Schedule of Sessions

SYMP: Symposia should consist of focused, integrated presentations assessing current understanding regarding a particular research problem, concept, application, or educational theme. Generally, symposia should have broad appeal within the ecological community or involve integration across sub-disciplines. Symposia focused within particular areas of ecology may be considered if these are areas of particularly active research, or if the symposia offer important new insights. Symposia may integrate historical perspectives explicitly, but this should generally be in the context of understanding current research and research questions. Presentations should offer new results and syntheses; speakers should not simply review previous work and results. No more than 24 symposia can be accepted for an Annual Meeting.

OOS: Organized oral sessions allow a wider range of thematic and conceptual options than symposia. Presentations included in an OOS must be topically coherent, but explicit synthetic overview is not required, and sessions need not have broad disciplinary or cross-disciplinary appeal. OOS's are particularly well suited for sets of related case studies, for specialized themes, or for presenting new work that does not yet admit of the synthesis called for in a symposium. Sessions may focus, for example, on a particular conceptual question, management problem, ecological process, or other unifying theme. A strong OOS proposal will provide a broad sampling of research in the topical area. OOS's may generate ideas for subsequent symposia. Up to (but no more than) eight speakers should be invited by session organizers and listed in the proposal; at least two speakers will be added subsequently by the Program Chair from the contributed abstracts. There is no limit on the number of OOS's that may be accepted each year.

OPS: Organized poster sessions are thematically and conceptually equivalent to organized oral sessions. Each OPS consists of a set of posters in multiples of 5. A strong OPS proposal will provide a broad sampling of research in the topical area. OPS's may generate ideas for subsequent symposia. There is no limit on the number of OPS's that may be accepted each year. Organized poster sessions are scheduled concurrently with the regular poster sessions on specially marked boards.

COS: Contributed oral sessions are collections of submitted abstracts each organized around a common study taxon, ecosystem, subdiscipline, concept/process, or tool/application. Contributed abstracts are reviewed and organized by the Program Chairs and Program Coordinator.

PS: Poster sessions are collections of submitted abstracts each organized around a common study taxon, ecosystem, subdiscipline, concept/process, or tool/application. Contributed abstracts are reviewed and organized by the Program Chairs and Program Coordinator.

WK: Workshops are intended to convey specific knowledge or skills; they are not intended for the presentation of research papers. Workshops are frequently more interactive and informal than sessions within the formal scientific program, and are not scheduled concurrently with symposia, organized oral, contributed oral, or poster sessions. Workshops may involve one or several teachers/presenters, and may include computer-based or other 'hands-on' training. Weekend workshops may be linked with a scientific field trip. Workshop proposals should make clear what participants might expect to gain. Limits of space and time may make it impossible to accommodate all worthy submissions.

SS: The ESA Annual Meetings include a wide range of events that do not conform to the criteria for the scientific sessions, workshops, or field trips. These 'special sessions' have included, for example, panel discussions, open discussions, lectures, and film screenings. Special sessions can permit extended dialogue, and may be vehicles for planning future events or organizations. Whatever its format, a special session should have some bearing on ecological science or education, broadly construed. Special sessions are open to all meeting registrants, although a ticket may be required for food or beverages.

Saturday, August 4

Field Trips, Workshops, and Business Meetings

8 am-11:30 am

FT 1 - Smith and Bybee Wetlands - The Largest Protected Urban Wetlands in America

Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center

Organized by: IC Phillipsen (philliiv@science.oregonstate.edu)

8 am-6:30 pm

WK 1 - National Workshop On Public Participation In Scientific Research

F150, Oregon Convention Center

Organized by: M Domroese, H Ballard, R Bonney, T DeFalco, A Miller-Rushing, S Newman, J Shirk, J Weltzin

This two-day workshop aims to advance the field of citizen science and other forms of participatory science, facilitate interactions and exchanges of insights across disciplines, and help establish a network for public participation in scientific research. For more information about the workshop: www.citizenscience.org/conference

Speakers:
T Root, Woods Institute for the Environment / Stanford University
W Michener, University of New Mexico
A Smith, Adler Planetarium
S Cooper, University of Washington
W Nichols, California Academy of Sciences

8 am-7 pm

8 am-5 pm

WK 2 - Python for Ecology

D137, Oregon Convention Center

Organized by: T Purucker (purucker.tom@epa.gov)

Python is a high-level scripting language that is becoming increasingly popular for scientific computing. This all-day workshop is designed to introduce the basics of Python programming to ecologists. The workshop includes sessions for Python basics and for exploring the Numpy and Scipy packages.

8 am-9 pm

FT 2 - Traditional Ecological Knowledge, Eco-Cultural Histories, and American Indian Integrated Resource Management: A Tour of the Mt. Hood Region

Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center

Organized by: FK Lake (franklake@fs.fed.us)

8:30 am-5 pm

ESA Governing Board Meeting

Ross Island, Doubletree Hotel

CANCELLED FT 3 - After a Fire, After the Breach: Changes in the White Salmon Watershed

Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center

Organized by: S Hummel

12 pm-5 pm

WK 3 - Integrated Undergraduate Teaching Material for Understanding Ecological and Hydrologic Response From Climate Change In Urban Forests

Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center

Organized by: M Dresner, H Chang, C DeRivera

Faculty will learn about a set of 16 new labs that will help them to include ecological response from climate change in their undergraduate labs. Participants will review the labs, learn about our results from assessing student learning, and collect data for one lab in Portland's Forest Park.

Speakers:
K Fuccillo, Portland State University
Z Bonak, Portland State University

WK 4 - Vegetation Sample Allocation: A Half-Day Overview

D139, Oregon Convention Center

Organized by: T Keeler-Wolf (tkwolf@dfg.ca.gov), Al Solomeshch

This half-day workshop addresses efficient sampling of vegetation in any natural or semi-natural setting. Methods for sample allocation will be reviewed and evaluated under different scenarios. We will emphasize the National Vegetation Classification system and the importance of synoptic vegetation description in landscape assessment.

WK 5 - Collaboration for Ecosystem Preservation: Ecologists and Faith Communities Discovering Common Ground for Sustaining Life On Earth

Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center

Organized by: LM Jablonski (jablonski@udayton.edu), J Holmes, GE Hitzhusen

Join renowned ecologists and environmentally active leaders of Pacific northwest diverse faith communities to learn about transferable bio-regional initiatives, explore best practises for dialogue and partnerships, and discover mutual benefits and complementary contributions in achieving justice and healthy ecosystems. Panel presentations, idea sharing resource exchange, local food and ecosystem vistas.

4 pm-7 pm

ESA SEEDS Student Orientation

Willamette Falls Room, Portland State University

Sunday, August 5

Field Trips, Workshops, Business Meetings and Receptions

8:30 am-12 pm

ESA Governing Board Meeting
Ross Island, Doubletree Hotel

1 pm-2 pm

ESA Buell/Braun Judges Meeting
Sellwood, Doubletree Hotel

2 pm-5 pm

ESA Council Orientation Meeting and Reception
E145, Oregon Convention Center

3 pm-4 pm

ESA Presider/AV Training
C124, Oregon Convention Center

3 pm-5 pm

ESA SEEDS Mentor Orientation
Morrison, Doubletree Hotel

5 pm-6:30 pm

PL 1 - ESA Opening Plenary Session
Oregon Blrm 201-203, Oregon Convention Center

6:30 pm-8 pm

ESA Opening Reception
Oregon Blrm Lobby, Oregon Convention Center

7 pm-9 pm

ESA SEEDS Welcome Dinner
Windows Skyroom, Red Lion

7 am-6 pm

FT 4 - Mount St. Helens: Lessons From 31 Years of Post-Eruption Ecological Research
Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center
Organized by: C Crisafulli

7:30 am-5 pm

FT 5 - Allocating Vegetation Sample Plots: A Demonstration of Effective Field Sampling Design in the Oregon Cascades
Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center
Organized by: T Keeler-Wolf (tkwolf@dfg.ca.gov)

8 am-11:30 am

WK 6 - Advancing Ecological Literacy In Non-Majors, Undergraduate Courses
D137, Oregon Convention Center
Organized by: JS Powers (powers@umn.edu), C Dowell, M Marchetti, L Turnbull
This workshop will explore issues and opportunities that arise in teaching undergraduate ecology and conservation biology courses for non-majors. The format includes large and small group discussions and demonstrations of activities.

WK 12 - The Advantage of Graduate School: Lessons for Scientific Leadership
E141, Oregon Convention Center
Organized by: AG Levine
To advance science, you must advance in science, and this workshop will teach you the critical skills which will aid your career journey.
Speakers:
AG Levine, Quantum

8 am-4:30 pm

FT 6 - Urban Bioblitz: Ecologists Contributing to and Learning from a Portland Historic Community Restoration Effort
Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center
Organized by: H Balbach, G Bowser, M Dresner

8 am-5 pm

WK 1 - National Workshop On Public Participation In Scientific Research
F150, Oregon Convention Center
Organized by: M Domroese, H Ballard, R Bonney, T DeFalco, A Miller-Rushing, S Newman, J Shirk, J Weltzin
This two-day workshop aims to advance the field of citizen science and other forms of participatory science, facilitate interactions and exchanges of insights across disciplines, and help establish a network for public participation in scientific research. For more information about the workshop: www.citizenscience.org/conference
Speakers:
T Root, Woods Institute for the Environment / Stanford University
W Michener, University of New Mexico
A Smith, Adler Planetarium
J Belsky, University of Montana
G Newman, Colorado State University

WK 7 - How to Lead An Effective Technical Meeting
D138, Oregon Convention Center
Organized by: J Berkson (berkson.jim@gmail.com)
Anyone can be an effective technical meeting leader. As with anything else, it requires learning the skills and gaining experience. During this highly interactive workshop, you will do both. This workshop is meant for individuals at all career stages. Bring out the leader in you!

8 am-5 pm

WK 8 - Getting off the Ground with Individual-Based Modeling: A Primer for Instructors and Researchers

D139, Oregon Convention Center

Organized by: SF Railsback (steven.railsback@humboldt.edu), V Grimm

The workshop will prepare participants to teach themselves and others how to build and use individual-based models for theoretical and applied ecology, using specialized but free software (NetLogo), a set of established design concepts, and a new textbook. Participants need to bring computers with NetLogo installed.

WK 9 - Science Beyond the Field: A Policy (dis) Orientation

D140, Oregon Convention Center

Organized by: LA Hidinger (lori.hidinger@asu.edu), I Bennett, M Farooque, J Wetmore

This workshop will explore the relationships among science, policy, and societal outcomes and give participants a sampling of topics including public funding for science, ecology governance challenges presented by new technologies, doing science in lean times, the role of ecologists in the policy process, and engaging without advocating.

Speakers:
D Goldston, Self Employed
N Lymn, Ecological Society of America
J Morris, US Environmental Protection Agency
E Frow, Harvard University
F Kearns, Pew Environment Group
TD Beard Jr., USGS
JE Herrick, USDA Agricultural Research Service

WK 10 - A Brief Introduction to Bayesian and Hierarchical Bayesian Modeling In Ecology

D136, Oregon Convention Center

Organized by: M Dietze (mdietze@life.illinois.edu), K Ogle

This workshop provides a brief introduction to Bayesian and hierarchical Bayesian modeling. It includes presentation and discussion of basic concepts, including important elements of Bayesian statistics and hierarchical Bayesian modeling. Participants will have the opportunity to develop and implement a Bayesian model in OpenBUGS.

WK 11 - Analysis of Multivariate Time-Series Data Using State-Space Models

D135, Oregon Convention Center

Organized by: EE Holmes (eli.holmes@noaa.gov), EJ Ward, MD Scheuerell

This workshop covers the use of multivariate state-space models for analysis of ecological time-series data under situations where there are known and unknown measurement errors, unobserved states, multiple data sources, and missing values.

8 am-5:30 pm

FT 7 - Pacific Northwest Old Growth Ecology and Management: The Wind River Experimental Forest and Research Natural Area

Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center

Organized by: DS Schimel (dschimel@neoninc.org)

FT 8 - Hungry for More Field Trip: An Ecological Lens for Understanding Diversity, Urban Agriculture and Local Sustainability

Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center

Organized by: AE Pérez-Quintero (anaelisa@comunidadesgaia.org), MM Gregory (meganmgregory1@gmail.com)

8:30 am-12 pm

ESA Governing Board Meeting

Ross Island, Doubletree Hotel

9 am-4:30 pm

FT 9 - SEEDS Education and Outreach Initiative (SEOI) Field Trip: Ecologists Join Forces with Community Partners to Help Restore Johnson Creek

Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center

Organized by: B Otero

10 am-3:30 pm

FT 10 - Bicycle Tour of Portland's Natural Area Restoration Sites

Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center

Organized by: TM Query (toby.query@portlandoregon.gov)

12 pm-5 pm

WK 13 - Welcome to the Climate Adaptation and Mitigation E-Learning (CAMEL) Community [FREE but must register]

E142, Oregon Convention Center

Organized by: TL Newberry (tnewberry@tocc.edu)

Educators and Students: Learn to gather and share content using NSF-funded "CAMEL" - Climate, Adaptation and Mitigation E-Learning - a FREE, INTERDISCIPLINARY, MULTIMEDIA, ONLINE RESOURCE to teach about CLIMATE CHANGE - Causes, Consequences, Solutions and Actions. CAMEL includes articles, datasets, images, videos, syllabi, labs, teaching modules, including indigenous perspectives. www.camelclimatechange.org

ME Lam, University of British Columbia and University of New Mexico–*Welcome from Traditional Ecological Knowledge section of the ESA*

L Birkey, National Council for Science and the Environment (NCSE)–*Introduction to CAMEL*

A Kuslikis, American Indian Higher Education Consortium (AIHEC) –*Overview of AIHEC-NCSE Climate Change Education Partnership*

TL Newberry[1] and OV Trujillo[2], (1)Tohono O'odham Community College, (2)Northern Arizona University –*Climate Change, Water and Traditional Ecological Knowledge in the Southwest*

W Van Lopik, College of the Menominee Nation–*Climate Change and Energy from an American Indian Perspective*

WK 14 - Estimating Uncertainty and Detecting Trends In Ecological Data: Challenges for Developing the National Ecological Observatory Network (NEON)

E143, Oregon Convention Center

Organized by: J Taylor (jtaylor@neoninc.org), S Berukoff, AM Fox, KM Thibault

This workshop will include two components: (1) presentation of the statistical basis and application of uncertainty quantification and ecological trend detection/attribution in the NEON design process, and (2) discussion and development of these increasingly important methods in ecology, in general, and how they relate to NEON.

WK 15 - Demography In a Continuous World: New Advances In Integral Projection Models (IPMs)

E144, Oregon Convention Center

Organized by: R Salguero-Gomez (salguero@demogr.mpg.de), J Metcalf, S McMahon, E Jongejans, C Merow

Moderator: S McMahon

Integral Projection Models (IPMs) are robust demographic tools for the study of population processes in ecology and evolution. Participants will learn IPM theory, as well as basic and novel applications (e.g. evolutionary analyses, population growth, longevity and dynamics in stochastic environments). Computational tools will be provided in an R package.

WK 16 - Managing Ecological Data for Effective Use and Re-Use: A Workshop for Early Career Scientists

E146, Oregon Convention Center

Organized by: A Budden (aebudden@dataone.unm.edu), C Strasser

This workshop will provide information and tools for data management that are useful over all stages of the research cycle, from data collection to data re-use, and is aimed at early-career scientists. Part of the workshop will be dedicated to attendees examining their own data sets with workshop organizers.

Speakers:
W Michener, University of New Mexico
S Hampton, National Center for Ecological Analysis and Synthesis
R Cook, Oak Ridge National Laboratory
V Hutchison, US Geological Survey
M Schildhauer, National Center for Ecological Analysis and Synthesis
T Beaty, Oak Ridge National Laboratory

WK 17 - Teaching and Assessing Student Process Skills In the Undergraduate Classroom: Approaches and Tools

E147, Oregon Convention Center

Organized by: AL Porzecanski, A Bravo, E Sterling, N Bynum

How can we best teach and assess process skills – such as critical thinking, data analysis, and oral communication – in the undergraduate classroom? This workshop will present best practices for teaching and assessing skills in undergraduates, and give participants the tools to develop a strategy for a selected skill.

WK 18 - Providing K-12 Teachers with Strategies and Resources for Fostering Environmental Literacy

E148, Oregon Convention Center

Organized by: AR Berkowitz (berkowitza@caryinstitute.org), M Johnson , S Simon, S Parker, JH Doherty

Get first-hand experience with effective strategies for working with K-12 teachers from the Culturally Relevant Ecology: Learning Progressions and Environmental Literacy project. Carbon, biodiversity and water strands are complemented with place-based, quantitative and citizenship themes. Participants receive a Leaders' Guide and professional development approaches grounded in our learning progression research.

12:30 pm-5 pm

WK 19 - Setting Yourself up for Success In the Postdoc

D137, Oregon Convention Center

Organized by: AG Levine

Specifically targeted towards graduate students and Postdocs, this workshop will focus on the current and expanding crisis in the job and career market for academic scientists.

Speakers:
AG Levine, Quantum

1 pm-2 pm

ESA Buell/Braun Judges Meeting

Sellwood, Doubletree Hotel

2 pm-5 pm

ESA Council Orientation Meeting and Reception

E145, Oregon Convention Center

3 pm-4 pm

ESA Presider/AV Training

C124, Oregon Convention Center

3 pm-5 pm

ESA SEEDS Mentor Orientation

Morrison, Doubletree Hotel

5 pm-6:30 pm

PL 1 - ESA Opening Plenary Session

Oregon Blrm 201-203, Oregon Convention Center

6:30 pm-8 pm

ESA Opening Reception

Oregon Blrm Lobby, Oregon Convention Center

7 pm-9 pm

ESA SEEDS Welcome Dinner

Windows Skyroom, Red Lion

Monday, August 6

Business Meetings and Receptions

7 am-8 am

ESA SEEDS Breakfast
D135, Oregon Convention Center

7 am-9 am

ESA Ecology Editorial Board Meeting
Ross Island, Doubletree Hotel

ESA Issues in Ecology Editorial Board Meeting
Sellwood, Doubletree Hotel

8 am-10 am

PL 2 - ESA Scientific Plenary and ESA Awards Session
Oregon Blrm 201-203, Oregon Convention Center

11:30 am-12 pm

ESA Presider/AV Training
C124, Oregon Convention Center

11:30 am-1 pm

ESA Opening of Exhibits
Exhibit Hall DE, Oregon Convention Center

11:30 am-1:15 pm

ESA Board of Professional Certification Meeting
Sellwood, Doubletree Hotel

ESA Joint Editorial Board Luncheon (by invitation only)
E145, Oregon Convention Center

ESA Past Presidents' Forum Luncheon
D130, Oregon Convention Center

ESA Rangeland Ecology Section Business Meeting
Portland Blrm 256, Oregon Convention Center

ESA Science Committee Business Meeting
D129, Oregon Convention Center

ESA Student Orientation
E148, Oregon Convention Center

12 pm-1 pm

ESA Long-term Studies Section Business Meeting
Morrison, Doubletree Hotel

ESA Southwest Chapter Brown Bag Lunch
Ross Island, Doubletree Hotel

5 pm-5:45 pm

ESA Award Recipients' Reception (by invitation only)
Broadway, Doubletree Hotel

5 pm-6:30 pm

ESA Musicians Central
Ginkoberry Concourse, Oregon Convention Center

6:30pm-8 pm

Christian Ecologists Social
VIP B, Oregon Convention Center

ESA Aquatic Section Mixer
D135, Oregon Convention Center

ESA Student Mixer
Columbia Blrm, Portland State University

ESA Theoretical Ecology Section Mixer
D136, Oregon Convention Center

ESA Vegetation Section and IAVS-NA Business Meeting and Mixer
D130, Oregon Convention Center

ESA's Sustainable Biosphere Initiative at 20 Years: The View Forward (reception)
A107, Oregon Convention Center

Utah State University Ecologists Mixer
D137, Oregon Convention Center

Monday Sessions

7 am-8 am

ESA SEEDS Breakfast

D135, Oregon Convention Center

7 am-9 am

ESA Ecology Editorial Board Meeting

Ross Island, Doubletree Hotel

ESA Issues in Ecology Editorial Board Meeting

Sellwood, Doubletree Hotel

8 am-10 am

PL 2 - ESA Scientific Plenary and ESA Awards Session

Oregon Blrm 201-203, Oregon Convention Center

10:15 am-11:30 am

SS 1 - Reaching Beyond the Ecology Bubble: How the Ecological Society of America Can Help You Connect with Other Important Groups, From Policymakers to Community Leaders

Portland Blrm 251, Oregon Convention Center

Organized by: N Lymn (nadine@esa.org), T Houston, L Lester

This interactive session will emphasize communicating ecological information that resonates with decision makers and other important groups, using tips outlined in the ESA publication "An Ecologist's Guidebook to Policy Engagement." The session will feature speakers experienced in working with policy, media, and other entities outside the ecological community.

SS 2 - A Blueprint for a Changing World: The National Fish, Wildlife and Plants Climate Adaptation Strategy

Portland Blrm 252, Oregon Convention Center

Organized by: K Freund (kate_freund@fws.gov), R Griffis

Join us for an overview of the National Fish, Wildlife and Plants Climate Adaptation Strategy, which lays out a unified approach for reducing the impacts of climate change on U.S. species and ecosystems. Dozens of federal, state, and tribal partners collaborated to develop this national blueprint for climate change response.

SS 3 - Creating Effective Data Management Plans for Ecological Research

Portland Blrm 253, Oregon Convention Center

Organized by: W Michener (wmichener@lternet.edu), A Budden

Learn how to create a data management plan that is tailored to your specific proposal or project, see examples of good data management plans, and discuss best practices with your colleagues.

Speakers:
P Cruse, University of California - California Digital Library
C Strasser, University of California Office of the President
S Hampton, National Center for Ecological Analysis and Synthesis

SS 4 - A Debate on the Sustainability of Biomass Production for Energy

Portland Blrm 254, Oregon Convention Center

Organized by: CE Ridley (ridley.caroline@epa.gov), ZH Leggett, CM Clark, Y Jager

Experts will argue opposite positions of the bioenergy-sustainability debate, attempting to convince the audience that bioenergy is or is not compatible with habitat and biodiversity conservation.

Speakers:
D Miller, Weyerhaeuser Company
R Efroymson, Oak Ridge National Lab
DA Landis, Michigan State University
C Kwit, University of Tennessee

SS 5 - Research and Funding Priorities for SESYNC, the National Socio-environmental Synthesis Center

Portland Blrm 255, Oregon Convention Center

Organized by: MA Palmer, J Boyd, J Kramer, L Ries

Moderator: SL Collins

The National Socio-environmental Synthesis Center (SESYNC) focuses on the intersection of human and environmental systems, and will define an evolving set of Themes to focus our research activities. The goal of this session is to provide the ESA membership with an opportunity to help prioritize, fine-tune, or revise current Themes.

Speakers:
R Hilborn, University of Washington
L Lopez-Hoffman, University of Arizona
S Levin, Princeton University
MK Macauley, Resources for the Future

SS 6 - Social and Ecological Gradients and Mechanisms of Resilience in Rangelands

Portland Blrm 256, Oregon Convention Center

Organized by: NF Sayre, E King

This Special Session will contribute to a general understanding of how ecosystems can be preserved, utilized, and sustained by synthesizing perspectives from diverse rangeland cases that illuminate the practical and management implications of resilience and social-ecological feedbacks.

SS 7 - Earth Stewardship: Exploring Connections Between Microecology and Macroecology

Portland Blrm 257, Oregon Convention Center

Organized by: L Cheng (lcheng1@gmail.com), K Xue

Moderator: L Cheng

Session speakers will present examples of how to synthesize knowledge from macro- and micro-ecology to improve our understanding of the earth's systems, and how to use knowledge to inform control policies.

Speakers:
J Zhou, University of Oklahoma
M Kaspari, University of Oklahoma
MK Firestone, University of California, Berkeley
JH Brown, University of New Mexico
CB Field, Carnegie Institution of Washington
J Tiedje, Michigan State University

SS 8 - Ecosystem Response to a Disappearing Cryosphere

Portland Blrm 258, Oregon Convention Center

Organized by: A Fountain, H Ducklow

The cryosphere is shrinking as the global climate warms and in response ecosystems are changing. Changes are manifest in the trophodynamics, via changes in habitat and species, and in biogeochemical cycling. We invite presentations that focus on site specific processes and synthesis efforts.

7 am-1:15 pm

SS 9 - Rooftop Solar Power Generation and Urban Forests: Strategies for Sustainable Coexistence In Cities

B117, Oregon Convention Center

Organized by: DC Staley (staley.dan@gmail.com)

This session will give strategies, policies and techniques to allow the urban sustainability professional to partner with other professionals to ensure urban forest benefits continue as urban solar power collection increases.

SS 10 - Sense of Place in the Pacific Northwest: Intergenerational Learning of How Oregon's Tribes Sustained Ecosystems for Millennia

C120, Oregon Convention Center

Organized by: ME Lam (mimibethlam@gmail.com), J Ford, FK Lake

Members from three of Oregon's tribes will share their senses of place and one indigenous student from outside of Oregon will witness the sharing: the ecological community can benefit from the traditional ecological knowledge, educational philosophies, and environmental ethics in resource management of Oregon's tribes, accumulated and sustained over millennia.

Speakers:
E Stutzman, Komemma Kalapuya and Coos
D Harrelson , Kalapuya, Confederated Tribes of Grand Ronde
B Shaw, Confederated Tribes of Warm Springs Reservation and Bureau of Indian Affairs

SS 11 - Identifying Key Ecological Research Questions and Theory Associated with Human and Justice Concerns

C123, Oregon Convention Center

Organized by: CH Nilon (nilonc@missouri.edu), LM Jablonski, KA Marshall, GA Middendorf

Panel of ecologists engaged in human and justice concerns representing the breadth of ESA will explore core questions, current research areas and future directions for their field. Come share your ideas towards a common language, identifying key research questions and next steps for both advancing ecology and addressing societal concerns.

SS 12 - Resources for Ecology Education: Fair and Share (REEFS)

A107, Oregon Convention Center

Organized by: JA Reynolds (julie.a.reynolds@duke.edu), JR Corney, A McMillen

Share your favorite classroom activity with your colleagues and learn about what they are doing to engage undergraduate students in a small group setting. Groups will offer feedback and suggestions. Digital publishing options will be discussed. Those interested in sharing activities should contact Julie Reynolds, Past Education Section Chair: julie.a.reynolds@duke.edu.

11:30 am-12 pm

ESA Presider/AV Training

C124, Oregon Convention Center

11:30 am-1 pm

ESA Opening of Exhibits

Exhibit Hall DE, Oregon Convention Center

11:30 am-1:15 pm

ESA Board of Professional Certification Meeting

Sellwood, Doubletree Hotel

ESA Joint Editorial Board Luncheon (by invitation only)

E145, Oregon Convention Center

ESA Past Presidents' Forum Luncheon

D130, Oregon Convention Center

ESA Rangeland Ecology Section Business Meeting

Portland Blrm 256, Oregon Convention Center

ESA Science Committee Business Meeting

D129, Oregon Convention Center

ESA Student Orientation

E148, Oregon Convention Center

WK 20 - RUI In Action: Developing a Primer for Undergraduate Research

D135, Oregon Convention Center

Organized by: RL Burks (burksr@southwestern.edu)

Sponsored by the Researchers at Primarily Undergraduate Institutions Section (R-PUI), our workshop will document best practices and ultimate challenges that occur with conducting research with undergraduates. We will compile our findings into a primer for ecologists to turn to when they have questions about best practices in undergraduate research.

WK 21 - Teaching Ecology Using Case Studies

D136, Oregon Convention Center

Organized by: DJ Grisé (david.grise@tamucc.edu), MJ Hansen

This workshop will discuss what makes a good case study, the benefits of using them, how to design them, how to effectively use them and available resources. Participants will develop ideas for case studies and share their experience if they have used case studies in the past.

WK 22 - Writing a 'Teaching Philosophy' Statement: Models and Suggestions

D137, Oregon Convention Center

Organized by: C D'Avanzo (cdavanzo@hampshire.edu), JC Moore

This workshop is designed to help graduate students and others write an effective teaching philosophy statement when they apply for academic positions.

WK 23 - You Want to Do What? Integrating Scientific Communication Into Large Undergraduate Courses

D138, Oregon Convention Center

Organized by: JM Batzli (jcbatzli@wisc.edu), JM Maher, GM Malcolm

This education workshop focuses on efficient strategies to support integration of scientific communication into large enrollment courses. Participants will examine syllabi, activities, assessments and modes of feedback that allow students to practice and improve communication skills.

WK 24 - Creative Multi-Media Approaches to Conservation Education for the Next Generation

D139, Oregon Convention Center

Organized by: KA Kassam (ksk28@cornell.edu), T Mourad, J Lassoie, RJ Herring

This workshop seeks to generate feedback on and partnerships for ConservationBridge, a multi-media education platform for interdisciplinary conservation education. After participating in this workshop, you will be able to (1) assess and, as desired, use ConservationBridge in your teaching; and/or (2) actively integrate your research into a wider research-education network.

WK 25 - Considerations for Data Aquisition Systems

F150, Oregon Convention Center

Organized by: DV Baker (dbaker@campbellsci.com)

We will discuss various sensor types, how they work, and considerations in selecting and deploying a sensor. Data logging, power, and communications options for a custom data acquisition system will also be discussed. The workshop will conclude with demonstrations and (depending on attendance) hands on experience.

WK 27 - Social Media for Collaboration, Outreach and Impact

F151, Oregon Convention Center

Organized by: S Chung, JL Gill

The rapid growth of social media tools and online communities dovetails neatly with increasing need for effective collaboration and outreach in science. This session includes case studies, live demos and best practices for the strategic use of social media and other online tools to improve scientific collaboration, education and outreach.

12 pm-1 pm

ESA Long-term Studies Section Business Meeting

Morrison, Doubletree Hotel

ESA Southwest Chapter Brown Bag Lunch

Ross Island, Doubletree Hotel

1:30 pm-5 pm

SYMP 1 - Frontiers In Measuring and Projecting Long-Lived Vegetation Dynamics

Portland Blrm 251, Oregon Convention Center

Organized by: OL Loucks (loucksol@muohio.edu), SB Franklin

Endorsed by: Vegetation Section, Vegetation Classification Panel, Long-term Studies Section

Moderator: OL Loucks

Scholars confront a wide variety of data showing change in vegetation due to a mixture of causes. Such natural and human-dominated processes induce both slow and rapid changes in vegetation, and these research results present an important challenge to the central assumption of vegetation classification and inventory.

1:30 PM Introductory remarks

1:35 PM SYMP 1-1 Neilson, RP[1] and SW Running[2], (1) Oregon State University (Courtesy), (2)University of Montana. *Where do we think the global vegetation is going next?*.

2:00 PM SYMP 1-2 Johnson, EA and ST Michaletz, University of Calgary. *Describing or explaining: Understanding effects of disturbance processes on ecological processes*.

2:25 PM SYMP 1-3 Palmquist, KA, RK Peet, JM White and K Israel, University of North Carolina at Chapel Hill. *Long-term vegetation change in contrasting North Carolina ecosystems*.

2:50 PM SYMP 1-4 Canham, CD, Cary Institute of Ecosystem Studies. *Disentagling responses to climate change versus broad anthropogenic impacts in temperate forests*.

3:15 PM Break

3:25 PM SYMP 1-5 Zedler, JB, University of Wisconsin-Madison. *Competitive advantage of invasive clonal plants in changing wetlands*.

3:50 PM SYMP 1-6 Harrison, SP[1], El Damschen[2], A Eskelinen[3] and BM Going[3], (1)University of California - Davis, (2)University of Wisconsin-Madison, (3)University of California, Davis. *Using functional traits to predict and compare change among plant communities*.

4:15 PM SYMP 1-7 Waller, DM[1], SE Johnson[2], G Sonnier[3] and DA Rogers[4], (1)University of Wisconsin, (2) Northland College, (3)University of Wisconsin-Madison, (4)University of Wisconsin - Parkside. *Characterizing plant functional trait profiles to infer drivers of ecological change in Wisconsin forest plant communities*.

4:40 PM Discussion

SYMP 2 - Interacting with Practitioners to Facilitate Earth Stewardship

Portland Blrm 252, Oregon Convention Center

Organized by: STA Pickett (picketts@caryinstitute.org), FS Chapin, ME Power, C Duke, SL Collins

Endorsed by: Policy Section

Moderator: STA Pickett

The symposium explores historical, current, and emerging connections between ecology and practical professions, such as regional planning, civil engineering, traditional ecological knowledge, environmental justice, and scenario development, to expose opportunities to advance the contributions of science to Earth Stewardship.

1:30 PM SYMP 2-1 Collins, SL[1], STA Pickett[2], ME Power[3], FS Chapin[4], J Baron[5] and C Duke[6], (1)University of New Mexico, (2)Cary Institute of Ecosystem Studies, (3) University of California, Berkeley, (4)University of Alaska, (5)Natural Resource Ecology Laboratory, United States Geological Survey, (6)Ecological Society of America. *The Earth Stewardship Initiative and the need for multi-disciplinary practice*.

1:55 PM SYMP 2-2 Kingsland, S, Johns Hopkins Univerisity. *Historical perspectives on Earth Stewardship*.

2:20 PM SYMP 2-3 Hulse, DW, University of Oregon. *Foundations and growth of connections between the science of ecology and landscape architecture*.

2:45 PM SYMP 2-4 Lam, ME, University of British Columbia. *Ecological and cultural knowledge transfer and resilience in Earth Stewardship*.

3:10 PM Break

3:20 PM SYMP 2-5 Dow, K, University of South Carolina. *Environmental justice and Earth Stewardship*.

3:45 PM SYMP 2-6 Carpenter, SR, University of Wisconsin - Madison. *Scenarios for assessing the future of social-ecological systems*.

4:10 PM SYMP 2-7 Gallagher, M, PrincetonHydro. *Training ecologists for action in restoration and management*.

4:35 PM Discussion

SYMP 3 - Observation and Life On Earth: The Changing Face of 21st Century Ecological Science

Portland Blrm 253, Oregon Convention Center

Organized by: R Sagarin (rafe@email.arizona.edu)

Endorsed by: Natural History Section

Ecology as a science is undergoing a dramatic transformation back towards the observational methods of early naturalists, but driven by the urgency of global scale environmental challenges and facilitated by both incredible new observational technologies and long held traditional ecological knowledge.

1:30 PM SYMP 3-1 Sagarin, R, University of Arizona. *Observation and ecology: Expanding the scope of science to*

understand a complex world.

2:00 PM SYMP 3-2 Pauchard, A, Universidad de Concepción, Instituto de Ecología y Biodiversidad (IEB). *Global networks of observers help to understand and manage plant invasions*.

2:30 PM SYMP 3-3 Weltzin, J, USA National Phenology Network. *Hot, flat and crowd-sourced: Citizen-scientist collaborations to tackle global change*.

3:00 PM Break

3:10 PM SYMP 3-4 Tissot, B, Washington State University Vancouver. *Integral ecology and sustainability: How a broader view of ecology can solve complex environmental issues*.

3:40 PM SYMP 3-5 Rozzi, R, University of North Texas and University of Magallanes - Institute of Ecology and Biodiversity, Chile. *Biocultural ethics: Integrating ecological observation and ecological co-habitation in the web of life on Earth*.

4:10 PM SYMP 3-6 Kosloski, M and G Dietl, The Paleontological Research Institution & Cornell University. *Observational ecology of predation in deep time*.

4:40 PM Discussion

OOS 1 - Continental-Scale Ecology and the Biology of Macrosystems

B116, Oregon Convention Center

Organized by: DS Schimel (dschimel@neoninc.org), HW Loescher

Moderator: B Wee

This session will address topics within the emerging macrosystems paradigm to understand biological systems over extensive geographical and spatial extents using quantitative, interdisciplinary, systems-oriented research, and how these capabilities are supported by the NEON facility

1:30 PM OOS 1-1 Schimel, DS, National Ecological Observatory Network (NEON, Inc.). *Integrating theory and observation towards usable knowledge using the NEON platform*.

1:50 PM OOS 1-2 Tazik, D[1], E Ayers[1], D Barnett[1], S Elmendorf[1], K Krause[1], C Meier[1], S Parker[1], J Taylor[1], ELS Hinckley[1] and K Goodman[2], (1)National Ecological Observatory Network (NEON, Inc.), (2)NEON Inc.. *Sampling organisms while describing the continent: the development of NEON's observing strategy for organismal biology*.

2:10 PM OOS 1-3 Fox, AM[1], TJ Hoar[2] and DJP Moore[3], (1) National Ecological Observatory Network (NEON, Inc.), (2)National Center for Atmospheric Research, (3)University of Arizona. *Quantifying uncertainty in projections of continental fluxes of carbon and energy using the NEON platform*.

2:30 PM OOS 1-4 Green, RO, Jet Propulsion Laboratory. *Observing global biodiversity and ecosystem function from space*.

2:50 PM OOS 1-5 Hibbard, K[1] and A Janetos[2], (1)Pacific Northwest National Laboratory, (2)PNNL/UMD. *Integrated regional modeling of scocio-ecological systems and their use in sustainability research*.

3:10 PM Break

3:20 PM OOS 1-6 Duffy, P, Neptune and Company, Inc.. *Characterization of climatically-driven ecological responses: Implications for the NEON continental design*.

3:40 PM OOS 1-7 McLachlan, JS[1], M Dietze[2], ST Jackson[3], CJ Paciorek[4] and JW Williams[5], (1)University of Notre Dame, (2)University of Illinois, (3)University of Wyoming, (4)University of California, Berkeley, (5)University of Wisconsin-Madison. *Integrating long-term data into ecological forcasting models*.

4:00 PM OOS 1-8 Higgins, LM and PG Kennedy, Lewis & Clark College. *Continental-scale distribution patterns in a tripartite plant-microbe symbiosis: Ectomycorrhizal fungi, Frankia bacteria, and alder trees in the Pacific Northwest, central Mexico, and beyond*.

4:20 PM OOS 1-9 Storch, D[1], AL Sizling[1], P Keil[2] and W Jetz[2], (1)Charles University, (2)Yale University. *Universality of the species-area relationship: From individuals to continents*.

4:40 PM OOS 1-10 Donoghue, JC II[1], N Morueta-Holme[2], B Boyle[1], LL Sloat[1], BJ Enquist[1], BJ McGill[3], JC Svenning[2] and R Condit[4], (1)University of Arizona, (2) Aarhus University, (3)University of Maine, (4)Smithsonian Tropical Research Institute. *Quantifying the fundamental unit of biogeography: Assessing different methods to measure geographic range size and why it matters*.

OOS 2 - Agroecology of Urban Gardens: Contributions to Research and Science Education

B113, Oregon Convention Center

Organized by: TV Dietsch

Moderator: TV Dietsch

The goal is to bring together researchers that are finding urban gardens to be unique and interesting study systems for research that contributes directly not only to the need for a better understanding of agroecology in urban settings, but also to broader themes in the ecology and science education.

1:30 PM OOS 2-1 Lawson, L, Rutgers University. *What the garden organizers say: Results from the 2011-12 American Community Gardening Survey*.

1:50 PM OOS 2-2 Gregory, MM[1], LE Drinkwater[1], SJ Peters[1], D Greig[2] and D Vigil[2], (1)Cornell University, (2)East New York Farms! / United Community Centers. *Practicing agroecology in Brooklyn community gardens: Enhancing ecosystem services and gardener learning through collaborative inquiry on cover crops*.

2:10 PM OOS 2-3 Gregory, MM[1], E Eck[1], A Miggins[2], A Cohen[3], M Pickoff[4] and TW Leslie[2], (1)Cornell University, (2)Long Island University, (3)Rutgers University, (4)Bates College. *Effects of garden land use, management practices, and landscape context on pest and beneficial insects in urban vegetable gardens*.

2:30 PM OOS 2-4 Philpott, SM[1], JA Cotton[2], RL Friedrich[3], LC Moorhead[4], GL Pardee[1], S Uno[5], M Valdez[1] and P Bichier[1], (1)University of Toledo, (2)Michigan State University, (3)USDA, (4)University of Tennessee, (5)Hosei University. *Biodiversity in urban gardens: Factors driving predator and pollinator communities*.

2:50 PM OOS 2-5 Ong, TWY and JH Vandermeer, University of Michigan. *The effect of biocomplexity on the spread of pests in urban agriculture*.

3:10 PM Break

3:20 PM OOS 2-6 MacIvor, JS and L Packer, York University. *Cavity-nesting bees and wasps in urban agroecology: Landscape determinants of diversity and foraging*.

3:40 PM OOS 2-7 Shayler, H[1], M McBride[1], J Russell-Anelli[1], D Lopp[1], H Spliethoff[2], L Marquez-Bravo[2], L Ribaudo[2], E Stone[3], G Ferenz[4], L Brooks[4] and V Lambert[4], (1) Cornell University, (2)New York State Dept. of Health, (3)GreenThumb, (4)Cornell University Cooperative Extension - NYC. *Healthy soils, healthy communities: A research and education partnership with urban gardeners*.

4:00 PM OOS 2-8 Grossman, J[1], S Smith[2], M Schroeder-

Moreno[2] and A Soltes[3], (1)NCSU, (2)North Carolina State University, (3)Inter-Faith Food Shuttle. *Laying the groundwork for soil science education through urban agriculture service-learning*.

4:20 PM OOS 2-9 Krasny, ME, Cornell University. *A social-ecological systems view on learning in community gardens*.

4:40 PM OOS 2-10 Aloisio, JM and JD Lewis, Fordham University. *Growing media affects edible plant production and leachate on a simulated rooftop farm*.

OOS 3 - Natural Gas: Ecology, Environment, and Economics

A105, Oregon Convention Center

Organized by: N Phillips, S Cleveland, RW Howarth, RB Jackson

Moderator: N Phillips

The goal of this Organized Oral Session is to examine the range of ecological, environmental, and economic interactions associated with the entire Natural Gas Process Chain.

1:30 PM OOS 3-1 Ackley, R, Gas Safety Inc. *Reading the urban landscape: Clues to gas leak damage to vegetation*.

1:50 PM OOS 3-2 Cleveland, S, Conservation Law Foundation. *Policy levers to spur a cleaner natural gas distribution system*.

2:10 PM OOS 3-3 Crosson, E, Picarro, Inc.. *Fast identification of methane sources in complex urban settings*.

2:30 PM OOS 3-4 Down, A[1], RB Jackson[1], J Karr[1], E Crosson[2], R Ackley[3] and N Phillips[4], (1)Duke University, (2)Picarro, Inc., (3)Gas Safety Inc., (4)Boston University. *Fingerprinting and accounting urban methane leaks*.

2:50 PM OOS 3-5 Hendrick, M, C Carroll and N Phillips, Boston University. *Novel soil ecosystems created by natural gas leaks*.

3:10 PM Break

3:20 PM OOS 3-6 Stout, S, USDA Forest Service. *Research at the USDA Forest Service Northern Research Station concerning the forest effects of oil and gas development*.

3:40 PM OOS 3-7 Farrell, L, Pipeline Safety Coalition. *Public outreach, and awareness to enhance environmental, and public safety in natural gas infrastructure*.

4:00 PM OOS 3-8 Howarth, RW, R Santoro and A Ingraffea, Cornell University. *Global warming and natural gas: The role of methane*.

4:20 PM OOS 3-9 Jackson, RB, A Vengosh, A Down, NR Warner, SG Osborn, K Zhao and T Darrah, Duke University. *Ecological and environmental dimensions of shale gas extraction*.

4:40 PM OOS 3-10 Klemow, KM and DA Bruns, Wilkes University. *Achieving an accurate public understanding of shale gas impacts: Opportunities for scientists and educators*.

OOS 4 - Change On the Edge: Exploring Ecosystem Implications for Altered Climate Drivers When the Plants Are Not Growing

C124, Oregon Convention Center

Organized by: SA Sistla (sistla@lifesci.ucsb.edu), KM Buckeridge

Moderator: JP Schimel

Variation in climate drivers during periods when plants are senesced is a potentially important control on ecosystem function. By, incorporating studies ranging from Mediterranean to tundra ecosystems, this session seeks to identify unifying principles that distinguish systems that are sensitive to these changes from those which are more easily perturbed.

1:30 PM OOS 4-1 Wilson, AM[1], JA Silander Jr.[1] and AM Latimer[2], (1)University of Connecticut, (2)University of California Davis. *Climatic controls on ecosystem resilience: Post-fire regeneration in the Cape Floristic Region of South Africa*.

1:50 PM OOS 4-2 Hanan, EJ[1], JP Schimel[1], C D'Antonio[2], C Tague[3] and DA Roberts[4], (1)University of California, Santa Barbara, (2)University of California Santa Barbara, (3)University of Calfornia, Santa Barbara, (4)University of California at Santa Barbara. *Biogeochemical response to fire in Mediterranean-type watersheds*.

2:10 PM OOS 4-3 Durán, J, JL Morse and PM Groffman, Cary Institute of Ecosystem Studies. *Climate variation and soil microbial biomass and activity in northern hardwood forests*.

2:30 PM OOS 4-4 Groffman, PM, Cary Institute of Ecosystem Studies. *Soil freezing perturbation to nitrogen cycling in the northern hardwood forest*.

2:50 PM OOS 4-5 Strickland, MS, Yale University. *The interaction between climate and the microbial community determines litter decomposition*.

3:10 PM Break

3:20 PM OOS 4-6 Henry, HAL and AV Malyshev, University of Western Ontario. *Frost damage and winter nitrogen uptake by the grass Poa pratensis: Consequences for vegetative versus reproductive growth*.

3:40 PM OOS 4-7 Reinmann, AB and PH Templer, Boston University. *Effects of changes in winter snowpack on above- and belowground carbon fluxes in a mixed-hardwood forest*.

4:00 PM OOS 4-8 Natali, SM, EAG Schuur and EE Webb, University of Florida. *Shifting carbon dynamics in a warmer world: Increasing respiration from frozen soils*.

4:20 PM OOS 4-9 Weintraub, MN[1], H Steltzer[2], PF Sullivan[3], JP Schimel[4], MD Wallenstein[5], A Darrouzet-Nardi[1] and AA Segal[3], (1)University of Toledo, (2)Fort Lewis College, (3)University of Alaska, (4)University of California, Santa Barbara, (5)Colorado State University. *The influence of spring temperatures and snow depth on arctic tundra plant growth and soil nutrient dynamics*.

4:40 PM OOS 4-10 Sistla, SA[1], EB Rastetter[2] and JP Schimel[1], (1)University of California, Santa Barbara, (2)Marine Biological Lab. *Exploring the consequences of winter versus summer permafrost soil warming using a microbial physiology-explicit decomposition model*.

OOS 5 - Preparing for ESA's 2015 Centennial: Why Does Understanding History Matter to Our Future?

A106, Oregon Convention Center

Organized by: JC Mulroy (mulroy@denison.edu)

Moderator: DH Knight

We present powerful examples of ongoing research that illuminate the role of history in helping us chart a successful direction for individual ecologists, our science, ESA, and the planet.

1:30 PM OOS 5-1 Jackson, ST, University of Wyoming. *Humboldt's 1807 essay on the geography of plants: The roots of global ecology and biogeography*.

1:50 PM OOS 5-2 Slack, NG, The Sage Colleges. *G. Evelyn Hutchinson, ecosystem ecologist and passionate environmentalist*.

2:10 PM OOS 5-3 Huston, MA[1] and SL Flader[2], (1)Texas State University, (2)University of Missouri. *An ecological who-done-it: Aldo Leopold, William Albrecht, and/or Hans Jenny in Missouri (1930 – 1950)?*.

2:30 PM OOS 5-4 Aney, WW, Senior Wildlife Ecologist.

Realizing Aldo Leopold's conservation vision: Oregon wildlife management since 1930.

2:50 PM OOS 5-5 Mulroy, TW[1], EB Mullen[2], A Parikh[3], A Howald[4], JA Gill[5], LM Brown[1] and WR Ferren Jr.[6], (1) Science Applications International Corporation (SAIC), (2)MRS, (3)Flx, (4)Garcia and Associates, (5)Marcola Oregon, (6)Wayne R. Ferren & Associates. *Twenty years out and counting: Creation and monitoring of dune swale wetlands in coastal Central California*.

3:10 PM Break

3:20 PM OOS 5-6 Bean, BS, Lava Lake Land & Livestock, LLC. *The Lava Lake Protocol: An approach to sustainable grazing in the context of complex surface ownership and public land use regulation in the Northern Rockies*.

3:40 PM OOS 5-7 Reiners, WA[1], DS Reiners[2] and JA Lockwood[1], (1)University of Wyoming, (2)California Polytechnic State University. *Traits of a good ecologist: What do contemporary ecologists think?*.

4:00 PM OOS 5-8 Mulroy, JC, Denison University. *Why does understanding the history of ecology matter to our individual and collective futures?*.

OOS 6 - Linking Ecological Science and Public Policy: Case Studies In Latin America

A107, Oregon Convention Center

Organized by: RH Manson (robert.manson@inecol.edu.mx)

Moderator: RV Pouyat

This session, with a particular focus on Latin America, provides a series of case studies and concludes with a roundtable discussion on translating ecological knowledge into recommendations for improving public policies relevant to the conservation and sustainable use of ecosystems in human-dominated landscapes.

1:30 PM OOS 6-1 Ezcurra, E, University of California, Riverside. *Ecological science and the management of marine ecosystems: The case of the Sea of Cortez, Mexico*.

1:50 PM OOS 6-2 Manson, RH[1], S Graf Montero[2], S Cortina Segovia[2] and P Bauche Petersen[2], (1)Instituto de Ecología, A.C., (2)CONAFOR. *Lessons learned in linking science and policy in the development of payment programs for hydrological services in Mexico*.

2:10 PM OOS 6-3 Quesada, M[1], R Cruz[2], G Sanchez[2] and G Avila-Sakar[3], (1)Universidad Nacional Autónoma de México, (2)Universidad Nacional Autónoma de México,,, (3)Winnipeg. *Biosecurity and the potential effects of transgenic crops in centers of origin in Mexico*.

2:30 PM OOS 6-4 Armesto, JJ, MC Núñez-Ávila and MB Gallardo, Institute of Ecology and Biodiversity. *Linking land use change in south-central Chile and international trade agreements*.

2:50 PM OOS 6-5 Baumgarten, L[1] and J Touval[2], (1)The Nature Consevancy, (2)The Nature Conservancy. *Effects of biofuel production on land use change in Brazil*.

3:10 PM Break

3:20 PM OOS 6-6 Guadarama-Zugasti, C[1], L Trujillo Ortega[1] and RH Manson[2], (1)Universidad Autonoma de Chapingo, (2)Instituto de Ecología, A.C.. *Challenges and opportunities for ecological knowledge to promote sustainable management practices in coffee agroecosystems*.

3:40 PM OOS 6-7 Klink, C, International Finance Corporation. *The role of ecological knowledge in improving climate change policy: REDD and REDD+*.

4:00 PM OOS 6-8 Álvarez Sánchez, FJ[1], L Almeida[1], E Cantoral[2], J Carmona[1], S Castillo[1], J Cifuentes[2] and L León[2], (1)Universidad Nacional Autónoma de México, (2)Universidad Nacional Autonoma de México. *Linkages between ecosystem management and human communities in central Mexico*.

4:20 PM OOS 6-9 Paulson Priebe, ME, Portland State University. *Effects of monitoring and enforcement on harvesting behaviors in a Central American high-montane cloud forest*.

4:40 PM OOS 6-10 Grossman, JJ, University of Washington. *Smallholder Eucalyptus plantation forestry in Eastern Paraguay: A case study of silvicultural, economic, and environmental context*.

OOS 7 - Modeling At the Front Lines: Predicting Biodiversity Response to Disturbance and Change

B110, Oregon Convention Center

Organized by: SF Railsback (steven.railsback@humboldt.edu), J Giske, U Berger, V Grimm

Moderator: SF Railsback

This session will explore and illustrate the ways that biodiversity resources and management issues can be modeled, at levels from diversity among a population's individuals to diversity within populations, communities, and ecosystems.

1:30 PM OOS 7-1 DeAngelis, D, United States Geological Survey. *Modeling biodiversity response to disturbance and change: History, challenges, and successes*.

1:50 PM OOS 7-2 Harvey, BC[1] and SF Railsback[2], (1)U.S. Forest Service, (2)Humboldt State University. *Capturing the effects of minor environmental change on a stream fish population: Comparing models differing in the complexity of individual behavior*.

2:10 PM OOS 7-3 Belarde, T, Humboldt State University. *Diversity and disturbance: Modeling how exotic species affect juvenile pikeminnow response to river flow fluctuations*.

2:30 PM OOS 7-4 Giske, J, University of Bergen. *The post-optimal animal: A psychological model of individual variation in a population*.

2:50 PM OOS 7-5 Johst, K[1], M Mewes[2], A Sturm[3], M Drechsler[1] and F Wätzold[4], (1)Helmholtz Centre for Environmental Research—UFZ, (2)Helmholtz Centre for Environmental Research - UFZ, (3)Freie Universität Berlin, (4) Brandenburg Technical University. *Modelling the impact of timing of land use on biodiversity conservation for the decision support software 'Ecopay'*.

3:10 PM Break

3:20 PM OOS 7-6 Lin, Y[1], U Berger[1], V Grimm[2] and Q Ji[3], (1)Institute of Forest Growth and Computer Science, Dresden University of Technology, (2)UFZ, Helmholtz Centre for Ecological Research - UFZ, (3)Institute of Hydrobiology, Dresden University of Technology. *Functional equivalence versus functional diversity: Is there a minimum dimensionality for characterizing forests to a reasonable level of realism?*.

3:40 PM OOS 7-7 Yospin, GI[1], SD Bridgham[2], RP Neilson[3], JP Bolte[4], DM Bachelet[5], PJ Gould[6], CA Harrington[6], JA Kertis[7], J Merzenich[7], C Evers[2] and BR Johnson[2], (1)Montana State University, (2)University of Oregon, (3)Oregon State University (Courtesy), (4)Oregon State University, (5)Conservation Biology Institute, (6)USDA Forest Service, Pacific Northwest Research Station, (7) USDA Forest Service. *Projections of climate change impacts on forest succession for local land management using a new vegetation model, CV-STM*.

4:00 PM OOS 7-8 Mayor, SJ, JF Cahill Jr., S Boutin and F He, University of Alberta. *Human landscape disturbance outweighs local disturbance in predicting boreal*

biodiversity.

4:20 PM OOS 7-9 Hof, C, Biodiversity and Climate Research Centre (BiK-F) & Senckenberg Gesellschaft für Naturforschung. *Habitats, dispersal, and multiple threats: Challenges for biodiversity under global change*.

4:40 PM OOS 7-10 Grimm, V, UFZ, Helmholtz Centre for Ecological Research - UFZ. *Simple models of complex systems: The paradox of modeling biodiversity*.

COS 1 - Aquatic Ecology: Streams And Rivers I

A103, Oregon Convention Center

1:30 PM COS 1-1 Henspeter, TA[1] and SM Galatowitsch[2], (1) University of Minnesota-Twin Cities, (2)University of Minnesota. *Vegetative dispersal in riparian vegetation: Processes and impacts in braided rivers*.

1:50 PM COS 1-2 McGrath, CC[1], EE Rosenberger[1], JH McCutchan Jr.[2] and RD Bjork[1], (1)USDA Forest Service, (2)University of Colorado. *Effects of reservoir operations on aquatic macroinvertebrate community composition and production in the Deadwood River, Idaho*.

2:10 PM COS 1-3 McKnight, DM, LF Stanish, DR Nemergut and J Cullis, University of Colorado. *Climate change and microbial mats in Antarctic meltwater streams: Modeling the scouring of mats by flood pulses*.

2:30 PM COS 1-4 Brunell, MS[1], GM Litton[1], NWT Quinn[2] and WT Stringfellow[1], (1)University of the Pacific, (2) Lawrence Berkeley National Laboratory. *Variable flow effects on phyto- and zooplankton at the river-estuary transition in the San Joaquin River, CA*.

2:50 PM COS 1-5 Pongruktham, O and CA Ochs, University of Mississippi. *Relationships of hydrologic connection with the river on physicochemical properties and phytoplankton dynamics of backwaters in the Lower Mississippi River floodplain*.

3:10 PM Break

3:20 PM COS 1-6 Meier, OW and C Johanson, Western Kentucky University. *Modeling riparian buffer restoration impacts on water quality in the upper Green River watershed of Kentucky and Tennessee*.

3:40 PM COS 1-7 Beakes, MP and JW Moore, Simon Fraser University. *Evaluating the impacts of wildfire on California coastal stream food webs*.

4:00 PM COS 1-8 Cervantes-Yoshida, KM[1], RA Leidy[2] and S Carlson[1], (1)University of California, Berkeley, (2)U.S. Environmental Protection Agency. *Does watershed land use influence freshwater fish assemblages in San Francisco Bay Area streams?*.

4:20 PM COS 1-9 Olafsson, J[1], GV Ingimundardottir[2], I Hansen[1], RT Magnusdottir[1] and SG Sigurdardottir[3], (1) Institute of Freshwater Fisheries, (2)Icelandic Institue of Natural History, (3)North East Iceland Nature Center. *Geothermal stream ecosystems in a changing world*.

4:40 PM COS 1-10 Hartson, RB, BP Kennedy and KM Myrvold, University of Idaho. *Patterns and drivers of juvenile steelhead survival throughout a stream network*.

COS 2 - Biodiversity: Effects Of Global Change I

B112, Oregon Convention Center

1:30 PM COS 2-1 Del Toro, I, University of Massachusetts at Amherst. *Biogeographic responses of ant species and communities to regional climate change*.

1:50 PM COS 2-2 Clavel, J[1], R Julliard[2], S Pavoine[2] and E Porcher[2], (1)Muséum National d'Histoire Naturelle - ONEMA, (2)Muséum National d'Histoire Naturelle. *The relevance of community approaches to assess the state of biodiversity: A case study in French river fish communities*.

2:10 PM COS 2-3 Lortie, C[1], RM Callaway[2], B Butterfield[3], R Michalet[4], RW Brooker[5], FI Pugnaire[6] and L Cavieres[7], (1)York University, (2)University of Montana, (3) Northern Arizona University, (4)BIOGECO laboratory, (5)The Macaulay Institute, (6)Consejo Superior de Investigaciones Científicas, (7)Universidad de Concepción. *Think locally, act globally: An inter-continential analysis of Silene acaulis cushion plants on other plant species*.

2:30 PM COS 2-4 Massey, A, University of Michigan. *Long-term wildlife and climate trends in Aberdare National Park, Kenya*.

2:50 PM COS 2-5 Hilber, SE, AK Barner, CE Benkwitt, KS Boersma, EB Cerny-Chipman, KE Ingeman, TL Kindinger, JD Lee, AJ Lindsley, JN Reimer, JC Rowe, C Shen, KA Thompson, LL Thurman and SS Heppell, Oregon State University. *Spatiotemporal trends in marine biodiversity in the Northeast Pacific: Linking patterns to climate and fisheries management*.

3:10 PM Break

3:20 PM COS 2-6 MacDougall, AS, University of Guelph. *Beyond complementarity: Multi-factor effects of native richness underlie the invasion paradox*.

3:40 PM COS 2-7 Moulton, LL[1] and R Vallender[2], (1)University of Manitoba, (2)Environment Canada. *Evidence of genetic introgression found in the last remaining "pure" population of Golden-winged Warblers*.

4:00 PM COS 2-8 Isbell, FI, D Tilman, S Polasky and S Binder, University of Minnesota. *Hysteresis indicates critical transition from diverse to depauperate grasslands*.

4:20 PM COS 2-9 Zhu, K, S Ghosh, AE Gelfand and JS Clark, Duke University. *Ontogenetic niche shifts in eastern U.S. trees*.

4:40 PM COS 2-10 Mariotte, P[1], C Vandenberghe[1], F Hagedorn[2] and A Buttler[1], (1)Ecole Polytechnique Fédérale de Lausanne & Swiss Federal Institute of Forest, Snow and Landscape Research (WSL), Lausanne, (2)Swiss Federal Institute of Forest, Snow and Landscape Research (WSL). *Subordinate plant species enhance community insurance to drought in semi-natural grasslands*.

COS 3 - Biogeochemistry: Linking Community Structure And Ecosystem Function I

B114, Oregon Convention Center

1:30 PM COS 3-1 Alvarez-Clare, S and M Mack, University of Florida. *Biological processes influencing nutrient limitation in a Costa Rican lowland tropical forest*.

1:50 PM COS 3-2 Brown, NR, U Norton, E Pendall, BE Ewers and B Borkhuu, University of Wyoming. *High levels of soil and litter nitrogen contents after bark beetle-induced lodgepole pine mortality*.

2:10 PM COS 3-3 Rousk, J, Lund University. *Fungal and bacterial growth responses to drought and drying-rewetting cycles*.

2:30 PM COS 3-4 Zamin, TJ and P Grogan, Queen's University. *Caribou and reindeer herbivory may help mitigate climate change impacts in arctic tundra*.

2:50 PM COS 3-5 Waring, BG[1] and C Hawkes[2], (1)University of Texas at Austin, (2)University of Texas, Austin. *Microbial responses to an imposed gradient of water availability in wet tropical forest soils*.

3:10 PM Break

3:20 PM COS 3-6 Kivlin, SN and KK Treseder, University of California, Irvine. *Phylogenetic relatedness of saprotrophic fungal communities affects decomposition rates*.

3:40 PM COS 3-7 Preston, M[1], KA Smemo[2], JW McLaughlin[3] and N Basiliko[4], (1)Univrsity of Toronto, (2)The Holden Arboretum, (3)Ontario Ministry of Natural Resources, (4)University of Toronto at Mississauga. *Microbial community structure and decomposition processes in peat soils of the James Bay Lowlands, Canada*.

4:00 PM COS 3-8 Hammill, E, T Atwood and DS Srivastava, University of British Columbia. *Trait-mediated effect of predators at the community and ecosystem level*.

4:20 PM COS 3-9 Atwood, T, E Hammill, DS Srivastava and JS Richardson, University of British Columbia. *Predator diversity and functional traits influence community structure and ecosystem processes*.

4:40 PM COS 3-10 Holtgrieve, GW[1], MT Brett[1], N So[2] and P Chheng[2], (1)University of Washington, (2)Inland Fisheries Research and Development Institute. *The importance of biogenic methane for fishery productivity in Tonle Sap Lake, Cambodia*.

COS 4 - Biogeochemistry: New Paradigms In Biogeochem Cycling

B115, Oregon Convention Center

1:30 PM COS 4-1 Menge, DNL[1], AA Wolf[2] and JL Funk[3], (1) Princeton University/Stanford University, (2)University of California Santa Cruz, (3)Chapman University/Stanford University. *Experimental evidence for over-fixation in temperate nitrogen fixing legume species*.

1:50 PM COS 4-2 Burkepile, DE[1], JE Allgeier[2], A Shantz[1], C Pritchard[1], N Lemoine[1], L Bhatti[1] and CA Layman[1], (1) Florida International University, (2)University of Georgia. *Nutrient supply from fishes impacts phase shifts in a Caribbean coral reef ecosystem*.

2:10 PM COS 4-3 Perakis, S[1], J Matkins[2] and DE Hibbs[3], (1) US Geological Survey, (2)Sagebrush Steppe Regional Landtrust, (3)Department of Forest Ecosystems and Society. *High nitrogen slows decomposition of lignin-rich litter: Interactive effects of tissue and fertilizer nitrogen*.

2:30 PM COS 4-4 Gei, MG and JS Powers, University of Minnesota. *Effects of nutrient and light availability on nitrogen fixation in tropical dry forest legume seedlings*.

2:50 PM COS 4-5 Silver, WL[1], D Liptzin[2] and M Almarez[1], (1) University of California, Berkeley, (2)UC - Berkeley. *Controls on long-term patterns in soil oxygen availability in upland humid tropical forests*.

3:10 PM Break

3:20 PM COS 4-6 Fortner, AM[1], JJ Mosher[2], AJ Stewart[3], JR Phillips[4], PJ Mulholland[4] and MS Bevelhimer[4], (1) ARCADIS-US, (2)Stroud Water Research Center, (3) Xcel Engineering Inc., (4)Oak Ridge National Laboratory. *Spatial-temporal characterization of carbon dioxide and methane emissions from four electric power-producing reservoirs in the southeastern U.S.*.

3:40 PM COS 4-7 Lewis, DB[1], KL Jimenez[1], A Abd-Elrahman[2], MG Andreu[2], RJ Northrop[2], N Anne[2] and CA Cheatham Rhodes[2], (1)University of South Florida, (2)University of Florida. *Nitrogen immobilization in soil as a function of soil and plant traits in salt marsh and mangrove ecosystems: A test of the rapid N stabilization hypothesis*.

4:00 PM COS 4-8 Brookshire, J[1] and SA Thomas[2], (1) Montana State University, (2)University of Nebraska-Lincoln. *Tree functional traits organize hydrological and biogeochemical dynamics in tropical rainforest*.

4:20 PM COS 4-9 Moorhead, DL[1], RL Sinsabaugh[2] and G Lashermes[3], (1)University of Toledo, (2)University of New Mexico, (3)Institut National de la Recherche Agronomique. *Modeling interacting microbial and litter quality constraints on decomposition: The intersection of metabolic, stoichiometric and ecoenzymatic theories*.

4:40 PM COS 4-10 Rich, J[1], L Brin[1], A Hardison[1], M Nelson[1], J Tucker[2] and AE Giblin[2], (1)Brown University, (2) Marine Biological Laboratory. *Resolving the aquatic nitrogen cycle: Benthic anaerobic ammonium oxidation (anammox) in coastal Rhode Island*.

COS 5 - Climate Change: Ranges And Phenology I

F149, Oregon Convention Center

1:30 PM COS 5-1 Pinsky, ML[1], MJ Fogarty[2], B Worm[3], JL Sarmiento[1] and SA Levin[1], (1)Princeton University, (2) NOAA NMFS Northeast Fisheries Science Center, (3) Dalhousie University. *Range shifts in marine species: Testing ecological hypotheses against four decades of observations*.

1:50 PM COS 5-2 Jones, LC[1], S Schwinning[1] and TC Esque[2], (1)Texas State University, (2)US Geological Survey, Westen Ecological Science Center. *How low can you go? Soil depth gradients contribute to the elevational creosotebush-to-blackbrush transition in the Mojave Desert*.

2:10 PM COS 5-3 Steel, EA[1], A Tillotson[2], DA Larsen[2], AH Fullerton[2], KP Denton[2] and BR Beckman[2], (1)USFS PNW Research Station, (2)Northwest Fisheries Science Center. *Beyond the mean: The importance of variability in predicting ecological impacts of stream thermal regimes*.

2:30 PM COS 5-4 Nagy, L, University of Bayreuth. *Recurring weather extremes alter the flowering phenology of two common temperate shrubs*.

2:50 PM COS 5-5 Petry, WK[1], AM McKinney[2], DW Inouye[2], KA Mooney[1] and JD Soule[3], (1)University of California at Irvine, (2)University of Maryland, (3)Rocky Mountain Biological Laboratory. *Warming up to changing trait frequencies: Rapid, climate change-induced shifts in population sex ratios along an elevation gradient*.

3:10 PM Break

3:20 PM COS 5-6 Gould, PJ and CA Harrington, USDA Forest Service, Pacific Northwest Research Station. *Modeling budburst in Coast Douglas-fir based on winter temperature and genotype*.

3:40 PM COS 5-7 Post, AR, Virginia Tech. *Lesser Celandine (Ranunculus ficaria) flowering phenology shifts since introduction to the United States*.

4:00 PM COS 5-8 Breed, GA[1], S Stichter[2] and EE Crone[1], (1) Harvard University, (2)Massachusetts Butterfly Club. *Citizen scientist data suggest widespread climate driven changes in North American butterfly communities*.

4:20 PM COS 5-9 CaraDonna, PJ[1], AM McKinney[2], DW Inouye[2], B Barr[3], CD Bertelsen[1] and NM Waser[4], (1) University of Arizona, (2)University of Maryland, (3)Rocky Mtn. Biological Laboratory, (4)University of California, Riverside. *Asynchronous changes in phenology of migrating Broad-tailed Hummingbirds and their early-season nectar resources*.

4:40 PM COS 5-10 Pfeifer-Meister, L, SD Bridgham, T Tomaszewski, ME Goklany, LL Reynolds, CJ Little and BR Johnson, University of Oregon. *Pushing limits: Altered temperature and precipitation differentially affect plant species inside and beyond their current ranges*.

COS 6 - Community Assembly And Neutral Theory I

F150, Oregon Convention Center

1:30 PM COS 6-1 Fukumori, K, G Livingston and MA Leibold, University of Texas at Austin. *Colonization-extinction dynamics in protist metacommunities*.

1:50 PM COS 6-2 Gavish, Y[1] and Y Ziv[2], (1)Ben-Gurion University of the Negev, (2)Ben-Gurion University. *Occupancy-based null-model for species area relationship*.

2:10 PM COS 6-3 Chagnon, PL[1], RL Bradley[1], J Klironomos[2] and H Maherali[3], (1)Université de Sherbrooke, (2) University of British Columbia, (3)University of Guelph. *The grimy side of Grime's CSR theory: How we can use life history strategy to better understand mycorrhizal ecology*.

2:30 PM COS 6-4 Greig, HS[1], SA Wissinger[2] and R Death[3], (1)University of Canterbury, (2)Allegheny College, (3) Massey University. *Biogeographic variation in species turnover across environmental gradients: A meta-analysis of wetland invertebrate communities*.

2:50 PM COS 6-5 Altermatt, F and M Seymour, Eawag: Swiss Federal Institute of Aquatic Science and Technology. *Dispersal limitation and habitat connectivity drive patterns of genetic and species diversity of invertebrate metacommunities in river systems*.

3:10 PM Break

3:20 PM COS 6-6 Farjalla, VF[1], DS Srivastava[2], NA Marino[1], FD Azevedo[1], V Dib[1], PL Marinho[3], AS Rosado[1], RL Bozelli[4] and FA Esteves[3], (1)University Federal of Rio de Janeiro, (2)University of British Columbia, (3)Federal University of Rio de Janeiro, (4)Universidade Federal do Rio de Janeiro. *Ecological determinism increases with organism size*.

3:40 PM COS 6-7 Beaudrot, L[1], M Rejmánek[2] and AJ Marshall[1], (1)University of California-Davis, (2)University of California, Davis. *The co-assembly of tropical plant communities and their vertebrate seed dispersers*.

4:00 PM COS 6-8 David, AS[1], SM Emery[2], G May[1], JA Rudgers[3] and EW Seabloom[1], (1)University of Minnesota, (2) University of Louisville, (3)Rice University. *Assembly of endosymbiont communities shaped by within-host species interactions*.

4:20 PM COS 6-9 Silvertown, J and Y Araya, The Open University. *Experimental investigation of the origin of fynbos plant community structure after fire*.

4:40 PM COS 6-10 Nelis, LC[1], J Ladau[2], NJ Sanders[3], K Fitzgerald[1], NE Heller[4], JS Appel[5] and DM Gordon[1], (1) Stanford University, (2)Gladstone Institutes, (3)University of Tennessee, (4)Duke University, (5)San Francisco Public Utilities Commission. *The impact of the invasive Argentine ant (Linepithema humile) on association network structure of native ant species in Northern California*.

COS 7 - Community Pattern And Dynamics I

F151, Oregon Convention Center

1:30 PM COS 7-1 Nelson, BJ and RD Stevens, Louisiana State University. *Testing links between species traits, phylogeny and environment in a Mojave Desert rodent metacommunity*.

1:50 PM COS 7-2 Chapman, JI and RW McEwan, University of Dayton. *Beta diversity dynamics across topographic gradients in the herbaceous layer of an old-growth deciduous forest*.

2:10 PM COS 7-3 Moran, ER[1] and JM Chase[2], (1)Washington University, (2)Washington University in St Louis. *Null models reveal the relationship between local and regional diversity and stability in pond metacommunities*.

2:30 PM COS 7-4 Bissett, SN and DR Young, Virginia Commonwealth University. *Coastal Vines: Untangling a web of ecosystem interactions*.

2:50 PM COS 7-5 Rozendaal, DMA and RK Kobe, Michigan State University. *Canopy defoliation by forest tent caterpillar influences mature tree growth in a northern hardwood forest*.

3:10 PM Break

3:20 PM COS 7-6 Grman, E and LA Brudvig, Michigan State University. *Stochastic processes, not species sorting, drive positive effects of species pool richness on beta diversity in prairie restorations*.

3:40 PM COS 7-7 Rodríguez-González, PM[1], RH Silva[2], PR Peres-Neto[2] and A Albuquerque[1], (1)School of Agronomy. Technical University of Lisbon, (2)University of Quebec at Montreal. *Phylogenetic and trait structure along an environmental and canopy gradient in understory communities of a southern European wetland forest*.

4:00 PM COS 7-8 Scheffers, BR[1], WF Laurance[2], SE Williams[3], RT Corlett[1], A Diesmos[4] and NS Sodhi[1], (1)National University of Singapore, (2)Smithsonian Institution/INPA, (3)James Cook University, (4)National Museum of the Philippines. *Arboreal habitat use by amphibians and reptiles in lowland and montane rainforests of Southeast Asia*.

4:20 PM COS 7-9 Eby, S[1], MD Smith[1], AK Knapp[2], SL Collins[3], N Govender[4], K Kirkman[5], RWS Fynn[6], DE Burkepile[7], N Hagenah[8], K Matchett[5], D Thomson[9], SE Koerner[3], K Wilcox[2] and CE Burns[10], (1)Yale University, (2) Colorado State University, (3)University of New Mexico, (4)Scientific Service Kruger National Park, (5)University of KwaZulu-Natal, (6)University of Botswana, (7)Florida International University, (8)University of Kwazulu-Natal, (9)SAEON, (10)The Nature Conservancy. *Grazing and fire have differing impacts on plant communities in North American and South African savanna grasslands*.

4:40 PM COS 7-10 Trexler, JC, AC Shideler, E Gaiser and FC Tobias, Florida International University. *Modeling an interaction web with stage-structured variables: Do they improve fit?*.

COS 8 - Conservation Ecology

D136, Oregon Convention Center

1:30 PM COS 8-1 Wootton, JT and CA Pfister, University of Chicago. *Experimental separation of genetic and demographic factors on extinction risk in free-living populations of an exploited species*.

1:50 PM COS 8-2 Schultz, CB[1], C LaBar[1], M Collins[2], E Materna[2] and J Beall[3], (1)Washington State University Vancouver, (2)US Fish and Wildlife Service, Oregon Field Office, (3)US Fish and Wildlife Service, Willamette Valley Refuges. *Field investigations of grass-specific herbicides on at-risk butterflies: Demography and behavior in Pacific Northwest Prairies*.

2:10 PM COS 8-3 Bonebrake, TC[1], AD Syphard[2], HM Regan[1], J Franklin[3] and KE Anderson[4], (1)University of California, (2)Conservation Biology Institute, (3)Arizona State University, (4)University of California, Riverside. *Land conservation and reintroduction strategies alleviate urbanization and climate change impacts on a rare shrub species*.

2:30 PM COS 8-4 Hicks, TL[1] and CB Schultz[2], (1)Washington State University - Vancouver, (2)Washington State University Vancouver. *Applying captive ecotoxicological studies using surrogates to managing at-risk species in the field*.

2:50 PM COS 8-5 McCarthy, MA[1], AL Moore[1], J Krauss[2] and JW Morgan[3], (1)The University of Melbourne, (2) University of Würzburg, (3)La Trobe University. *Indices of*

population viability.

3:10 PM Break

3:20 PM COS 8-6 Goldstein, MC, M Rosenberg and L Cheng, Scripps Institution of Oceanography, University of California San Diego. *Increased abundance and ecological implications of plastic microdebris in the North Pacific Subtropical Gyre*.

3:40 PM COS 8-7 Stanton, JC, Stony Brook University. *Reconstructing the decline and extinction of the passenger pigeon in a spatially explicit and temporally dynamic modeling framework*.

4:00 PM COS 8-8 Meek, MH[1], MR Stephens[1], MR Baerwald[1], KM Tomalty[1] and B May[2], (1)University of California-Davis, (2)University of California- Davis. *Conservation genetics of Chinook salmon in the Central Valley, CA and implications for the reintroduction of a currently extinct population*.

4:20 PM COS 8-9 Wonkka, CL[1], WE Rogers[1], D Twidwell[2], FE Smeins[1] and M Fujiwara[1], (1)Texas A&M University, (2) Oklahoma State University. *Exploring population level herbivore effects on an endangered terrestrial orchid*.

4:40 PM COS 8-10 Bliss-Ketchum, LL[1], CE de Rivera[1] and K Rappold[2], (1)Portland State University, (2)City of Wilsonville. *Road undercrossing use across structure sizes by a Pacific Northwest wildlife community*.

COS 9 - Conservation Management I

D137, Oregon Convention Center

1:30 PM COS 9-1 Campbell, SP, RJ Steidl and ER Zylstra, University of Arizona. *A spatially-explicit population viability analysis for the desert tortoise*.

1:50 PM COS 9-2 Theiss, KE and KE Holsinger, University of Connecticut. *Threats to persistence of the rare orchid Erasanthe henrici in Madagascar*.

2:10 PM COS 9-3 Awkerman, JA[1], NH Schumaker[1], RS Lunetta[1] and WA Gould[2], (1)US EPA, (2)International Institute of Tropical Forestry. *Evaluating relative impacts of habitat loss and invasive species on an endemic songbird species to guide sustainable management decisions*.

2:30 PM COS 9-4 Romito, A[1], M Conroy[1], JT Peterson[2] and NP Nibbelink[1], (1)University of Georgia, (2)USGS, Oregon Cooperative Fish and Wildlife Research Unit. *Using decision models to assist Vital Signs Monitoring in National Parks: A prototype using sea otters (Enhydra lutris kenyoni) in coastal Alaska*.

2:50 PM COS 9-5 Bakker, VJ[1], L Caldwell[2], S Sillett[3] and SA Morrison[4], (1)James Madison University, (2)Colorado State University, (3)Smithsonian Conservation Biology Institute, (4)The Nature Conservancy. *Population viability of an island endemic bird facing climate-related threats* .

3:10 PM Break

3:20 PM COS 9-6 McGilliard, CR, School of Aquatic and Fishery Sciences, University of Washington. *Modeling the potential impacts of maternal age on recruitment variability: an exploration of two hypothesized portfolio effects*.

3:40 PM COS 9-7 Roberts, LJ and R Burnett, PRBO Conservation Science. *Multi-species hierarchical Bayesian occupancy models for examining avian community responses to Sierra Nevada National Forest management*.

4:00 PM COS 9-8 Catano, CP, JJ Angelo and IJ Stout, University of Central Florida. *Enhancing models of species-habitat relationships with lidar remote sensing: A case study estimating the probability of burrow abandonment by the threatened gopher tortoise (Gopherus polyphemus)*.

4:20 PM COS 9-9 Wiederholt, RP and L Lopez-Hoffman, University of Arizona. *Moving across the border: A conservation modeling approach for migratory bat populations*.

4:40 PM COS 9-10 Ramage, B[1], D Sheil[2], H Salim[3] and MD Potts[1], (1)University of California--Berkeley, (2)Institute of Tropical Forest Conservation, (3)University of California, Berkeley. *Logging effects in tropical forests remain largely unknown due to a persistent methodological problem*.

COS 10 - Detritus And Decomposition

D138, Oregon Convention Center

1:30 PM COS 10-1 Caspersen, JP[1], P Rudz[1] and N Basiliko[2], (1)University of Toronto, (2)University of Toronto at Mississauga. *A stage-based model of carbon dynamics in downed woody debris*.

1:50 PM COS 10-2 Kallenbach, C and AS Grandy, University of New Hampshire. *Litter decomposition dynamics following land-use change are driven by land-use legacies*.

2:10 PM COS 10-3 Rudz, P[1], N Basiliko[2] and JP Caspersen[1], (1)University of Toronto, (2)University of Toronto at Mississauga. *Modeling nutrient accumulation and release in downed woody debris*.

2:30 PM COS 10-4 Goebel, M[1], B Bulaj[2], M Zadworny[3], J Mucha[3], J Oleksyn[4], SE Hobbie[5], PB Reich[5] and DM Eissenstat[1], (1)Pennsylvania State University, (2) August Cieszkowski Agricultural University of Poznan, (3)Polish Academy of Sciences, (4)Polish Academy of Sciences, Institute of Dendrology, (5)University of Minnesota. *Studying root decomposition in situ using the minirhizotron approach*.

2:50 PM COS 10-5 Kurth, VJ[1], CA Gehring[1], PZ Fule[1] and SC Hart[2], (1)Northern Arizona University, (2)University of California, Merced. *Post-fire nitrogen translocation by wood-decaying fungi in southwestern ponderosa pine forests*.

3:10 PM Break

3:20 PM COS 10-6 Evans-White, MA[1], C Prater[1], EE Scott[1], EJ Norman[1], JT Scott[1], SA Entrekin[2], C Fuller[2] and HM Halvorson[1], (1)University of Arkansas, (2)University of Central Arkansas. *Effects of phosphorus enrichment on detritus and detritivores in Ozark streams*.

3:40 PM COS 10-7 Scott, EE[1], BC Baker[1], C Prater[2], M Evans-White[1] and JT Scott[1], (1)University of Arkansas, (2)Trent University. *Phosphorus availability and leaf type affect litter stoichiometry and decomposition*.

4:00 PM COS 10-8 Austin, EE[1], CW Schadt[2] and A Classen[1], (1)The University of Tennessee, (2)Oak Ridge National Laboratory. *Wood decomposing fungal community structure and function differ across decay stages of wood, but respond similarly to temperature*.

4:20 PM COS 10-9 Clay, NA and M Kaspari, University of Oklahoma. *Nutrients more than predators alter decomposition and invertebrate communities in tropical brown food web mesocosms*.

4:40 PM COS 10-10 Tejo, CF[1], D Greaves[1], D Zabowski[1] and NM Nadkarni[2], (1)University of Washington, (2)University of Utah. *Decomposition rates in the canopy and forest floor in an old-growth coastal temperate forest in Washington*.

COS 11 - Ecosystem Function: Biodiversity I

D139, Oregon Convention Center

1:30 PM COS 11-1 Hanley, TC, LM Puth, JP DeLong and DM Post, Yale University. *The effects of Daphnia genotypic*

richness and phenotypic dissimilarity on consumer-resource dynamics and ecosystem function.

1:50 PM COS 11-2 Abbott, JM[1], JJ Stachowicz[2] and AR Hughes[3], (1)University California, Davis, (2)University of California, Davis, (3)Florida State University. *The role of genetic relatedness and trait similarity in the outcome of pairwise interactions between genotypes of eelgrass (Zostera marina)*.

2:10 PM COS 11-3 White, HM[1], RF Long[1], K Velas[2], WL Rockey[3], AP Rayburn[4] and R Kelsey[2], (1)University of California Cooperative Extension, (2)Audubon California, (3)University of California-Davis, (4)University of California, Davis. *Avian use of hedgerows and adjacent crops in Central California agricultural landscapes*.

2:30 PM COS 11-4 Snyder, WE[1], D Crowder[1], TD Northfield[2] and R Gomulkiewicz[1], (1)Washington State University, (2)University of Wisconsin. *Conserving and promoting evenness: Organic farming and fire-based wildland management as case studies*.

2:50 PM COS 11-5 Hedin, LO, Princeton University. *Do we need individual organisms in ecosystem models?*.

3:10 PM Break

3:20 PM COS 11-6 Keitzer, SC[1] and RR Goforth[2], (1)Purdue University, (2)Purdue Universtiy. *Effects of consumer species richness and functional diversity on stream ecosystem processes*.

3:40 PM COS 11-7 Bracken, MES, JG Douglass and GC Trussell, Northeastern University. *Changes in the functional consequences of biodiversity loss along a latitudinal gradient*.

4:00 PM COS 11-8 Baruffol, M[1], PA Niklaus[1], C Xiulian[2], T Zhiyao[2] and B Schmid[1], (1)University of Zurich, (2)Peking University. *Tree species richness enhances stand growth in south-east Asian subtropical secondary forests*.

4:20 PM COS 11-9 Herr, JR, Penn State University. *Diversity of soil fungi associated with differing monoculture forest types measured by next-generation pyrosequencing*.

COS 12 - Education: Pedagogy

E141, Oregon Convention Center

1:30 PM COS 12-1 Hunsicker, ME[1], L Ciannelli[1], JM Anderies[2], KM Bailey[3], P Chigbu[4], C Finley[1], K Frank[5], C Leach[6] and C Webb[6], (1)Oregon State University, (2)Arizona State University, (3)National Oceanic and Atmospheric Administration, (4)University of Maryland Eastern Shore, (5)Department of Fisheries and Oceans, (6)Colorado State University. *Multidisciplinary higher education is critical for marine ecosystem sustainability*.

1:50 PM COS 12-2 Rogers, J, St. Lawrence University. *Teaching Foundations of Ecology to Freshmen – An evolving student-led discussion approach*.

2:10 PM COS 12-3 Williams, KS[1], SD Bush[2], NJ Pelaez[3], JA Rudd II[4], MT Stevens[5] and KD Tanner[6], (1)San Diego State University, (2)California Polytechnic State University San Luis Obispo, (3)Purdue University, (4)California State University Los Angeles, (5)Utah Valley University, (6)San Francisco State University. *National study of Science Faculty with Education Specialties (SFES) in the US*.

2:30 PM COS 12-4 Stehlik, I, University of Toronto at Scarborough. *Bringing biology to life: Introducing students to the tree of life with a self-guided learning circuit*.

2:50 PM COS 12-5 Paradise, CJ, AM Campbell, LJ Heyer, P Sellers and M Barsoum, Davidson College. *Improving critical thinking in introductory college biology courses*.

3:10 PM Break

3:20 PM COS 12-6 Harsh, JA and M Schmitt-Harsh, Indiana University. *The development and implementation of an inquiry-based poster project on sustainability in a large non-majors environmental science course*.

3:40 PM COS 12-7 Grant, BW, Widener University. *Pedagogy for the rest: Improving ecological literacy through a student-centered problem-based non-majors environmental science course*.

4:00 PM COS 12-8 Berkowitz, AR[1], RC Jordan[2], A Alvarado[3], SA Gray[4] and JR DeLisi[5], (1)Cary Institute of Ecosystem Studies, (2)Rutgers University, (3)Cary Institute or Ecosystem Studies, (4)University of Hawaii, (5) Educational Development Center, Inc.. *Why and how should high school students learn about the ecology-nature of science?* .

4:20 PM COS 12-9 Baker, GA and SL Kiser, Lane Community College. *Data literacy focus to move students to apprentice scientists: Incorporating authentic research into introductory biology from DNA to phenology*.

4:40 PM COS 12-10 Ting, TF, University of Illinois at Springfield. *Systems thinking and ecosystem management: A pedagogical approach*.

COS 13 - Evolution: Selection And Adaptation I

E142, Oregon Convention Center

1:30 PM COS 13-1 Lindh, B, Willamette University. *Cost of reproduction in a gender-switching forest understory herb, Coptis laciniata*.

1:50 PM COS 13-2 Felker-Quinn, E[1], JA Schweitzer[1] and JK Bailey[2], (1)University of Tennessee - Knoxville, (2) University of Tennessee, Knoxville. *Meta-analysis of EICA hypothesis finds no trade-off between plant defense and competitive ability*.

2:10 PM COS 13-3 Talluto, MV and CW Benkman, University of Wyoming. *Effects of natural selection from seed predation on serotiny: The role of red squirrels in determining forest structure in lodgepole pine*.

2:30 PM COS 13-4 Kovach, RP[1], AJ Gharrett[1], JE Joyce[2] and D Tallmon[3], (1)University of Alaska Fairbanks, (2)NOAA, (3)University of Alaska Southeast. *Changes in salmon migration timing: Potential role of microevolution*.

2:50 PM COS 13-5 Johnson, L[1], M Gray[1], H Tetreault[1], K Garrett[1], E Akhunov[1], P St Amand[1], N Bello[1], J Bryant[1], N An[1], BR Maricle[2], J Olsen[2], SG Baer[3], RK Goad[4], A De La Cruz[5], T Morgan[1] and M Knapp[1], (1)Kansas State University, (2)Fort Hays State University, (3) Southern Illinois University, (4)Southern Illinois University Carbondale, (5)Universidad Central del Caribe. *Ecotypic variation in drought tolerance and genetic diversity of the ecologically dominant grass big bluestem (Andropogon gerardii) across the Great Plains precipitation gradient*.

3:10 PM Break

3:20 PM COS 13-6 Christie, MR[1], ML Marine[1], RA French[2] and MS Blouin[1], (1)Oregon State University, (2)Oregon Department of Fish and Wildlife. *Genetic adaptation to novel environments can occur on ecological timescales*.

3:40 PM COS 13-7 Rivera, RJ[1], K Skogen[2] and J Fant[3], (1) Northwestern University, (2)Chicago Botanic Garden, (3)Northwestern University & Chicago Botanic Garden. *Quantitative genetics in a fragmented landscape, a study of heritable floral traits in Oenothera harringtonii*.

4:00 PM COS 13-8 Heger, T[1], J Kollmann[1], A Givmanesh[2], AM Latimer[2] and K Rice[2], (1)Technische Universitaet Muenchen, (2)University of California, Davis. *Effects of past and present competition on evolutionary potential*

and adaptation in the colonizing plant, Erodium cicutarium.

4:20 PM COS 13-9 Touchton, JM[1] and M Wikelski[2], (1)Max Planck Institute for Ornithology, (2)Max Plank Institute for Ornithology. *Species loss results in territorial breakdown and emergence of alternative phenotypes in ant-following birds*.

4:40 PM COS 13-10 Kim, E[1] and K Donohue[2], (1)University of South Carolina, (2)Duke University. *Local adaptation of Erysimum capitatum across altitudes: Implications for responses to climate change*.

COS 14 - Forest Habitats: Temperate I

E143, Oregon Convention Center

1:30 PM COS 14-1 Hane, ME[1], AJ Kroll[2], JR Johnson[1], M Rochelle[1] and EB Arnett[3], (1)Weyerhaeuser, (2) Weyerhaeuser Company, (3)Bat Conservation International. *Experimental effects of structural enrichment on avian nest survival*.

1:50 PM COS 14-2 Randolph, KC, U.S. Forest Service. *General ecology of Juglans nigra L. and potential effects of thousand cankers disease in the eastern United States*.

2:10 PM COS 14-3 Kroll, AJ[1], J Jones[1], J Giovanini[1], SD Duke[1], T Ellis[2] and MG Betts[2], (1)Weyerhaeuser NR, (2)Oregon State University. *Avian species richness in relation to forest management practices in early seral tree plantations*.

2:30 PM COS 14-4 Verschuyl, JP[1], AJ Kroll[2], J Giovanini[2], J Jones[2] and SD Duke[2], (1)National Council for Air and Stream Improvment, (2)Weyerhaeuser NR. *Does available energy influence avian response to key forest stand habitat features*.

2:50 PM COS 14-5 Sillett, SC, R Van Pelt, AL Carroll and RD Kramer, Humboldt State University. *Old-growth redwood forests I: Separating effects of tree size and age on trunk growth*.

3:10 PM Break

3:20 PM COS 14-6 Moser, B[1], S Richter[1], T Kipfer[1], J Ghazoul[2] and T Wohlgemuth[1], (1)Swiss Federal Research Institute for Forest, Snow and Landscape Research WSL, (2)ETH Zurich. *Low phenotypic plasticity of Mediterranean Pinus sylvestris seedlings questions the benefit of assisted colonization for forest persistence at the Central Alpine forest-steppe ecotone under climate change*.

3:40 PM COS 14-7 Spetich, MA[1], Z Fan[2], X Fan[3], HS He[3] and SR Shifley[4], (1)USDA Forest Service, (2)Mississippi State University, (3)University of Missouri, (4)Forest Service Northern Research Station. *Oak decline in the Ozark Highlands*.

4:00 PM COS 14-8 Acker, SA[1], JR Boetsch[1], MH Huff[2], M Bivin[3], L Whiteaker[2] and C Cole[4], (1)Olympic National Park, (2)North Coast and Cascades Monitoring Network, (3)North Cascades National Park, (4)Lewis and Clark National Historical Park. *Recent tree mortality in National Parks in western Washington*.

4:20 PM COS 14-9 Lucas, JD and T Lacourse, University of Victoria. *A 10,000 cal yr vegetation history of Douglas-fir forests on Pender Island, south-coastal British Columbia*.

4:40 PM COS 14-10 McBurney, KG[1], ET Cline[2] and GJ Ettl[1], (1) University of Washington, (2)University of Washington Tacoma. *Influence of soil moisture on Alnus rubra ectomycorrhizal fungal community distribution throughout a growing season*.

COS 15 - Invasion: Dynamics, Population Processes I

E144, Oregon Convention Center

1:30 PM COS 15-1 Relva, MA[1] and MA Nuñez[2], (1)INIBIOMA (Conicet-Universidad del Comahue), (2)The University of Tennessee. *Invasion of introduced conifers is shaped by mammalian herbivores: Evidence from a literature review*.

1:50 PM COS 15-2 Levine, JM[1] and E Pachepsky[2], (1)ETH Zurich, (2)UC Santa Barbara. *Patchy landscapes and the spatial spread of populations*.

2:10 PM COS 15-3 Vick, JK[1], JC Zinnert[2], SA Shiflett[1] and DR Young[1], (1)Virginia Commonwealth University, (2) US Army Corps of Engineers. *Comparative functional mechanisms of co-occurring shrubs resulting in dominance of a thicket forming N-fixer*.

2:30 PM COS 15-4 Crandall, RM[1] and TM Knight[2], (1) Washington University, (2)Washington University in St. Louis. *Seasonal timing and intensity of fire alters the competitive relationship between the invasive legume, Lespedeza cuneata, and co-occurring native species*.

2:50 PM COS 15-5 Pusack, TJ and MA Albins, Oregon State University. *Invasive red lionfish (Pterois volitans) affect persistence of the bridled goby (Coryphopterus glaucofraenum)*.

3:10 PM Break

3:20 PM COS 15-6 Cuddington, K[1] and A Hastings[2], (1) University of Waterloo, (2)University of California, Davis. *Autocorrelated environmental variation can increase invasion risk*.

3:40 PM COS 15-7 Melbourne, BA[1] and A Hastings[2], (1) University of Colorado at Boulder, (2)University of California, Davis. *Spatial environmental heterogeneity reduces variance in the rate of spread: counterintuitive results from a highly replicated experiment*.

4:00 PM COS 15-8 Fettig, CE and RA Hufbauer, Colorado State University. *Life history, reproductive strategy, and population dynamics of black henbane (Hyoscyamus niger), a toxic plant introduced to North America*.

4:20 PM COS 15-9 Firestone, JL, University of California, Davis. *The important oxymoron of rare invasives: Decreased reproduction in smaller populations of the invasive grass Lolium multiflorum* .

4:40 PM COS 15-10 Klooster, WS[1], CP Herms[2], DA Herms[3] and J Cardina[1], (1)The Ohio State University/ OARDC, (2)Ohio State University/ OARDC, (3)The Ohio State University / OARDC. *Understory plant dynamics in emerald ash borer-impacted forests*.

COS 16 - Invasion: Prevention And Management I

E146, Oregon Convention Center

1:30 PM COS 16-1 Pergl, J[1], P Pysek[2], I Perglova[1] and V Jarosik[3], (1)Institute of Botany Academy of Sciences of the Czech Republic, (2)Institute of Botany, Academy of Sciences, Pruhonice, Czech Republic, (3)Charles University. *Low persistence of a monocarpic invasive plant in historical sites biases our perception of its invasion dynamics*.

1:50 PM COS 16-2 Cummings, JA[1], IM Parker[2] and GS Gilbert[1], (1)University of California Santa Cruz, (2)University of California, Santa Cruz. *Allelopathy: A tool for invader suppression and forest restoration*.

2:10 PM COS 16-3 Smith, LL[1] and JN Barney[2], (1)Virginia Tech, (2)Virginia Polytechnic Institute and State University. *Where does fertile Miscanthus × giganteus fall on the invasive spectrum: Performance, establishment, and spread*.

2:30 PM COS 16-4 Parish, MJ and C Christian, Sonoma State University. *Legacy effects of restoration disturbances on co-occurring native and exotic perennial grasses*.

2:50 PM COS 16-5 Phillips-Mao, L[1], DL Larson[2] and NR

Jordan[1], (1)University of Minnesota, (2)US Geological Survey. *Interacting effects of light, native herb cover, and species richness on garlic mustard (Alliaria petiolata) invasion*.

3:10 PM Break

3:20 PM COS 16-6 Stewart-Koster, B and JD Olden, University of Washington. *A graph theoretic approach to assess vulnerability of lakes to species invasions*.

3:40 PM COS 16-7 Gantz, CA[1], CL Jerde[1], WL Chadderton[2], DR Gordon[2], RP Keller[3] and DM Lodge[1], (1)University of Notre Dame, (2)The Nature Conservancy, (3)Loyola University Chicago. *Using species traits to predict invasiveness of aquatic plants in the Great Lakes*.

4:00 PM COS 16-8 Jamieson, MA[1], DG Knochel[2], A Manrique[2] and TR Seastedt[2], (1)Colorado State University, (2) University of Colorado at Boulder. *Top-down and bottom-up controls on Dalmatian toadflax (Linaria dalmatica) performance along the Colorado Front Range, USA*.

4:20 PM COS 16-9 Grulke, NE, S Seybold and A Graves, USDA Forest Service. *The role of biotic and abiotic stressors in Jeffrey pine susceptibility to bark beetle*.

4:40 PM COS 16-10 Coutts, SR[1], H Yokomizo[2] and YM Buckley[1], (1)University of Queensland, (2)National Institute for Environmental Studies. *Can the behavior of multiple independent managers and ecological traits interact to determine prevalence of widespread weeds?*.

COS 17 - Modeling: Populations I

Portland Blrm 254, Oregon Convention Center

1:30 PM COS 17-1 Evans, MEK[1] and KE Holsinger[2], (1)University of Arizona, (2)University of Connecticut. *Estimating vital rates using Generalized Linear Mixed Models (GLMMs): A simulation study of connected vs. separate GLMMs*.

1:50 PM COS 17-2 Pfingsten, IA[1] and TN Kaye[2], (1)Oregon State University, (2)Institute for Applied Ecology. *Use of local climate to improve predictions of plant population viability in future climates*.

2:10 PM COS 17-3 Gaoue, OG[1] and C Horvitz[2], (1)University of Tennessee, (2)University of Miami. *Harvesting plant parts from wild populations affects life history parameters of a tropical tree*.

2:30 PM COS 17-4 Detto, M[1] and HC Muller-Landau[2], (1) Smithsonian Tropical Research Institute, (2)Smithsonian Tropical Research Institution. *Investigating ecological spatial aggregation using wavelets and moment equations*.

2:50 PM COS 17-5 Thorson, JT[1], AE Punt[1] and R Nel[2], (1)University of Washington, (2)Nelson Mandela Metropolitan University. *Changes in availability during population recovery for two South African sea turtle populations under nesting beach protection, identified using multi-state robust design tag-resighting models*.

3:10 PM Break

3:20 PM COS 17-6 Shoemaker, KT and HR Akcakaya, Stony Brook University. *Inferring the nature of anthropogenic threats from abundance time series records*.

3:40 PM COS 17-7 Otto, C[1], L Bailey[2] and G Roloff[1], (1)Michigan State University, (2)Colorado State University. *Improving occupancy estimation when sampling disturbances and animal movements violate the closure assumption*.

4:00 PM COS 17-8 Franklin, EC, MJ Donahue and PL Jokiel, University of Hawaii. *Species distribution models for archipelago-scale analysis of Hawaiian marine ecosystems*.

4:20 PM COS 17-9 Donahue, MJ[1], PL Jokiel[2] and M Ross[1], (1)Hawaii Institute of Marine Biology, (2)University of Hawaii. *Spatial variation in coral demography using integral projection models*.

COS 18 - Mutualism And Facilitation I

Portland Blrm 255, Oregon Convention Center

1:30 PM COS 18-1 Pringle, EG, University of Michigan. *Costs to defenders: Mortality of mutualistic plant ants attacking a specialist herbivore*.

1:50 PM COS 18-2 Bingham, MA[1] and SW Simard[2], (1)University of California, Irvine, (2)University of British Columbia. *Ectomycorrhizal networks facilitate conifer regeneration under drought stress*.

2:10 PM COS 18-3 Goheen, JR[1] and TM Palmer[2], (1)University of Wyoming, (2)University of Florida. *Ant mutualists stabilize megaherbivore-driven landscape change in a savanna ecosystem*.

2:30 PM COS 18-4 Savage, AM[1] and JA Rudgers[2], (1)North Carolina State University, (2)Rice University. *Novel ant-plant mutualisms affect communities: Indirect interactions between extrafloral nectar-bearing plants and honeydew-producing insects via invasive ants*.

2:50 PM COS 18-5 Vieira, C[1] and GQ Romero[2], (1)UNICAMP, (2) State University of Campinas. *Indirect facilitation by leaf-rolling caterpillars on arthropod communities in different scales*.

3:10 PM Break

3:20 PM COS 18-6 Harsch, MA, University of Washington. *Abiotic, biotic or historical limitation of Nothofagus treeline expansion*.

3:40 PM COS 18-7 Rudgers, JA, Rice University. *Symbiosis and plant rarity: Effects of fungal endophytes on rare and common native grasses*.

4:00 PM COS 18-8 Lee, CT, Florida State University. *Inherent stability of resource-mutualist-exploiter interactions*.

4:20 PM COS 18-9 Ezoe, H, Osaka Prefecture University. *Symbiont choice by host and evolutionarily stable distribution of symbiont trait in one-to-many mutualism*.

4:40 PM COS 18-10 Rúa, MA[1], RL McCulley[2] and CE Mitchell[3], (1)University of North Carolina, Chapel Hill, (2)University of Kentucky, (3)University of North Carolina. *The role of biotic and abiotic factors in altering pathogen dynamics for tall fescue in a managed grassland*.

COS 19 - Physiological Ecology I

Portland Blrm 256, Oregon Convention Center

1:30 PM COS 19-1 Wilkening, J[1], C Ray[2] and K Sweazea[3], (1)University of Colorado, (2)University of Colorado-Boulder, (3)Arizona State University. *Using fecal samples to measure physiological stress in American pikas*.

1:50 PM COS 19-2 Sack, L[1], C Scoffoni[2], A McKown[1], K Frole[3], M Rawls[2], JC Havran[4], H Tran[1] and T Tran[1], (1)UCLA, (2)University of California Los Angeles, (3)University of Hawaii, (4)Campbell University. *Developmentally-based scaling of leaf venation architecture with leaf size explains global ecological patterns*.

2:10 PM COS 19-3 Barnard, HR[1], A Byers[1], A Harpold[2], BE Ewers[3], D Gochis[4] and P Brooks[2], (1)University of Colorado, (2)University of Arizona, (3)University of Wyoming, (4)NCAR. *Examining the response of lodgepole pine transpiration to snow melt and summer rainfall in subalpine Colorado, USA*.

2:30 PM COS 19-4 Scoffoni, C, C Vuong, S Diep and L Sack, UCLA. *Leaf shrinkability with dehydration: Coordination with hydraulic vulnerability and ecological implications*.

2:50 PM COS 19-5 Pasquini, SC[1] and L Santiago[2], (1)University of California, (2)University of California, Riverside.

Incorporating phylogeny into comparisons between lianas and trees.

3:10 PM Break

3:20 PM COS 19-6 Kunkle, JM and MB Walters, Michigan State University. *Plant trait correlates of whole-plant carbohydrate storage and relative growth rate in angiosperm and gymnosperm seedlings: Are there tradeoffs*.

3:40 PM COS 19-7 Aston, TL, BE Ewers, Y Yarkhunova, CR Guadagno and C Weinig, University of Wyoming. *Impact of genotypic variation in aquaporin function on plant performance under drought*.

4:00 PM COS 19-8 Guadagno, CR, BE Ewers, T Lehmann, C Weinig, E Topchiy, TL Aston and Y Yarkhunova, University of Wyoming. *Herbaceous plants struggling with drought: Metabolic characterization of genotypic variance via NMR*.

4:20 PM COS 19-9 Song, X[1], KL Clark[2] and B Helliker[1], (1) University of Pennsylvania, (2)USDA Forest Service. *Controls on interspecific variation in tree-ring oxygen isotopes among three co-dominant species in a temperate forest*.

COS 20 - Population Dynamics

Portland Blrm 257, Oregon Convention Center

1:30 PM COS 20-1 Fox, GA[1] and BE Kendall[2], (1)University of South Florida, (2)University of California Santa Barbara. *A conceptual framework for analyzing demographic heterogeneity*.

1:50 PM COS 20-2 Wang, HH, WE Grant and PD Teel, Texas A&M University. *Simulation of climate-host-parasite-landscape interactions: A spatially-explicit model for ticks (Ixodidae)*.

2:10 PM COS 20-3 Frey, SJK[1], NL Rodenhouse[2], S Sillett[3], RT Holmes[4] and MG Betts[1], (1)Oregon State University, (2) Wellesley College, (3)Smithsonian Conservation Biology Institute, (4)Dartmouth College. *Ups and downs: Long-term songbird population trends across an elevational gradient in the Hubbard Brook Experimental Forest, NH*.

2:30 PM COS 20-4 Tenhumberg, B[1], EA Eager[2], CV Haridas[3], D Pilson[1] and R Rebarber[1], (1)University of Nebraska-Lincoln, (2)University of Nebraska, (3)University of Nebraska, Lincoln. *Disturbance frequency and vertical distribution of seeds affect long-term population dynamics: A mechanistic seed bank model*.

2:50 PM COS 20-5 Watson, JR[1], BE Kendall[2], DA Siegel[2] and S Mitarai[3], (1)Princeton University, (2)University of California Santa Barbara, (3)Okinawa Institute of Science and Technology. *Changing seascapes, stochastic connectivity and marine metapopulation dynamics*.

3:10 PM Break

3:20 PM COS 20-6 Fronhofer, EA[1], A Kubisch[1], FM Hilker[2], T Hovestadt[1] and HJ Poethke[1], (1)University of Wuerzburg, (2)University of Bath. *Why are metapopulations so rare?*.

3:40 PM COS 20-7 Acevedo, MA[1], RJ Fletcher Jr.[1], RL Tremblay[2] and E Meléndez[3], (1)University of Florida, (2)University of Puerto Rico at Humacao, (3)University of Puerto Rico. *The implications of asymmetric dispersal for connectivity and colonization-extinction dynamics*.

4:00 PM COS 20-8 Steiner, CF, R Stockwell, M Tadros and L Khraizat, Wayne State University. *The maintenance of clonal diversity and stability in environmentally forced metapopulations*.

4:20 PM COS 20-9 Allstadt, AJ[1], KJ Haynes[1], AM Liebhold[2] and D Johnson[3], (1)University of Virginia, (2)USDA Forest Service, (3)Virginia Commonwealth University. *Use of temporal variation in population and climatic synchrony to identify causal mechanisms*.

4:40 PM COS 20-10 Legault, G and JW Fox, University of Calgary. *Spatial synchrony in a model system: A minimum dispersal threshold and the importance of demographic stochasticity*.

COS 21 - Reptiles And Amphibians

Portland Blrm 258, Oregon Convention Center

1:30 PM COS 21-1 Peterman, WE and RD Semlitsch, University of Missouri. *The ties that bind: Fine scale habitat associations of terrestrial salamanders and implications for population dynamics*.

1:50 PM COS 21-2 Chan, HK[1], NE Karraker[2], DC Thomas[1] and M Kusrini[3], (1)The University of Hong Kong, (2)University of Rhode Island, (3)Bogor Agricultural University. *Are we losing common and widespread species? Implications from the phylogeography of the floating frog (Occidozyga lima)*.

2:10 PM COS 21-3 Bradley, PW[1], SS Gervasi[1], J Hua[2], RD Cothran[3], RA Relyea[2], DH Olson[4] and AR Blaustein[1], (1) Oregon State University, (2)University of Pittsburgh, (3) University of PIttsburgh, (4)USDA Forest Service, Pacific Northwest Research Station. *Differences in sensitivity to Batrachochytrium dendrobatidis (Bd) infection across ten populations of wood frog (Lithobates sylvatica)*.

2:30 PM COS 21-4 Charbonnier, J and JR Vonesh, Virginia Commonwealth University. *Synthesizing studies of plastic responses to pond drying in amphibians: a meta-analysis*.

2:50 PM COS 21-5 Gervasi, SS, C Gondhalekar and AR Blaustein, Oregon State University. *All hosts are not created equal: Variation in the responses of amphibians to the fungal pathogen, Batrachochytrium dendrobatidis*.

3:10 PM Break

3:20 PM COS 21-6 Searcy, CA[1], LN Gray[2], PC Trenham[3] and HB Shaffer[4], (1)University of California - Davis, (2)University of New Mexico, (3)Western Washington University, (4) University of California - Los Angeles. *Delayed life history effects, multilevel selection, and evolutionary tradeoffs: Mass and date of metamorphosis in the California tiger salamander*.

3:40 PM COS 21-7 Whitfield, SM[1], B Caraballo[2], A Catenazzi[3] and MA Donnelly[4], (1)University of South Dakota, (2) New York University, (3)Gonzaga University, (4)Florida International University. *Limited physiological capacity for response to warming in lowland tropical frogs*.

4:00 PM COS 21-8 Van Meter, RJ and ST Purucker, U.S. Environmental Protection Agency. *Advective and diffusive dermal processes for estimating terrestrial amphibian pesticide exposure*.

4:20 PM COS 21-9 Foufopoulos, J[1], P Pafilis[2], E Valakos[2] and NM Anthony[3], (1)University of Michigan, (2)University of Athens, (3)University of New Orleans. *Interactive effects of marine subsidies, herbivory, and predation in island lizards*.

4:40 PM COS 21-10 Reider, KE and MA Donnelly, Florida International University. *Are peccaries contributing to the amphibian and reptile declines at La Selva Biological Station, Costa Rica*.

COS 22 - Restoration Ecology I

B117, Oregon Convention Center

1:30 PM COS 22-1 Burgar, JM[1], MD Craig[1] and VL Stokes[2], (1) Murdoch University, (2)Alcoa of Australia. *Investigating the congruence between vegetation succession and faunal recolonization in a production landscape: A case*

study of bats in south-western Australia.

1:50 PM COS 22-2 Deemy, JB and ER Crawford, Virginia Commonwealth University. *Herbaceous and woody vegetative assessment in a newly restored mixed tidal regime freshwater wetland*.

2:10 PM COS 22-3 Fischer, D[1], CJ LeRoy[1], SM Ferrier[2], E Hersch-Green[3], G Allan[2], K Kennedy[2], R Bangert[2] and T Whitham[2], (1)The Evergreen State College, (2)Northern Arizona University, (3)Michigan Technological University. *Riparian restoration and genetic diversity of a foundation tree along the principal river of the Southwest*.

2:30 PM COS 22-4 Columbus, U, Y Ziv and H Tsoar, Ben-Gurion University. *Ecological restoration of the western-Negev dunes system in light of land-use changes: Aeolian activity and faunal response*.

2:50 PM COS 22-5 Schweizer, D, University of California Santa Cruz. *Evolutionary relations matter: Application of phylogenetic ecology to the restoration of tropical forests*.

3:10 PM Break

3:20 PM COS 22-6 Faist, AM[1], SP O'Neill[2], DR Nemergut[1] and SK Collinge[1], (1)University of Colorado, (2)University of Colorado at Boulder. *Vernal pool soil properties and their role in restoration success*.

3:40 PM COS 22-7 Boukili, VKS, RL Chazdon and JC Volin, University of Connecticut. *Using plant functional traits to refine ecological restoration techniques: A seedling transplant experiment*.

4:00 PM COS 22-8 Shippey, AC and CR Whitcraft, CSU Long Beach. *Effects of altered precipitation and increased warming on a restored southern California salt marsh*.

4:20 PM COS 22-9 Harshbarger, D, Southern Illinois University Carbondale. *Remnant and restored community trajectories following disturbance*.

4:40 PM COS 22-10 Koontz, MB[1], CJ Lundberg[2], RR Lane[2], JW Day[2], RD DeLaune[2] and SR Pezeshki[1], (1)University of Memphis, (2)Louisiana State University. *Aboveground net primary productivity and soil properties in forested wetlands after restored hydrology from notching of dikes on the Mississippi River near the Loosahatchie Bar*.

COS 23 - Soil Ecology

C120, Oregon Convention Center

1:30 PM COS 23-1 Russell, AE[1] and DC Olk[2], (1)Iowa State University, (2)USDA-ARS. *Testing the effects of chemistry of organic matter inputs on soil carbon dynamics in an un-confounded experiment*.

1:50 PM COS 23-2 Mendes-Soares, H, KIC Chen, K Fitzpatrick and GJ Velicer, Indiana University. *Effects of chimerism in bacterial social performance*.

2:10 PM COS 23-3 Kratz, CJ[1], AJ Burton[1] and EA Lilleskov[2], (1) Michigan Technological University, (2)US Forest Service, Northern Research Station. *Extracellular enzyme activity in soils from a temperate forest climate manipulation study demonstrate significant seasonal trends*.

2:30 PM COS 23-4 Miller, K[1] and S Perles[2], (1)National Park Service, Northeast Temperate Network, (2)National Park Service, Eastern Rivers and Mountains Network. *Patterns in forest soil chemistry across Eastern U.S. national parks*.

2:50 PM COS 23-5 Yarwood, S[1], EA Brewer[2], RR Yarwood[2], K Lajtha[2] and DD Myrold[2], (1)University of Maryland, (2)Oregon State University. *The persistence of soil microbes: Active community composition and capability to respond to litter addition after 10-years of no-inputs*.

3:10 PM Break

3:20 PM COS 23-6 Shaw, EA, K Denef, MF Cotrufo and DH Wall, Colorado State University. *Following carbon through the soil food web: Do long-term burning practices affect carbon trophic dynamics in grasslands?*.

3:40 PM COS 23-7 Rinkes, ZL[1], JL DeForest[2], AS Grandy[3], DL Moorhead[1] and MN Weintraub[1], (1)University of Toledo, (2)Ohio University, (3)University of New Hampshire. *Interactions between litter quality, surface area, and the microbial community in two contrasting soils during the earliest stage of decay*.

4:00 PM COS 23-8 Contosta, AR, SD Frey, R Varner and B Godbois, University of New Hampshire. *The effects of intensive rotational grazing on soil carbon sequestration and greenhouse gas emissions in the northeastern United States*.

4:20 PM COS 23-9 Wickings, K[1], AS Grandy[1], SC Reed[2] and CC Cleveland[3], (1)University of New Hampshire, (2) USGS, (3)University of Montana. *The origin of chemical complexity during plant litter decomposition*.

4:40 PM COS 23-10 Vandegehuchte, ML[1], UN Nielsen[2], EA Shaw[1], JL Soong[1], ZA Sylvain[1], CM Tomasel[1], MF Cotrufo[1] and DH Wall[1], (1)Colorado State University, (2) University of Western Sydney. *Variation in abundance of soil fauna trophic groups with depth, season, and litter quality: Implications for the study of decomposition*.

COS 24 - Sustainability: Agriculture/Forestry

C123, Oregon Convention Center

1:30 PM COS 24-1 Bixenmann, RJ, D Weaver and TM Sterling, Montana State University. *Smooth brome is an attractive alternative host for the wheat stem sawfly*.

1:50 PM COS 24-2 Doudna, JW, MJ Helmers, ME O'Neal and JC Tyndall, Iowa State University. *Stakeholder perspectives on conservation program implementation in agricultural landscapes*.

2:10 PM COS 24-3 Fancher, H[1], PG Taylor[1], SA Weintraub[1], CC Cleveland[2] and AR Townsend[3], (1)University of Colorado, (2)University of Montana, (3)University of Colorado, Boulder. *Greenhouse gas emissions and energy production potential from an oil palm wastewater lagoon in southwest Costa Rica*.

2:30 PM COS 24-4 Fischer, PW, GJ Ettl, SF Tóth, JM Comnick, N Konnyu and KR Ceder, University of Washington. *The effects of harvest practices and intensity on carbon sequestration in Douglas-fir forests of western Washington, USA*.

2:50 PM COS 24-5 Cobb, AB and GWT Wilson, Oklahoma State University. *Linking arbuscular mycorrhiza to sustainable agricultural production: Can mycorrhiza increase sorghum production and grain quality?*.

3:10 PM Break

3:20 PM COS 24-6 Cook, RL and JL Stape, North Carolina State University. *Total soil carbon changes and stable carbon isotope dynamics following reforestation of pasture with broadleaf and conifer plantations in Brazil*.

3:40 PM COS 24-7 O'Connell, CS, N Mueller, J Foley, S Polasky, J Gerber and P West, University of Minnesota. *Managing an intensified Amazonia: Estimating the effect of agricultural intensification of key commodities on ecosystem service delivery in Amazonia*.

4:00 PM COS 24-8 Thomas, D[1], GB Chuyong[2], D Kenfack[3] and SN Moses[4], (1)Oregon State University, (2)University of Buea, (3)Smithsonian Center for Tropical Forest Science, (4)Korup Forest Dynamics Plot Programme. *Dynamics of climbing palms in an African forest*.

4:20 PM COS 24-9 Maul, J[1], S Mirsky[1] and S Emche[2], (1)USDA-

ARS Sustainable Agriculture Systems Laboratory, (2) USDA-ARS. *Synchronizing cover crop flowering time with human demands in reduced-till organic agroecosystems: A comparative genomics approach*.

COS 25 - Theoretical Ecology

D135, Oregon Convention Center

1:30 PM COS 25-1 Marleau, JN, F Guichard and M Loreau, McGill University. *The effects of spatial configurations on metaecosystem stability and functioning*.

1:50 PM COS 25-2 Abbott, KC, Iowa State University. *What's so special about alternative stable states?*.

2:10 PM COS 25-3 Artzy-Randrup, Y[1], KP Day[2] and M Pascual[1], (1)University of Michigan and Howard Hughes Medical Institute, (2)New York University School of Medicine. *Strain diversity and disease risk – implications for malaria elimination*.

2:30 PM COS 25-4 Stump, SM and P Chesson, University of Arizona. *Coexistence destabilizing mechanisms from nonlinear predation in a variable environment*.

2:50 PM COS 25-5 Rael, RC and ND Martinez, Pacific Ecoinformatics and Computational Ecology Lab. *The influence of speciation on the evolution of complex food web structure*.

3:10 PM Break

3:20 PM COS 25-6 Golubski, AJ[1], EB Baskerville[2] and M Pascual[3], (1)Kennesaw State University, (2)University of Michigan, (3)University of Michigan AND Howard Hughes Medical Institute. *Must food web models consider adaptive behavior to consider adaptive behavior?*.

3:40 PM COS 25-7 Tredennick, A[1], LP Bentley[2] and N Hanan[3], (1)Colorado State University, (2)University of Arizona, (3) South Dakota State University. *Whole-tree and branch-level allometry in savannas: Testing Metabolic Scaling Theory in a non-ideal system*.

4:00 PM COS 25-8 Crone, EE, Harvard University. *Detecting life history tradeoffs from demographic time series for perennial wildflowers*.

4:20 PM COS 25-9 Reiner, RC Jr.[1], A Lloyd[2], AA King[3], ST Stoddard[1], T Kochel[4], E Halsey[4], A Morrison[5] and T Scott[1], (1)University of California, Davis, (2)North Carolina State University, (3)University of Michigan, (4)Naval Medical Research Center, (5)University of California - Davis. *Investigating temporal patterns in the force of infection of dengue virus transmission using longitudinal serologic data*.

4:40 PM COS 25-10 Kellner, JB[1], JN Sanchirico[2], A Hastings[2] and PJ Mumby[3], (1)Woods Hole Oceanographic Institution, (2)University of California, Davis, (3) University of Queensland. *Ecosystem-based fisheries management: Moving from single-species to multi-species management*.

4:30 pm-6:30 pm

OPS 1 - Ecologists Doing History: Notes From the Field

Exhibit Hall DE, Oregon Convention Center

Organized by: SL White (sally_white@msn.com)

As we approach 100 years of ESA and after a tremendous growth of our science, we present tools and use case studies to help ecologists examine the field's historical roots and prepare for future challenges.

OPS 1-1 Balbach, H, US Army ERDC. *Archives as a source of ecological history: The Victor E. Shelford Papers as a case study*.

OPS 1-2 Slack, NG, The Sage Colleges. *G. Evelyn Hutchinson and the invention of new fields in modern ecology*.

OPS 1-3 Reiners, WA[1], DS Reiners[2] and JA Lockwood[1], (1) University of Wyoming, (2)California Polytechnic State University. *Personal beliefs and motivations of contemporary U.S. ecologists: Uncovering patterns and associations*.

OPS 1-4 Tysor, CS[1] and SL White[2], (1)University of British Columbia, (2)Morrison, CO. *ESA in the wake of three waves of feminism*.

OPS 1-5 White, SL[1], JC Mulroy[2] and H Balbach[3], (1)Morrison, CO, (2)Denison University, (3)US Army ERDC. *An in-depth look at ESA's early membership: Continuity, contrasts, and surprises*.

OPS 1-6 Franklin, SB[1], RK Peet[2] and D Roberts[3], (1)University of Northern Colorado, (2)University of North Carolina, (3) Montana State University. *A short history of vegetation classification and its relevance today*.

OPS 1-7 Aney, WW, Senior Wildlife Ecologist. *From before Lewis and Clark: The history of wildlife management in the Oregon Country*.

OPS 1-8 Mulroy, TW[1], J Storrer[2], T Klug[3] and WR Ferren Jr.[4], (1) Science Applications International Corporation (SAIC), (2)Storrer Environmental Services, (3)Cardno Entrix, (4) Wayne R. Ferren & Associates. *Lessons from 30 years of habitat restoration in Central California with three case studies*.

OPS 1-9 Bean, BS, Lava Lake Land & Livestock, LLC. *Long-distance pronghorn migration in the Northern Rockies: A collaborative approach to species conservation*.

PS 1 - Reptiles And Amphibians

Exhibit Hall DE, Oregon Convention Center

PS 1-10 Marino, JA[1], MP Holland[2] and EE Werner[1], (1)University of Michigan, (2)University of Michigan, Ann Arbor, MI. *Competition alters interactions between larval anurans, parasites, and predators*.

PS 1-11 Kuhns, AR[1] and JA Crawford[2], (1)University of Illinois, (2)Lindenwood University. *Ecological function of created seasonal wetlands*.

PS 1-12 Holden, MK, University of Arkansas. *Multiple stressors on larval amphibians: The effects of herbicide use, predation, and projected warming*.

PS 1-13 Kawai, U, J Horita and G Perry, Texas Tech University. *Effects of preservation methods on stable isotope ratios of carbon and nitrogen in muscle tissue of Hemidactylus turcicus*.

PS 1-14 Burkett, EM, University of Michigan. *Aquatic invader: The impact of the round goby (Neogobius melanostomus) on Great Lakes benthic fish diversity and diet*.

PS 1-15 Schmolke, A[1], R Kanagaraj[2], VA Kowal[3] and DJ Bruggeman[1], (1)Michigan State University, (2)Helmholtz Centre for Environmental Research - UFZ, (3)Ecological Services and Markets, Inc.. *Habitat Suitability for Gopher Tortoises*.

PS 1-16 McEntire, KD, BA Pierce and AE Wall, Southwestern University. *Reproductive timing of Eurycea naufragia at two spring sites*.

PS 1-17 Belasen, A[1], B Li[2], D Chremou[3], P Pafilis[3], E Valakos[3] and J Foufopoulos[1], (1)University of Michigan, (2) University of MIchigan, (3)University of Athens. *Thermal ecology in island populations of the Aegean wall lizard (Podarcis erhardii)*.

PS 1-18 Grözinger, F[1], J Thein[2], H Feldhaar[3] and MO Rödel[1], (1) Museum für Naturkunde Leibniz Institute for Research on Evolution and Biodiversity at the Humboldt University

Berlin, (2)Büro für Faunistik und Umweltbildung, (3) University of Bayreuth. *More than just environment? Remarkable phenotypic plasticity in developmental traits within a population of the common frog (Amphibia, Ranidae, Rana temporaria)*.

PS 1-19 Ryberg, WA and LA Fitzgerald, Texas A&M University. *Applying a landscape community concept to lizards of the Mescalero Sands*.

PS 1-20 Strauss, AT[1] and KG Smith[2], (1)Indiana University, (2)Washington University in St. Louis. *Invertebrate community structure helps explain the distribution of amphibian chytrid in Eastern Missouri*.

PS 1-21 Burke, RL, Hofstra University. *Why did terrapins cross the runway?*.

PS 1-22 Banka, MN and B Low, University of Michigan. *Using Bayesian modeling to predict nesting onset in a population of midland painted turtles (Chrysemys picta marginata)*.

PS 1-23 Geerdes, E[1], SM Whitfield[1], MA Donnelly[2] and J Kerby[1], (1)University of South Dakota, (2)Florida International University. *Ranavirus infection in native amphibians at La Selva Biological Station, Costa Rica: The first report of ranavirus in Central America*.

PS 1-24 Bowne, DR and JM Schoonmaker, Elizabethtown College. *Biased sex ratio and age distribution in a suburban population of Chrysemys picta (painted turtle)*.

PS 1-25 Ousterhout, BH[1] and EB Liebgold[2], (1)University of Missouri, (2)University of Virginia. *Dispersal versus site tenacity of adult and juvenile red-backed salamanders (Plethodon cinereus)*.

PS 1-26 Chestnut, T[1], CW Anderson[1], MA Voytek[2] and JD Kirshtein[1], (1)US Geological Survey, (2)National Aeronautics and Space Administration. *Spatial and temporal patterns of Batrachochytrium dendrobatidis occupancy in amphibian habitats*.

PS 1-27 Mackey, MJ and RD Semlitsch, University of Missouri. *Using headwater streams and salamanders to test hypotheses of golf course impacts*.

PS 1-28 Crawford, JA and EM Wright, Lindenwood University. *Land management effects in Missouri conservation areas on pond-breeding amphibians*.

PS 1-29 Anderson, TL and HH Whiteman, Murray State University. *Overall competitor density, not species identity, affects facultative paedomorphosis in the mole salamander, Ambystoma talpoideum*.

PS 1-30 Shirk, PL[1], DA Patrick[2], KM Howell[3], EB Harper[4] and JR Vonesh[1], (1)Virginia Commonwealth University, (2) Paul Smith's College, (3)University of Dar es Salaam, (4) State University of New York College of Environmental Science and Forestry. *Community and population-level responses of an Afromontane chameleon assemblage to forest fragmentation*.

PS 1-31 Wright, EM[1], JA Crawford[1] and AR Kuhns[2], (1) Lindenwood University, (2)University of Illinois. *Evaluating the quality of created wetlands through metamorphic amphibian sampling*.

PS 1-32 Pittman, SE, GM Connette and RD Semlitsch, University of Missouri. *Effects of habitat composition on movement and optimal dispersal strategies in juvenile spotted salamanders (Ambystoma maculatum)*.

PS 1-33 O'Donnell, KM[1], FR Thompson III[2] and RD Semlitsch[1], (1)University of Missouri, (2)University of Missouri-Columbia. *A hierarchical modeling approach to estimate terrestrial salamander abundance prior to prescribed fire and timber harvest*.

PS 1-34 Aardweg, Z[1], JA Homyack[2] and DR Chalcraft[1], (1)East Carolina University, (2)Weyerhaeuser NR Company. *Initial effects of woody biomass removal and intercropping of switchgrass (Panicum virgatum) on herpetofauna in eastern North Carolina*.

PS 1-35 Brown, TK, California State University San Marcos. *Energetics of Blainville's Horned Lizards, Phrynosoma blainvillii, in disturbed and undisturbed habitat*.

PS 2 - Aquatic Ecology

Exhibit Hall DE, Oregon Convention Center

PS 2-36 Handler, AM[1], IA Oleksy[2], DC Richardson[3], N Rigolino[3], T Hoellein[4], DC Arscott[5] and CA Gibson[6], (1)Franklin & Marshall College, (2)University of New Hampshire, (3) SUNY New Paltz, (4)Loyola University, (5)Stroud Water Research Center, (6)Skidmore College. *Physiochemical controls of the growth of the invasive freshwater diatom, Didymosphenia geminata, in Rondout Creek, New York*.

PS 2-37 Knudson, TM and AR Black, Eastern Washington University. *Factors affecting rainbow trout growth and condition in eastern Washington lakes*.

PS 2-38 Oele, DL[1], PB McIntyre[2] and DJ Hogan[2], (1)University of Wisconsin-Madison, (2)University of Wisconsin. *Assessing natal spawning site fidelity of northern pike using otolith microchemistry*.

PS 2-39 Semcheski, MR, TA Egerton and HG Marshall, Old Dominion University. *Seasonal variability in estuarine planktonic and benthic algal populations*.

PS 2-40 Brandon, CS and JL Dudycha, University of South Carolina. *Plasticity of eye development in a freshwater crustacean, Daphnia*.

PS 2-41 Lear, SC, M Wu and L Lee, Montclair State University. *Assessment of bloom-forming Cyanobacteria and algae in selected New Jersey lakes*.

PS 2-42 Holmes, CJ[1], KL Schulz[2], S Figary[3], JH Pantel[4] and CE Càceres[1], (1)University of Illinois at Urbana-Champaign, (2)State University of New York College of Environmental Science and Forestry, (3)SUNY-ESF, (4)University of Texas at Austin. *Eco-evolutionary feedbacks on colonization dynamics in newly formed ponds*.

PS 2-43 Crawford, JW[1], SR Hall[2] and CE Cáceres[1], (1)University of Illinois, (2)Indiana University. *Linking allocation to sexual reproduction with resource use efficiency in a facultative parthenogen, Daphnia pulicaria*.

PS 2-44 Black, AR and L Bridges, Eastern Washington University. *An investigation the potential impacts of an invasive fish (brook stickleback: Culaea inconstans) on aquatic wetland communities and waterfowl*.

PS 2-45 Walz, KC[1], KL Schulz[2], ZY Lim[1], S Figary[3], JH Pantel[4] and CE Càceres[4], (1)SUNY ESF, (2)State University of New York College of Environmental Science and Forestry, (3)SUNY-ESF, (4)University of Illinois at Urbana-Champaign. *Is any water good water? Clonal growth and reproduction differences in response to abiotic and biotic factors in vernal pools*.

PS 2-46 Quist, DJ[1], MD Dixon[1], TC Cowman[2] and DA Soluk[1], (1) University of South Dakota, (2)Missouri River Institute. *Long–term trends and status of riverine mesohabitats, channel complexity, and habitat turnover along the Missouri River from Fort Benton, MT to Kansas City, KS from 1890 to 2006*.

PS 2-47 Jorgensen, JC[1], MM McClure[1], MB Sheer[1] and NL Munn[2], (1)Northwest Fisheries Science Center, National Marine Fisheries Service, (2)National Marine Fisheries Service, Habitat Conservation Division. *Climate change influences the footprint of anthropogenic habitat*

alteration: Implications for endangered species and regulatory reviews of riverbank stabilization projects.

PS 2-48 Macneale, KH[1], JA Spromberg[1], AA Camp[1], S Damm[2], J Davis[2] and NL Scholz[1], (1)NOAA Fisheries - Northwest Fisheries Science Center, (2)US Fish and Wildlife Service. *Experimental approach for assessing how stormwater runoff affects macroinvertebrate communities in urban streams*.

PS 2-49 Sowder, CD[1] and EA Steel[2], (1)University of Washington, (2)USFS PNW Research Station. *Describing complexity in thermal regimes in Pacific Northwest streams*.

PS 2-50 Simmons, JA[1], ML Anderson[2], WJ Dress[3], J Frick-Ruppert[4], CJB Hanna[3], D Hornbach[5], A Janmaat[6], F Kuserk[7], JG March[8], T Murray[9], J Niedzwiecki[10], D Panvini[10], B Pohlad[11], CL Thomas[11] and L Vasseur[12], (1)Mount St. Mary's University, (2)University of Montana Western, (3)Robert Morris University, (4)Brevard College, (5)Macalester College, (6)University of the Fraser Valley, (7)Moravian College, (8)Washington and Jefferson College, (9)Elizabethtown College, (10)Belmont University, (11)Ferrum College, (12)Brock University. *Effect of riparian shade on stream water temperature: A collaboration among eleven primarily undergraduate institutions*.

PS 2-51 Baker, BC and JT Scott, University of Arkansas. *The effects of phosphorus enrichment on leaf litter stoichiometry in a forested stream*.

PS 2-52 Griffiths, NA and PJ Mulholland, Oak Ridge National Laboratory. *Organic matter decomposition along a temperature gradient in a forested headwater stream*.

PS 2-53 Stancheva, R and RG Sheath, California State University San Marcos. *Distribution and ecology of green alga Zygnema aplanosporum (Zygnematophyceae) in Californian streams*.

PS 2-54 Mollik, MAH, Practical Academy on Wise Education and Research Foundation. *Community investigation of Escherichia coli, and Shigella species in freshwater environment of Sirajganj district, Bangladesh*.

PS 2-55 Kawanishi, R, R Dohi, A Fujii, M Inoue and Y Miyake, Ehime University. *Seasonal use of the hyporheic zone by spinous loach, Cobitis shikokuensis, in an intermittent river, southwestern Japan*.

PS 2-56 Norris, KG[1], MM Mineau[1], JE Saros[1], SM Coghlan[1] and KS Simon[2], (1)University of Maine, (2)University of Auckland. *Effects of anadromous alewife on seasonal patterns of nutrient limitation in Maine lakes and streams*.

PS 2-57 Rios-Touma, BP[1], AC Encalada[1], N Bonada[2], M Rieradevall[2], F González[1] and N Prat[2], (1)Universidad San Francisco de Quito, (2)Universitat de Barcelona. *The role of flow shaping the functional and structural invertebrate diversity at a high altitude tropical stream*.

PS 2-58 Connelly, CK and C McNeely, Eastern Washington University. *Mining, aquifer recharge, and urbanization impact Spokane river macroinvertebrates*.

PS 2-59 Phillipsen, IC and DA Lytle, Oregon State University. *Population genetic structure of aquatic insects with varying dispersal abilities in fragmented desert streams*.

PS 2-60 Baca, S[1], DA Martinez Gomez[1] and EJ Walsh[2], (1) University of Texas at El Paso, (2)The University of Texas at El Paso. *Population responses of the freshwater rotifer Plationus patulus to Pharmaceuticals and Personal Care Products (PPCPs) from impacted and unimpacted populations*.

PS 2-61 Graham, MD[1], S Reedyk[2] and RD Vinebrooke[1], (1) University of Alberta, (2)Agriculture and Agri-Food Canada. *Environmental factors of high phytoplankton beta-diversity across reservoirs*.

PS 2-62 Zhu, B, B Kadapuram and A Benaquista, University of Hartford. *Does land use affect stream water quality in the North Branch Park River watershed?*.

PS 2-63 White, CA and X Chen, Alabama A&M University. *Patterns of forest cover, hydrological regime, and aquatic biota in Alabama*.

PS 3 - Aquatic-Terrestrial Linkages

Exhibit Hall DE, Oregon Convention Center

PS 3-64 Postali, TC[1] and GQ Romero[2], (1)Unicamp, (2)State University of Campinas. *The influence of allochthonous input from streams on terrestrial guilds of arthropods*.

PS 3-65 Langer, TA[1], KD Zimmer[1], BR Herwig[2], MA Hanson[2], WO Hobbs[3], JB Cotner[4], RW Wright[2] and SR Vaughn[2], (1) University of St Thomas, (2)Minnesota Department of Natural Resources, (3)Science Museum of Minnesota, (4) University of Minnesota - Twin Cities. *$\delta^{15}N$ of detritivores track nitrogen inputs from agricultural land into shallow Minnesota lakes*.

PS 3-66 Castro Burgos, G[1], J Gómez[1], FF Campón[1], E Scheibler[1], JP Schoen[2], ZR Snobl[2], CM Wojan[2], O Xiong[2] and T Wellnitz[2], (1)IADIZA - CONICET, (2)University of Wisconsin - Eau Claire. *Does elevation modify aquatic export to riparian habitats?*.

PS 3-67 McKane, RB[1], A Abdelnour[2], A Brookes[1], CA Burdick[1], K Djang[3], TE Jordan[4], B Kwiatkowski[5], F Pan[6], WT Peterjohn[7], M Stieglitz[2] and DE Weller[4], (1)U.S. Environmental Protection Agency, (2)Georgia Institute of Technology, (3)CSC, (4)Smithsonian Environmental Research Center, (5)Marine Biological Laboratory, (6) University of North Texas, (7)West Virginia University. *Identifying green infrastructure BMPs for reducing nitrogen export to a Chesapeake Bay agricultural stream: Model synthesis and extension of experimental data*.

PS 3-68 Wojan, CM, EC Merten, AR Devoe, ZR Snobl and TA Wellnitz, University of Wisconsin - Eau Claire. *Do stream logjams influence riparian web spider density and distribution?*.

PS 3-69 Kissman, CEH[1], CE Williamson[1], KC Rose[1] and JE Saros[2], (1)Miami University, (2)University of Maine. *Climate change-induced effects on food web structure in an alpine lake: Terrestrial DOM subsidies alter consumer:producer biomass ratios in unexpected ways*.

PS 3-70 Klemmer, AJ[1], JS Richardson[2] and AR McIntosh[1], (1)University of Canterbury, (2)University of British Columbia. *Trophic dynamics of meta-ecosystems: Connectedness alters interaction outcome*.

PS 3-71 Komosinski, RA and JR Vonesh, Virginia Commonwealth University. *Effects of litter diversity on macroinvertebrate communities in Neotropical water-filled tree holes*.

PS 4 - Wetlands

Exhibit Hall DE, Oregon Convention Center

PS 4-72 Rayamajhi, MB[1], TD Center[1] and PD Pratt[2], (1)United States Department of Agriculture, (2)Invasive Plant Research Laboratory. *Active restoration possibilities for invasive tree occupied sites: Examples from Melaleuca quinquenervia systems in Florida, USA*.

PS 4-73 Sanchez, CA, DL Childers, L Turnbull and NA Weller, Arizona State University. *The contribution of evapotranspiration to the annual water budget of an aridland urban wastewater treatment wetland*.

PS 4-74 Jarnigan, JR[1], G Starr[1], CL Staudhammer[1], JA Cherry[1] and B Mortazavi[2], (1)University of Alabama, (2)University of Alabama and Dauphin Island Sea Lab. *Ecosystem carbon dynamics along a productivity gradient following*

the BP Deepwater Horizon Oil Spill.

PS 4-75 Chen, H and S Popovich, University of Illinois at Springfield. *Carbon and nitrogen storage in two restored wetlands in Illinois*.

PS 4-76 Dangremond, EM, University of California, Berkeley. *A saga of survival for seedlings of the rare mangrove Pelliciera rhizophorae*.

PS 4-77 Weller, NA, DL Childers and L Turnbull, Arizona State University. *Plant community changes within an aridland constructed wastewater treatment wetland*.

PS 4-78 Kangas, PC, University of Maryland. *Structural ecology of a vertical moss-dominated wetland*.

PS 4-79 Stuber, OS[1], GI Martin[2], LK Kirkman[3] and J Hepinstall-Cymerman[4], (1)Odum School of Ecology, University of Georgia and Joseph W. Jones Ecological Research Center, (2)URS Corporation, (3)Joseph W. Jones Ecological Research Center, (4)University of Georgia. *Examining the current status of isolated wetlands in southwestern Georgia and the implications of 60 years of land use change*.

PS 4-80 Botello, GM[1], SW Golladay[2] and AP Covich[3], (1) University of Georgia and Joseph W. Jones Ecological Research Center, (2)Joseph W. Jones Ecological Research Center, (3)University of Georgia. *Investigating the effects of surrounding land use and environmental factors on larval mosquito assemblages in agricultural wetlands of southwestern Georgia*.

PS 4-81 Ludwig, SM[1], JD Schade[1], J Porterfield[1] and BE Johnson[2], (1)St. Olaf College, (2)University of Wisconsin-Stout. *Impact of Phalaris arundinacea on wetland methane emissions and microbial community*.

PS 4-82 Allums, SE and SW Golladay, Joseph W. Jones Ecological Research Center. *Food webs of geographically isolated wetlands: A comparison across an agricultural disturbance gradient*.

PS 4-83 Patton, DA[1], AP Covich[1], RL Moore[2] and JC Bergstrom[1], (1)University of Georgia, (2)University of Georgia,. *Effects of drought and wildfire on wetland ecosystem services in the Okefenokee National Wildlife Refuge, Georgia, USA*.

PS 5 - Riparian And Floodplain Habitats

Exhibit Hall DE, Oregon Convention Center

PS 5-84 Li, F[1], JB West[1], GW Moore[1] and L Kui[2], (1)Texas A&M University, (2)SUNY-ESF. *Persistence of floodwater sustains riparian plant transpiration during drought: A case study of Arundo donax on the Rio Grande*.

PS 5-85 Wheeler, TA, KL Kavanagh and A Noble-Stuen, University of Idaho. *Marine nutrient subsidies in inland riparian forests*.

PS 5-86 Gebauer, A, RL Brown, S Schwab, C McNeely and C Nezat, Eastern Washington University. *Ecohydrology of invasive reed canary grass (Phalaris arundinacea)*.

PS 5-87 Wagner, SK[1], CP Ortega[2] and A Cruz[3], (1)Univirsity of Colorado, (2)Fort Lewis College, (3)University of Colorado. *Avian community response across a gradient of native to invasive riparian vegetation in northwest New Mexico*.

PS 5-88 Israelitt, D, E Walton and KE Schulz, Southern Illinois University Edwardsville. *Response of floodplain forest communities to modified hydrology in the Upper Mississippi River Basin*.

PS 5-89 White, JC and WK Smith, Wake Forest University. *Water sources in riparian tree species of the southeastern United States*.

PS 5-90 Tozzi, ES, HM Easlon and JH Richards, University of California, Davis. *Interactive effects of water, light and heat stress on photosynthesis in Fremont cottonwood*.

PS 6 - Marine Systems

Exhibit Hall DE, Oregon Convention Center

PS 6-91 Garcia, V, A Ehrhart, C McLean and BA Bancroft, Southern Utah University. *Comparing nematocyst production in starved and well-fed sea anemones (Aiptasia pallida)*.

PS 6-92 Hart, A, University of Washington. *Context dependent interactions between a seaweed and its snail herbivore are mediated by snail density and epiphyte load*.

PS 6-93 Sobral, P[1], J Antunes[2], J Frias[2], AC Micaelo[3] and AM Ferreira[3], (1)IMAR- FCTUNL, (2)IMAR- Institute for Marine Research, (3)IPIMAR - Instituto das Pescas e do Mar. *Plastic marine debris and persistent organic pollutants along the Portuguese coast: How much and how many?*.

PS 6-94 Ruesink, JL[1], AC Trimble[1] and A Sarich[2], (1)University of Washington, (2)Washington Department of Fish and Wildlife. *Climate variability influences recruitment in a multi-decadal time series*.

PS 6-95 Rose, JM[1], CA Blanchette[2], E Sanford[3], RC Williams[4] and BA Menge[1], (1)Oregon State University, (2)University of California, Santa Barbara, (3)University of California Davis, (4)University of California, Santa Cruz. *The influence of upwelling-driven ocean acidification on growth of the California mussel, Mytilus californianus*.

PS 6-96 Hatch, M, Scripps Institution of Oceanography. *Detecting major ecological changes in the Late Holocene: Age and growth of archaeological Chione undatella from a Southern California Lagoon*.

PS 6-97 Freeman, A, Adelphi University. *Does the invasive marine crab (Carcinus maenas) experience a novelty advantage across different intertidal communities?*.

PS 7 - Conservation Ecology

Exhibit Hall DE, Oregon Convention Center

PS 7-98 Hung, KLJ[1], JS Ascher[2], J Gibbs[3], RE Irwin[4] and DT Bolger[4], (1)University of California, San Diego, (2)American Museum of Natural History, (3)Cornell University, (4)Dartmouth College. *Examining the effects of habitat fragmentation on a southern California native bee assemblage through historic pitfall trap samples*.

PS 7-99 Clarke, D, JR Ward, JL Horton and M Rayfield, University of North Carolina at Asheville. *Genetic and demographic patterns in American ginseng (Panax quinquefolius L.) populations from western North Carolina*.

PS 7-100 Miller-Rushing, A[1], K Petrie[1], B Zoellick[2], S Benz[2], M Soukup[2], D Manski[1] and L Dominy[1], (1)National Park Service, (2)SERC Institute. *Participatory science as a means to integrate management, science, and education at Acadia National Park*.

PS 7-101 Williamson, PS[1], CG Meredith[2] and JJ Goodson[1], (1) Texas State University-San Marcos, (2)City of Sunset Valley. *Evaluation of suitable habitat for reintroduction of the endangered species Abronia macrocarpa as a recovery measure*.

PS 7-102 Lewis, MB[1], EW Schupp[1] and TA Monaco[2], (1)Utah State University, (2)USDA-ARS. *Dust and proximity to unpaved roads correlated with decreased reproduction of an endangered Utah endemic shrub*.

PS 7-103 McKenna, J[1], JL Horton[2], CR Rossell[2], HD Clarke[2] and JR Ward[2], (1)UNC-Asheville, (2)University of North Carolina at Asheville. *Habitat characteristics of Spiraea virginiana Britton, an imperiled riparian shrub*.

PS 7-104 McManus, KM[1], LE Aragao[2], Y Malhi[3] and JB Fisher[4], (1)Stanford University, (2)University of Exeter, (3)

Oxford University, (4)California Institute of Technology. *Disturbance protection in semi-protected areas: A case study of fire inhibition provided by indigenous territories in the Brazilian Amazon*.

PS 7-105 Pandey, M[1] and J Sharma[2], (1)TTU, (2)Texas Tech University. *Efficiency of microsatellite isolation from orchids via 454 sequencing*.

PS 8 - Conservation Management

Exhibit Hall DE, Oregon Convention Center

PS 8-106 Ohte, N[1], M Shimizu[2], N Tokuchi[2] and N Matsuo[3], (1) The University of Tokyo, (2)Kyoto University, (3)Mie University. *Nitrogen utilization and life cycle of Sabina vulgaris: Developing islands of fertility in a semi-arid desert in northern China*.

PS 8-107 An, CK[1], JH Shim[2], HJ Kim[1], JW Nam[1], J Seong[1], HK Kim[3] and H Yi[1], (1)Seoul Women's University, Seoul, (2)Research Institute of Korean Amphibian and Reptile, Suwon, (3)Eco Tech Engineering Company, Seoul. *Restoration of replacement habitat of the two endangered species, Korean Golden Frogs and Narrow-mouthed Toads*.

PS 8-108 Wayland, HC[1], R Manderino[1], TO Crist[2] and KJ Haynes[1], (1)University of Virginia, (2)Miami University. *Impacts of gypsy moth defoliation and Bacillus thuringiensis application on beetle diversity*.

PS 8-109 Kern, CC[1], RA Montgomery[2], PB Reich[2] and TF Strong[3], (1)USDA Forest Service; University of Minnesota, (2) University of Minnesota, (3)USDA Forest Service, Retired. *Harvest gap size and proportion of forest area in gaps influence species diversity of ground-layer vascular plants*.

PS 8-110 Sarr, DA[1], M Sheehy-Skeffington[2], L Groshong[1] and J Curtin[2], (1)Klamath Network-National Park Service, (2) National University of Ireland, Galway. *Classification and mapping of wetland plant communities in the Burren National Park, West Ireland*.

PS 8-111 Zhang, J[1], Z Fu[2], Z Ouyang[3], J Liu[4] and V Hull[4], (1)Research Center for Eco-Environmental Sciences,Chinese Academy of Sciences, (2)Mianyang Normal University, (3)Chinese Academy of Sciences, (4)Michigan State University. *Linking socio-economic factors to biodiversity threats in protected areas: Complexity introduced by multiple livelihood modes*.

PS 8-112 Schaming, TD, Cornell University. *Use of occupancy surveys to monitor Clark's Nutcrackers*.

PS 8-113 Hulton, H[1], CW Barrows[2] and KE Anderson[3], (1) University of California Riverside, (2)University of California at Riverside, (3)University of California, Riverside. *Optimizing colonization proccesses to post-fire lands in Joshua Tree National Park*.

PS 8-114 Rogers, WE, CL Wonkka, D Twidwell and FE Smeins, Texas A&M University. *Effects of fire and herbivory on an endangered terrestrial orchid in a Texas post oak savanna*.

PS 8-115 Burcsu, T[1], J Christy[2], J Bauer[2] and J Kagan[3], (1)Institute for Natural Resource, (2)Institute for Natural Resources, (3)Oregon State University. *Prioritizing wetlands in Oregon for restoration and rehabilitation*.

PS 8-116 Toro-Rosario, M[1] and E Meléndez[2], (1)Center for Systems Integration and Sustainability, (2)Institute for Tropical Ecosystem Studies (ITES). *Characterization of cave-inhabiting arthropods of Puerto Rico: Potential tools for conservation*.

PS 9 - Conservation Planning, Policy, and Theory

Exhibit Hall DE, Oregon Convention Center

PS 9-117 Davis, SD and C Corbett, Pepperdine University. *Photosynthetic capacity and its implications for the competitive ability of Ceanothus megacarpus, Ceanothus crassifolius and Rhamnus californica*.

PS 9-118 Milt, A and PR Armsworth, University of Tennessee. *When more surveying for rare species does not lead to more value for conservation planning*.

PS 9-119 Hall, HR, SW Blair and T Ankersen, University of Florida. *Protecting the ecological integrity of our nations waters: An analysis of water quality monitoring data*.

PS 9-120 Alvarez, SJ[1], G Restrepo[2] and DJ Lizcano[2], (1)University of Maryland, (2)Universidad de Pamplona. *Identifying indicator assemblages as surrogates for conservation planning*.

PS 9-121 Jacobson, S[1], D Ritan[1] and M Kinnaird[2], (1)University of Florida, (2)Mpala Research Center. *Tourism satisfaction and wildlife conservation in Kenya*.

PS 9-122 Toomey, RS III[1], S Thomas[2] and SR Trimboli[1], (1)Mammoth Cave International Center for Science and Learning, (2) National Park Service. *Mammoth Cave National Park's response to the threat of White-nose Syndrome: A multi-prong approach including management plans, research and monitoring activities, and visitor education*.

PS 9-123 Howe, RW[1], RP Axler[2], VJ Brady[2], TN Brown[2], JJH Ciborowski[3], NP Danz[4], JP Gathman[5], GE Host[2], LB Johnson[2], KE Kovalenko[3], GJ Niemi[2] and ED Reavie[2], (1)University of Wisconsin-Green Bay, (2)University of Minnesota-Duluth, (3)University of Windsor, (4)University of Wisconsin-Superior, (5)University of Wisconsin-River Falls. *Multi-species indicators of ecological condition in the coastal zone of the Laurentian Great Lakes*.

PS 10 - Ecosystem Management

Exhibit Hall DE, Oregon Convention Center

PS 10-124 Landsbergen, KJ, Columbus College of Art and Design. *White oak (Quercus alba) leaf morphology and shoot structure responses to silvicultural burning treatments*.

PS 10-125 Roche, LM, AT O'Geen and KW Tate, University of California, Davis. *Managing for multiple outcomes on rangeland agroecosystems: Quantifying synergies and tradeoffs*.

PS 10-126 Valentini, E[1], A Taramelli[1], M Bresciani[2], C Giardino[2], F Filipponi[1], M Targusi[1], C Manzo[3] and L Disperati[3], (1)ISPRA - Institute for Environmental Protection and Research, (2)IREA-CNR - Institute for electromagnetic sensing of the environment, (3)Siena University. *Spectral libraries for emerged and submerged sandy beach using hyperspectral data*.

PS 10-127 Frêne, C[1], I Ponce[2], G Ojeda[2], C Ide[2], MP Torres[2], E Sotomayor[2] and C Donoso[2], (1)Pontificia Universidad Católica de Chile; Instituto de Ecología y Biodiversidad, (2)Agrupación de Ingenieros Forestales por el Bosque Nativo. *Community-based planning and management for sustainable water supply in small watersheds of southern Chile*.

PS 10-128 Bae, K[1], RD Yanai[1], SP Hamburg[2], JD Blum[3], MA Arthur[4], MA Vadeboncoeur[5], CR See[1] and CR Levine[1], (1)SUNY College of Environmental Science and Forestry, (2)Environmental Defense Fund, (3)University of Michigan, (4)University of Kentucky, (5)University of New Hampshire. *Sustainable forest harvest requires calcium supply from soil pools: Ecosystem budgets for second-growth northern hardwoods in New Hampshire*.

PS 10-129 Cyle, KT[1], MB Machmuller[1], M Kramer[2], N Hill[1] and A Thompson[3], (1)University of Georgia, (2)University of California, (3)University of Georgia, Athens. *Rapid*

association of clay fraction carbon in soil from grazing dairy pastures.

PS 11 - Ecosystem Services Assessment

Exhibit Hall DE, Oregon Convention Center

PS 11-130 Ito, A, National Institute for Environmental Studies. *Water-use efficiency of ecosystem functions and services of the terrestrial biosphere*.

PS 11-131 Herrmann, DL and ML Cadenasso, University of California, Davis. *Tipping the balance between ecosystem service and disservice: Considering light availability and soil carbon effects on carbon cycling in urban lawns*.

PS 11-132 Santavy, DL[1], P Bradley[2] and WS Fisher[2], (1)U.S. EPA, (2)US EPA. *Biological condition gradient: Applying a framework for determining the biological integrity of coral reefs*.

PS 11-133 Koehler-Cole, K[1], JR Brandle[1], CA Francis[1] and EE Blankenship[2], (1)University of Nebraska-Lincoln, (2) University of Nebraska. *A survey of public preferences for rural amenities in Lincoln, Nebraska*.

PS 11-134 Duszynski, KM[1], H Rowe[2] and J Dukes[1], (1)Purdue University, (2)Arizona State University. *Vegetation and soil texture effects on soil carbon and nitrogen in Midwestern Tallgrass Prairie and CRP*.

PS 11-135 Qiu, J[1] and MG Turner[2], (1)University of Wisconsin-Madison, (2)University of Wisconsin. *Spatial interactions among ecosystem services in an urbanizing agricultural landscape in the Upper Midwest*.

PS 11-136 Goodling, E, J Green and N McClintock, Portland State University. *Ecosystem services and political ecology: An integrated framework for urban environmental research*.

PS 12 - Environmental Impact And Risk Assessment

Exhibit Hall DE, Oregon Convention Center

PS 12-137 Macias, MA[1], DR Bedford[2], DM Miller[2] and DR Sandquist[3], (1)California State University, Fullerton., (2) U. S. Geological Survey, (3)California State University, Fullerton. *Quantification of water uptake from pulsed input via disturbed and undisturbed channels on a desert bajada*.

PS 12-138 Wang, X and Y Wu, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences. *The estimates of land, water and carbon footprints based on household consumption of food and commodities in Beijing, China*.

PS 12-139 Van der Vieren, D and C Kleier, Regis University. *Germination rates of Bouteloua gracilis (Blue Grama) under different concentrations of magnesium chloride*.

PS 12-140 Locklin, JL[1], JS Huckabee[1] and EJ Gering[2], (1)Temple College, (2)The University of Texas at Austin. *Streamlining techniques for rearing large quantities of the damselfly, Ischnura ramburii (Odonata: Coenagrionidae) in the laboratory*.

PS 12-141 Magee, TK[1], ME Kentula[2], G Serenbetz[3], ME Scozzafava[3], KA Blocksom[1] and AR Olsen[1], (1)US EPA, Western Ecology Division, (2)US EPA, Western Ecology Divsion, (3)US EPA. *The 2011 National Wetland Condition Assessment*.

PS 12-142 Davenport, SL and DJ Moriarty, California State Polytechnic University, Pomona. *Local weather conditions predict avian species richness in a coastal sage scrub habitat*.

PS 12-143 Will-Wolf, S[1], MP Nelsen[2] and MT Trest[1], (1)University of Wisconsin-Madison, (2)University of Chicago. *Response of four common lichen species to pollution, light, and nearby land cover: Predictions partially match 30-year patterns in upper midwestern USA*.

PS 12-144 Goetting, JM[1], EK McHale[1], D Martinovic[1], KD Zimmer[1], BR Herwig[2], MA Hanson[2], SR Vaughn[2] and RW Wright[2], (1)University of St Thomas, (2)Minnesota Department of Natural Resources. *Influence of watershed land-use on vitellogenin levels in fathead minnows (Pimephales promelas) in Minnesota shallow lakes*.

PS 12-145 Grigas, D[1], J Cebrian[2], B Ehmen[3], M Woodrey[4], T Strange[3], W Underwood[3], J Lehrter[5] and Y Chen[1], (1) University of Arkansas at Pine Bluff, (2)Dauphin Island Sea Lab, (3)Grand Bay National Estuarine Research Reserve, (4)Grand Bay National Estuarine Research Reserve; Coastal Research and Extension Center, Mississippi State University, (5)US EPA, NHEERL, Gulf Ecology Division. *Nutrient budgets in coastal bayous under varying degrees of urbanization, North Central Gulf of Mexico*.

PS 12-146 Porter, E[1], DH Bingham[1], J Lynch[2] and LH Pardo[3], (1) National Park Service, (2)US Environmental Protection Agency, (3)USDA Forest Service. *Critical loads for atmospheric deposition of nitrogen and sulfur compounds in national parks of the USA*.

PS 12-147 Blett, TF[1], M Fenn[2], KF Lambert[3], DA Burns[4], LH Pardo[2], R Haeuber[5] and CT Driscoll[6], (1)National Park Service, (2)USDA Forest Service, (3)Harvard Forest (Harvard University), (4)US Geologic Survey, (5)US EPA, (6)Syracuse University. *Ecosystem protection and restoration in the U.S.: Using air pollution thresholds to communicate public policy choices*.

PS 12-148 Sundol, CS[1], JK Bush[1] and R Bass[2], (1)University of Texas at San Antonio, (2)City of Boerne. *Relationship between avian abundance and measures of river impairment in central Texas*.

PS 12-149 Lipari, GM[1], C Ingersoll[2] and K Garbach[3], (1)University of California Davis, (2)MIT Sloan School of Management, (3) University of California, Davis. *Network analysis provides a tool to evaluate agroecology of sourcing practices for cocoa and rice: Investigating relationships among ecological certification organizations and multinational food corporations*.

PS 12-150 Durtsche, RD, P O'Hearn and K Spicer, Northern Kentucky University. *Amphibian developmental response to a natural anti-fungal treatment for the bat White-nose syndrome*.

PS 13 - Restoration Ecology

Exhibit Hall DE, Oregon Convention Center

PS 13-151 Thaxton, JM[1], SM Martinez[1], SJ Van Bloem[1] and SL Whitmire[2], (1)University of Puerto Rico, (2)University of Puerto Rico, Mayaguez. *Biomass allocation and leaf phenology of native and non-native grasses in a subtropical dry forest in Puerto Rico*.

PS 13-152 Hayes, CT, AJ Lyons, NM Reed and MA Gathany, Cedarville University. *Fish and macroinvertebrate species diversity in restored and unrestored forks of Massies Creek, Ohio*.

PS 13-153 Long, Q[1], K Kindscher[2] and BL Foster[2], (1)Missouri Botanical Garden, (2)University of Kansas. *Seed addition with heterogeneous disturbances to increase native diversity in restored grasslands*.

PS 13-154 West, BE[1], K Engelhardt[2] and MC Neel[3], (1)University of Maryland College Park, (2)University of Maryland Center for Environmental Science, (3)University of Maryland. *Linking genotypic diversity and reproductive success of Vallisneria americana from the Chesapeake Bay to enhance current and future restoration strategies*.

PS 13-155 Eggett, LM[1], PM Acton[2], JF Fox[2] and AL Jones[3], (1) Brevard College, (2)University of Kentucky, (3)Eastern

Kentucky University. *Assessing carbon budgets of reclaimed surface mines in the Southern Appalachian coal region of eastern Kentucky*.

PS 13-156 Gilbert, JC, JS Kush and RJ Barlow, Auburn University. *Destroyed virgin longleaf pine stand lives-on in digital form*.

PS 13-157 Richards, WH, Seattle Public Utilities. *Silviculture to facilitate marbled murrelet nesting structure*.

PS 13-158 Fry, JE, SK Gleeson and J Chakravarty, University of Kentucky. *Effect-functional traits of nine bunchgrasses native to the blue ash-oak savanna of the Inner Bluegrass Region of Kentucky*.

PS 13-159 Stube, CK and MW Paschke, Colorado State University. *Native ruderal species and cheatgrass (Bromus tectorum): Interactions in revegetation*.

PS 13-160 Shanklin, AM[1], MW Paschke[1], CC Rhoades[2] and PJ Fornwalt[3], (1)Colorado State University, (2)USDA Forest Service Research, (3)USDA Forest Service. *Rehabilitation of slash pile scars in Colorado*.

PS 13-161 Gilland, KE and BC McCarthy, Ohio University. *Performance of American Chestnut (Castanea dentata) and its hybrids on reclaimed mine sites in unglaciated Ohio*.

PS 13-162 Reinwald, AD[1], EW Schupp[1], JR Summerhays[1], SM Ostoja[2] and ML Brooks[2], (1)Utah State University, (2) United States Geological Survey. *Evaluating restoration techniques using native perennial grasses in cheatgrass (Bromus tectorum L.) invaded sagebrush-steppe ecosystems*.

PS 13-163 Emam, TM[1], VT Eviner[2] and K Rice[3], (1)UC Davis, (2) University of California Davis, (3)University of California, Davis. *Soil inoculation increases biomass of non-native grasses at a mine restoration site*.

PS 13-164 Buonopane, M[1], G Snider[2], BK Kerns[3] and PS Doescher[2], (1)USFS Pacific Northwest Research Station, (2)Oregon State University, (3)USFS, Pacific Northwest Research Station. *Complex restoration challenges: Weeds, seeds, and roads in a forested Wildland Urban Interface*.

PS 13-165 Chambers, JC[1], E Eldredge[2], KA Snyder[3], DI Board[1] and V Hubbard[2], (1)USDA Forest Service, (2)Natural Resources Conservation Service, (3)USDA Agricultural Research Service. *Restoring abandoned agricultural lands in arid environments: The tradeoffs between water availability and exotic species*.

PS 13-166 Albrecht, MA[1], A Bishop[2] and D Lincicome[2], (1) Missouri Botanical Garden, (2)Tennessee Department of Environment & Conservation. *Linking demographic processes with ecological gradients to inform restoration of edaphic endemics*.

PS 13-167 Villafana, B and GL Vourlitis, California State University. *Soil carbon and nutrient and vegetation dynamics of a constructed freshwater wetland on the campus of California State University, San Marcos*.

PS 13-168 Kirkpatrick, HE, J Wong and RV Burke, University of Puget Sound. *Functional responses of soil microbial communities to sugar amendment across a five year time sequence in Puget lowland prairies*.

PS 13-169 Goss, CW and PC Goebel, The Ohio State University. *Do forest patches influence leaf breakdown and macroinvertebrate communities in agricultural landscapes?*.

PS 13-170 Walker, J[1], BO Knapp[2] and S Cohen[3], (1)USDA Forest Service, (2)Clemson University, (3)Marine Corps Base Camp Lejeune. *Longleaf pine establishment affects site restoration potential through changes in vegetation, fuels, and fire behavior*.

PS 13-171 Lindgren, AI, NM DeCrappeo, TA Wirth, UC Wijayratne, DA Pyke and EJ DeLorenze, USGS Forest and Rangeland Ecosystem Science Center. *Is squirreltail growing with cheatgrass a better competitor than squirreltail growing without cheatgrass*.

PS 13-172 Byrd, SM[1], CM Peugh[1], RA Fehn[2], ND Cavender[3] and JM Bauman[4], (1)The Wilds, (2)The Ohio State University, (3)The Morton Arboretum, (4)Miami University. *Sustaining ecosystem services through conservation of pollinator networks, invasive species removal and habitat restoration* .

PS 13-173 Bauman, JM[1], S Hiremath[2], KE Gilland[3] and CH Keiffer[4], (1)The Wilds, (2)USDA Forest Service, (3)Ohio University, (4)Miami University. *Ectomycorrhizal fungal community assemblage under various soil reclamation methods*.

PS 13-174 Lee, CT and A Armitage, Texas A&M University at Galveston. *Comparing growth patterns among ecotypes of a habitat-forming species: A case study in a restored Spartina alterniflora marsh*.

PS 13-175 Bassett, T, LA Brudvig and E Grman, Michigan State University. *Land-use history trumps planting diversity effects in prairie restoration*.

PS 13-176 Stoffel, LN, DL Mummey and PW Ramsey, MPG Ranch. *An assisted succession model using sainfoin*.

PS 13-177 Slone, DH[1], JP Reid[1], BM Stith[1], ED Swain[1] and M DeWit[2], (1)USGS, (2)Florida Fish and Wildlife Conservation Commission. *When "preserving our ecosystems" conflicts with endangered species needs: A manatee refuge in southwest Florida and Everglades restoration*.

PS 13-178 Hermann, SM, JS Kush and JC Gilbert, Auburn University. *Preliminary results of planting small gaps as a strategy for restoring longleaf pine forests*.

PS 13-179 Bahr, JR, ZT Aanderud and SB St Clair, Brigham Young University. *Evaluating post-fire recovery of biological soil crusts and desert ecosystem services*.

PS 14 - Sustainability

Exhibit Hall DE, Oregon Convention Center

PS 14-180 Bae, C[1] and D Lee[2], (1)Seoul National University, Seoul, South Korea, (2)Seoul National University. *Analysis of urban runoff with Low Impact Development (LID) applications: Focus on green roofs and permeable pavement*.

PS 14-181 Chen, Y, SD Day, B Strahm, RK Shrestha, AF Wick and WL Daniels, Virginia Tech. *Effects of urban land development practices on soil greenhouse gas emissions*.

PS 14-182 Bailey, RE, Central Michigan University. *Long term sustainability of shallow lake impoundments: A case history, Lake Isabella (Isabella Co., MI)*.

PS 14-183 Barroso, J, PG Lawrence and BD Maxwell, Montana State University. *Improving agroecosystem input management with on-farm experimentation*.

PS 14-184 Kweon, D and YC Youn, Seoul National University. *Development of ecological indicators for sustainability assessment of village groves: The case of Namwon City, Republic of Korea*.

PS 14-185 Burton, CM[1], P Burton[2] and N Turner[1], (1)University of Victoria, (2)University of Northern British Columbia, Canadian Forest Service. *Recovery of devil's club (Oplopanax horridus) after clearcut logging in northwestern British Columbia*.

PS 14-186 Mitten, D and M Hauk, Prescott College. *The Journal of Sustainability Education - Nurturing ecology in action toward sustainability*.

PS 15 - Sustainability: Agriculture/Forestry

Exhibit Hall DE, Oregon Convention Center

PS 15-187 Wilhelm, KR[1], B Rathsack[2] and JG Bockheim[1], (1) University of Wisconsin-Madison, (2)University of Wisconsin. *Effects of timber harvest intensity on macronutrient cycling on oak-dominated sandy soils of northwest Wisconsin*.

PS 15-188 Palmer, MM[1], DJ Mladenoff[1], JA Forrester[1] and DE Rothstein[2], (1)University of Wisconsin-Madison, (2) Michigan State University. *Net ecosystem productivity during the first two years of woody biomass plantation establishment at two grassland sites in northern MI and WI, USA*.

PS 15-189 Wieme, RA and KL Shea, St. Olaf College. *Effects of varying nitrogen fertilizer treatments on soil properties, plant nutrients, and economic returns in no-till cornfields*.

PS 15-190 Mitchell, DC[1], MJ Castellano[1], TB Parkin[2] and MJ Helmers[1], (1)Iowa State University, (2)USDA Agricultural Research Service. *Biogeochemical processes of nitrate removal by prairie buffers in Iowa agricultural watersheds*.

PS 15-191 Schulte, LA[1], CA Cambardella[2], T Gunther[1], RB Hall[1], A Hallam[1], SK Hargreaves[1], W Headlee[1], E Heaton[1], MJ Helmers[1], KS Hofmockel[1], TM Isenhart[1], RK Kolka[3], R Manatt[1], K Moore[1], TA Ontl[1], W Welsh[1] and RJ Williams[1], (1)Iowa State University, (2)USDA-Agricultural Research Service, (3)USDA Forest Service, Northern Research Station. *The Landscape Biomass Project: Field tests of ecological and economic tradeoffs associated with five biomass cropping systems*.

PS 15-192 Hunt, ND, ST Gower and M Ozdogan, University of Wisconsin Madison. *Estimating canopy dynamics and productivity of upper Midwestern agroecosystems using remotely sensed observations*.

PS 15-193 Wang, D, D LeBauer and M Dietze, University of Illinois. *Screening optimal biomass source by assessing plant growth rate and water use efficiency on 21 woody species*.

PS 16 - Fire

Exhibit Hall DE, Oregon Convention Center

PS 16-194 Heckman, KA[1], J Campbell[2], H Powers[3], T Guilderson[4], BE Law[2] and CW Swanston[5], (1)USDA Forest Service, (2)Oregon State University, (3)Los Alamos National Lab, (4)Lawrence Livermore National Lab, (5)US Forest Service, Northern Research Station. *The influence of fire on the radiocarbon signature and character of soil organic matter in the Siskiyou National Forest, Oregon*.

PS 16-195 Hollingsworth, SN[1], MG Hohmann[2] and WA Hoffmann[1], (1)North Carolina State University, (2)US Army Corps of Engineers ERDC - CERL. *The bigger they are the harder they fall: Plant carbon balance explains size-dependent responses to fire*.

PS 16-196 Vaness, BM[1], DJ Augustine[2], KW Davies[2], BG Johnson[3], JD Derner[4], DW Johnson[3], RL Sheley[2], JD Bates[2], DG Milchunas[5], WW Miller[3], EM Carroll-Moore[3] and DI Board[6], (1)Western Ag Innovations, Inc., (2)USDA-ARS, (3)University of Nevada, (4)USDA ARS, High Plains Grasslands Research Station, (5)Colorado State University, (6)USDA Forest Service Rocky Mountain Research Station. *Burning down the house: A pyromaniacs guide to PRS™-probe use in fire ecology research*.

PS 16-197 Acker, SA[1], JA Kertis[2] and RJ Pabst[3], (1)Olympic National Park, (2)USDA Forest Service, (3)Oregon State University. *Tree recruitment following wildfire in a mountain hemlock forest, Oregon Cascades*.

PS 16-198 Senici, D[1], A Lucas[2], HH Chen[1], Y Bergeron[3], A Larouche[4], B Brossier[5], O Blarquez[6] and AA Ali[5], (1) Lakehead University, (2)Universite du Quebec en Abitibi-Temiscamingue, (3)University of Quebec in Abitibi-Temiscamingue, (4)Université de Montréal, (5)Universite Montpellier II, (6)Université du Québeec à Montréal. *Multi-millennial interactions between fire frequency and tree abundance in North American boreal forests*.

PS 16-199 Clement, GT[1] and SK Chapman[2], (1)Villanova Univesity, (2)Villanova University. *Forest fire legacy effects are more pervasive at low elevations*.

PS 16-200 Clifford, MJ and RK Booth, Lehigh University. *Late Holocene drought variability and wildfire occurrence in Maine*.

PS 16-201 Newman, EA, EK Waller and MA Moritz, University of California, Berkeley. *California data support Oregon fire probability mapping using MaxEnt models*.

PS 16-202 Gaetani, MS and D Schwilk, Texas Tech University. *Tradeoffs in fire survival traits of oaks in the Trans-Pecos Mountains*.

PS 16-203 Ellsworth, LM, CM Litton and AP Dale, University of Hawaii at Manoa. *Changes in land cover and fire risk associated with nonnative grass invasion in Hawaii*.

PS 16-204 West, AL, CB Zou, E Stebler, D Turton, SD Fuhlendorf and H Zhang, Oklahoma State University. *Ecohydrological response of tallgrass prairie rangelands to fire and grazing impacts from patch burning and annual burning regimes*.

PS 16-205 Barlow, RJ, JC Gilbert, SM Hermann and JS Kush, Auburn University. *Prescribed fire effects in a longleaf pine (Pinus palustris) ecosystem: Are winter fires working?*.

PS 16-206 Chapman, SK[1], RL Kukola[1], KL Clark[2] and J Hom[2], (1) Villanova University, (2)USDA Forest Service. *Disturbance mediated changes in nitrogen cycling in the New Jersey Pinelands*.

PS 16-207 Kemp, KB, AM Young, PE Higuera, J Abatzoglou and P Morgan, University of Idaho. *Quantifying climate-fire relationships in forest ecosystems of the U.S. Northern Rockies, 1902-2008*.

PS 17 - Fire Management

Exhibit Hall DE, Oregon Convention Center

PS 17-208 Jennings, TN[1], JE Smith[1], K Cromack Jr.[2], D McKay[1], BA Caldwell[2] and S Beldin[3], (1)USDA Forest Service, (2)Oregon State University, (3)USGS FRESC. *Taking the heat: Soil microbial communities and soil biogeochemistry after wildfire and postfire logging in central Oregon*.

PS 17-209 Keyser, AR[1], A Westerling[1] and T Das[2], (1)University of California, Merced, (2)CH2M Hill Inc.. *Quantifying the relative importance of multiple indices when predicting fire severity in the western United States*.

PS 17-210 Petersen, SM, College of Wooster. *Effects of single spring and fall fires and a fire surrogate (clipping) on seedling layers in oak-dominated forests in southern Ohio*.

PS 17-211 Knutson, KC[1], TA Wirth[1], DA Pyke[1], DS Pilliod[1], RS Arkle[1], ML Brooks[2], JB Grace[3] and JC Chambers[4], (1)USGS Forest and Rangeland Ecosystem Science Center, (2)USGS Western Ecological Research Center, (3)USGS National Wetlands Research Center, (4)USDA Forest Service. *Effects of post-fire seedings on plant cover and annual grass invasion in the Great Basin: A chronosequence approach*.

PS 17-212 Meier, AJ, DR Kem and MM Wilder, Western Kentucky University. *The effects of fire on the vernal herbs of an eastern mesic forest*.

PS 17-213 Anning, AK and BC McCarthy, Ohio University. *Long-term growth response of trees to prescribed fire and thinning*

treatments in the mixed oak forests of southeastern Ohio.

PS 17-214 Narog, MG, LG Wolden, JL Beyers and PJ Riggan, Pacific Southwest Research Station. *Fine tuning FireMapper imagery for post-fire plant recovery*.

PS 18 - Land-Use And Land-Use History

Exhibit Hall DE, Oregon Convention Center

PS 18-215 Perkins, KS, JR Nimmo and AC Medeiros, USGS. *Effects of native forest restoration on soil hydraulic properties, Auwahi, Maui*.

PS 18-216 Larouche, M and JM Rhemtulla, McGill University. *Effects of historical land use and landscape configuration on forest plant diversity in an agroforested landscape of southern Quebec, Canada*.

PS 18-217 Vega-Fontanez, HA, University of Puerto Rico. *Bridging El Yunque National Forest and Espiritu Santo Nature Reserve: A proposal for developing a Floodplain Green Corridor in Northeast Puerto Rico*.

PS 19 - Ecoinformatics

Exhibit Hall DE, Oregon Convention Center

PS 19-218 Baldridge, E[1], N Myrhvold[2] and SKM Ernest[1], (1)Utah State University, (2)Intellectual Ventures. *Macroecological life-history trait database for birds, mammals, and reptiles*.

PS 19-219 Ries, L[1], J JaJa[1], M Smorul[1], D Taron[2], WF Fagan[1], J Glassberg[3] and J Sauer[4], (1)University of Maryland, (2)Chicago Academy of Sciences, (3)North American Butterfly Association, (4)USGS Patuxent Wildlife Research Center. *Access, visualization and statistical tools for the analysis of North American butterfly monitoring data*.

PS 19-220 Karl, JW[1], RS Unnasch[2], JE Herrick[3] and J Gillan[1], (1) USDA ARS Jornada Experimental Range, (2)The Nature Conservancy, (3)USDA Agricultural Research Service. *JournalMap: Geo-semantic searching for relevant knowledge*.

5 pm-5:45 pm

ESA Award Recipients' Reception (by invitation only)

Broadway, Doubletree Hotel

5 pm-6:30 pm

ESA Musicians Central

Ginkoberry Concourse, Oregon Convention Center

6:30 pm-8 pm

Christian Ecologists Social

VIP B, Oregon Convention Center

ESA Aquatic Section Mixer

D135, Oregon Convention Center

ESA Student Mixer

Columbia Blrm, Portland State University

ESA Theoretical Ecology Section Mixer

D136, Oregon Convention Center

ESA Vegetation Section and IAVS-NA Business Meeting and Mixer

D130, Oregon Convention Center

ESA's Sustainable Biosphere Initiative at 20 Years: The View Forward (reception)

A107, Oregon Convention Center

Utah State University Ecologists Mixer

D137, Oregon Convention Center

8 pm-10 pm

SS 13 - An Evening of Music: Live Performance by ESA Musicians

A103, Oregon Convention Center

Organized by: NJ Gotelli (ngotelli@uvm.edu)

Moderator: NJ Gotelli

An evening of music and performance by ESA members.

SS 14 - Critical Transitions the Movie

Portland Blrm 251, Oregon Convention Center

Organized by: M Scheffer

Tipping points and early warning signals are a hot area of research but also inspire artists. The Norwegian artist Tone Bjordam has made a stunningly beautiful abstract movie capturing the essence of these concepts. Marten Scheffer who worked with her on the design will introduce the movie.

Speakers:
M Scheffer, Wageningen University

SS 15 - Civic Ecology: A Pathway for Earth Stewardship In Cities

B113, Oregon Convention Center

Organized by: ME Krasny, KG Tidball

An exploration of civic ecology conceptual frameworks, research, and local Portland practices, and how they contribute to ESA's Earth Stewardship and action ecology agendas.

SS 16 - Connecting Collaborative Conservation Across Cultures: Identifying Effective Strategies for Cross-Cultural Comparisons of Collaborative Conservation Research

B114, Oregon Convention Center

Organized by: KD Wilkins, G Bowser, G Sumay

This session invites ESA participants to join in an interactive discussion that will identify effective strategies for conducting cross-cultural comparisons of collaborative conservation research from around the world.

WK 28 - Using *Pinus contorta* As a Global Natural Experiment for Invasion Ecology and Management

B116, Oregon Convention Center

Organized by: A Pauchard (pauchard@udec.cl), BD Maxwell, MA Nuñez

This workshops aims to exchange experiences and coordinate efforts to study *Pinus contorta* using a global research network. *Pinus contorta*, native from North America, invades numerous environments in several countries. Our goal is to share ideas and discuss how to study this species at a global scale.

Tuesday, August 7

Business Meetings and Receptions

6:45 am-9 am

ESA Frontiers Editorial Board Meeting
Ross Island, Doubletree Hotel

7 am-8 am

ESA Awards Committee Business Meeting
D135, Oregon Convention Center

ESA Graduate Students and Post Doc Roundtable with ESA Leadership
E148, Oregon Convention Center

7 am-9 am

ESA Meetings Committee Business Meeting
D129, Oregon Convention Center

ESA SEEDS Advisory Board Meeting
Morrison, Doubletree Hotel

8 am-10 am

ESA Centennial Committee Meeting
D130, Oregon Convention Center

8 am-5 pm

ESA Vegetation Classification Panel
Alaska, Doubletree Hotel

11:30 am-1:15 pm

ESA Ecosphere Editor in Chief Meeting
Ross Island, Doubletree Hotel

ESA Past Presidents' 2015 Committee Meeting
D130, Oregon Convention Center

ESA Traditional Ecological Knowledge Business Meeting and Luncheon
VIP B, Oregon Convention Center

ESA Urban Ecosystem Ecology Section Business Meeting
E145, Oregon Convention Center

GLBT Ecologists Brown Bag Lunch
Morrison, Doubletree Hotel

Rapid Response Team Luncheon (by invitation only)
D135, Oregon Convention Center

12 pm-1 pm

ESA Paleoecology Section Business Meeting
D129, Oregon Convention Center

12 pm-1:15 pm

ESA Mexican Chapter Annual Business Meeting: Challenges for Ecology in Latin America
Hawthorne, Doubletree Hotel

4 pm-6 pm

ESA Ecological Applications Editorial Board Meeting
Ross Island, Doubletree Hotel

4:30 pm-6:30 pm

Royal Society Publishing Event (Booth 204)
Exhibit Hall DE, Oregon Convention Center

5 pm-6:30 pm

ESA Musicians Central
Ginkoberry Concourse, Oregon Convention Center

6:30 pm-8 pm

All Tropical Biology Mixer Hosted by OTS
F150, Oregon Convention Center

British Ecological Society Journal of Ecology Centenary Reception (by invitation only)
Portland Blrm 256, Oregon Convention Center

ESA Applied Ecolgy, Agroecology, Human Ecology, Urban Ecosystem Ecology, and Environmental Justice Joint Mixer
Portland Blrm 258, Oregon Convention Center

ESA Asian Ecology Section Business Meeting and Mixer
Morrison, Doubletree Hotel

ESA Biogeosciences Mixer
Portland Blrm 255, Oregon Convention Center

ESA Education Section Mixer
E146, Oregon Convention Center

ESA Fund for the Future Reception (by invitation only)
Red Star Tavern Club Rm, Hotel Monaco

ESA Soil Ecology Section and Microbial Ecology Joint Mixer
E145, Oregon Convention Center

ESA Student Section Business Meeting and Awards Ceremony
E148, Oregon Convention Center

NEON Meet & Greet
Mt. Helens, Doubletree Hotel

Pacific Northwest Prairie Conservation Science Mixer
Hawthorne, Doubletree Hotel **USGS Meet and Greet**
C123, Oregon Convention Center

6:30 pm-9 pm

Oecologia Editorial Board Reception (by invitation only)
Halsey, Doubletree Hotel

Tuesday Sessions

6:45 am-9 am

ESA Frontiers Editorial Board Meeting

Ross Island, Doubletree Hotel

7 am-8 am

ESA Awards Committee Business Meeting

D135, Oregon Convention Center

ESA Graduate Students and Post Doc Roundtable with ESA Leadership

E148, Oregon Convention Center

7 am-9 am

ESA Meetings Committee Business Meeting

D129, Oregon Convention Center

ESA SEEDS Advisory Board Meeting

Morrison, Doubletree Hotel

8 am-10 am

ESA Centennial Committee Meeting

D130, Oregon Convention Center

8 am-11:30 am

SYMP 4 - The Two Cultures of Statistics In Ecology: Prediction Vs. Explanation

Portland Blrm 251, Oregon Convention Center

Organized by: BM Bolker, AJ Tyre

Endorsed by: Statistical ecology, Theoretical ecology

Moderator: B Bolker

This symposium contrasts two approaches to ecological analysis: (1) a top-down, 'algorithmic', predictive approach that attempts to extract meaningful patterns from large data sets while imposing relatively few assumptions, vs. (2) a bottom-up, 'explanatory', model-based approach that fits theoretically based models to the data in order to elucidate biological processes.

8:00 AM Introductory remarks

8:05 AM SYMP 4-1 Fink, D[1], WM Hochachka[1], T Damoulas[1], J Dave[1] and S Kelling[2], (1)Cornell University, (2)Cornell Lab of Ornithology. *Exploratory analysis and inference with broad-scale citizen science data*.

8:30 AM SYMP 4-2 Preisler, HK[1] and DR Brillinger[2], (1)US Forest Service, (2)University of California Berkeley. *Predictive or explanatory? Is that the question?*.

8:55 AM SYMP 4-3 Latimer, AM[1], C Merow[2] and AM Wilson[2], (1)University of California Davis, (2)University of Connecticut. *Hierarchical statistical models for ecological data: Combining explanation and prediction*.

9:20 AM SYMP 4-4 Dietterich, TG and RA Hutchinson, Oregon State University. *Bridging the two cultures: Latent variable statistical modeling with boosted regression trees*.

9:45 AM Break

9:55 AM SYMP 4-5 Soberon, J, A Lira-Noriega, N Barve and AT Peterson, University of Kansas. *Physics envy vs. computer sciences envy: Shifting theoretical paradigms in ecology*.

10:20 AM SYMP 4-6 Hastie, T, Stanford University. *An analysis of approaches to presence only data*.

10:45 AM Discussion

SYMP 5 - Revisiting the Holy Grail: Using Trait-Based Ecology As a Framework for Preserving, Utilizing, and Sustaining Our Ecosystems

Portland Blrm 252, Oregon Convention Center

Organized by: J Wright, JL Funk

Endorsed by: Physiological Ecology

Moderator: JL Funk

While Trait-Based Ecology holds significant promise for understanding responses to communities and ecosystems to global change, there are also significant conceptual and practical challenges that must be addressed before the framework can be implemented.

8:00 AM SYMP 5-1 Reich, PB, University of Minnesota. *What does the leaf economic spectrum tell us about the performance of individuals, populations, communities, and ecosystems?*.

8:25 AM SYMP 5-2 Cavender-Bares, J[1], K Kozak[1] and DD Ackerly[2], (1)University of Minnesota, (2)University of California. *Phylogenetic conservatism in the traits that drive community assembly*.

8:50 AM SYMP 5-3 Bunker, DE, New Jersey Institute of Technology. *Strategies for successful aggregation and integration of ecological data – lessons from other research domains*.

9:15 AM SYMP 5-4 Wright, J, Duke University. *How should trait based ecology deal with intraspecific trait variability?*.

9:40 AM Break

9:50 AM SYMP 5-5 Kattge, J[1], S Díaz[2], S Lavorel[3], IC Prentice[4], PW Leadley[5], G Bönisch[1], C Wirth[6] and TT Consortium[7], (1)Max Planck Institute for Biogeochemistry, (2)Instituto Multidisciplinario de Biología Vegetal, (3)Université Joseph Fourier, (4)Macquarie University, (5)Université Paris Sud, (6)University of Leipzig, (7)hosted at the Max Planck Institute for Biogeochemistry. *The potential (and limitations) of global plant trait databases: Lessons from TRY*.

10:15 AM SYMP 5-6 Ames, G[1] and CT Webb[2], (1)Duke University, (2)Colorado State University. *A trait based framework to predict community shifts in response to changing disturbance regimes*.

10:40 AM SYMP 5-7 Sutton-Grier, A[1], J Wright[2] and C Richardson[2], (1)National Oceanic and Atmospheric Administration, (2) Duke University. *Lessons from applying a trait based framework for predicting restoration success*.

11:05 AM SYMP 5-8 Butterfield, B[1] and KN Suding[2], (1)Northern Arizona University, (2)University of California at Berkeley. *Linking environmental filters and functional traits to multiple ecosystem services*.

SYMP 6 - Human Behaviour and Sustainability: Addressing Barriers to Change

Portland Blrm 253, Oregon Convention Center

Organized by: RA Dyball (rob.dyball@anu.edu.au), C Gross

Endorsed by: Justice, Agroecology, Rangeland Ecology and Management Section, Human Ecology Section

Moderator: E Ellis

This symposium presents a coherently integrated series of interdisciplinary research projects unified around the argument that the primary barriers to sustainability are not a lack of existing knowledge, but socially constructed obstacles hindering our capacity to act on the basis of that knowledge.

8:00 AM Introductory remarks

8:05 AM SYMP 6-1 Fischer, J, Leuphana University Lueneburg. *Policy reform for sustainability: Contrasting challenges in different settings*.

8:25 AM SYMP 6-2 Wyborn, C, Australian National University. *Engaging civil society across scales: Integrating local community perspectives into large scale biodiversity conservation initiatives in Australia and North America*.

8:45 AM SYMP 6-3 Watanabe, C, University of Tokyo. *Consumption and population in underdeveloped nations: The health impacts of food consumption by high density populations: Case study from Bangladesh*.

9:05 AM SYMP 6-4 Lovejoy, T, George Mason University & Heinz Center for Science, Economics and the Environment. *Financial institutions and sustainable development*.

9:25 AM Break

9:35 AM SYMP 6-5 Gross, C, Australian National University. *Fairness and justice: Water allocations, food bowl modernization, and divided communities, case of Victoria, Australia*.

9:55 AM SYMP 6-6 Freitag, A, Duke University. *Values and beliefs: Utilizing different 'ways of knowing' in small-scale fishing communities in North Carolina*.

10:15 AM SYMP 6-7 Steffen, W, Australian National University. *Ways forward: The wicked problem of global change: Towards more sustainable futures*.

10:35 AM SYMP 6-8 Ehrlich, PR, Stanford University. *Interdisciplinary research platforms to support evidence-based policy making in coupled human-natural systems: Lessons from the MAHB*.

10:55 AM Discussion

OOS 8 - Living at Water's Edge: Shifting Human Patterns Impacting Coastal Ecosystems

A106, Oregon Convention Center

Organized by: ME Lam (mimibethlam@gmail.com), BR Pohlad

Moderator: ME Lam

This symposium synthesizes ecological theory and practice in a way that renders the science understandable, both to resource users and regulators of human activities, to shift human patterns of consumption and industry impacting coastal ecosystems and to identify what is needed to promote collaborative governance.

8:00 AM OOS 8-1 Lam, ME[1] and BR Pohlad[2], (1)University of British Columbia, (2)Ferrum College. *Living at Water's edge: Connecting ecology, communities, and policy*.

8:20 AM OOS 8-2 Pitcher, TJ, University of British Columbia. *Sea change: Historically based restoration and the sea ahead*.

8:40 AM OOS 8-3 Pérez-Quintero, AE, University of Puerto Rico. *Mobilizing coastal communities to protect coastal ecosystems*.

9:00 AM OOS 8-4 Zandvliet, DB, Simon Fraser University. *Re-visioning environmental learning to sustain communities*.

9:20 AM OOS 8-5 Berkes, F, University of Manitoba. *Marine and coastal co-management: How can we foster learning and adaptive processes?*.

9:40 AM Break

9:50 AM OOS 8-6 Fluharty, DL, University of Washington. *Living at the edge: Making integrated coastal management and marine policy work*.

10:10 AM OOS 8-7 Leslie, HM, Brown University. *Ecosystem-based management in practice: Learning from place-based initiatives*.

10:30 AM OOS 8-8 McLeod, KL, COMPASS. *From metaphors to measurements: Mobilizing science for ecosystem-based management*.

OOS 9 - Population, Environment and Sustainability Issues In the U.S.

A105, Oregon Convention Center

Organized by: SH Hurlbert (shurlbert@sunstroke.sdsu.edu)

Moderator: R Costanza

Conflicts between sustainability and population growth as exemplified by U.S. past, present and future population trends, policies, and case histories of major negatively impacted environmental resources of the U.S. and bordering regions of Canada and Mexico, with intimations of the way forward.

8:00 AM OOS 9-1 DeYoung, MBC, Californians for Population Stabilization. *U.S. population policies, trends and projections: 1900-2050*.

8:20 AM OOS 9-2 Pimentel, D, Cornell University. *Estimating a sustainable population for the United States*.

8:40 AM OOS 9-3 Dietz, R, The Daly News. *Moving toward ecological economics: Why are we still haunted by the ghosts of Adam Smith, Milton Friedman, and Julian Simon?*.

9:00 AM OOS 9-4 Cafaro, P, Colorado State University. *Developing an environmental impact statement for U.S. immigration policy*.

9:20 AM OOS 9-5 Schindler, DW, University of Alberta. *Oil sands operations, first nation peoples and a sustainable Canada*.

9:40 AM Break

9:50 AM OOS 9-6 Ceballos Gonzalez, G, Universidad Nacional Autonoma de Mexico. *Continental ecology, connectivity, and the conservation of biodiversity in the Mexico-U.S. border region*.

10:10 AM OOS 9-7 Michael, H[1] and R Lackey[2], (1)Washington Department of Fish and Wildlife, Retired, (2)Oregon State University. *Past, present and future of salmonid stocks in the Pacific Northwest*.

10:30 AM OOS 9-8 Zuckerman, B, University of California Los Angeles. *Population growth and projection of future U.S. greenhouse gas outputs*.

10:50 AM OOS 9-9 Hurlbert, SH, San Diego State University. *Sustainibility, censorship and unholy left-right alliances*.

OOS 10 - Ecological Effects of Artificial Light At Night

D136, Oregon Convention Center

Organized by: EK Perkin (liz.perkin@igb-berlin.de), F Hölker

Moderator: JS Richardson

This session seeks to update the ecological community about recent advances in artificial light research and to increase awareness of the potential effects of artificial light on ecosystems.

8:00 AM OOS 10-1 Rotics, S, T Dayan and N Kronfeld-Schor, Tel-Aviv University. *Light pollution in a rocky desert community: Foraging behavior, activity patterns, and inter- and intraspecific interactions in spiny mice*.

8:20 AM OOS 10-2 Kempenaers, B, Max Planck Institute for Ornithology. *Artificial night lighting disrupts songbird breeding behavior*.

8:40 AM OOS 10-3 Nordt, A and R Klenke, Helmholz Centre for Environmental Research. *Sleepless in the city: Drivers of the shift in dawn song of urban dwelling European blackbirds*.

9:00 AM OOS 10-4 Spoelstra, K[1], RV Grunsven[2], M Titulaer[1], KV Geffen[2], MD Jong[1], M Donners[3], F Berendse[2], E Veenendaal[2] and M Visser[1], (1)Netherlands Institute of Ecology, (2)Wageningen University, (3)Philips Lighting. *Experimental illumination of a terrestrial ecosystem: Effects at the population and individual level*.

9:20 AM OOS 10-5 Lewanzik, D and CC Voigt, Leibniz Institute for Zoo and Wildlife Research. *Effects of artificial light at night on obligatory nocturnal mammals*.

9:40 AM Break

9:50 AM OOS 10-6 Hölker, F[1], S Huber[2], EK Perkin[3] and K Tockner[1], (1)Leibniz Institute of Freshwater Ecology and Inland Fisheries, (2)EAWAG Swiss Federal Institute of Aquatic Science and Technology, (3)Leibniz Institute of Freshwater Ecology and Inland Fisheries/Freie Universität Berlin. *Does indoor lighting attract stream insects?*.

10:10 AM OOS 10-7 Perkin, EK[1], F Hölker[2], K Tockner[3] and JS Richardson[4], (1)Leibniz Institute of Freshwater Ecology and Inland Fisheries/Freie Universität Berlin, (2)Leibniz Institute of Freshwater Ecology and Inland Fisheries, (3)IGB, (4)University of British Columbia. *Does artificial light at night disrupt temperate stream ecosystem functioning?*.

OOS 11 - Complex Interactions Between Biota, Landscapes and Native Peoples

A107, Oregon Convention Center

Organized by: NJ Reo (reon@umich.edu), JM Fragoso

Moderator: NJ Reo

Complex interactions between subsistence people and their environments

8:00 AM OOS 11-1 Reshetnikov, AN, Ecology & Evolution Institute. *Range expansion of invasive fish (Perccottus glenii): the past, the present, and the future*.

8:20 AM OOS 11-2 Mandle, L and T Ticktin, University of Hawaii at Manoa. *Ecological compatibility and trade-offs between wild plant harvest and conservation of plant diversity in a seasonally dry tropical ecosystem*.

8:40 AM OOS 11-3 Wood, SLR, McGill University. *Sustaining biodiverse and productive landscapes in tropical swidden forests of the Peruvian Amazon*.

9:00 AM OOS 11-4 Lincoln, NK, Stanford University. *Indigenous environmental management: Examples of how native organizaitons assess tradeoffs*.

9:20 AM OOS 11-5 Perreault, P, University of British Columbia. *Capactiy for what? Capacity for whom?: A critical analysis of capacity building for aborignal forest management*.

9:40 AM Break

9:50 AM OOS 11-6 Baldy, CR, UC Davis. *Why we gather: The ecology of traditional gathering in native California and the future of bio-cultural sovereignty*.

10:10 AM OOS 11-7 James, K, South Wapichan District Toshaos' Council. *Traditional views of ecosystems and their management*.

10:30 AM OOS 11-8 Whyte, K, Michigan State University. *Values, knowledge and indigenous peoples*.

10:50 AM OOS 11-9 Smith, MA, Lakehead University. *Giving voice to First Nation views on land stewardship: Moving beyond the boreal conservation vs. development debate*.

11:10 AM OOS 11-10 Fragoso, JM, Stanford University. *Complex interactions between biodiversity and indigenous amazonian cultures*.

OOS 12 - Consequences of Future Climate Variability On Productivity, Carbon Storage, and Water Balance In Arid and Semiarid Regions

B110, Oregon Convention Center

Organized by: DR Schlaepfer (dschlaep@uwyo.edu), WK Lauenroth, JB Bradford

Moderator: IC Burke

In arid and semiarid regions where water availability is a limiting factor, increased variability in weather events may result in novel spatial and temporal dynamics of water balance. This session will address consequences of climate variability on ecosystem productivity, species composition, and carbon storage, which may respond in nonlinear ways.

8:00 AM OOS 12-1 Lauenroth, WK[1], DR Schlaepfer[1] and JB Bradford[2], (1)University of Wyoming, (2)US Geological Survey. *Soil water dynamics and ecosystem water balance in the semiarid West*.

8:20 AM OOS 12-2 Brunsell, N, University of Kansas. *Implications of changing extreme weather distributions on grassland ecohydrology*.

8:40 AM OOS 12-3 Bradford, JB[1], DR Schlaepfer[2] and WK Lauenroth[2], (1)US Geological Survey, (2)University of Wyoming. *Weather variability in semiarid ecosystems: Consequences for ecosystem water balance and soil water availability*.

9:00 AM OOS 12-4 Raz-Yaseef, N[1], DD Baldocchi[2] and D Yakir[3], (1)UC Berkeley, (2)University of California, (3)Weizmann Institute of Science. *Resilience of semi-arid forests to precipitation patterns: Lessons learned from a dry forest in Israel and a ground-water controlled forest in California*.

9:20 AM OOS 12-5 Schlaepfer, DR[1], WK Lauenroth[1] and JB Bradford[2], (1)University of Wyoming, (2)US Geological Survey. *Future regeneration of big sagebrush under climate variability*.

9:40 AM Break

9:50 AM OOS 12-6 Sala, OE[1], LA Gherardi[1] and D Peters[2], (1) Arizona State University, (2)USDA Agricultural Research Service. *Effects of interannual precipitation variability on ecosystem water balance and its consequences for aboveground net primary production*.

10:10 AM OOS 12-7 Paruelo, J and M Texeira, Universidad de Buenos Aires and CONICET. *The inertia of C gains in grasslands and shrublands of South America: Changes across environmental gradients*.

10:30 AM OOS 12-8 Thomey, ML and SL Collins, University of New Mexico. *Climate change and the carbon cycle: A view from arid-semiarid grassland ecosystems*.

10:50 AM OOS 12-9 Salguero-Gomez, R[1], W Siewert[2], B Casper[3] and K Tielbörger[4], (1)Max Planck Institute for Demographic Research, (2)Tubingen University, (3) University of Pennsylvania, (4)University of Tuebingen. *Desert plant demography and climate change: more variable is not bad*.

11:10 AM OOS 12-10 Horn, KJ[1], RR Jensen[2] and SB St. Clair[2], (1)Brigham Young Univiersity, (2)Brigham Young University. *Exotic grass invasion in western US deserts alters landscape scale responses to precipitation and temperature through fire*.

OOS 13 - The Chemical Ecology of Plant-Animal Mutualisms

B116, Oregon Convention Center

Organized by: JS Manson (Jessamyn.S.Manson@Dartmouth.edu), RA Raguso, SR Whitehead

Moderator: JS Manson

Chemistry is a key trait mediating species interactions; this session will focus on three key plant-animal mutualisms, pollination, seed dispersal and indirect defenses, to illustrate the importance of chemistry in fundamental ecological relationships and will also demonstrate how chemical ecology techniques can be integrated into more traditional ecological studies.

8:00 AM OOS 13-1 Policha, T[1], R Manobanda[2], MR Barnadas[3], J McAlpine[1], BTM Dentinger[4], BA Roy[1] and RA Raguso[5], (1)University of Oregon, (2)National Herbarium, Quito, Ecuador, (3)Magpie Studio: Fabrication for Art and Science, (4)Jodrell Laboratory Royal Botanic Gardens, Kew, (5)Cornell University. *How to act like a mushroom: Olfactory and visual cues in the attraction of drosophilid flies by neotropical Dracula orchids*.

8:20 AM OOS 13-2 Friberg, M[1], RA Raguso[2] and JN Thompson[3], (1)University of California, Santa Cruz, (2)Cornell University, (3)University of California Santa Cruz. *Floral scent and the geographic mosaic of co-evolving plants and insects*.

8:40 AM OOS 13-3 Whittall, JB[1], E Narbona[2] and CA Dick[1], (1) Santa Clara University, (2)Universidad Pablo de Olavide. *On the measure of flower color: Examples from the Brassicaceae*.

9:00 AM OOS 13-4 Lichtenberg, EM and JC Nieh, University of California, San Diego. *Heterospecific recruitment pheromones facilitate efficient foraging by keystone Neotropical pollinators*.

9:20 AM OOS 13-5 Vannette, RL, MP Gauthier and T Fukami, Stanford University. *Nectar microbes differentially affect nectar chemistry and plant-pollinator interactions*.

9:40 AM Break

9:50 AM OOS 13-6 Whitehead, SR, University of Colorado. *Defense trade-offs in ripe fruits: Secondary compounds deter pests but reduce consumption by mutualist seed dispersers*.

10:10 AM OOS 13-7 Mooney, KA, WK Petry, L Abdala-Roberts and X Moreira, University of California at Irvine. *Consequences of monarch damage and plant genotype for ant-aphid interactions on the common milkweed Asclepias syriaca*.

10:30 AM OOS 13-8 Skogen, K[1], J Fant[2] and RA Raguso[3], (1) Northwestern University and Chicago Botanic Garden, (2)Northwestern University & Chicago Botanic Garden, (3)University of South Carolina. *Vagrant pollinators and fragrant plants - Geographic structure in floral scent despite hawkmoth-mediated gene flow linking isolated populations*.

10:50 AM OOS 13-9 Izaguirre, MM[1], AM Ciarla[1], CA Mazza[2] and CL Ballaré[2], (1)University of Buenos Aires, (2)University of Buenos Aires and IFEVA-CONICET. *No time for candy: Plants down-regulate herbivory-induced extrafloral nectar production when challenged by competitors*.

11:10 AM OOS 13-10 Youngsteadt, E, Sigma Xi. *Communicating chemical ecology to a broader audience*.

COS 26 - Agroecology/Agroforestry

A103, Oregon Convention Center

8:00 AM COS 26-1 Szczepaniec, A[1] and MD Eubanks[2], (1) South Dakota State University, (2)Texas A&M University. *Anthropogenic effects on plant resistance: Can insecticides alter induction of defenses in crop plants?*.

8:20 AM COS 26-2 Neff, K, Montana State University. *The ecology of nutrition: Soil organic matter effects on crop yield and human nutrition*.

8:40 AM COS 26-3 Lauer, JG, University of Wisconsin - Madison. *Long-Term Evidence for Sustainable Midwest Cropping Systems*.

9:00 AM COS 26-4 Peralta, AL[1], CM Ugarte[2], MM Wander[2] and AD Kent[2], (1)Michigan State University, (2)University of Illinois at Urbana-Champaign. *The biological basis of soil fertility: Microbial community response to organic transition strategy*.

9:20 AM COS 26-5 Beck, J[1], M Schroeder-Moreno[1], G Fernandez[1], J Grossman[2] and N Creamer[1], (1)North Carolina State University, (2)NCSU. *A systems level approach to sustainable soil and pest management strategies for strawberry production*.

9:40 AM Break

9:50 AM COS 26-6 Chen, YH[1], AT Barrion[2], NL Cuong[3] and G Langellotto[4], (1)University of Vermont, (2)Philrice, (3)Cuu Long Rice Research Institute, (4)Oregon state University. *Cultivation of domesticated rice influences arthropod diversity and community composition in the Mekong Delta, Vietnam*.

10:10 AM COS 26-7 Jiménez Soto, E[1], JA Cruz Rodríguez[1], I Perfecto[2] and J Vandermeer[2], (1)Universidad Autónoma Chapingo, (2)University of Michigan. *Uncovering the relationship between two ant species and the coffee berry borer in Chiapas, Mexico*.

10:30 AM COS 26-8 Jabbour, R[1], E Gallandt[1], S Zwickle[2], RS Wilson[2], K McPhee[1] and D Doohan[2], (1)University of Maine, (2)Ohio State University. *Organic farmer mental models: Associations between weed seedbanks and management philosophies on New England farms*.

10:50 AM COS 26-9 Malcolm, GM, GG Camargo, TL Richards and HD Karsten, Pennsylvania State University. *Energetic comparison of a dairy cropping system that use straight vegetable oil fuel produced from canola grown on-farm with a system that uses all diesel fuel*.

11:10 AM COS 26-10 Kerr, AC[1], FK Akinnifesi[2], S Mn'gomba[2] and MS Torn[3], (1)UC Berkeley, (2)World Agroforestry Centre, (3)Lawrence Berkeley National Laboratory. *Drought and planting date affect seedling establishment and soil fertility benefits of leguminous agroforestry species in Malawi*.

COS 27 - Aquatic Ecology: Streams And Rivers II

B112, Oregon Convention Center

8:00 AM COS 27-1 Marchetti, M[1], MP Limm[2], G Benigno[3], B Lorig[3] and H Bowen[3], (1)St. Mary's College of California, (2)University of California, Berkeley, (3)CSU Chico. *Critical role of seasonal tributaries for native fish and aquatic biota in the Sacramento River*.

8:20 AM COS 27-2 Tabacchi, E and AM Planty-Tabacchi, ECOLAB, Laboratoire d'Ecologie et Environnement. *Changes in river corridor plant diversity over two decades: Lessons from the Adour River, SW France*.

8:40 AM COS 27-3 Albertson, LK[1], BJ Cardinale[2] and LS Sklar[3], (1)University of California, Santa Barbara, (2)University of Michigan, (3)San Fransisco State University. *Impacts of biological diversity on sediment erosion in streams*.

9:00 AM COS 27-4 Haase, P, J Geismar and A Sundermann, Senckenberg Research Institute and Natural History

Museum Frankfurt. *Long-distance dispersal in macroinvertebrates as a prerequisite of climate change driven range shifts and recolonization of restored rivers: A multi-method approach*.

9:20 AM COS 27-5 Townsend, SA, EA Garcia and MM Douglas, Charles Darwin University. *The response of benthic algal biomass to nutrient addition over a range of current speeds in an Australian tropical river*.

9:40 AM Break

9:50 AM COS 27-6 Garcia, EA, S Townsend and MM Douglas, Charles Darwin University. *Experimental manipulation of top-down and bottom-up factors in a Northern Australian tropical river*.

10:10 AM COS 27-7 Hwan, JL and SM Carlson, University of California, Berkeley. *Disrupting the flow: Effects of stream fragmentation on ecosystem processes and stream fish dynamics*.

10:30 AM COS 27-8 Bowles, BD[1] and DE Bowles[2], (1)Missouri State University, (2)National Park Service. *Linking extant and historical aquatic vegetation communities in karst springs of the Ozark Highlands to assess status and threats to these highly groundwater-dependent ecosystems*.

10:50 AM COS 27-9 Barnard, T, E Schramm, B Naberezny, DA Bruns and KM Klemow, Wilkes University. *Surface water quality monitoring to address the impacts on Marcellus Gas development on small and medium streams in northeast Pennsylvania*.

11:10 AM COS 27-10 Hall, EK[1] and J Baron[2], (1)United States Geological Survey, (2)Natural Resource Ecology Laboratory, United States Geological Survey. *The role of nitrifiers in accumulating NO_3^- in the surface waters of Rocky Mountain National Park*.

COS 28 - Biodiversity: Effects Of Global Change II

B113, Oregon Convention Center

8:00 AM COS 28-1 Mantyka-Pringle, CS[1], TG Martin[2], DB Moffatt[3], S Linke[4] and J Rhodes[1], (1)University of Queensland, (2)CSIRO Ecosystem Sciences, (3) Department of Environment and Resource Management, (4)Griffith University. *Understanding and predicting impacts of climate change and land-use change on freshwater biodiversity*.

8:20 AM COS 28-2 Lach, L, C Jones, T Morald, R Parsons, N Shackelford and CE Ramalho, University of Western Australia. *Beautiful but buzz-less: Urban bushland fragments harbor few native bees to the detriment of an endemic buzz-pollinated plant*.

8:40 AM COS 28-3 Massad, TJ[1], JK Balch[2], PM Brando[3], SE Trumbore[4], C Lahís Mews[3] and S Aparecida Vieira[5], (1) University of Chicago, (2)National Center for Ecological Analysis & Synthesis, (3)Instituto de Pesquisa Ambiental da Amazônia, (4)Max Planck Institute for Biogeochemistry, (5)Universidade Estadual de Campinas. *Post-fire regeneration dynamics in the southern Amazon: How early interactions between fire history, nutrient availability, and herbivory affect the recovery of diversity*.

9:00 AM COS 28-4 Gutierrez Illan, J[1], CD Thomas[2], JA Jones[1], BJ Anderson[3], SM Shirley[1] and MG Betts[1], (1)Oregon State University, (2)University of York, (3)UKPopNet. *Modelling bird populations in the pacific northwest: Implications for species responses to recent climate change*.

9:20 AM COS 28-5 Bartomeus, I[1], R Winfree[1] and JS Ascher[2], (1) Rutgers University, (2)American Museum of Natural History. *Assessing the status of the bee fauna of the northeastern United States across a century of global change*.

9:40 AM Break

9:50 AM COS 28-6 Santelmann, MV, JP Bolte and T Larsen, Oregon State University. *Assessment of biodiversity in alternative future landscapes of the Willamette Valley, Oregon*.

10:10 AM COS 28-7 Morrison, EW[1], SD Frey[1], WK Thomas[1] and A Pringle[2], (1)University of New Hampshire, (2) Harvard University. *Diversity and structure of soil fungal communities under long-term nitrogen enrichment*.

10:30 AM COS 28-8 Cowles, JM[1], AT Clark[1], M Kosmala[1], HR Whittington[1], PD Wragg[1], AJ Wright[2], JS Powers[1] and D Tilman[1], (1)University of Minnesota, (2)University of Wisconsin - Milwaukee. *Interactive effects of warming and diversity on grassland community composition and ecosystem productivity*.

10:50 AM COS 28-9 Nock, CA[1], A Paquette[2], DJ Nowak[3], M Follett[1] and C Messier[2], (1)University of Quebec at Montreal, (2)Université du Québec à Montréal, (3)USDA Forest Service. *Effects of land use on tree diversity in eastern North America: Does functional diversity decline with intensity?*.

11:10 AM COS 28-10 Mueller, R and BJ Bohannan, University of Oregon. *Changes in fungal diversity and similarity along an experimental nitrogen gradient*.

COS 29 - Biogeochemistry: Atmospheric N Deposition Effects

B114, Oregon Convention Center

8:00 AM COS 29-1 Jovan, S[1], JA Riddell[2], P Padgett[3] and TH Nash III[4], (1)US Forest Service, (2)Arizona State University, (3)USDA Forest Service, (4)University of Wisconsin. *Lichen responses to different forms of nitrogen in the Los Angeles Basin: Implications for critical levels and loads*.

8:20 AM COS 29-2 Likens, GE and DC Buso, Cary Institute of Ecosystem Studies. *Determining the elusive baseline for surface water chemistry at the Hubbard Brook Experimental Forest*.

8:40 AM COS 29-3 Lyons, BJ and AJ Burton, Michigan Technological University. *Chronic simulated nitrogen deposition and the decomposition of dead woody material along a latitudinal gradient in Michigan*.

9:00 AM COS 29-4 Levine, CR[1], RD Yanai[1] and G Lampman[2], (1) SUNY College of Environmental Science and Forestry, (2) NYSERDA. *Assessing long-term monitoring programs for sulfur, nitrogen, and mercury deposition and impacts in New York state*.

9:20 AM COS 29-5 Reed, SC[1], C Roybal[2], TE Crews[2], L Floyd-Hanna[2], M Miller[3], MC Duniway[1] and J Belnap[1], (1)USGS, (2)Prescott College, (3)National Park Service. *Nitrogen deposition in drylands: How anthropogenic nitrogen inputs affect coupled biogeochemical cycles in the Four Corners Region, U.S.A.*.

9:40 AM Break

9:50 AM COS 29-6 Bytnerowicz, A[1], RF Johnson[2], L Zhang[3], GD Jenerette[2], S Schilling[1] and E Allen[4], (1)USDA Forest Service, (2)University of California, (3)Environment Canada, (4)University of California, Riverside. *Deposition of gaseous reactive nitrogen to forests and other ecosystems in the San Bernardino Mountains, California*.

10:10 AM COS 29-7 González, AL[1], JJ Elser[2], JJ Armesto[3] and PA Marquet[4], (1)University of British Columbia, (2)University of Arizona, (3)P. Universidad Catolica de Chile, (4)Institute of Ecology and Biodiversity and Center for Advanced Studies in Ecology and Biodiversity. *Fog-mediated energy and nutrient fluxes through food webs in coastal desert ecosystems*.

10:30 AM COS 29-8 Avolio, ML[1], SE Koerner[2], KJ La Pierre[1], MD Smith[1], K Wilcox[3] and SL Collins[2], (1)Yale University, (2)

University of New Mexico, (3)Colorado State University. *Species re-ordering due to long-term nitrogen and phosphorous inputs has consequences for plant community diversity and productivity*.

10:50 AM COS 29-9 Rodriguez, A[1], GM Lovett[1], KC Weathers[1], MA Arthur[2], PH Templer[3], CL Goodale[4] and LM Christenson[5], (1)Cary Institute of Ecosystem Studies, (2)University of Kentucky, (3)Boston University, (4)Cornell University, (5) Vassar College. *Heterotrophic respiration in northern hardwood forest soils after 14 years of nitrogen addition*.

11:10 AM COS 29-10 Midgley, MG and RP Phillips, Indiana University. *Mycorrhizal associations of dominant tree species help explain variation in forest ecosystem response to N deposition*.

COS 30 - Biogeochemistry: Linking Community Structure And Ecosystem Function II

B115, Oregon Convention Center

8:00 AM COS 30-1 Alldred, MK and SB Baines, Stony Brook University. *Effects of wetland plant communities on denitrification rates: A meta-analysis*.

8:20 AM COS 30-2 Rosenstock, NP[1], A Rosling[2], A Tunlid[1] and H Wallander[1], (1)Lund University, (2)Swedish University of Agricultural Sciences. *The role of soil chemistry and parent material in determining microbial community composition and activity in temperate coniferous forests*.

8:40 AM COS 30-3 Oberle, B[1], JA Myers[2], JC Penagos[1], J Sweeny[3], K Ogle[4] and A Zanne[1], (1)University of Missouri, St. Louis, (2)Washington University, (3)National Oceanic and Atmospheric Administration, (4)Arizona State University. *Climate change, death, and decomposition: Xylem vessel length influences both mortality and decay among Ozark forest trees*.

9:00 AM COS 30-4 Talbot, JM[1], K Peay[1] and KK Treseder[2], (1) University of Minnesota, (2)University of California, Irvine. *Functional differences among decomposer communities explain litter chemistry controls over decay*.

9:20 AM COS 30-5 Ebel, JD[1], AM Marcarelli[1] and AE Kohler[2], (1)Michigan Technological University, (2)Shoshone-Bannock Tribes. *Biofilm responses to nutrient enrichment using salmon carcass analog in central Idaho streams*.

9:40 AM Break

9:50 AM COS 30-6 Altrichter, AE[1], JE Barrett[1], KM Geyer[1], C Takacs-Vesbach[2] and MN Gooseff[3], (1)Virginia Tech, (2)University of New Mexico, (3)Pennsylvania State University. *Landscape history and contemporary environmental drivers of microbial community structure and function*.

10:10 AM COS 30-7 Vanni, MJ[1] and PB McIntyre[2], (1)Miami University, (2)University of Wisconsin. *Metabolic ecology meets ecological stoichiometry: Predicting nutrient excretion rates of aquatic animals in the field*.

10:30 AM COS 30-8 Sullivan-Guest, T[1], CW Schadt[1], N Basta[2] and P Jardine[3], (1)Oak Ridge National Laboratory, (2) The Ohio State University, (3)University of Tennessee. *Mapping soil lead speciation and soil microbial response at an abandoned firing range in Oak Ridge, TN*.

10:50 AM COS 30-9 McAllister, SA, SD Bridgham, Q Jin and BJM Bohannan, University of Oregon. *Microbial community structure and ecosystem function: Linking methane production rate to methanogen community structure in peatland soils*.

11:10 AM COS 30-10 Brower, SC, X Mou and LG Leff, Kent State University. *Dissecting the link between community composition and function in the laboratory: Denitrification in pure and mixed cultures*.

COS 31 - Climate Change: Plants I

E145, Oregon Convention Center

8:00 AM COS 31-1 Rodgers, V[1], T Lancaster[1], SS Hoeppner[2] and J Dukes[2], (1)Babson College, (2)Purdue University. *Responses of leaf characteristics to experimentally altered climate conditions: Differences among six species of tree seedlings*.

8:20 AM COS 31-2 Grant, TA III[1], GP Juday[1] and JD Herriges[2], (1)University of Alaska Fairbanks, (2)Bureau of Land Management. *Lichens, wildfires, and climate change in Alaska: Ecosystem impacts from assessing caribou habitat*.

8:40 AM COS 31-3 McMahon, S, Smithsonian Institution. *Realized growing seasons: Patterns and implications of intra-annual tree growth in temperate forests*.

9:00 AM COS 31-4 Carnwath, GC and CR Nelson, University of Montana. *Competition modulates climate sensitivity of Pseudotsuga menziesii*.

9:20 AM COS 31-5 Byrne, KM[1] and WK Lauenroth[2], (1)Colorado State University, (2)University of Wyoming. *Contrasting effects of precipitation manipulations on species composition and community structure at two sites within the central grassland region, USA*.

9:40 AM Break

9:50 AM COS 31-6 Cheesman, AW and K Winter, Smithsonian Tropical Research Institute. *Tropical tree seedling responses and acclimation potential to elevated temperatures*.

10:10 AM COS 31-7 Elmendorf, S[1] and GHR Henry[2], (1)National Ecological Observatory Network (NEON), (2)University of British Columbia. *Evaluation of climate warming effects on tundra plant composition* .

10:30 AM COS 31-8 Teskey, R[1], I Bauweraerts[2], TM Wertin[3], M Ameye[2], MA McGuire[1] and K Steppe[2], (1)University of Georgia, (2)Ghent University, (3)U.S. Geological Survey. *Impact of heat waves, drought stress and elevated CO_2 on northern red oak seedlings*.

10:50 AM COS 31-9 Bouda, M and JE Saiers, Yale University. *Representing root system architecture in Dynamic Vegetation Models: Results of a combined model of root system growth and soil water uptake*.

11:10 AM COS 31-10 Myers-Smith, IH[1], M Vellend[1], E Lévesque[2], D Hik[3] and TSH Data Synthesis Group[4], (1)Université de Sherbrooke, (2)Université du Québec à Trois-Rivières, (3) University of Alberta, (4)Shrub Hub Research Network. *The climate sensitivity of shrub growth: A synthesis of 20 arctic and alpine sites*.

COS 32 - Climate Change: Ranges And Phenology II

F150, Oregon Convention Center

8:00 AM COS 32-1 Waters, SM and J Hille Ris Lambers, University of Washington. *Timing is everything: flowering phenology influences pollinator-mediated indirect interactions between native and exotic plants*.

8:20 AM COS 32-2 Gezon, ZJ[1], DW Inouye[2] and RE Irwin[1], (1) Dartmouth College, (2)University of Maryland. *The effects of altered phenology on plant-pollinator interactions and plant reproduction*.

8:40 AM COS 32-3 Ram, K[1], F Watson[2], D Smith[3] and C Wilmers[4], (1)University of California, Berkeley, (2) California State University Monterey Bay, (3)Yellowstone Center for Resources, (4)University of California, Santa Cruz. *Climate alters spatiotemporal dynamics of summer green wave in Yellowstone National Park*.

9:00 AM COS 32-4 VanGyzen, JM[1], ML Pruyn[1], K Votta[2] and

TR Boucher[1], (1)Plymouth State University, (2)Margret & H.A. Rey Center. *Factors other than temperature may influence northern hardwood tree phenology*.

9:20 AM COS 32-5 Kharouba, HM[1], M Vellend[2], RM Sarfraz[1] and JH Myers[1], (1)University of British Columbia, (2) Université de Sherbrooke. *Experimental warming alters phenological synchrony and insect performance in western tent caterpillars and red alders*.

9:40 AM Break

9:50 AM COS 32-6 Sheriff, MJ[1], CL Buck[2] and BM Barnes[1], (1) University of Alaska Fairbanks, (2)University of Alaska Anchorage. *Breeding phenology of free-living arctic ground squirrels in an early spring: Is autumn a back seat driver?*.

10:10 AM COS 32-7 Wolkovich, EM[1], C Davis[2] and E Cleland[3], (1) University of British Columbia, (2)Harvard, (3)University of California – San Diego. *Phenology and plant invasions: Do invaders occupy novel temporal niches?*.

10:30 AM COS 32-8 Ellwood, E[1], JM Diez[2], I Ibanez[2], RB Primack[1], H Kobori[3], H Higuchi[4], JA Silander[5] and C Polgar[1], (1)Boston University, (2)University of Michigan, (3)Tokyo City University, (4)University of Tokyo, (5) University of Connecticut. *Japanese insect phenology and phenological changes among trophic levels*.

10:50 AM COS 32-9 Stewart, JAE, University of Nevada Reno. *Moving beyond resurveys of historic pika record locations: Using relict feces to test the hypothesis of climate-mediated range retreat in California*.

11:10 AM COS 32-10 James, P[1], C Cullingham[2], J Cooke[2] and D Coltman[2], (1)Universite de Montreal, (2)University of Alberta. *Genetic characterization and predictive modelling of a pine hybrid zone in western Canada: Implications for range expansion of the mountain pine beetle*.

COS 33 - Community Assembly And Neutral Theory II

F151, Oregon Convention Center

8:00 AM COS 33-1 al Hammal, O[1], D Alonso[2] and SJ Cornell[1], (1)University of Leeds, (2)Consejo Superior de Investigaciones Cientificas, CEAB-CSIC. *How powerful are tests of neutral theory? Detecting density dependence in ecological communities*.

8:20 AM COS 33-2 Andersen, KM[1] and BL Turner[2], (1)University of Georgia, (2)Smithsonian Tropical Research Institute. *Plant nitrogen acquisition strategies and community assembly in a tropical montane forest*.

8:40 AM COS 33-3 Tello, JS[1], I Jiménez[1], P Jorgensen[1], JA Myers[2], MJ Macia[3], AF Fuentes-Claros[4], L Cayola-Pérez[4], G Arellano[5], M Cornejo-Mejía[4], MI Loza-Rivera[4], J Quisbert-Quispe[4] and VW Torrez[4], (1)Missouri Botanical Garden, (2)Washington University, (3)Universidad Autónoma de Madrid, (4)Herbario Nacional de Bolivia, (5)Real Jardín Botánico. *Beta-diversity, gamma diversity, and community assembly along a tropical elevational gradient*.

9:00 AM COS 33-4 Lamanna, CA, LL Sloat, AN Henderson and BJ Enquist, University of Arizona. *Opposing trait drivers of phylogenetic community assembly across a subalpine elevational gradient*.

9:20 AM COS 33-5 Bittel, AT[1], BL Foster[1] and GR Houseman[2], (1)University of Kansas, (2)Wichita State University. *Exploring stochastic and niche-based community assembly dynamics in a long-term grassland field experiment*.

9:40 AM Break

9:50 AM COS 33-6 Bakker, JD[1], EG Delvin[2] and PW Dunwiddie[1], (1)University of Washington, (2)The Nature Conservancy. *Evaluating the importance of spatiotemporal variation in plant establishment*.

10:10 AM COS 33-7 Sedio, BE[1], JR Paul[2], CM Taylor[3] and CW Dick[1], (1)University of Michigan, (2)Colorado State University, (3)Missouri Botanical Garden. *Biogeographic history determines local scale community structure in a hyperdiverse clade of Neotropical plants*.

10:30 AM COS 33-8 Rael, RC, R D'Andrea, G Barabas and AM Ostling, University of Michigan. *Components of stochastic niche dynamics and their influence on the species abundance distribution*.

10:50 AM COS 33-9 Stanish, LF[1], TM Legg[1], DR Nemergut[1], SP O'Neill[2] and A Gonzalez-Pena[1], (1)University of Colorado, (2)University of Colorado at Boulder. *The utility of C-score analysis for examining bacterial co-occurrence patterns in large sequencing datasets*.

11:10 AM COS 33-10 Rominger, AJ[1], DS Gruner[2], J Harte[3] and RG Gillespie[3], (1)University of California, (2)University of Maryland, (3)University of California, Berkeley. *Making and breaking a new ecological theory: Does maximum information entropy predict community structure in evolving ecosystems?*.

COS 34 - Community Pattern And Dynamics II

D137, Oregon Convention Center

8:00 AM COS 34-1 Watts, AC, University of Florida. *Ecological footprints in the geomorphic record: reciprocal feedbacks versus diametric processes*.

8:20 AM COS 34-2 McCann, MJ, Stony Brook University. *Using aquatic plants to understand community regime shifts*.

8:40 AM COS 34-3 Hart, SP and JM Levine, ETH Zurich. *The consequences of variation among individuals for species coexistence*.

9:00 AM COS 34-4 Bhotika, S and RD Holt, University of Florida. *On the relationship of a large herbivore community to environmental and anthropogenic influences in the Serengeti ecosystem*.

9:20 AM COS 34-5 Brundrett, K and CM Swan, University of Maryland, Baltimore County. *Local and regional constraints on diversity of an experimental urban metacommunity*.

9:40 AM Break

9:50 AM COS 34-6 Larsen, EA[1], C Crisafulli[2] and WF Fagan[1], (1)University of Maryland, (2)US Forest Service. *Avian community assembly processes during primary succession*.

10:10 AM COS 34-7 Palen, WJ[1], WI Atlas[1], JC Finlay[2], BX Semmens[3], C McNeely[4], MP Limm[5] and ME Power[5], (1)Simon Fraser University, (2)University of Minnesota, (3)UC San Diego, (4)Eastern Washington University, (5)University of California, Berkeley. *Spatial patterns in juvenile steelhead (Oncorhynchus mykiss) resource use, top-down control, and the importance of terrestrial subsidies in river networks*.

10:30 AM COS 34-8 McCluney, KE[1], C Bang[1], JL Sabo[1] and SH Faeth[2], (1)Arizona State University, (2)The University of North Carolina at Greensboro. *Bottom-up and direct effects of water availability on an urban food web*.

10:50 AM COS 34-9 Spotswood, EN[1], JW Bartolome[1] and B Allen-Diaz[2], (1)University of California at Berkeley, (2) University of California. *Spatial and temporal understory species turnover in a California foothill oak woodland*.

11:10 AM COS 34-10 Woods, CL and SJ DeWalt, Clemson University. *Habitat partitioning of epiphytes within tropical tree canopies*.

COS 35 - Conservation Management II

D138, Oregon Convention Center

8:00 AM COS 35-1 Watson, VJ[1] and MW Suplee[2], (1)University of Montana, (2)Montana Department of Environmental Quality. *Updating numeric nutrient criteria for Montana's wadeable streams and rivers*.

8:20 AM COS 35-2 Harmon-Threatt, AN[1] and S Hendrix[2], (1) Washington University in St.Louis, (2)University of Iowa. *Planting for pollinators: Can current restoration mixes attract and conserve bees?*.

8:40 AM COS 35-3 Bump, J[1], CM Murawski[1], LM Kartano[2], DM Beyer[3] and BJ Roell[3], (1)Michigan Technological University, (2)University of Helsinki, (3)Michigan Department of Natural Resources. *Wolves, bear-baiting, and hunting dog conflict: Trading increased depredation rates for high hunter success?*.

9:00 AM COS 35-4 Artelle, KA[1], JD Reynolds[1] and CT Darimont[2], (1)Simon Fraser University, (2)University of California, Santa Cruz. *Ecological approach for understanding human-wildlife conflicts*.

9:20 AM COS 35-5 Dvornich, KM, NatureMapping Foundation. *Better data collection tools expands the use of bioblitz data for scientists, citizens, and land managers*.

9:40 AM Break

9:50 AM COS 35-6 Silvano, AL[1], C Guyer[1], DR Allgood[1], CB Johnson[1], J Stiles[1], SH Stiles[1] and JB Grand[2], (1)Auburn University, (2)USGS Alabama Cooperative Fisheries and Wildlife Research Unit. *Using occupancy analysis to select focal species for adaptive management*.

10:10 AM COS 35-7 Santos, MJ[1], JH Thorne[2], Z Frank[1] and J Christensen[1], (1)Stanford University, (2)University of California, Davis. *Reconstructing the conservation history of California over the last 80 years*.

10:30 AM COS 35-8 Teel, S, National Park Service. *Become a believer, methods to consider when including citizen scientists in research expected to produce defensible results.*

10:50 AM COS 35-9 Cornelisse, TM and TP Duane, University of California Santa Cruz. *Have you heard of the Ohlone tiger beetle? How knowledge affects recreationists' stated behaviors and attitude toward an endangered species*.

11:10 AM COS 35-10 Iacona, GD[1], FD Price[2] and PR Armsworth[3], (1)University of Tennessee, Knoxville, (2)Florida Natural Areas Inventory, (3)University of Tennessee. *How does site invadedness relate to funding for invasive plant treatment?*.

COS 36 - Ecosystem Function: Biodiversity II

D139, Oregon Convention Center

8:00 AM COS 36-1 Burton, JI[1], A Ares[2], SE Mulford[1], KJ Puettmann[1] and DH Olson[3], (1)Oregon State University, (2)Virginia Technical University, (3)USDA Forest Service, Pacific Northwest Research Station. *Tradeoffs among carbon storage, sequestration, and plant species richness in managed forests of western Oregon, USA*.

8:20 AM COS 36-2 Connolly, J[1] and FI Isbell[2], (1)University College Dublin, (2)University of Minnesota. *Models of Biodiversity-Ecosystem-Function relationships: Pitfalls hidden in the mathematical form, and in transformation of the functional response*.

8:40 AM COS 36-3 van Klink, R[1], MJJ Schrama[1], MP Berg[2], MF WallisDeVries[3] and JP Bakker[1], (1)University of Groningen, (2)Vrije University, (3)Dutch Butterfly Conservation. *Complementary effects of soil compaction and mowing on ecosystem functioning mimic effects of large grazers*.

9:00 AM COS 36-4 Both, S[1], J Bauhus[2], A Erfmeier[1], JL Gutknecht[3], W Härdtle[4], K Nadrowski[5], G von Oheimb[4], B Schmid[6], T Scholten[7], A Schuldt[4], C Wirth[5], X Yang[8], K Ma[9] and H Bruelheide[1], (1)Martin Luther University Halle-Wittenberg, (2)University of Freiburg, (3)Helmoltz-Centre for Environmental Research- UFZ, (4)Leuphana University Lüneburg, (5)University of Leipzig, (6) University of Zurich, (7)Eberhard Karls University of Tübingen, (8)Chinese Academy of Sciences Kunming, (9)Chinese Academy of Sciences. *The role of tree and shrub diversity for ecosystem functioning in Chinese subtropical forests: First results of the BEF-China experiment*.

9:20 AM COS 36-5 Poisot, T[1], N Mouquet[2] and D Gravel[3], (1)Université du Québec à RImouski, (2)Université Montpellier 2, CNRS, (3)Université du Québec à Rimouski. *Trophic complementarity and ecosystem functioning*.

9:40 AM Break

9:50 AM COS 36-6 de Kroon, H[1], FM Padilla[1] and L Mommer[2], (1)Radboud University, (2)Wageningen University. *Decreased root turnover in a diverse grassland community maintains belowground overyielding*.

10:10 AM COS 36-7 Kosmala, M, G Heimpel and D Tilman, University of Minnesota. *Biological control of annual crop pests provided by mixed prairie of varying diversity*.

10:30 AM COS 36-8 Overath, RD, DL Smee, KD Johnson and JA Sanchez, Texas A&M University - Corpus Christi. *Intraspecific variation influences natural settlement of Eastern Oysters*.

10:50 AM COS 36-9 Reynolds, PL[1], JE Duffy[1], C Böstrom[2], J Coyer[3], M Cusson[4], M Hori[5], JG Douglass[6], KA Hovel[7], J Eklöf[8], A Engelen[9], BK Eriksson[3], S Fredriksen[10], L Gamfeldt[11], K Iken[12], PO Moksnes[8], M Nakaoka[13], MI O'Connor[14], J Olsen[10], JP Richardson[1], JL Ruesink[15], EE Sotka[16], JJ Stachowicz[17] and J Thormar[10], (1) The College of William and Mary, (2)Åbo Akademi University, (3)University of Groningen, (4)Université du Québec à Chicoutimi, (5)Fisheries Research Agency, (6) Northeastern University, (7)San Diego State University, (8)University of Gothenburg, (9)Centre of Marine Sciences (CCMAR), (10)University of Oslo, (11)Göteborg University, (12)University of Alaska Fairbanks, (13) Hokkaido University, (14)University of British Columbia, (15)University of Washington, (16)College of Charleston, (17)University of California, Davis. *Role of environmental and biodiversity gradients in bottom-up and top-down control of seagrass communities: A collaborative field experiment across the Northern Hemisphere*.

11:10 AM COS 36-10 Flynn, DFB[1], C Roscher[2], E Allan[3], T Jenkins[3], A Lipowsky[1], M Gubsch[4] and B Schmid[1], (1)University of Zurich, (2)Helmholtz Centre for Environmental Research, (3)University of Bern, (4)ETH Zurich. *Phylogenetic nich conservatism in plant functional traits*.

COS 37 - Education: Research And Assessment

E141, Oregon Convention Center

8:00 AM COS 37-1 Hansen, MJ, University of British Columbia. *Evaluating interactive activities by measuring student learning gain*.

8:20 AM COS 37-2 Middlemis Maher, J[1], B Arnold[2], TL Derting[2] and D Ebert-May[1], (1)Michigan State University, (2) Murray State University. *Quantitatively assessing the implementation of evidence-based, learner-centered teaching practice of FIRST IV postdoctoral scholars*.

8:40 AM COS 37-3 Holt, EA, Utah Valley University. *Educating undergraduate students to identify plagiarism in ecology*.

9:00 AM COS 37-4 Batzli, JM[1], AR Smith[2], SA McGee[1] and PH Williams[2], (1)University of Wisconsin, Madison, (2)University of Wisconsin - Madison. *Beyond Punnett squares: Gains and challenges for learning quantitative genetics in an inquiry-based introductory biology lab course*.

9:20 AM COS 37-5 Bray, SR[1] and GL Bailey[2], (1)Transylvania University, (2)University of Nebraska. *Altering college students' misconceptions of evolution requires addressing views that evolution and religion are in conflict*.

9:40 AM Break

9:50 AM COS 37-6 Porzecanski, AL[1], A Bravo[1], E Sterling[1], N Bynum[2], BJ Abraham[3], RL Burks[4], M Cawthorn[5], JA Cigliano[6], LM Dàvalos[7], DS Fernandez[8], L Freeman[9], MJ Groom[10], SR Ketcham[11], TA Langen[12], J Linder[13], JF Mull[14], D Ruby[15], T Theodose[16] and DW Vogler[17], (1) American Museum of Natural History, (2)Duke University, (3)Hampton University, (4)Southwestern University, (5) Georgia Southern University, (6)Cedar Crest College, (7) State University of New York at Stony Brook, (8)University of Puerto Rico at Humacao, (9)Fulton Montgomery Community College, (10)University of Washington, (11) University of the Virgin Islands, (12)Clarkson University, (13)James Madison University, (14)Weber State University, (15)University of Maryland Eastern Shore, (16)University of Southern Maine, (17)SUNY College at Oneota. *How much can students gain in data analysis and critical thinking skills in one semester?*.

10:10 AM COS 37-7 Landosky, JM and KL Clark, Eastern Connecticut State University. *The importance of Bloom's affective domain in undergraduate ecology course performance*.

10:30 AM COS 37-8 Williams, KS, KM Fisher and JE Lineback, San Diego State University. *BioHUB: An internet HUB for the Conceptual Assessment in Biology (CAB) community*.

10:50 AM COS 37-9 Long, T[1], KM Kostelnik[1], SA Wyse[2], JL Momsen[3], J Dauer[1] and D Ebert-May[1], (1)Michigan State University, (2)Bethel University, (3)North Dakota State University. *Evaluating reform outcomes: Is there evidence for efficacy?*.

11:10 AM COS 37-10 Andrews, SE and SD Frey, University of New Hampshire. *Studio soils: Student performance in a newly restructured introductory soil science course*.

COS 38 - Evolution: Selection And Adaptation II

E142, Oregon Convention Center

8:00 AM COS 38-1 Novy, AE[1], SL Flory[2] and JM Hartman[1], (1) Rutgers University, (2)University of Florida. *Evidence for rapid adaptive evolution of phenology in the invasive grass Microstegium vimineum*.

8:20 AM COS 38-2 Garcia-Palacios, P[1], N Martin-Robles[2], M Alvaro-Sanchez[2], DH Wall[1] and R Milla[2], (1)Colorado State University, (2)Rey Juan Carlos University. *Effects of plant domestication on litter decomposition rates*.

8:40 AM COS 38-3 Burgess, SC[1] and ML Baskett[2], (1)University of California Davis, (2)University of California, Davis. *Migration load when there is frequency-dependent competition between residents and immigrants: Combining genetic and demographic dynamics*.

9:00 AM COS 38-4 Shoemaker, LG and A Clauset, University of Colorado at Boulder. *The evolution of body mass distribution and diversification within the Equidae family*.

9:20 AM COS 38-5 Züst, T[1], C Heichinger[1], DJ Kliebenstein[2] and LA Turnbull[1], (1)University of Zürich, (2)University of California, Davis. *Adaptive change in a genetically diverse plant population: Aphids as drivers of natural selection*.

9:40 AM Break

9:50 AM COS 38-6 Koralewski, TE, M Mateos and KV Krutovsky, Texas A&M University. *Phylogenetic relationships between Southern pines (genus Pinus, subsection Australes)*.

10:10 AM COS 38-7 Zhang, YY[1], F Roux[2], F Johannes[3], V Latzel[1], M Fischer[1] and O Bossdorf[1], (1)University of Bern, (2) Université des Sciences et Technologies de Lille 1, (3) University of Groningen. *Epigenetic variation can cause heritable variation in plant phenotypic plasticity*.

10:30 AM COS 38-8 Olds, BP, PJ Mulrooney and KN Paige, University of Illinois at Urbana-Champaign. *Somatic mosaicism in Populus trichocarpa leads to evolutionary change*.

10:50 AM COS 38-9 Brodersen, C[1], S Jansen[2], B Choat[3] and J Pittermann[1], (1)University of California, (2)Universität Ulm, (3)University of Western Sydney. *Cavitation resistance in the primary xylem of ferns and fern allies*.

COS 39 - Forest Habitats: Temperate II

E143, Oregon Convention Center

8:00 AM COS 39-1 Lee, EH, PA Beedlow and RS Waschmann, US Environmental Protection Agency/NHEERL. *Tree-ring analysis of the fungal disease Swiss needle cast in the Western Oregon coast*.

8:20 AM COS 39-2 Reilly, MJ[1] and TA Spies[2], (1)Oregon State University, (2)US Forest Service, Pacific Northwest Research Station. *Regional patterns of tree mortality in old-growth forests of the Pacific Northwest*.

8:40 AM COS 39-3 Priewasser, K[1], T Wohlgemuth[1], H Bachofen[1], P Brang[1], B Moser[1] and H Bugmann[2], (1) Swiss Federal Research Institute for Forest, Snow and Landscape Research WSL, (2)ETH Zurich. *Alkaline soils, sparse ground vegetation, and low altitude positively influence post-windthrow tree regeneration in temperate and boreal forests of Switzerland (Central Europe)*.

9:00 AM COS 39-4 Celis-Diez, JL[1], FM Jaksic[2] and JJ Armesto[1], (1)Institute of Ecology and Biodiversity, (2)CASEB. *Demographic consequences of selective logging for the arboreal marsupial Dromiciops gliroides in Chiloé Island, Chile*.

9:20 AM COS 39-5 Núñez-Ávila, MC[1], M Uriarte[2], PA Marquet[1] and JJ Armesto[1], (1)Institute of Ecology and Biodiversity, (2)Columbia University. *Seed dispersal limitation of tree Aextoxicon punctatum in historically isolated and fragmented rainforest in semiarid Chile*.

9:40 AM Break

9:50 AM COS 39-6 Bryan, HM[1], CT Darimont[2], PP Paquet[3], KE Wynne-Edwards[1] and JEG Smits[1], (1)University of Calgary Veterinary Medicine, (2)University of California, Santa Cruz, (3)Raincoast Conservation Foundation. *Patterns in stress and reproductive hormones in salmon-eating grizzly and black bear populations*.

10:10 AM COS 39-7 Knorr, MA, B Godbois and SD Frey, University of New Hampshire. *Soil carbon storage in response to chronic warming in a temperate forest*.

10:30 AM COS 39-8 Davis, LR, RD Haugo and D Kavanagh, The Nature Conservancy. *An ecological context for "whole system" conservation of eastern Washington forests*.

10:50 AM COS 39-9 Rogers, DA, University of Wisconsin-Parkside. *Long- term changes in American beech (Fagus grandifolia) forest metacommunities at the edge of its range*.

11:10 AM COS 39-10 Baek, G[1], D Lee[2] and C Park[2], (1)Seoul National University, Seoul, South Korea, (2)Seoul National University. *Spatial Planning of Climate Adaptation Zone in response to projected climate change: Promoting*

climate adaptation of endangered species (Prionailurus bengalensis) habitat.

COS 40 - Invasion: Ecosystem Processes

E144, Oregon Convention Center

8:00 AM COS 40-1 McIntosh, ACS[1], SE Macdonald[1] and M Gundale[2], (1)University of Alberta, (2)Swedish University of Agricultural Sciences. *From native to non-native: The influence of species identity and regional factors on ecosystem processes and properties following the introduction of lodgepole pine to northern Sweden*.

8:20 AM COS 40-2 Long, MS[1], CM Litton[1], CP Giardina[2] and JP Sparks[3], (1)University of Hawaii at Manoa, (2)USDA Forest Service, (3)Cornell University. *Impact of feral pig (Sus scrofa) removal on soil carbon fluxes in Hawaiian tropical montane wet forest*.

8:40 AM COS 40-3 Tamura, M[1], N Tharayil[1] and P Alpert[2], (1) Clemson University, (2)University of Massachusetts. *Effect of polyphenol-rich litter on soil organic matter composition: Consequences of invasion by the plant Polygonum cuspidatum*.

9:00 AM COS 40-4 Piper, CL, EG Lamb and SD Siciliano, University of Saskatchewan. *The impact of smooth brome on nitrogen cycling processes in a fescue grassland*.

9:20 AM COS 40-5 Yahdjian, L[1], PA Montes[2] and EJ Chaneton[3], (1)University of Buenos Aires, CONICET, (2)IFEVA - CONICET - University of Buenos Aires, (3)IFEVA - Facultad de Agronomía, Universidad de Buenos Aires. *Functional attributes of exotic-dominated old fields and native remnant grasslands in the Inland Pampa, Argentina*.

9:40 AM Break

9:50 AM COS 40-6 Tharayil, N[1], P Alpert[2], P Bhowmik[2] and P Gerard[1], (1)Clemson University, (2)University of Massachusetts. *Seasonal suppression of N cycling by the invasive, clonal plant Polygonum cuspidatum*.

10:10 AM COS 40-7 Amatangelo, KL and DF Sax, Brown University. *Meta-analysis of ecosystem function response to variation in native-exotic dominance*.

10:30 AM COS 40-8 Barrios-Garcia, MN[1], D Simberloff[2] and AT Classen[1], (1)University of Tennessee, (2)University of Tennesse. *Exotic ecosystem engineer alters ecosystem structure and function in Patagonia*.

10:50 AM COS 40-9 Judd, KE, SN Francoeur, JK Kirk and ST Duke, Eastern Michigan University. *Phragmites invasion slows carbon and nutrient turnover and alters microbial communities in a Great Lakes Coastal wetland*.

11:10 AM COS 40-10 Snyder, KA[1], RL Scott[2], K McGwire[3], TJ Jones[1] and SM Uselman[1], (1)USDA Agricultural Research Service, (2)USDA-ARS, (3)Desert Research Institute. *The effects of insect biological control on a Tamarix invaded ecosystem: ecosystem water and carbon dioxide fluxes and plant-level responses*.

COS 41 - Microbial Ecology I

E146, Oregon Convention Center

8:00 AM COS 41-1 Colman, BP[1], C Richardson[1], GV Lowry[2], BK Reinsch[2], B Espinasse[1], MR Wiesner[1], JM Unrine[3] and ES Bernhardt[1], (1)Duke University, (2)Carnegie Mellon University, (3)University of Kentucky. *Increased methane flux from wetlands due to differential toxicity of silver nanoparticle pollution*.

8:20 AM COS 41-2 Allison, SD and Y Lu, University of California. *Evolutionary and spatial controls on bacterial enzyme production*.

8:40 AM COS 41-3 Docherty, K[1] and JL Gutknecht[2], (1) Western Michigan University, (2)Helmoltz- Centre for Environmental Research- UFZ. *Increased fire incidence in California annual grasslands can alter soil microbial responses to multi-factor global change*.

9:00 AM COS 41-4 Holden, SR and KK Treseder, University of California, Irvine. *Post-fire changes in soil microbial communities constrain heterotrophic respiration following wildfires*.

9:20 AM COS 41-5 Benitez, MS[1], MH Hersh[2], B Spakes Richter[3], R Vilgalys[1] and JS Clark[1], (1)Duke University, (2)Bard College and Cary Institute of Ecosystem Studies, (3)University of Florida. *Contrasting fungal communities in asymptomatic vs. symptomatic forest seedlings within the context of Janzen - Connell hypothesis*.

9:40 AM Break

9:50 AM COS 41-6 Landesman, WJ[1], DM Nelson[2] and MC Fitzpatrick[2], (1)Green Mountain College, (2)University of Maryland Center for Environmental Science. *Assessing the relative importance of soil properties, tree type and distance on soil microbial community composition at multiple spatial scales*.

10:10 AM COS 41-7 Sanchez, A and J Gore, MIT. *Eco-evolutionary feedback in cooperatively growing yeast populations*.

10:30 AM COS 41-8 Ramirez, KS[1] and N Fierer[2], (1)Colorado State University, (2)University of Colorado-Boulder. *Modeling the effects of increasing anthropogenic nitrogen on soil microbial decomposition*.

10:50 AM COS 41-9 Fujimoto, M, KT Scribner and TL Marsh, Michigan State University. *Factors affecting microbial community assembly during succession on the egg surface of the Lake Sturgeon and the effect of microbial succession processes on host life history traits*.

11:10 AM COS 41-10 Cheng, L[1], Y Luo[1], L Wu[1], Y Deng[1], Y Qin[1], J Van Nostrand[1], Z He[1], MB Leigh[2], EAG Schuur[3], J Tiedje[4] and J Zhou[1], (1)University of Oklahoma, (2) University of Alaska, (3)University of Florida, (4)Michigan State University. *Experimental warming increases old carbon decomposition through shifting functional microbial communities in a tallgrass prairie*.

COS 42 - Modeling: Populations II

Portland Blrm 254, Oregon Convention Center

8:00 AM COS 42-1 Zhang, R[1], A Jäkäläniemi[2] and EE Crone[1], (1)Harvard University, (2)University of Oulu. *Population persistence of a riparian plant Silene tatarica in Northern Finland*.

8:20 AM COS 42-2 Stott, IM[1], DJ Hodgson[1] and SB Townley[2], (1)University of Exeter, Cornwall Campus, (2)University of Exeter. *Making the most of your matrix model: Novel analytical techniques for effective population management*.

8:40 AM COS 42-3 Mahon, CL[1], EM Bayne[2], P Solymos[3], SM Matsuoka[3], M Carlson[4] and E Dzus[5], (1)Environment Canada, (2)University of Alberta, (3)Boreal Avian Modelling Project, (4)ALCES Landscape and Land-Use Limited, (5)Alberta-Pacific Forest Industries Incorporated. *Does expected future habitat condition support proposed population objectives for boreal landbirds in Bird Conservation Region 6 - Boreal Taiga Plains*.

9:00 AM COS 42-4 Wallace, J and TS Prather, University of Idaho. *Comparative Demography of Anthriscus caucalis across plant communities in its novel range: Inferences for population spread*.

9:20 AM COS 42-5 Wangen, SR, B Shapiro and M Ferris,

University of Wisconsin - Madison. *Crowdsourcing ecological research: Using the Trails Forward simulation platform and video game to address conservation issues*.

9:40 AM Break

9:50 AM COS 42-6 Hart, EM and L Avilés, University of British Columbia. *The interplay between random catastrophes and Allee effects on the dynamics of local populations in a metapopulation*.

10:10 AM COS 42-7 Smith, DM[1], DM Finch[1], DA Lytle[2] and DM Merritt[3], (1)USDA Forest Service Rocky Mountain Research Station, (2)Oregon State University, (3)USFS Watershed, Fish, and Wildlife & CSU Natural Resource Ecology Laboratory NRRC. *Fire and flood in the bosque: a cottonwood population model for flow-restricted streams of the American Southwest*.

10:30 AM COS 42-8 Scranton, K[1], J Knape[2] and P de Valpine[1], (1)University of California - Berkeley, (2)University of California - Berkeley, Berkeley, CA. *Estimating a population model for stage-structured cohort data with individual heterogeneity in development*.

10:50 AM COS 42-9 Rodhouse, TJ[1], PC Ormsbee[2], KM Irvine[3], LA Vierling[4], JM Szewczak[5] and KT Vierling[4], (1)National Park Service, (2)US Forest Service, (3)US Geological Survey, (4)University of Idaho, (5)Humboldt State University. *Annual turnover in bat occupancy patterns: predictions from life history theory with implications for conservation and monitoring*.

11:10 AM COS 42-10 Morrison, TA[1], MJ Kauffman[2], AD Middleton[1] and DE McWhirter[3], (1)University of Wyoming, (2)United States Geological Survey, Wyoming Cooperative Fish and Wildlife Research Unit, (3)Wyoming Game and Fish Department. *Heading for a cliff: Can dramatic declines in elk recruitment cause lagged population declines?*.

COS 43 - Mutualism And Facilitation II

Portland Blrm 255, Oregon Convention Center

8:00 AM COS 43-1 Suwa, T[1], E Grman[2], R Prunier[2] and JA Lau[2], (1)Michigan State University and W.K. Kellogg Biological Station, (2)Michigan State University. *Does species-specific context-dependency in mutualisms explain community response to environmental change?*.

8:20 AM COS 43-2 Morales, MA[1] and AG Zink[2], (1)Williams College, (2)San Francisco State University. *Mechanism of agreggation in an ant-tended treehopper*.

8:40 AM COS 43-3 Afkhami, ME and SY Strauss, University of California, Davis. *Mutualist-mediated niche expansion and differentiation in a grass-fungal endophyte symbiosis: Linking an experimental test of drought tolerance to rangewide patterns of mutualist-mediated niche effects*.

9:00 AM COS 43-4 Yoo, HJ and DA Holway, University of California, San Diego. *Ecological effects of multi-species, ant-hempiteran mutualisms in citrus*.

9:20 AM COS 43-5 Biswas, SR and HH Wagner, University of Toronto. *Temporal dimension of the Stress Gradient Hypothesis at the intraspecific level*.

9:40 AM Break

9:50 AM COS 43-6 Hembry, DH, L Atkinson, C Guo, EA Newman and RG Gillespie, University of California, Berkeley. *Coevolutionary diversification and network structure of a specialized pollination mutualism on oceanic islands*.

10:10 AM COS 43-7 Keller, KR, Michigan State University. *The role of resource mutualisms and intraspecific variation during succession*.

10:30 AM COS 43-8 Amato, KR[1], CJ Yeoman[1], AD Kent[2], N Righini[1], F Carbonero[1], A Estrada[3], HR Gaskins[1], RM Stumpf[1], S Yildirim[1], M Torralba[4], M Gillis[4], BA Wilson[1], KE Nelson[4], BA White[1] and SR Leigh[1], (1)University of Illinois at Urbana-Champaign, (2)University of Illinois, (3) Universidad Nacional Autónoma de México, (4)J. Craig Venter Institute. *Spatial and temporal variation in the gut microbiome of wild, black howler monkeys (Alouatta pigra).*

10:50 AM COS 43-9 Brown, BL[1], RP Creed Jr.[2], J Skelton[1], KJ Farrell[2] and M Thomas[2], (1)Virginia Tech, (2)Appalachian State University. *Fickle food on a shifting plate: Variable benefits and partner control mechanisms in a crayfish-annelid cleaning symbiosis*.

11:10 AM COS 43-10 Hannon, LE and DL Finke, University of Missouri. *A role for generalists in the pollination of Krameria erecta oil flowers in central Arizona?*.

COS 44 - Parasitism And Host-Parasite Interactions

Portland Blrm 256, Oregon Convention Center

8:00 AM COS 44-1 Torchin, M[1], O Miura[2] and R Hechinger[3], (1)Smithsonian Tropical Research Institute, (2)Kochi University, (3)UC Santa Barbara. *Parasite species richness in marine snails increases with latitude in both the Atlantic and Pacific Oceans*.

8:20 AM COS 44-2 Nabity, PD[1], MR Berenbaum[1] and EH DeLucia[2], (1)University of Illinois, (2)University of Illinois at Urbana-Champaign. *Testing the extended phenotype hypothesis as phylloxera induce stomata and reorganize metabolism in grapes*.

8:40 AM COS 44-3 Malfi, RL and TH Roulston, University of Virginia. *Patterns of parasite infection in bumble bees (Bombus spp.) of the northern Shenandoah Valley in Virginia*.

9:00 AM COS 44-4 Wood, CL[1], F Micheli[1], M Fernández[2], S Gelcich[2], JC Castilla[2] and J Carvajal[3], (1)Stanford University, (2)Universidad Católica de Chile, (3) Universidad de los Lagos. *Epidemiological and ecological effects of fishing on parasites of fished host species*.

9:20 AM COS 44-5 Mordecai, EA[1], AG Jaramillo[2] and JE Ashford[2], (1)University of California-Santa Barbara, (2) University of California, Santa Barbara. *Competition – colonization tradeoffs promote coexistence in salt marsh trematode parasites*.

9:40 AM Break

9:50 AM COS 44-6 Hersh, MH[1], MA Previtali[2], SL LaDeau[3], F Keesing[4] and RS Ostfeld[3], (1)Bard College and Cary Institute of Ecosystem Studies, (2)Universidad Nacional del Litoral, (3)Cary Institute of Ecosystem Studies, (4) Bard College. *Effects of variable larval tick burdens on survival of white-footed mice (Peromyscus leucopus)*.

10:10 AM COS 44-7 Koprivnikar, J and JC Redfern, Brandon University. *Life history and ecological aspects of larval amphibian behavioral consistency*.

10:30 AM COS 44-8 Arnold, E[1] and G Devevey[2], (1)University of Illinois at Chicago, (2)University of Pennsylvania. *From the perspective of a parasite: What factors determine success for a tick?*.

10:50 AM COS 44-9 Smith, NF[1] and JH Cohen[2], (1)Eckerd College, (2)University of Delaware. *Light-mediated behavior of marine parasitic larvae: Adaptations to enhance transmission success*.

11:10 AM COS 44-10 Sargent, LW, K Towle, L Callahan and DM Lodge, University of Notre Dame. *Host manipulation by a trematode parasite (Microphallus sp.) favors invasive rusty crayfish (Orconectes rusticus) in competition with congeners*.

COS 45 - Physiological Ecology II

Portland Blrm 257, Oregon Convention Center

8:00 AM COS 45-1 Young, SL, University of Nebraska-Lincoln. *Die-back and re-growth of Phragmites australis (common reed) following drought*.

8:20 AM COS 45-2 Auchincloss, L[1], JH Richards[1], CA Young[2] and MK Tansey[3], (1)University of California, Davis, (2)Stockholm Environment Institute, (3)Bureau of Reclamation MidPacific Region. *Inundation depth, duration, and temperature influence Fremont cottonwood (Populus fremontii) seedling growth and survival*.

8:40 AM COS 45-3 McGuire, MA[1], J Bloemen[2], DP Aubrey[1], K Steppe[2] and RO Teskey[1], (1)University of Georgia, (2) Ghent University. *Xylem-transported respiratory CO_2 as a substrate for carbon assimilation in trees*.

9:00 AM COS 45-4 Renninger, HJ[1], KV Schafer[2], KL Clark[3] and N Skowronski[3], (1)Rutgers University, (2)Rutgers University Newark, (3)USDA Forest Service. *Effects of a prescribed burn on water use and photosynthetic capacity of Pitch pines (Pinus rigida L.) in the New Jersey Pine Barrens*.

9:20 AM COS 45-5 Johnson, DM[1], JC Domec[2], DR Woodruff[3], KA McCulloh[4] and FC Meinzer[3], (1)Duke University, (2) North Carolina State University, (3)USDA Forest Service, (4)Oregon State University. *Two tropical lianas and their host trees have contrasting hydraulic strategies*.

9:40 AM Break

9:50 AM COS 45-6 Medeiros, JS and JK Ward, University of Kansas. *Hydraulic adjustments alter limits on transpiration at glacial vs. current and future predicted atmospheric [CO_2]*.

10:10 AM COS 45-7 Church, JN[1], L Wiley[2], RS Criddle[3] and LD Hansen[3], (1)California Geological Survey, (2)California State University, Fresno, (3)Brigham Young University. *Yearly ponderosa pine metabolism trends provide insight into adaptation to site and changing climate conditions*.

10:30 AM COS 45-8 Houghton, JM, K Thompson and M Rees, University of Sheffield. *Components of the relative growth rate under multiple environmental conditions*.

10:50 AM COS 45-9 Fox, RA[1], GJ Ettl[1] and J Kuera[2], (1)University of Washington, (2)Environmental Measuring Systems. *Differential responses of sap flow rates in Pseudotsuga menziesii, Thuja plicata, and Tsuga heterophylla to canopy position, seasonal variability, and climate*.

11:10 AM COS 45-10 Maguire, AJ and RK Kobe, Michigan State University. *Depletion of non-structural carbohydrate reserves in temperate tree seedlings under stress*.

COS 46 - Population Dynamics: Modeling

Portland Blrm 258, Oregon Convention Center

8:00 AM COS 46-1 Perlut, NG[1] and AM Strong[2], (1)University of New England, (2)University of Vermont. *Evaluating the 50% assumption: Greater than expected first-year survival rates for migratory songbirds*.

8:20 AM COS 46-2 Kendall, BE[1], GA Fox[2], M Fujiwara[3], TM Nogeire[4] and JP Stover[5], (1)University of California Santa Barbara, (2)University of South Florida, (3) Texas A&M University, (4)University of Washington, (5) University of California. *Demographic heterogeneity affects population dynamics through multiple pathways*.

8:40 AM COS 46-3 Innes, C[1], M Anand[1], AC Staver[2], SA Levin[2] and CT Bauch[1], (1)University of Guelph, (2)Princeton University. *The impact of coupled human-environment system dynamics on alternative stable states of a forest-grassland mosaic ecosystem*.

9:00 AM COS 46-4 Kurkjian, HM, SK Carothers and ES Jules, Humboldt State University. *Seed predation reduces the fecundity of a rare plant and leads to population decline*.

9:20 AM COS 46-5 Ovadia, O[1], A Horev[1], R Yosef[1] and P Tryjanowski[2], (1)Ben Gurion University of the Negev, (2) Poznan University of Life Sciences. *Consequences of variation in male harem size to population persistence: Modeling poaching and extinction risk of Bengal tigers (Panthera tigris)*.

9:40 AM Break

9:50 AM COS 46-6 Yackulic, CB[1], C Finch[2] and WA Pine III[2], (1) US Geological Survey, (2)University of Florida. *Movement and growth in humpback chub: Using multistate models for inference from a mixed batch and individual tag dataset*.

10:10 AM COS 46-7 Yeakel, JD[1] and M Mangel[2], (1)University of California, Santa Cruz, (2)University of California at Santa Cruz. *Estimating the degree of compensation from fluctuations in fish biomass*.

10:30 AM COS 46-8 Buoro, MM, JL Hwan and SM Carlson, University of California, Berkeley. *Investigating the selective survival of threatened steelhead juveni*.

10:50 AM COS 46-9 Carroll, IT, RM Nisbet and CJ Briggs, University of California, Santa Barbara. *Signature of the initial state in absorbing Markov chains: Theory and an application to Batrachochytrium dendrobatidis infection*.

11:10 AM COS 46-10 Yap, MJC[1], RA Desharnais[1], C Robles[1], L Cao[2] and E Diaz[1], (1)California State University, Los Angeles, (2)California State University. *Modeling the dynamics of disturbance in mussel beds*.

COS 47 - Remote Sensing And Image Analysis

B117, Oregon Convention Center

8:00 AM COS 47-1 Jia, G, H Wang and A Zhang, Chinese Academy of Sciences. *Analysis of dryland ecosystem production with integrated multi-site flux measurements and satellite data*.

8:20 AM COS 47-2 Zald, H[1], J Ohmann[2], R McGaughey[3] and HM Roberts[1], (1)Oregon State University, (2)Pacific Northwest Research Station, USDA Forest Service, (3) USDA Forest Service. *Incorporating LIDAR and Landsat-based disturbance metrics into fine-grain nearest-neighbor imputation maps of vegetation composition and structure*.

8:40 AM COS 47-3 Hogland, JS, NM Anderson and JG Jones, Forest Service. *Estimating above ground tree biomass for the Uncompahgre Plateau in Western Colorado using NAIP imagery and a series of textural and probabilistic metrics*.

9:00 AM COS 47-4 Mellin, C[1], L Parrott[2], S Andréfouët[3], CJ Bradshaw[4], MA MacNeil[1] and MJ Caley[1], (1) Australian Institute of Marine Science, (2)Complex Systems Laboratory, University of Montreal, (3)Institut de Recherche pour le Développement, (4)University of Adelaide. *Habitat image processing can predict marine biodiversity patterns at multiple scales*.

9:20 AM COS 47-5 Kazakova, AN, University of Washington. *Quantifying vertical and horizontal stand structure using terrestrial LIDAR in the Pacific Northwest forests*.

9:40 AM Break

9:50 AM COS 47-6 Roberts, KA and X Chen, Alabama A&M University. *Direct and indirect assessment of vegetation located near CO_2-mediated enhanced oil recovery (CO_2-EOR) activities*.

10:10 AM COS 47-7 Antonarakis, A[1], SC Wofsy[2], W Munger[1],

8 am-11:30 am; 8 am-5 pm; 11:30 am-1:15 pm

C Schaaf[3] and PR Moorcroft[2], (1)Harvard, (2)Harvard University, (3)UMASS. *Forest structure and composition from remote sensing to constrain predictions of forest ecosystem carbon dynamics*.

10:30 AM COS 47-8 Wasser, LA[1], AH Taylor[2], L Chasmer[3] and R Day[4], (1)NEON, (2)The Pennsylvania State University, (3)Wilfrid Laurier University, (4)Penn State University. *Assessing anthropogenic influence and edge effect influence on forested riparian buffer spatial configuration and structure: An example using LIDAR remote sensing methods*.

10:50 AM COS 47-9 Pontius, JA, US Forest Service Northern Research Station. *Quantifying forest health trends across time and space: A hyperspectral approach using multi-spectral remote sensing imagery*.

11:10 AM COS 47-10 Colgan, MS[1], GP Asner[2] and T Swemmer[3], (1)Stanford University, (2)Carnegie Institution, (3)South African Ecological Observation Network. *Destructive sampling within airborne LIDAR flight areas to improve airborne estimation of aboveground woody plant biomass*.

COS 48 - Restoration Ecology II

C120, Oregon Convention Center

8:00 AM COS 48-1 Churchill, DJ[1] and AJ Larson[2], (1)University of Washington, (2)University of Montana. *Quantifying and restoring stand-level spatial pattern in dry mixed-conifer forests of Eastern Washington*.

8:20 AM COS 48-2 Holl, KD[1], RA Zahawi[2], VM Stout[1] and JL Reid[1], (1)University of California, Santa Cruz, (2) Organization for Tropical Studies. *Does restoring tropical forest using an applied nucleation approach enhance habitat heterogeneity and seedling recruitment?*.

8:40 AM COS 48-3 Sprugel, DG[1], CB Halpern[1], R Gersonde[2] and SA Evans[1], (1)University of Washington, (2)Seattle Public Utilities. *Variability of understory response to ecological thinning and gap creation in Douglas-fir/hemlock forests*.

9:00 AM COS 48-4 Reid, JL[1], EK Holste[2] and RA Zahawi[3], (1) University of California, Santa Cruz, (2)Michigan State University, (3)Organization for Tropical Studies. *Artificial bat roosts do not accelerate tropical forest recovery in abandoned pastures*.

9:20 AM COS 48-5 Nyamai, PA[1], PC Goebel[1], DM Hix[1] and RG Corace III[2], (1)The Ohio State University, (2)USDI Fish and Wildlife Service. *Can variable-retention harvesting help reduce fuel loads and restore mixed-pine forest ecosystems?*.

9:40 AM Break

9:50 AM COS 48-6 Delvin, EG[1], JD Bakker[2] and PW Dunwiddie[2], (1)The University of Washington, (2)University of Washington. *Investigating the role of host plants in recovering golden paintbrush (Castilleja levisecta)*.

10:10 AM COS 48-7 Bauer, JT and JD Bever, Indiana University. *Plant-soil feedbacks in remnant and restored tallgrass prairie*.

10:30 AM COS 48-8 Maier, ME and KA Sullivan, Utah State University. *Restoring a pine in decline: Foraging ecology of Clark's nutcracker and red squirrel in whitebark pine forests*.

10:50 AM COS 48-9 Russell-Roy, ET, WS Keeton, JA Pontius and CD Kerchner, University of Vermont. *Rehabilitation forestry and carbon market access on overharvested, former industrial northern hardwood-conifer forests*.

11:10 AM COS 48-10 Castro, J, Universidad de Granada. *Post-fire salvage logging versus non-intervention polices: Old facts, new questions*.

COS 49 - Riparian And Floodplain Habitats

C123, Oregon Convention Center

8:00 AM COS 49-1 Douglas, CMS[1], G Cowlishaw[2] and M Mulligan[3], (1)King's College London & Zoological Society of London, (2)Zoological Society of London, (3)King's College London. *Hydrological drivers of dryland riparian woodlands*.

8:20 AM COS 49-2 Kui, L[1], JC Stella[1], K Skorko[2], A Lightbody[2], A Wilcox[3] and S Bywater-reyes[3], (1)State University of New York College of Environmental Science and Forestry, (2)University of New Hampshire, (3)University of Montana. *Flood effects on native and exotic woody riparian seedlings*.

8:40 AM COS 49-3 Forshay, KJ, BR Faulkner, JR Brooks, A McElmurry, P Mayer and SP Cline, United States Environmental Protection Agency. *Low elevation old channel features of the Willamette River floodplain support high subsurface denitrification rates*.

9:00 AM COS 49-4 King, AJ, CSIRO. *Inundation and drought affect soil eukaryote dominance but not occurrence in Australian floodplain soils*.

9:20 AM COS 49-5 Dwire, KA[1], EE Wohl[2], NA Sutfin[2], RA Bazan[1] and L Polvi-Pilgrim[2], (1)Rocky Mountain Research Station, (2)Colorado State University. *Carbon storage along headwater stream segments with differing valley geometry in Rocky Mountain National Park, Colorado*.

9:40 AM Break

9:50 AM COS 49-6 Noble-Stuen, A, KL Kavanagh and TA Wheeler, University of Idaho. *Modeling the effects of anadromous fish nitrogen on the carbon balance of riparian forests in central Idaho, USA*.

10:10 AM COS 49-7 Boudell, JA[1] and J Stromberg[2], (1)Clayton State University, (2)Arizona State University. *Impact of varying nitrate concentrations on germination of a suite of semi-arid region riparian plant species*.

10:30 AM COS 49-8 Brown, RL[1], AJ Clausen[1] and P Shafroth[2], (1) Eastern Washington University, (2)US Geological Survey. *Understanding reduced plant diversity below dams on the Elwha River, Washington*.

10:50 AM COS 49-9 Dott, CE[1], GL Gianniny[1], SJ Pike[1] and M Clutter[2], (1)Fort Lewis College, (2)Chesapeake Energy. *Seasonal and inter-annual variation in river flow as drivers of shallow groundwater fluctuation and riparian vegetation change on the impounded Dolores River, southwest Colorado*.

11:10 AM COS 49-10 Stromberg[1], JC, JM Betsch[1], AF Hazelton[1] and DM Merritt[2], (1)School of Life Sciences, Arizona State University, (2)USFS Watershed, Fish, and Wildlife & CSU Natural Resource Ecology Laboratory NRRC. *How tightly coupled are seed dispersal and flood timing? Case study from the semi-arid Verde River, Arizona, USA.*

8 am-5 pm

ESA Vegetation Classification Panel

Alaska, Doubletree Hotel

11:30 am-1:15 pm

ESA Ecosphere Editor in Chief Meeting

Ross Island, Doubletree Hotel

ESA Past Presidents' 2015 Committee Meeting

D130, Oregon Convention Center

ESA Traditional Ecological Knowledge Business Meeting and Luncheon

VIP B, Oregon Convention Center

ESA Urban Ecosystem Ecology Section Business Meeting

E145, Oregon Convention Center

GLBT Ecologists Brown Bag Lunch

Morrison, Doubletree Hotel

Rapid Response Team Luncheon (by invitation only)

D135, Oregon Convention Center

WK 26 - Halting Attrition: Mentoring and Retention of Women and Minority Students

C123, Oregon Convention Center

Organized by: GRH Allington (gallingt@slu.edu), CN Ryan, CR Lemons, AR Post

Plugging the leaky pipeline of women and minority ecologists is quickly becoming a priority. This workshop will be an active discussion between senior and student ecologists from diverse career paths on mentoring and strategies for career success for women and minorites.

WK 29 - Data Sharing In Ecology: Breaking Down the Cultural Barriers

E141, Oregon Convention Center

Organized by: WK Gram, S Hampton, V Hutchison

Why does the data paradigm need to shift in ecology? Why are ecologists hesitant to share their data and use community data? Bring your lunch and join representatives from NEON, DataONE and NCEAS, as well as your fellow ecologists, to discuss these issues and strategies to address these barriers.

WK 30 - The NGame: Improving Student Learning of Complex Ecological Concepts Through Game-Based Learning

B113, Oregon Convention Center

Organized by: AP Smith, JE Collins, TC Balser

This workshop introduces 'The NGame', an interactive, game-based learning tool designed to guide students through the series of complex interactions between the physical, chemical and biological environment that drive the nitrogen cycle. Participants will learn and play The NGame, and discuss innovative teaching strategies that encourage hands on, experiential learning.

WK 31 - How to Use Teaching Issues and Experiments In Ecology (TIEE) In Your Teaching and Publish Ecology Research In TIEE

D137, Oregon Convention Center

Organized by: C D'Avanzo (cdavanzo@hampshire.edu), LM Hartley, A Maskiewicz

This workshop is an introduction to how to use Teaching Issues and Experiments in Ecology (TIEE) in ecology and biology teaching and how to submit an Experiment, Issue, or Research paper.

WK 32 - Formative Assessment: Just Do It! Rapid Response to Undergraduate Feedback

D138, Oregon Convention Center

Organized by: J Dauer (jdauer@msu.edu), A Sutton-Grier, ESJ Rauschert, JL Momsen

Participants will explore the value of formative assessment to student learning, will develop methods for planned and spontaneous formative assessment, and will learn ways to respond to the results of formative assessment in order to improve student learning in diverse class settings.

WK 33 - Answering Ecological Questions with Metagenomic Sequencing

D139, Oregon Convention Center

Organized by: DD Myrold, JT Lennon

Participants will be introduced to the application of metagenomics to address ecological questions, with an overview of the methodology, description of a few case studies, and a discussion of the some of the challenges that face the field as it moves forward.

Speakers:
JT Lennon, Michigan State University
DA Antonopoulos, Argonne National Laboratory
W Mohn, University of British Columbia

WK 34 - SEEDS Chapter Workshop

F150, Oregon Convention Center

Organized by: F Abbott (fred@esa.org), M Armstrong

This workshop will provide an opportunity for SEEDS Campus Ecology Chapters to collaborate and share their accomplishments and for ESA members to learn more about the SEEDS program and how to start a Chapter.

WK 35 - Engaging Arts/Humanities with Long-Term Research and Education Programs: Outcomes, Approaches, Networking

B116, Oregon Convention Center

Organized by: MB Leigh, FJ Swanson

This workshop will begin with examples of engagement of arts and humanities in long-term, place-based ecological research and education programs for purposes of both primary inquiry and outreach. Open discussion will address how to foster this work at individual sites and across the emerging network of sites (see http://www.ecologicalreflections.com/).

WK 48 - Funding for Ecology From the National Science Foundation: A Discussion with Program Officers

E142, Oregon Convention Center

Organized by: P Alpert, C Dybas, H Gholz, N Grimm, RS Inouye, DJ Levey, SM Scheiner, AJ Tessier, S Twombly, S Watts

The purposes of this panel discussion are to inform the ecological research community about current opportunities and processes for funding at NSF and to receive suggestions on how the Foundation can best serve the discipline. Participants from NSF will include program officers from the two clusters most centered on ecology.

Speakers:
P Alpert, National Science Foundation
C Dybas, National Science Foundation
H Gholz, National Science Foundation
N Grimm, National Science Foundation
RS Inouye, National Science Foundation
DJ Levey, National Science Foundation
SM Scheiner, National Science Foundation
AJ Tessier, National Science Foundation
A Townsend, National Science Foundation
S Twombly, National Science Foundation
S Watts, National Science Foundation

11:45 am-1:15 pm; 12 pm-1 pm; 12 pm-1:15 pm; 1:30 pm-5 pm

11:45 am-1:15 pm

FT 11 - Oregon Convention Center – An Industry Leader in Sustainable Business Practice (FREE)

Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center

Organized by: M Horton (michelle@esa.org)

12 pm-1 pm

ESA Paleoecology Section Business Meeting

D129, Oregon Convention Center

12 pm-1:15 pm

ESA Mexican Chapter Annual Business Meeting: Challenges for Ecology in Latin America

Hawthorne, Doubletree Hotel

1:30 pm-5 pm

SYMP 7 - Pollination Services In a Changing World: Ecological and Evolutionary Implications

Portland Blrm 251, Oregon Convention Center

Organized by: NM Williams (nmwilliams@ucdavis.edu), R Winfree, RE Irwin

Endorsed by: Plant Population Ecology Section

Moderator: NM Williams

This symposium explores how anthropogenically-driven global change is affecting pollination, from both plant and animal perspectives. Talk topics range from fundamental ecological and evolutionary research, to the use of science in planning and policy to sustain pollinator diversity and pollination services for the benefit of human welfare.

1:30 PM SYMP 7-1 Irwin, RE[1], LS Adler[2], PS Warren[2] and AL Carper[1], (1)Dartmouth College, (2)University of Massachusetts. *Natural selection in urban environments: The role of plant-animal interactions*.

1:50 PM SYMP 7-2 Jha, S, University of Texas. *Pollinator nesting and foraging dynamics in human-altered landscapes*.

2:10 PM SYMP 7-3 Elle, E and GA Gielens, Simon Fraser University. *Pollen limitation: How much is really about the pollinator community?*.

2:30 PM SYMP 7-4 Polce, C[1], J Biesmeijer[2], M Termansen[3] and SG Potts[4], (1)University of Leeds, (2)and IICB Biology University of Leeds, (3)Arhus University, (4)University of Reading. *Using species distribution models to predict current and future UK crop pollination*.

2:50 PM SYMP 7-5 Rader, R, JR Reilly, I Bartomeus and R Winfree, Rutgers University. *Predicting climate change impacts on crop pollination services*.

3:10 PM Break

3:20 PM SYMP 7-6 Isaacs, R[1], B Blaauw[1], JK Tuell[1], E May[1], NM Williams[2], K Ward[2], JC Daniels[3] and A Pence[3], (1) Michigan State University, (2)University of California, Davis, (3)University of Florida. *Taking pollination ecosystem services to the farm: Development of habitat management practices to support sustainable food production*.

3:40 PM SYMP 7-7 Manson, JS[1], JP Strange[2] and RE Irwin[1], (1)Dartmouth College, (2)USDA-ARS Pollinating Insects Research Unit. *Bottom-up effects of an invasive plant on native bumble bee pollinators*.

4:00 PM SYMP 7-8 Blüthgen, N, TU Darmstadt. *Plant-pollinator networks: Does land use impede an insurance against climate change?*.

4:20 PM SYMP 7-9 Fründ, J[1], CF Dormann[2], A Holzschuh[3] and T Tscharntke[1], (1)Georg-August-University, (2)Albert-Ludwigs-University Freiburg, (3)University of Würzburg. *Mechanisms of pollinator diversity effects on pollination in experimental plant communities*.

4:40 PM SYMP 7-10 Kleijn, D and J Scheper, Alterra, Centre for Ecosystem Studies. *Mitigating pollinator loss in Europe: What strategies are most effective?*.

SYMP 8 - Revolutionary Ecology: The Role of Diversity In Unleashing Ecology's Potential to Improve Environmental Conditions and Societal Welfare

Portland Blrm 252, Oregon Convention Center

Organized by: MJ Armstrong (Melissa.Armstrong@nau.edu), SK Doshi, C Sanfiorenzo-Barnhard, RJ Colón-Rivera

Endorsed by: EHRC Committee, Student Section, Education Section

Moderator: H Woody

Action ecology promotes the transformation of ecology into a profession that rewards and trains its scientists to embrace the many forms of diversity needed to improve environmental conditions and societal welfare.

1:30 PM SYMP 8-1 Sanfiorenzo-Barnhard, C, Grupos Ambientales Interdisciplinarios Aliados-GAIA. *Looking back in order to move ahead, the historical perspective of action ecology*.

1:55 PM SYMP 8-2 Armstrong, M, Ecological Society of America. *The power behind a pedagogy of inclusion in creating social change*.

2:20 PM SYMP 8-3 Nutlouis, R, Black Mesa Water Coalition. *Tribal Nations at the forefront of environmental sustainability*.

2:45 PM SYMP 8-4 Doshi, SK, Queen's University. *How participatory action research can bridge societal divides and develop sustainable communities*.

3:10 PM Break

3:20 PM SYMP 8-5 Bonta, M, Center for Diversity in the Environment. *Equity, diversity, and inclusivity in the environmental movement*.

3:45 PM SYMP 8-6 Pickett, STA, Cary Institute of Ecosystem Studies. *Dimensions of diversity and its importance to science*.

4:10 PM SYMP 8-7 Brennan, G, Focus The Nation. *Ecology of self: Stories of trying to use ecology as a verb*.

4:35 PM Discussion

SYMP 9 - Rocky Mountain Futures: Preserving, Utilizing, and Sustaining Rocky Mountain Ecosystems

Portland Blrm 253, Oregon Convention Center

Organized by: J Baron, DB Fagre

Endorsed by: Rocky Mountain Chapter

Moderator: JA Hicke

Our symposium addresses sustainability in the Rocky Mountains by looking back at the conclusions of Rocky Mountain Futures, an ecological perspective which was published 10 years ago, and looking forward at how humans and native ecosystems can coexist in this profoundly human landscape.

1:30 PM SYMP 9-1 Fagre, DB, Northern Rocky Mountain Science Center. *The indirect human influence on western mountain environments: Vulnerabilities and resiliencies*.

1:55 PM SYMP 9-2 Seastedt, T, University of Colorado at Boulder. *Grassland transformations in the Rocky Mountain West*.

2:20 PM SYMP 9-3 Hicke, JA[1] and J Logan[2], (1)University of Idaho, (2)USDA Forest Service, Retired. *The emerging significance of bark beetle outbreaks in the Rocky Mountains*.

2:45 PM SYMP 9-4 Tomback, DF, University of Colorado Denver. *Forest health challenges in the Rocky Mountain West*.

3:10 PM Break

3:20 PM SYMP 9-5 Garcia, ES[1] and C Tague[2], (1)University of California, Santa Barbara, (2)University of Calfornia, Santa Barbara. *The influence of climate change and climate-influenced disturbances on streamflow and carbon cycling in the Rocky Mountains*.

3:45 PM SYMP 9-6 Bowen, ZH[1], TJ Gallegos[2], CJ Potter[2], DN Mott[3], BA Varela[2] and NB Carr[1], (1)USGS, Fort Collins Science Center, (2)USGS, Central Energy Resources Science Center, (3)USGS, Wyoming Water Science Center. *Trends and issues associated with energy development in the West*.

4:10 PM SYMP 9-7 Theobald, DM, Colorado State University. *Land use modifies potential climate change adaptation strategies and opportunities in the Rocky Mountains*.

4:35 PM SYMP 9-8 Baron, J[1], DB Fagre[2], TR Seastedt[3], JA Hicke[4], D Tomback[5], ES Garcia[6], Z Bowen[7] and D Theobald[8], (1)Natural Resource Ecology Laboratory, United States Geological Survey, (2)Northern Rocky Mountain Science Center, (3)University of Colorado at Boulder, (4)USDA Forest Service and University of Idaho, (5)University of Colorado, (6)University of California, Santa Barbara, (7)USGS, (8)Colorado State University. *Only fools and newcomers predict the future: The hubris of forecasting*.

OOS 14 - Conservation Values and Dynamics of Early Post-Disturbance Temperate Forests In North America

A105, Oregon Convention Center

Organized by: C Kwit, D King, B Collins, M Swanson

Moderator: C Kwit

The proposed symposium will synthesize and advance the perception and treatment of the early stage of forest succession as it pertains to the ecology, conservation, and management of temperate forest ecosystems.

1:30 PM OOS 14-1 Runkle, JR and JR Milks, Wright State University. *Comparison of temperate forest succession models from different ecoregions, and the role of the early-successional stage*.

1:50 PM OOS 14-2 King, D[1] and SR Schlossberg[2], (1)Northern Research Station, USDA Forest Service, (2)University of Massachusetts Amherst. *Synthesis of the conservation value of the early-successional stage of succession in eastern U.S. forests*.

2:10 PM OOS 14-3 Swanson, M, Washington State University. *Conservation value of the early stage of succession in western U.S. forests*.

2:30 PM OOS 14-4 Larson, AJ[1] and CA Cansler[2], (1)University of Montana, (2)University of Washington. *The changing role of fire in whitebark pine population dynamics: Implications for conservation*.

2:50 PM OOS 14-5 Souza, L[1] and SE Kuebbing[2], (1)University of Oklahoma, (2)University of Tennessee. *Review and synthesis of the early successional stage and invasive plant species*.

3:10 PM Break

3:20 PM OOS 14-6 Collins, B[1], PS White[2] and C Kwit[3], (1)Western Carolina University, (2)University of North Carolina at Chapel Hill, (3)University of Tennessee. *Disturbance and early succession in the southern Appalachians and the eastern U.S*.

3:40 PM OOS 14-7 Greenberg, CH[1] and TL Keyser[2], (1)USDA Forest Service, Southern Research Station, (2)USDA Forest Service. *Southeastern ecosystems and early successional habitat: One size does not fit all*.

4:00 PM OOS 14-8 Campbell, J[1], DC Donato[2] and JF Franklin[3], (1)Oregon State University, (2)University of Wisconsin, (3)University of Washington. *Multiple successional pathways and precocity in forest development: Can some forests be born complex?*.

OOS 15 - Contemporary Evolution Amid the Human Enterprise: New Insights Into the Fates of Populations and Communities

A106, Oregon Convention Center

Organized by: SP Brady (steven.brady@yale.edu)

Moderator: DK Skelly

This session showcases key insights and synthetic perspectives into the profound influence of contemporary evolution on long-term population and community responses to human altered systems.

1:30 PM OOS 15-1 Hendry, AP, McGill University. *Rates and patterns of evolutionary change in human altered ecosystems*.

1:50 PM OOS 15-2 Merilä, J, University of Helsinki. *Detecting climate change responses in the wild: Problems and prospects*.

2:10 PM OOS 15-3 Kolbe, J[1], M Leal[2], TW Schoener[3], DA Spiller[3] and J Losos[4], (1)University of Rhode Island, (2) Duke University, (3)University of California, Davis, (4) Harvard University. *Interacting evolutionary mechanisms during island introductions in brown anole lizards*.

2:30 PM OOS 15-4 Williams, L, Woods Hole Oceanographic Institution. *Signatures of selection in natural populations adapted to chronic pollution*.

2:50 PM OOS 15-5 Waples, RS[1], A Elz[1], L Park[1] and B Arnsberg[2], (1)NOAA Fisheries, (2)Nez Perce Tribe. *Evolution and conservation of Pacific salmon in a changing world*.

3:10 PM Break

3:20 PM OOS 15-6 Sekor, MR and SJ Franks, Fordham University. *Selection and adaptation to novel environmental conditions in introduced genotypes of the annual plant Brassica rapa*.

3:40 PM OOS 15-7 Brady, SP, Yale University. *Roads induce adapted populations of a salamander, but maladapted populations of a frog*.

4:00 PM OOS 15-8 Turner, KG[1], H Freville[2], RA Hufbauer[3] and LH Rieseberg[1], (1)University of British Columbia, (2)Centre d'Ecologie Fonctionnelle et Evolutive, Centre national de la recherche scientifique, (3)Colorado State University. *Invasive weed demonstrates phenotypic differentiation between ranges in multiple common gardens*.

4:20 PM OOS 15-9 Reed, TE and M Visser, Netherlands Institute of Ecology. *Eco-evolutionary consequences of phenological mismatch in Dutch great tits*.

4:40 PM OOS 15-10 McEvoy, PB[1], KM Higgs[1] and E Karaçetin[2], (1)Oregon State University, (2)Erciyes University. *Rapid adaptive evolution in a biological control insect colonizing a high-elevation environment in western Oregon*.

1:30 pm-5 pm

OOS 16 - Growing Our Understanding of Life On Earth: Reflections On the Scientific and Training Legacies of Terry Chapin, From Physiological Ecology to Earth Stewardship

A107, Oregon Convention Center

Organized by: JF Johnstone, MC Mack

Moderator: MC Mack

This session will review and synthesize contributions of one of ESA's pre-eminent scientists, F. Stuart (Terry) Chapin, III, to different sub-disciplines of ecology. The talks share a common aim of highlighting the lessons we could learn from Chapin to enhance our own research, collaboration, and training efforts.

1:30 PM OOS 16-1 Shaver, GR[1], MS Bret-Harte[2] and JM Craine[3], (1)Marine Biological Laboratory, (2)University of Alaska Fairbanks, (3)Dartmouth College. *Hot springs, bulldozers and tussocks: Terry Chapin's early career contributions to plant physiological ecology, and the legacy of "the mineral nutrition of wild plants"*.

1:50 PM OOS 16-2 Schimel, JP[1] and M Firestone[2], (1)University of California, Santa Barbara, (2)University of California Berkeley. *New paradigms in nitrogen cycling*.

2:10 PM OOS 16-3 Randerson, JT[1], B Rogers[1], J Beringer[2], S Chambers[3], JP McFadden[4] and W Eugster[5], (1) University of California, Irvine, (2)Monash University, (3)ANSTO, Australia, (4)University of California, Santa Barbara, (5)ETH Zurich. *The influence of a changing disturbance regime on regional and global climate: Terry Chapin's contributions to Earth System science*.

2:30 PM OOS 16-4 Chapin, M[1], K Walter Anthony[1], S Zimov[2], JF Reynolds[3] and EAG Schuur[4], (1)University of Alaska Fairbanks, (2)Northeast Science Station, Russia, (3) Duke University, (4)University of Florida. *International collaborations: Understanding arctic ecosystem feedbacks*.

2:50 PM OOS 16-5 Beier, CM[1], TJ Brinkman[2], S McNeeley[3], WD Hansen[4], KV Spellman[5] and C Knapp[4], (1)SUNY College of Environmental Science and Forestry, (2)University of Alaska, (3)National Center for Atmospheric Research, (4)University of Alaska, Fairbanks, (5)University of Alaska Fairbanks. *Fostering resilience while driving transformative change – Terry Chapin's contributions to sustainability science in the Arctic and beyond*.

3:10 PM Break

3:20 PM OOS 16-6 Johnstone, JF[1], LR Walker[2] and CL Fastie[3], (1)University of Saskatchewan, (2)University of Nevada Las Vegas, (3)Middlebury College. *Linking deterministic and stochastic processes of succession to understand drivers of ecological resilience*.

3:40 PM OOS 16-7 Hooper, DU[1] and MC Mack[2], (1)Western Washington University, (2)University of Florida. *The mechanisms driving ecosystems: Insight and synthesis in Chapin, Matson, and Mooney*.

4:00 PM OOS 16-8 Grogan, P[1], VT Eviner[2] and SE Hobbie[3], (1) Queen's University, (2)University of California Davis, (3) University of Minnesota. *The qualities and impacts of a great mentor*.

4:20 PM OOS 16-9 Power, ME[1], P Matson[2] and MG Turner[3], (1) University of California, Berkeley, (2)Stanford University, (3)University of Wisconsin. *Earth Stewardship – Following in the footsteps of Terry Chapin*.

OOS 17 - Traditional Ecological Knowledge, Research and Integrated Resource Management: How Culture Sustains Ecosystems

D136, Oregon Convention Center

Organized by: FK Lake (franklake@fs.fed.us)

Moderator: J Ford

This symposium will bring together tribal scientists, managers and practitioners who will present and share how traditional ecological knowledge (TEK) is being incorporated into research and management. Presenters, all of tribal descent, represent various tribal, agency, university, and organization programs and projects taking place across North America.

1:30 PM OOS 17-1 Armstrong, J, Okanagan Indian Educational Resources Society. *Okanogan traditional ecological knowledge: Perspectives of utilizing and sustaining ecosystems*.

1:50 PM OOS 17-2 Hatfield, S, Confederated Tribes of Siletz. *Traditional ecological knowledge can impact, enhance, and diversify adaptation, sustainability, and environmental stability*.

2:10 PM OOS 17-3 Kimmerer, R, SUNY College of Environmental Science and Forestry. *Sustaining the plants that sustain us: The philosophy and practice of reciprocal restoration*.

2:30 PM OOS 17-4 Woodside, G, Oregon State University. *Restoration of a Flordia tribal land: Legacy of the Southeastern Lower Mvskogee Creek people*.

2:50 PM OOS 17-5 Trosper, RL, University of Arizona. *Integrating a hydroelectric dam into integrated resource management in a TEK framework*.

3:10 PM Break

3:20 PM OOS 17-6 Lake, FK, U.S. Forest Service, Pacific SW. *Incorporating TEK with wildland fire and fisheries research and management: Opportunities and challenges*.

3:40 PM OOS 17-7 Quaempts, E, Confederated Tribes of Umatilla. *First Foods Management: A tribal approach to intergrated resouce management*.

4:00 PM OOS 17-8 Soto-Pinto, L, El Colegio de la Frontera Sur. *Improved fallows as alternative for shifting cultivation in Chiapas, Mexico*.

4:20 PM OOS 17-9 Rinkevich, SE, University of Arizona. *Cultural significance of Ba'cho (gray wolf) to the Western Apache in Arizona*.

OOS 18 - Making a Difference Outside Academia: Non-Governmental Organization and Agency Contributions to Earth Stewardship

B110, Oregon Convention Center

Organized by: M McClure (michelle.mcclure@noaa.gov), J Bash, K Watson

Moderator: J Bash

This session highlights the novel scientific work and conservation strategies NGOs and agencies have taken to support healthy ecosystems, species and human communities.

1:30 PM OOS 18-1 Rea, A[1], HA Walker[1], JL Copeland[1] and DQ Kellogg[2], (1)US EPA, (2)University of Rhode Island. *Using ecosystem services to inform decisions at multiple scales of governance*.

1:50 PM OOS 18-2 Labrum, K[1], M Gleason[1], M Bell[1], M Merrifield[1], S Rienecke[1] and JR Wilson[2], (1)The Nature Conservancy, (2)UCSB. *Collaborating with the fishing industry to improve sustainability of West Coast groundfish*.

2:10 PM OOS 18-3 Griffis, R, M McClure and E Seney, NOAA Fisheries Service. *Incorporating climate change into Endangered Species Act decisions: Case studies from aquatic systems*.

2:30 PM OOS 18-4 Kaye, TN, K Jones and I Pfingsten, Institute for Applied Ecology. *Does biological diversity of neighboring habitat control reintroduction success of endangered species?*.

2:50 PM OOS 18-5 Hellier, J, EarthCorps. *Citizens and scientists: The EarthCorps approach to science- and community-based ecological restoration*.

3:10 PM Break

3:20 PM OOS 18-6 Samhouri, JF, NOAA Fisheries. *Sea sick? An Ocean Health Index to inform comprehensive marine policy and management*.

3:40 PM OOS 18-7 Batten, K, U.S. Agency for International Development. *USAID, science, climate change, and development*.

4:00 PM OOS 18-8 Thompson, JR[1], KF Lambert[2] and DR Foster[3], (1)Smithsonian Institution, (2)Harvard Forest (Harvard University), (3)Harvard University. *Collaborating with stakeholders to define land-use scenarios that inform landscape simulations in Massachusetts, USA*.

4:20 PM OOS 18-9 May-Tobin, CC[1], DH Boucher[1], E Decker[2], G Hurowitz[3], J Martin[1], K Mulik[1], S Roquemore[1] and A Stark[3], (1)Union of Concerned Scientists, (2)University of Massachusetts, Amherst, (3)Climate Advisers. *Solutions for deforestation-free commodities*.

4:40 PM OOS 18-10 Bachelet, DM, D Conklin and K Ferschweiler, Conservation Biology Institute. *Making vegetation model projections usable by managers*.

OOS 19 - Above-Belowground Interactions – From Genomes to Ecosystems

B116, Oregon Convention Center

Organized by: AE Bennett (alibenne@bio.indiana.edu), SN Johnson

Moderator: DJ Ballhorn

This OOS highlights the spectrum of current and potential research from genomics through ecosystems in above-belowground interactions in order to expand the boundaries of future research in this area. Above-belowground interactions drive our need for mechanistic understanding, and have important implications for the fields of restoration ecology, conservation, and agroecology.

1:30 PM OOS 19-1 Busov, V, Michigan Technological University. *Role of gibberellins' metabolism and signaling in coordination of above-belowground growth in Populus*.

1:50 PM OOS 19-2 Bennett, AE, James Hutton Institute. *Genotypic variation in above-belowground interactions: Evidence from AM fungal-plant-herbivore systems*.

2:10 PM OOS 19-3 de la Peña, E, Ghent University. *Local adaptation of insect herbivores to grasses by mediation of the soil community*.

2:30 PM OOS 19-4 Shaffer, GP, Southeastern Louisiana University. *A 5-year mesocosm study on 11 species of wetland plants common to coastal Louisiana: The effects of water quality, hydrology, sediment addition, and hurricanes on above- and belowground production*.

2:50 PM OOS 19-5 Wurst, S, Freie Universitaet Berlin. *Community level effects in above-belowground interactions*.

3:10 PM Break

3:20 PM OOS 19-6 Yannarell, AC and Y Lou, University of Illinois at Urbana-Champaign. *The microbial ecology of plant-soil feedback: Exploring the relationship between a microbe's plant preference and its feedback potential*.

3:40 PM OOS 19-7 Gehring, CA[1], KR Hultine[2], KA Meinhardt[3], CM Sthultz[4], AV Whipple[1] and TG Whitham[1], (1)Northern Arizona University, (2)Desert Botanical Garden, (3)New Mexico State University, (4)Harvard University. *The importance of above-belowground interactions to the global change responses of two foundation species*.

4:00 PM OOS 19-8 Yadav, V[1], DFB Flynn[2] and B Schmid[2], (1) Institute of Evolutionary Biology and Environmental Studies, (2)University of Zurich. *Effect of plant and soil community history on biodiversity–ecosystem functioning relationships*.

4:20 PM OOS 19-9 Madritch, MD[1], KE Mock[2], RL Lindroth[3] and PA Townsend[4], (1)Appalachian State University, (2)Utah State University, (3)University of Wisconsin, (4)University of Wisconsin - Madison. *Hyperspectral remote sensing links aspen genotype with belowground processes at landscape scales*.

4:40 PM OOS 19-10 Zhou, J[1], L Wu[1], K Xue[1], L Cheng[1], M Yuan[1], J Zhang[1], Y Deng[1], JDV Nostrand[1], Z He[1], R Penton[2], J Cole[2], J Tiedje[2], R Bracho-Garrillo[3], EAG Schuur[3], C Luo[4], K Konstantinidis[4], X Xu[1], D Li[1] and Y Luo[1], (1)University of Oklahoma, (2)Michigan State University, (3)University of Florida, (4)Georgia Institute of Technology. *From community structure to function: Metagenomics-enabled predictive understanding of microbial communities to climate warming at the temperate grassland ecosystems in Oklahoma*.

OOS 20 - Recent Advances In Individual-Based Population Modeling with Applications to Conservation and Management

C124, Oregon Convention Center

Organized by: NH Schumaker (schumaker.nathan@epa.gov), CB Wilsey

Moderator: A Brookes

This session will use case studies to illustrate how novel research in applied ecology and conservation is being driven by advances in individual-based population modeling.

1:30 PM OOS 20-1 Schumaker, NH[1], A Brookes[2], C Carroll[3], P Huber[4], T Nogeire[5], P Singleton[6], M Tuma[7], CB Wilsey[6] and GY Xie[8], (1)US EPA, (2)US Environmental Protection Agency, (3)Klamath Center for Conservation Research, (4)University of California, Davis, (5)University of California Santa Barbara, (6)University of Washington, (7)SWCA Environmental Consultants, (8)Oregon State University. *Using HexSim to simulate complex species, landscape, and stressor interactions*.

1:50 PM OOS 20-2 Singleton, PH[1], BG Marcot[1], JF Lehmkuhl[1], MG Raphael[1], RSH Kennedy[1] and NH Schumaker[2], (1) USDA Forest Service, (2)US EPA. *Modeling interactions between spotted owl and barred owl populations in fire-prone forests*.

2:10 PM OOS 20-3 Wilsey, CB and JJ Lawler, University of Washington. *Simulating the effects of land-use, climate change, and management on an endangered species*.

2:30 PM OOS 20-4 Nogeire, TM[1], JJ Lawler[1], NH Schumaker[2], BL Cypher[3] and SE Phillips[3], (1)University of Washington, (2)US EPA, (3)California State University. *Impacts of habitat loss, climate change and pesticide exposure on kit fox populations*.

2:50 PM OOS 20-5 Carroll, C[1] and NH Schumaker[2], (1)Klamath Center for Conservation Research, (2)US EPA. *Graph-based analysis of connectivity in spatially-explicit population models: HexSim and the Connectivity Analysis Toolkit*.

3:10 PM Break

3:20 PM OOS 20-6 Yang Xie, G[1], NH Schumaker[2], A Brookes[3] and AR Blaustein[1], (1)Oregon State University, (2) US EPA, (3)US Environmental Protection Agency. *The development of a spatially-explicit, individual-based, disease model for amphibians and the chytrid fungus, Batrachochytrium dendrobatidis*.

3:40 PM OOS 20-7 Tuma, M[1], C Millington[2], NH Schumaker[3] and P Burnett[2], (1)SWCA Environmental Consultants / University of Southern California, (2)SWCA Environmental

Consultants, (3)US EPA. *Modeling population response to anthropogenic threats for a long-lived reptile, the desert tortoise*.

4:00 PM OOS 20-8 Huber, PR[1], NH Schumaker[2], SE Greco[1] and J Hobbs[3], (1)University of California, Davis, (2)US EPA, (3)California Department of Fish and Game. *Using HexSim to assess potential reintroduction sites for a native ungulate*.

4:20 PM OOS 20-9 Dunk, JR[1], B Woodbridge[2], NH Schumaker[3], EM Glenn[2], DW LaPlante[4] and B White[2], (1)Humboldt State University, (2)United States Fish and Wildlife Service, (3)US EPA, (4)Natural Resource Geospatial. *Integrating species distributional, conservation planning, and individual based population models: A case study in conservation network evaluation for the northern spotted owl*.

4:40 PM OOS 20-10 Day, J[1], NH Schumaker[2], A Brookes[3] and B McRae[4], (1)University of Washington, (2)US EPA, (3) US Environmental Protection Agency, (4)The Nature Conservancy. *New developments in computer modeling advance ecological realism of landscape genetics simulations*.

OOS 21 - Developing New Paradigms to Understand and Predict Decomposition Rates In Tropical Forests

A103, Oregon Convention Center

Organized by: BG Waring

Moderator: BG Waring

The goal of this session is to reconcile multiple mechanistic hypotheses regarding the drivers of leaf litter decomposition in tropical forests with empirical data and ecosystem models.

1:30 PM OOS 21-1 Kaspari, M, University of Oklahoma. *Decomposition in a non-Leibig universe*.

1:50 PM OOS 21-2 Hättenschwiler, S[1], N Fanin[1], S Barantal[1], H Schimann[2], J Nahmani[1], S Coq[1] and N Fromin[1], (1) Centre d'Ecologie Fonctionnelle et Evolutive, CEFE-CNRS, (2)INRA-UMR ECOFOG. *Carbon quality as a control on decomposition in tropical forests*.

2:10 PM OOS 21-3 Powers, JS[1], J Schilling[1] and M Lerdau[2], (1)University of Minnesota, (2)University of Virginia. *Functional trait-based frameworks for understanding leaf litter and wood decomposition in tropical dry forests*.

2:30 PM OOS 21-4 McGlynn, TP, California State University Dominguez Hills. *Mesofauna as drivers and passengers of decomposition in tropical forests*.

2:50 PM OOS 21-5 Noble, VR and DS Srivastava, University of British Columbia. *Consequences of fragmentation and forest conversion on leaf litter decomposition in tropical forests*.

3:10 PM Break

3:20 PM OOS 21-6 Cusack, D, University of California - Los Angeles. *Is nitrogen a primary driver of decomposition rates in nitrogen-rich tropical forests? Exploration of the spatially and chemically explicit role of nitrogen*.

3:40 PM OOS 21-7 Wieder, WR[1], G Bonan[1], M Hartman[2] and WJ Parton[2], (1)National Center for Atmospheric Research, (2)Colorado State University. *Nutrient controls on decomposition rates: A global modeling approach*.

COS 50 - Aquatic Ecology: Streams And Rivers III

B112, Oregon Convention Center

1:30 PM COS 50-1 Wei, A and M Zhang, University of British Columbia (Okanagan). *The cumulative effects of forest disturbance on streamflow in a large watershed in the central interior of British Columbia, Canada*.

1:50 PM COS 50-2 Bruce, JEB and JD Reynolds, Simon Fraser University. *Effect of salmon-derived nutrients on growth and condition in freshwater sculpins*.

2:10 PM COS 50-3 Snyder, M and CM Pringle, University of Georgia. *Are relatively low densities of nocturnally-active freshwater shrimps an important component of energy flow in tropical streams draining mainland Costa Rica*.

2:30 PM COS 50-4 Findlay, SEG and DL Strayer, Cary Institute of Ecosystem Studies. *Magnitude and causes of change in submerged aquatic vegetation in the Hudson River*.

2:50 PM COS 50-5 Sousa, RG, CBMA – Centre of Molecular and Environmental Biology. *From common to rare in a couple of years: The case of the peaclam Pisidium amnicum in the Minho River (NW of the Iberian Peninsula)*.

3:10 PM Break

3:20 PM COS 50-6 Entrekin, SA[1], EN Jensen[1], J Kelso[1], G Adams[1], R Adams[1], B Austin[2], M Evans-White[2], C Gallipeau[3], B Haggard[2], E Inlander[3], B Johnson[4], L Massey[2] and L Stearman[1], (1)University of Central Arkansas, (2)University of Arkansas, (3)The Nature Conservancy, (4)Environmental Protection Agency. *Effects of natural gas recovery on Arkansas streams*.

3:40 PM COS 50-7 Austin, B[1], EN Jensen[2], K Brick[3], M Evans-White[1], SA Entrekin[2], E Inlander[4] and C Gallipeau[4], (1) University of Arkansas, (2)University of Central Arkansas, (3)University of Arkansas, Fayetteville, (4)The Nature Conservancy. *Impact of natural gas wells on periphyton and metabolism in streams in north central Arkansas*.

4:00 PM COS 50-8 Linton, JN[1] and J Reynolds[2], (1)Simon Fraser University, (2)Simon Fraser Univeristy. *Ecological role of salmon on stream benthic macro-invertebrate populations in coastal ecosystems*.

4:20 PM COS 50-9 Swain, NR, MD Hocking and JD Reynolds, Simon Fraser University. *Effects of nutrient subsidies on trophic and population ecology of resident fish*.

COS 51 - Biogeochemistry: Experimental Climate Change Effects On Biogeo Processes

B113, Oregon Convention Center

1:30 PM COS 51-1 Avirmed, O, I Burke, WK Lauenroth, M Lobley, DM Bell and DR Schlaepfer, University of Wyoming. *Recovery of plant communities and soil organic matter pools in sagebrush steppe ecosystem of south central Wyoming*.

1:50 PM COS 51-2 Vankoughnett, MR and HAL Henry, Western University. *The interactive effects of soil freezing and nitrogen deposition on winter and growing season nitrogen retention*.

2:10 PM COS 51-3 Unger, S[1], X Lecomte[1], JS Pereira[1], D Fangueiro[2] and M Jongen[1], (1)Instituto Superior de Agronomia, Universidade Técnica de Lisboa, (2)Technical University of Lisbon, Instituto Superior de Agronomia. *The impact of changes in the timing of precipitation on soil respiration and soil-N in Mediterranean evergreen oak woodlands*.

2:30 PM COS 51-4 Sharkhuu, A[1], AF Plante[1], EM Orosoo[2], B Casper[1], B Helliker[1], P Liancourt[1], B Boldgiv[2] and P Petraitis[1], (1)University of Pennsylvania, (2)National University of Mongolia. *Effects of experimental warming on soil respiration in the semi-arid steppe to taiga forest transition zone in northern Mongolia*.

2:50 PM COS 51-5 Xue, K, J Xie, Y Deng, L Wu, Z He, JDV Nostrand, Y Luo and J Zhou, University of Oklahoma. *Interactive effects of clipping practice and experimental warming on soil microbial communities involved in nitrogen cycling in a tallgrass prairie*.

3:10 PM Break

3:20 PM COS 51-6 Limousin, JM[1], CP Bickford[1], JL Osuna[1], RE Pangle[1], EA Yepez[2], AL Boutz[1], N Gehres[1], NG McDowell[3] and WT Pockman[1], (1)University of New Mexico, (2) Instituto Tecnológico de Sonora, (3)Los Alamos National Laboratory. *Contrasting foliar responses to experimental drought and rainfall addition in co-occurring piñon and juniper trees*.

3:40 PM COS 51-7 Darrouzet-Nardi, A[1], SA Sistla[2], H Steltzer[3], PF Sullivan[4], MD Wallenstein[5] and MN Weintraub[1], (1) University of Toledo, (2)University of California, Santa Barbara, (3)Fort Lewis College, (4)University of Alaska, (5)Colorado State University. *Soil nitrogen dynamics during snow melt in moist acidic tussock tundra soils*.

4:00 PM COS 51-8 Mildner, M[1], S Leuzinger[2], MKF Bader[3] and C Koerner[1], (1)University of Basel, (2)ETH Zurich, (3)University of Western Australia. *Response of mature Norway spruce (Picea abies) to elevated atmospheric CO_2*.

4:20 PM COS 51-9 Eddy, WC III, SE Hobbie, PB Reich, R Rich and A Stefanski, University of Minnesota. *Will warming enhance soil organic matter decomposition? Evidence from an in situ warming experiment and process-based soil laboratory incubations*.

4:40 PM COS 51-10 Mayor, JR[1], BL Turner[1], HC Muller-Landau[2], EAG Schuur[3] and JS Wright[1], (1)Smithsonian Tropical Research Institute, (2)Smithsonian Tropical Research Institution, (3)University of Florida. *Response of tropical forest nitrogen isotope ratios to 13 years of nitrogen and phosphorus fertilization*.

COS 52 - Biogeochemistry: Linking Community Structure And Ecosystem Function III

B114, Oregon Convention Center

1:30 PM COS 52-1 Seidl, R[1], TA Spies[2], W Rammer[1], EA Steel[3], RJ Pabst[4] and K Olsen[4], (1)University of Natural Resources and Life Sciences (BOKU) Vienna, (2)US Forest Service, Pacific Northwest Research Station, (3) USFS PNW Research Station, (4)Oregon State University. *Drivers of spatial variation in old-growth forest carbon density disentangled with LIDAR and an individual-based landscape model*.

1:50 PM COS 52-2 Laube, BE, RD Jackson and CJ Kucharik, University of Wisconsin-Madison. *Plant community impacts on nitrous oxide emissions and aboveground productivity in perennial grasslands*.

2:10 PM COS 52-3 Luo, Y, X Xu, RA Sherry, S Niu, D Li and J Xia, University of Oklahoma. *State transition of US Great Plains prairie under experimental warming*.

2:30 PM COS 52-4 Crumsey, J[1], K Nadelhoffer[1], J LeMoine[1] and M Grant[2], (1)University of Michigan, (2)UM Biological Station (Pellston, MI). *Impacts of invasive earthworm community composition on carbon cycling in a sandy north temperate forest soil*.

2:50 PM COS 52-5 de Vries, FT[1], E Thebault[2], M Liiri[3], K Birkhofer[4], M Tsiafouli[5] and RD Bardgett[1], (1)Lancaster University, (2)Ecole Normale Superieure, (3)University of Helsinki, (4)Lund University, (5)University of Thessaloniki. *Links between soil food webs and ecosystem services across European land use systems*.

3:10 PM Break

3:20 PM COS 52-6 Orozco, GL, TW Ocheltree, Z Ratajczak and JB Nippert, Kansas State University. *Isodog: Using a multi-year isoscape to assess clonal shrub physiology and ecohydrology in a tallgrass prairie*.

3:40 PM COS 52-7 Morrissey, EM and RB Franklin, Virginia Commonwealth University. *Ecology, structure, and function of denitrification and DNRA microbes in tidal freshwater wetlands*.

4:00 PM COS 52-8 Briggs, AA, Stanford University. *Effects of spatial subsidies and habitat structure on the ecology of two locally dominant geckos*.

4:20 PM COS 52-9 Smith, AP[1], E Marín-Spiotta[2] and TC Balser[1], (1)University of Wisconsin-Madison, (2)University of Wisconsin, Madison. *Microbial community and soil carbon dynamics vary with season and forest age along a tropical successional chronosequence*.

4:40 PM COS 52-10 Veraart, AJ, MR Dimitrov, JJM de Klein and M Scheffer, Wageningen University. *Abundance, richness, and activity of denitrifiers in drainage ditches, in relation to sediment characteristics, vegetation, and land-use*.

COS 53 - Climate Change I

B115, Oregon Convention Center

1:30 PM COS 53-1 Schwartzberg, EG[1], KF Raffa[2], PB Reich[3] and RL Lindroth[2], (1)University of Wisconsin - Madison, (2)University of Wisconsin, (3)University of Minnesota. *Altered phenological synchrony in a warmer climate: Forest tent caterpillars at B4Warmed*.

1:50 PM COS 53-2 Diez, JM, ETH Zurich. *Fungal phenology responses to climate variation across North America*.

2:10 PM COS 53-3 Chow, VY[1], C Gerbig[2], M Longo[1], JC Ceballos[3], T Koch[2], L Hess[4], H Chen[5], O Kolle[2], J Steinbach[2], BC Daube[1], EW Gottlieb[1], KM Longo[3], MO Andreae[6], JW Munger[1] and SC Wofsy[1], (1)Harvard University, (2)Max-Planck-Institute for Biogeochemistry, Jena, Germany, (3)Instituto Nacional de Pesquisas Espaciais, (4)Earth Research Institute, UCSB, (5)NOAA Earth System Research Laboratory, (6)Max Planck Institute for Chemistry, Mainz, Germany. *Constraining CO_2 fluxes in the Amazon Basin with a regional aircraft campaign*.

2:30 PM COS 53-4 Park, IW, University of Wisconsin-Milwaukee. *A plant for all seasons: Examining patterns of spring, summer, and fall flowering phenology across South Carolina*.

2:50 PM COS 53-5 Hatten, JR[1], DJ Mattson[1], C van Riper III[1], MJ Johnson[2], JA Holmes[2], K Ironside[1] and M Peters[2], (1)U.S. Geological Survey, (2)Northern Arizona University. *Forecasting climate impacts on select birds in the western United States*.

3:10 PM Break

3:20 PM COS 53-6 Doll, JE, BC Petersen and JM Kunkle, Michigan State University. *Climate change adaptation for agricultural ecosystems: What do the farmers think?*.

3:40 PM COS 53-7 Sharma, S[1], JJ Magnuson[2] and SR Carpenter[3], (1)Loyola University Chicago, (2)University of Wisconsin-Madison, (3)University of Wisconsin - Madison. *Temporal dynamics in lake-ice breakup dates around the Northern Hemisphere from 1903 to 2003*.

4:00 PM COS 53-8 Figueiredo, JC[1], AH Baird[1], S Harii[2] and SR Connolly[1], (1)ARC Centre of Excellence for Coral Reef Studies, James Cook University, (2)University of Ryukyus. *Impact of climate change on the potential for localized recruitment in reef corals*.

4:20 PM COS 53-9 Uzochukwu, G, North Carolina A&T State University. *Indicators of climate change in north carolina and educational implications*.

4:40 PM COS 53-10 Liu, Y[1], S Brewer[2] and ST Jackson[1], (1) University of Wyoming, (2)University of Utah. *Modeling vegetation of the past: Integrating fossil pollen data with vegetation modeling*.

1:30 pm-5 pm

COS 54 - Climate Change: Plants II

E145, Oregon Convention Center

1:30 PM COS 54-1 Abbott, MJ[1] and L Battaglia[2], (1)Southern Illinois University, (2)Southern Illinois University - Carbondale. *Effects of experimental storm surge and sedimentation on pitcher plants (Sarracenia purpurea) in a coastal pine savanna*.

1:50 PM COS 54-2 Farrior, CE, R Dybzinski, SG Keel and S Pacala, Princeton University. *Competitive plant responses to elevated CO_2 may significantly decrease a potential carbon sink*.

2:10 PM COS 54-3 Jones, JA[1], JA Cherry[1] and KL McKee[2], (1) University of Alabama, (2)U.S. Geological Survey. *Do elevated CO_2, sea-level rise, and mineral sedimentation interact to influence biological contributions to soil elevations in coastal wetlands*.

2:30 PM COS 54-4 Suchar, VA and R Robberecht, University of Idaho. *Integration and scaling of UV-B radiation effects on plants: From DNA to whole plant*.

2:50 PM COS 54-5 Collins, AR and MA Cavaleri, Michigan Technological University. *The effects of experimental warming and irrigation on the water use of sugar maples (Acer saccharum) in a northern hardwood forest*.

3:10 PM Break

3:20 PM COS 54-6 Christ, JR and ML Pruyn, Plymouth State University. *Patterns of susceptibility to soil frost and the hydraulic properties of yellow birch (Betula alleghaniensis Brit.) stands over natural gradients in a northern hardwood forest*.

3:40 PM COS 54-7 Peterson, JM and SS Bell, University of South Florida. *Dispersal patterns of black mangrove (Avicennia germinans) propagules at a mangrove-saltmarsh ecotone*.

4:00 PM COS 54-8 O'Keefe, K[1], JB Nippert[2] and CJ Springer[3], (1)Saint Joseph's University, (2)Kansas State University, (3)St. Joseph's University. *Influences of local adaptation and genome size on Panicum virgatum (switchgrass) responses to variable precipitation timing*.

4:20 PM COS 54-9 Leuzinger, S[1] and S Hättenschwiler[2], (1)Auckland University of Technology, (2)Centre of Functional Ecology and Evolution. *Beyond global change – lessons from 25 years of CO_2 research*.

4:40 PM COS 54-10 Battaglia, LL, Southern Illinois University. *Assisted colonization: how far is too far? Results of a futuristic transplant garden experiment*.

COS 55 - Community Assembly And Neutral Theory III

F150, Oregon Convention Center

1:30 PM COS 55-1 Petermann, JS[1], P Kratina[2] and DS Srivastava[3], (1)Freie Universität, (2)University of California, (3)University of British Columbia. *The diversity of small things: Trophic control and dispersal in Costa Rican bromeliad protists*.

1:50 PM COS 55-2 Bellemare, J[1], NJ Horton[1], K Aloisio[1] and MA Geber[2], (1)Smith College, (2)Cornell University. *Plant community phylogenetic patterns suggest long-term niche conservatism and incumbency by early-diverging angiosperm lineages along a major diversity gradient in temperate deciduous forests*.

2:10 PM COS 55-3 Chang, C and J Lichstein, University of Florida. *Plant community assembly from a trait-based perspective: Modeling stochastic and deterministic processes on Mount St. Helens*.

2:30 PM COS 55-4 Gavilanez, MM and RD Stevens, Louisiana State University. *Role of environmental, historical and spatial processes in the structure of Neotropical primate communities: Contrasting taxonomic and phylogenetic perspectives*.

2:50 PM COS 55-5 Pollock, L[1], PA Vesk[2] and M Bayly[2], (1)School of Botany, (2)The University of Melbourne. *The role of speciation and introgression in local co-occurrence: Eucalyptus in the Grampians Ranges*.

3:10 PM Break

3:20 PM COS 55-6 Hsieh, SYL, Sun Yat-Sen University. *Neutral vs. niche theory: which one can explain spider diversity within temperate forest canopies?*.

3:40 PM COS 55-7 Wang, H[1], T Wang[2], L Bao[2], P Mou[2], VL Sork[3], J Wu[4] and J Ge[2], (1)State Key Laboratory of Earth Surface Processes and Resource Ecology & College of Life Sciences, Beijing Normal University, (2) Beijing Normal University, (3)University of California, Los Angeles, (4)Arizona State University. *A scientific framework for biodiversity research in the mixed coniferous-deciduous forests, North Asia*.

4:00 PM COS 55-8 Siefert, AC[1], C Ravenscroft[1], MD Weiser[2] and N Swenson[3], (1)Syracuse University, (2)North Carolina State University, (3)Michigan State University. *Patterns of functional beta diversity reveal deterministic assembly processes in North American tree communities*.

4:20 PM COS 55-9 Boyle, EE and SJ Adamowicz, University of Guelph. *Phylogenetic community structure of freshwater macroinvertebrates in the sub-arctic region of Churchill, MB*.

4:40 PM COS 55-10 Chen, A[1], S Wang[2] and SW Pacala[1], (1) Princeton University, (2)Peking University. *Faster tree speciation in wet versus dry habitats: Evidence from a rainfall gradient in the Panama Canal watershed*.

COS 56 - Community Pattern And Dynamics III

F151, Oregon Convention Center

1:30 PM COS 56-1 Galitsky, C and JJ Lawler, University of Washington. *The relative role of the patch attributes and the nature of the surrounding matrix in structuring avian communities in oak woodlands in Oregon, USA*.

1:50 PM COS 56-2 Murry, BA[1] and JM Farrell[2], (1)Central Michigan University, (2)SUNY- College of Environmental Science and Forestry. *Influence of invasive species and oligotrophication on the size-structure and emergent food web properties of a large river fish assemblage*.

2:10 PM COS 56-3 Grunstra, MB, Penn State Beaver. *Suitability of interpolation for plant community distribution varies depending on perennial versus annual species*.

2:30 PM COS 56-4 Reynecke, BK and RL Brown, Eastern Washington University. *Examination of combined plant community restoration techniques on Mima mounds at Turnbull National Wildlife Refuge, WA*.

2:50 PM COS 56-5 Forrestel, EJ, M Donoghue and MD Smith, Yale University. *Phylogenetic and functional responses to disturbance in mesic grasslands: A cross-continental comparison*.

3:10 PM Break

3:20 PM COS 56-6 Miller, E and C Klausmeier, Michigan State University. *Seasonal succession in phytoplankton cell size contrasted with an adaptive dynamic food-web model in a periodic system: How zooplankton regulate seasonal turnover in phytoplankton traits*.

3:40 PM COS 56-7 Stahlheber, KA and C D'Antonio, University of California Santa Barbara. *Connectivity between savanna and woodland habitats benefits plant species richness at landscape scales*.

4:00 PM COS 56-8 Murphy, SJ and BC McCarthy, Ohio University. *Modeling fifteen-year patterns in the growth, mortality, and regeneration of trees in an old-growth, mixed-mesophytic forest*.

4:20 PM COS 56-9 Supp, SR and SKM Ernest, Utah State University. *Experimental macroecological approach tests the influence of biotic interactions, species richness, and abundance as determinants of the species abundance distribution*.

4:40 PM COS 56-10 Roy, CL, BS Maitner and AE Dunham, Rice University. *Are mountain passes higher in the tropics? A community phylogenetic approach*.

COS 57 - Conservation Management III

D137, Oregon Convention Center

1:30 PM COS 57-1 Castro Escobar, BD[1], MV Castro Rojas[2] and R Rozzi[3], (1)University of Puerto Rico, Rio Piedras Campus, (2)University of Chile, (3)University of North Texas and University of Magallanes - Institute of Ecology and Biodiversity, Chile. *Approximations to biocultural conservation of plants and birds in Puerto Saavedra, Chile: The Mapuche perspective*.

1:50 PM COS 57-2 Reece, JS and R Noss, University of Central Florida. *A new method for assessing vulnerability of species and communities to combined impacts of sea-level rise, climate change, and land-use change*.

2:10 PM COS 57-3 DeWitt, PD[1], JL Keim[1] and CR Smyth[2], (1)Matrix Solutions Inc., (2)Summit Environmental Consultants Inc.. *If you build it, will they come? Using resource selection and satellite imagery to develop wildlife habitat reclamation strategies*.

2:30 PM COS 57-4 Warman, L[1], S Cordell[1], R Ostertag[2], JR Schulten[2], A Uowolo[1] and PM Vitousek[3], (1)USDA Forest Service, (2)University of Hawaii, (3)Stanford University. *Fantasy football for community ecologists: Building hybrid ecosystems in Hawaiian lowland wet forests*.

2:50 PM COS 57-5 Jennings, MK[1], R Lewison[1], EE Boydston[2], JC Burger[3], KR Crooks[4], RN Fisher[5], M Fowler[3], LM Lyren[2] and D Olson[3], (1)San Diego State University, (2) U.S. Geological Survey, (3)Irvine Ranch Conservancy, (4)Colorado State University, (5)US Department of the Interior. *Corridor conservation in southern California under climate change: Understanding mammalian carnivore response to burned landscapes*.

3:10 PM Break

3:20 PM COS 57-6 Robinson, OJ, JL Lockwood and NH Fefferman, Rutgers University. *Using a coupled predator-prey PVA to direct efforts of controlling predation on at-risk populations*.

3:40 PM COS 57-7 Grundel, R[1], KJ Frohnapple[1], TA Patterson[2] and NB Pavlovic[1], (1)US Geological Survey, (2)University of Notre Dame. *Geographic coincidence of abundance, richness, conservation value, and response to climate of U.S. landbirds*.

4:00 PM COS 57-8 Philippoff, JK[1], E Conklin[2], C Smith[1] and C Hunter[1], (1)University of Hawaii at Manoa, (2)The Nature Conservancy. *Movement and dietary preference of the sea urchin Tripneustes gratilla (Echinodermata) on a patch reef in Hawai'i*.

4:20 PM COS 57-9 Bothwell, HM, Northern Arizona University. *Planning for global change: Range-specific conservation and restoration recommendations from a study of cottonwood (Populus angustifolia)*.

4:40 PM COS 57-10 Grand, JB[1], M Post van der Burg[2], TL Kreps[3] and RM Mordecai[4], (1)USGS Alabama Cooperative Fisheries and Wildlife Research Unit, (2)US Geological Survey, (3)Auburn University, (4)U.S. Fish & Wildlife Service. *A prototype for comparing landscape scale conservation strategies in the South Atlantic Coastal Plain, USA*.

COS 58 - Ecosystem Function: Biodiversity III

D138, Oregon Convention Center

1:30 PM COS 58-1 Matthews, B[1], T Aebischer[1], B Lundsgaard-Hansen[1], KE Sullam[2] and O Seehausen[1], (1)EAWAG, (2)Drexel University. *Experimental evidence for the ecosystem consequences of eco-evolutionary dynamics*.

1:50 PM COS 58-2 Wolf, AA[1] and ES Zavaleta[2], (1)University of California Santa Cruz, (2)University of California, Santa Cruz. *Species traits, not nested structure, drive the effects of realistic biodiversity losses on productivity*.

2:10 PM COS 58-3 Yurkonis, KA[1], S Seahra[2] and JA Newman[2], (1)University of North Dakota, (2)University of Guelph. *The mechanisms affecting productivity and invasion responses in grasslands occur over small spatial scales*.

2:30 PM COS 58-4 Hallett, LM[1], E Cleland[2], SL Collins[3], TL Dickson[4], EC Farrer[1], LA Gherardi[5], KL Gross[4], J Hsu[1], L Turnbull[5] and KN Suding[1], (1)University of California at Berkeley, (2)University of California – San Diego, (3) University of New Mexico, (4)Michigan State University, (5) Arizona State University. *Compensatory dynamics increase along a gradient of precipitation variability in US grasslands*.

2:50 PM COS 58-5 Stachowicz, JJ[1], SJ Kamel[1], AR Hughes[2] and R Grosberg[1], (1)University of California Davis, (2) Florida State University. *Connecting genetic diversity to seagrass productivity: Effects of genotypic richness, genetic relatedness and trait variation*.

3:10 PM Break

3:20 PM COS 58-6 MacDonald, AL, LA Schulte, MJ Helmers and JB Niemi, Iowa State University. *Testing a new conservation practice for agricultural landscapes: Bird response to prairie strips in row-cropped landscapes*.

3:40 PM COS 58-7 Nielsen, UN[1], DH Wall[2], N Fierer[3] and C Lauber[4], (1)University of Western Sydney, (2)Colorado State University, (3)University of Colorado, (4)University of Colorado at Boulder. *Soil biodiversity and ecosystem function: Insights from Antarctic low diversity soils*.

4:00 PM COS 58-8 Zuppinger-Dingley, D[1], B Schmid[2] and DFB Flynn[2], (1)Institute of Evolutionary Biology and Environmental Studies, (2)University of Zurich. *Plant community history affects the interspecific combining ability of plants*.

4:20 PM COS 58-9 Pufal, G[1] and AM Klein[2], (1)Leuphana University, (2)Leuphana University of Lüneburg. *Seed fate of common grassland species along an experimental plant diversity gradient*.

4:40 PM COS 58-10 Hulvey, KB, RJ Hobbs, MP Perring, RJ Standish and L Lach, University of Western Australia. *Restoring multiple woodland ecosystem functions through diverse carbon plantings*.

COS 59 - Education: Tools And Technology

D139, Oregon Convention Center

1:30 PM COS 59-1 Newman, G[1], J Scher[2], J Graham[3], T Walters[2], L Martin[2], R Scarpino[4] and T Manahan[3], (1)Colorado State University, (2)USDA APHIS PPQ CPHST, (3)Natural Resource Ecology Laborary, (4) Natural Resource Ecology Laboratory, Colorado State University. *What's in a name? Crowdsourcing citizens, experts, and the Web to populate the ID Source plant pest identification search tool*.

1:50 PM COS 59-2 Burton, RS, Alverno College. *Readability,*

logodiversity, and the effectiveness of college biology textbooks.

2:10 PM COS 59-3 Kroiss, SJ and TM Knight, Washington University in St. Louis. *A comparison of discussion-based methods (CREATE) for improving scientific literacy*.

2:30 PM COS 59-4 Donovan, DA[1] and J Rousseau[2], (1)Western Washington University, (2)Whatcom Community College. *A research-based inquiry curriculum for the life sciences*.

2:50 PM COS 59-5 Carter, T[1], M Miss[2], J Steckel[3], E Bachta[4] and M Kirn[5], (1)Butler University, (2)Mary Miss Studio, (3) Williams Creek Consulting, (4)Indianapolis Museum of Art, (5)EcoArts Connections. *Combining art, science, and technology for environmental outreach in an urban watershed*.

3:10 PM Break

3:20 PM COS 59-6 Bush, JK and CA Negrete, University of Texas at San Antonio. *The TREE Program: A model for promoting and enhancing career development for underrepresented minorities in conservation and natural resources*.

3:40 PM COS 59-7 Wu, XB[1], S Knight[2], JF Schielack[1] and A Webb[2], (1)Texas A&M University, (2)Pennsylvania State University. *Ecological inquiry in a virtual world*.

4:00 PM COS 59-8 Hong, T, J Harston, C Holland and T Purucker, U.S. Environmental Protection Agency. *An integrated web-based assessment tool for assessing pesticide exposure and risks*.

4:20 PM COS 59-9 Wasser, LA[1], S Henderson[2] and DL Ward[3], (1)NEON, (2)NEON, Inc., (3)National Ecological Observatory Network (NEON, Inc.). *Project BudBurst and FieldScope: Piloting continental-scale citizen science data visualization tools*.

4:40 PM COS 59-10 Newberry, TL, Tohono O'odham Community College. *TOCC Plant Atlas: A tool for integrating traditional ecological knowledge into science curricula*.

COS 60 - Effects Of Multiple Global Changes On Communities And Ecosystems I

E141, Oregon Convention Center

1:30 PM COS 60-1 Naujokaitis-Lewis, I[1], D Badzinski[2], JMR Curtis[3] and MJ Fortin[1], (1)University of Toronto, (2)Bird Studies Canada, (3)Department of Fisheries and Oceans. *Influence of multiple dynamic threats and uncertainties on species persistence at the range margin*.

1:50 PM COS 60-2 Eskelinen, A and SP Harrison, University of California, Davis. *Plant traits mediate consumer and nutrient control on plant community productivity and diversity*.

2:10 PM COS 60-3 Tait, LW, Oregon State University. *Impacts of climate change on the primary productivity of marine macrophytes: Effects of pH and temperature on net productivity*.

2:30 PM COS 60-4 Prather, HM[1], NE Broshot[2], SM Eppley[1] and TN Rosenstiel[1], (1)Portland State University, (2) Linfield College. *Anthropogenic influences on epiphytic biodiversity across the Portland urban airshed*.

2:50 PM COS 60-5 Hofmockel, KS[1], S Gibbons[2], SK Hargreaves[1], BJ Wilsey[1] and JA Gilbert[3], (1)Iowa State University, (2) MPG Ranch, (3)University of Chicago. *Do bacterial diversity and structure respond to diversity of native and exotic-dominated plant communities exposed to irrigation*.

3:10 PM Break

3:20 PM COS 60-6 Vinebrooke, RD and JP Zettel, University of Alberta. *Now you see it, now you don't: Nutrient co-limitation of alpine pond ecosystems*.

3:40 PM COS 60-7 Kulacki, KJ[1], N He[1], PJ Parent[1], ME McCarthy[1], DM Costello[1], SD Tiegs[2], KJ Fritschie[1] and BJ Cardinale[1], (1)University of Michigan, (2)Oakland University. *Stressed-out streams: Ranking the effects of stressors on stream periphyton*.

4:00 PM COS 60-8 Wilcox, KR[1], MD Smith[2], KJ La Pierre[2] and AK Knapp[1], (1)Colorado State University, (2)Yale University. *Stoichiometric responses to a suite of global change experiments in a mesic grassland*.

4:20 PM COS 60-9 Sthultz, CM[1], LTA Van Diepen[2], SD Frey[2] and A Pringle[1], (1)Harvard University, (2)University of New Hampshire. *Influences of nitrogen deposition and soil warming on saprophytic fungal community structure, fungal growth, and litter decomposition*.

4:40 PM COS 60-10 Sonnier, G[1], SE Johnson[2], KL Amatangelo[3] and DM Waller[4], (1)University of Wisconsin-Madison, (2)Northland College, (3)Brown University, (4)University of Wisconsin. *Are plant communities converging in functional traits as well as species composition?*.

COS 61 - Herbivory: Plant Defenses I

E142, Oregon Convention Center

1:30 PM COS 61-1 Weber, MG[1] and K Keeler[2], (1)Cornell University, (2)University of Nebraska - Lincoln. *Plants with extrafloral nectaries: Our current understanding of phylogenetic and taxonomic distributions*.

1:50 PM COS 61-2 Kadow, D[1], F Buck[1], D Selmar[2], R Lieberei[1] and DJ Ballhorn[3], (1)University of Hamburg, (2)Technical University Braunschweig, (3)Portland State University. *Cyanogenesis in rubber tree: Post-translational regulation of the cyanogenic response*.

2:10 PM COS 61-3 Buhl, C and RL Lindroth, University of Wisconsin. *Genetic modification of cellulosic biofuel crops: Implications for pest susceptibility*.

2:30 PM COS 61-4 Barton, KE, University of Hawaii at Manoa. *Not all island plants are defenseless: Prickles and latex in the endemic Hawaiian prickly poppy (Argemone glauca)*.

2:50 PM COS 61-5 Thaler, JS, Cornell University. *Interactions between predation risk and plant resistance for Colorado potato beetle behavior, physiology and performance*.

3:10 PM Break

3:20 PM COS 61-6 Karban, R[1], K Shiojiri[2] and S Ishizaki[3], (1) University of California at Davis, (2)Kyoto University, (3) Hokkaido University. *Communication among sagebrush benefits receiver plants and is slightly more effective among kin*.

3:40 PM COS 61-7 Agrawal, AA[1], M Johnson[2], AP Hastings[1], JP Salminen[3] and JL Maron[4], (1)Cornell University, (2) University of Toronto, (3)University of Turku, (4)The University of Montana. *Evolution of plant defense in real time: A multigenerational field experiment*.

4:00 PM COS 61-8 Dimarco, RD and JA Fordyce, University of Tennessee. *Not all toxic butterflies are toxic: Patterns of chemical sequestration in a subtropical community of Troidini swallowtails*.

4:20 PM COS 61-9 Keefover-Ring, K, Umeå Plant Science Centre. *Beetle versus bergamot: Evidence for intraspecific chemical specialization*.

COS 62 - Invasion: Dynamics, Population Processes II

E143, Oregon Convention Center

1:30 PM COS 62-1 Jerde, CL, ME Wittmann and DM Lodge, University of Notre Dame. *Modeling Allee effects due to sterile grass carp introductions: An unplanned experiment in the Laurentian Great Lakes*.

1:50 PM COS 62-2 Jakubowski, AR[1], M Casler[2] and RD

Jackson[1], (1)University of Wisconsin-Madison, (2)USDA - Agricultural Research Service. *Breeding, cultivation, and invasion: Investigating the impacts of agriculture on the invasion history of reed canarygrass*.

2:10 PM COS 62-3 Almquist, TL[1], RN Mack[1] and SJ Novak[2], (1) Washington State University, (2)Boise State University. *Variation in freezing tolerance in Bromus tectorum: Comparison between Intermountain West and Great Plains populations*.

2:30 PM COS 62-4 Kanarek, AR[1], CT Webb[2] and RD Holt[3], (1)National Institute for Mathematical and Biological Synthesis, (2)Colorado State University, (3)University of Florida. *Overcoming Allee effects through evolutionary, genetic, and demographic rescue*.

2:50 PM COS 62-5 Bohl Stricker, KR and P Stiling, University of South Florida. *The introduced invasive shrub Eugenia uniflora outperforms introduced non-invasive, common native, and rare native congeners in Florida*.

3:10 PM Break

3:20 PM COS 62-6 Rew, LJ, ME Bridges, T Brummer, EA Lehnhoff, BD Maxwell, F Pollnac and TC Skurski, Montana State University. *Evaluating non-native plant population dynamics along environmental suitability gradients*.

3:40 PM COS 62-7 Pierson, JC, S Swain and A Young, CSIRO. *Incest vs. abstinence: Reproductive tradeoffs between mate limitation and progeny fitness in a self-incompatible invasive plant*.

4:00 PM COS 62-8 Bois, ST[1], JM Allen[1], C Merow[1], I Ibanez[2] and JA Silander Jr.[1], (1)University of Connecticut, (2) University of Michigan. *Comparative experimental biogeography of invasive alien and native plant species pairs using integral projection models*.

4:20 PM COS 62-9 Pearson, SH[1], D Velinsky[2] and HW Avery[1], (1)Drexel University, (2)Academy of Natural Sciences of Drexel University. *Resource overlap and the potential for competition between invasive red-eared slider turtles and native red-bellied turtles*.

4:40 PM COS 62-10 Dugan, LE, DA Hendrickson and C Parmesan, University of Texas. *Competitive interactions and community-level impacts of an invasive fish*.

COS 63 - Invasion: Prevention And Management II

E144, Oregon Convention Center

1:30 PM COS 63-1 Meffin, R, RP Duncan and PE Hulme, Lincoln University. *Inter- and intraspecific variation in the risk of naturalization in alien Brassica spp*.

1:50 PM COS 63-2 Ordonez, A, University of Wisconsin – Madison. *Do alien plant species profit more from high resource availability than natives? A trait-based analysis*.

2:10 PM COS 63-3 Keller, RP[1] and JM Deines[2], (1)Loyola University Chicago, (2)University of Notre Dame. *Rapid risk assessment for invasive species: Accuracy and utility of a screening approach for fish introductions to the United States*.

2:30 PM COS 63-4 Paulson, EL and AP Martin, University of Colorado - Boulder. *Invasive crayfish in a desert spring system: Using landscape genetics to inform ecological restoration*.

2:50 PM COS 63-5 Balbach, H, US Army ERDC. *How does the military approach invasive species management?*.

3:10 PM Break

3:20 PM COS 63-6 Howeth, JG[1], CA Gantz[2], PL Angermeier[3], EA Frimpong[4], M Hoff[5], RP Keller[6], DM Lodge[2], NE Mandrak[7], MP Marchetti[8], JD Olden[9] and CM Romagosa[10], (1)University of Alabama, (2)University of Notre Dame, (3)U.S. Geological Survey, Virginia Cooperative Fish and Wildlife Research Unit, (4)Virginia Polytechnic Institute and State University, (5)United States Fish and Wildlife Service, (6)Loyola University Chicago, (7)Department of Fisheries and Oceans, (8)St. Mary's College of California, (9)University of Washington, (10)Auburn University. *A trait-centered approach to risk assessment of non-native fishes in trade*.

3:40 PM COS 63-7 Peffer, EK, University of California, Davis. *Could riparian restoration increase stream invasibility to submersed macrophytes? Effects of shading on Elodea canadensis and Myriophyllum spicatum*.

4:00 PM COS 63-8 Hilton, MJ[1], JM Lord[1], TM Konlechner[2], AJ Ghaemaghamy[1] and GH Forrester[3], (1)University of Otago, (2)Melbourne University, (3)Landcare Research New Zealand Ltd, Lincoln. *Lupinus arboreus (tree lupin) regeneration from the seed bank following herbicide control, Kaitorete Spit, New Zealand*.

4:20 PM COS 63-9 Chan, S[1], T Siemens[1], J Adams[2], C Jacoby[3], WY Wong[4], R Goettel[5], H Domske[6], S Zaleski[7], P Charlebois[8], L Chilton[9], M Gear[10], J Cassell[11], T Miller-Morgan[1], P Griffman[12], J Brinsmead[13], M Herborg[14], J Lam[1] and J Olden[15], (1)Oregon State University, (2)Washington Sea Grant, (3)St Johns River Water Management District, (4) Brown University, (5)Illinois Sea Grant, (6)Cornell University, (7)Bureau of Ocean Energy Management, Regulation and Enforcement, (8)Illinois and Indiana Sea Grant, (9)USC, (10) California Sea Grant, (11)University of California, Davis, (12) USC Sea Grant, (13)Ministry of Natural Resources, Ontario Province, (14)British Columbia Ministry of Environment, (15)University of Washington. *Opportunity for integrated vector management: Reducing the potential for schools and biological science suppliers as pathways for invasive species*.

4:40 PM COS 63-10 Steele, JE, CJ Browne, TJ Fullman, MA Hyman and KE Sauby, University of Florida. *Modeling invasive plant species in Florida to inform statewide management practices*.

COS 64 - Microbial Ecology II

E146, Oregon Convention Center

1:30 PM COS 64-1 Norman, JS and JE Barrett, Virginia Tech. *Environmental controls on the activity of ammonia oxidizing archaea and bacteria in temperate forest soils*.

1:50 PM COS 64-2 McHugh, T and E Schwartz, Northern Arizona University. *Impact of monsoon rains on soil microbial community structure and nitrogen mineralization in an arid grassland*.

2:10 PM COS 64-3 Nelson, CE[1], SJ Goldberg[1], L Wegley Kelly[2], AF Haas[1], F Rohwer[2], JE Smith[1] and CA Carlson[1], (1) University of California, (2)San Diego State University. *Exudates from coral and macroalgae differentially stimulate metabolism and alter community composition of tropical reef bacterioplankton*.

2:30 PM COS 64-4 Adair, KL, S Wratten and G Lear, Lincoln University. *Assessing the impact of land management practices on bacterial community structure in New Zealand soils*.

2:50 PM COS 64-5 Lamit, LJ[1], SC Wooley[2], RL Lindroth[3], TG Whitham[1] and CA Gehring[1], (1)Northern Arizona University, (2)California State University Stanislaus, (3) University of Wisconsin. *Linking mycorrhizal fungal communities to tree genotype, litter chemistry and plant growth traits*.

3:10 PM Break

3:20 PM COS 64-6 O'Brien, SL[1], SM Owens[1], JG Caporaso[2], J Hampton-Marcell[1], JD Jastrow[1], ER Johnston[1], DA Antonopoulos[1], JA Gilbert[1] and F Meyer[1], (1)Argonne National Laboratory, (2)Northern Arizona University. *Spatial structure of soil microbial communities from centimeter to ecosystem*.

3:40 PM COS 64-7 Ladau, J[1], TJ Sharpton[1], G Jospin[2], SW Kembel[3], JP O'Dwyer[4], A Koeppel[5], JL Green[3] and KS Pollard[6], (1)Gladstone Institutes, (2)UC Davis Genome Center, (3)University of Oregon, (4)Santa Fe Institute, (5) University of Virginia, (6)Gladstone Institutes and UC San Francisco. *Global hotspots of marine bacterial diversity are highly affected by human impacts*.

4:00 PM COS 64-8 Brewer, PE and JC von Fischer, Colorado State University. *Effects of primary microenvironments on archaeal community composition in a semi-arid ecosystem*.

4:20 PM COS 64-9 Zeglin, LH[1], MM David[2], E Prestat[2], A Lindsley[1], M Arango[3], PJ Bottomley[1], RL Hettich[4], JK Jansson[2], A Jumpponen[3], C Rice[3], SG Tringe[5], NC VerBerkmoes[4] and DD Myrold[6], (1)Department of Crop and Soil Science, (2)Lawrence Berkeley National Laboratory, (3)Kansas State University, (4)Oak Ridge National Laboratory, (5)Lawrence Berkeley National Laboratory, US Department of Energy, (6)Oregon State University. *Microbial functional response to altered precipitation timing and duration – Implications for the soil carbon cycle*.

COS 65 - Modeling I

Portland Blrm 254, Oregon Convention Center

1:30 PM COS 65-1 Grace, JB[1], DR Schoolmaster Jr.[2], GR Guntenspergen[1], BR Mitchell[3], A Little[4], K Miller[3] and EW Schweiger[3], (1)US Geological Survey, (2)Five Rivers Services at US Geological Survey, (3)National Park Service, (4)University of Wisconsin-Stout. *A third generation of structural equation modeling: From theories to queries*.

1:50 PM COS 65-2 Irvine, KM[1], R Al-Chokhachy[1], EK Archer[2], JL Kershner[1], S Miller[3] and BB Roper[2], (1)US Geological Survey, (2)U.S.D.A. Forest Service, (3)Utah State University. *Using structural equation models to evaluate long-term aquatic effectiveness monitoring efforts*.

2:10 PM COS 65-3 Hararuk, O[1], D Obrist[2] and Y Luo[1], (1) University of Oklahoma, (2)Desert Research Institute. *Modeling the sensitivity of soil mercury storage to climate-induced changes in soil carbon pools*.

2:30 PM COS 65-4 O'Dwyer, J[1], SW Kembel[2] and JL Green[2], (1) Santa Fe Institute, (2)University of Oregon. *Phylogenetic sampling and the signatures of community assembly*.

2:50 PM COS 65-5 Li, D[1], C Schädel[2], J Zhou[1] and Y Luo[1], (1) University of Oklahoma, (2)University of Florida. *A data-model fusion technique to evaluate the temperature sensitivity of SOC decomposition*.

3:10 PM Break

3:20 PM COS 65-6 Oedekoven, CS[1], ST Buckland[1], ML Mackenzie[1], R King[1], KO Evans[2] and LW Burger[2], (1) University of St Andrews, (2)Mississippi State University. *A Bayesian approach to analysing distance sampling data with application to large-scale experimental studies*.

3:40 PM COS 65-7 Drapek, RJ, USDA Forest Service. *Sources of vegetation model uncertainty: Differences in soil and climate data inputs affect future projections*.

4:00 PM COS 65-8 Rota, CT[1], JJ Millspaugh[1], DC Kesler[1], CP Lehman[2], MA Rumble[3] and CM Bodinof[4], (1)University of Missouri, (2)South Dakota Department of Game, Fish and Parks, (3)U.S. Forest Service Rocky Mountain Research Station, (4)Missouri Department of Conservation. *A Bayesian modified case-control model for estimating absolute probability of use from use-availability data*.

4:20 PM COS 65-9 Folse, HJ III and SD Allison, University of California. *Emergent spatial structure in a community of extracellular enzyme-producing microbes*.

4:40 PM COS 65-10 Ness, GA[1], J Chamberlain[2], S Bonner[1] and C Small[3], (1)University of Kentucky, (2)USDA Forest Service, Southern Research Station, (3)Radford University. *Modeling the relationship between below ground and above ground biomass of black cohosh*.

COS 66 - Mutualism And Facilitation III

Portland Blrm 255, Oregon Convention Center

1:30 PM COS 66-1 Davis, TS[1], K Boundy-Mills[2] and PJ Landolt[1], (1)USDA, (2)UC Davis. *Volatile emissions from an epiphytic fungus are semiochemicals for eusocial wasps*.

1:50 PM COS 66-2 Moeller, HV[1], K Peay[2] and T Fukami[1], (1) Stanford University, (2)University of Minnesota. *Turnover in the ectomyccorhizal fungal community along a soil age gradient*.

2:10 PM COS 66-3 Fitzpatrick, GM, MC Lanan and JL Bronstein, University of Arizona. *Consequences of ant thermal tolerance and dominance hierarchies for an ant-plant mutualism*.

2:30 PM COS 66-4 Van Bael, SA[1], WT Wcislo[2] and SA Rehner[3], (1)Tulane University, (2)Smithsonian Tropical Research Institute, (3)USDA-ARS. *Interacting symbioses: Leaf endophyte load and fungal garden development in leaf-cutting ants*.

2:50 PM COS 66-5 Larimer, A, K Clay and JD Bever, Indiana University. *The effects of nitrogen and phosphorus additions on the mutualisms between plants, arbuscular mycorrhizal fungi, and rhizobia bacteria*.

3:10 PM Break

3:20 PM COS 66-6 Wilson, HE, BR Johnson, RC Mueller, L Pfeifer-Meister, TE Tomaszewski, BJM Bohannan and SD Bridgham, University of Oregon. *Experimental warming across a natural climate gradient reverses soil nutrient effects on arbuscular mycorrhizal abundance in prairie plants*.

3:40 PM COS 66-7 Paige, KN[1], DR Scholes[2] and MH Siddappaji[1], (1)University of Illinois - Urbana Champaign, (2)University of Illinois at Urbana-Champaign. *Chromosome amplification and the phenomenon of overcompensation in plants*.

4:00 PM COS 66-8 Cheeke, TE[1], JD Bever[2], MB Cruzan[1] and TN Rosenstiel[1], (1)Portland State University, (2)Indiana University. *A field evaluation of arbuscular mycorrhizal fungal colonization in split plots of conventional and genetically modified Bt maize*.

4:20 PM COS 66-9 Scholes, DR[1] and KN Paige[2], (1)University of Illinois at Urbana-Champaign, (2)University of Illinois - Urbana Champaign. *Endopolyploidy and fitness compensation following herbivory in globally-distributed ecotypes and cell-cycle mutant lines*.

4:40 PM COS 66-10 Erlandson, SR, JA Savage, J Cavender-Bares and K Peay, University of Minnesota. *Ectomycorrhizal fungal community response to a water availability gradient*.

COS 67 - Plant-Insect Interactions I

Portland Blrm 256, Oregon Convention Center

1:30 PM COS 67-1 Sconiers, WB and MD Eubanks, Texas A&M University. *The Nutrient Availability Hypothesis: A test of a unifying plant-herbivore hypothesis*.

1:50 PM COS 67-2 Wetzel, WC and DR Strong, University of California, Davis. *Spatial heterogeneity and host-plant preferences influence the abundances of an insect herbivore*.

2:10 PM COS 67-3 Lomáscolo, SB[1], NP Chacoff[2], R Castro-Urgal[3] and DP Vázquez[4], (1)Universidad de Cuyo, (2) Instituto Argentino de Investigaciones de las Zonas Áridas, (3)Group of population and community ecology, Universitat de Les Illes Balears, (4)Centro Científico y Tecnológico Mendoza. *Trait convergence in a plant-pollinator network*.

2:30 PM COS 67-4 Cummings, KA, NJ Divjak and LM Johnson, Chatham University. *Comparison of two populations of Cardinal flower (Lobelia cardinalis) for alkaloid production and the phytochemicals' effects on a specialist weevil seed predator, Cleopmiarus hispidulus*.

2:50 PM COS 67-5 Hajian-Forooshani, Z[1], DJ Gonthier[1], A Iverson[2], I Perfecto[1], SM Philpott[3] and J Vandermeer[1], (1)University of Michigan, (2)University of Mchigan, (3) University of Toledo. *Context-dependent benefits from an indirect ant-plant mutualism: Competition for ant attendance limits ant benefits to coffee*.

3:10 PM Break

3:20 PM COS 67-6 Kim, TN and NC Underwood, Florida State University. *The effect of neighborhood composition on four mechanisms of associational resistance and susceptibility*.

3:40 PM COS 67-7 Clarke, GL and AK Brody, University of Vermont. *Effects of pollinators, seed predators, and vertebrate herbivores on female and hermaphrodite sex morphs and demography of the gynodioecious plant, Polemonium foliosissimum*.

4:00 PM COS 67-8 Stokes, KH and P Stiling, University of South Florida. *Effects of parasitism and competition on Asphondylia borrichiae*.

4:20 PM COS 67-9 Catton, HA[1], RA De Clerck-Floate[2] and RG Lalonde[1], (1)University of British Columbia Okanagan, (2)Agriculture and Agri-Food Canada. *Patch-level nontarget attack by the biocontrol weevil Mogulones crucifer: A temporary spillover effect requiring host plant presence?*.

4:40 PM COS 67-10 Long, JD and L Porturas, San Diego State University. *Scale insects: An emergent threat to Southern California salt marshes*.

COS 68 - Physiological Ecology III

Portland Blrm 257, Oregon Convention Center

1:30 PM COS 68-1 Guo, W, Shandong University. *Effects of soil moisture and light intensity on ecophysiological characteristics of Amorpha fruticosa seedlings*.

1:50 PM COS 68-2 Hughes, NM, High Point University. *The physiological ecology of winter leaf reddening in evergreen species*.

2:10 PM COS 68-3 Coble, AP and MA Cavaleri, Michigan Technological University. *Investigating vertical gradients of leaf morphology and anatomy in a sugar maple (Acer saccharum) forest*.

2:30 PM COS 68-4 Bronson, D[1], X Song[1], M Goulden[2], KL Clark[3], P Bolstad[4], T Meyers[5], J Chen[6], A Noormets[7], D Dragoni[8], DY Hollinger[9], JW Munger[10], S Wofsy[10], TA Martin[11], RK Monson[12], DD Baldocchi[13], AR Desai[14], E Euskirchen[15], WJ Massman[16] and B Helliker[1], (1) University of Pennsylvania, (2)University of California, Irvine, (3)USDA Forest Service, (4)University of Minnesota, (5)NOAA, (6)The University of Toledo, (7)North Carolina State University, (8)Indiana University, (9)US Department of Agriculture Forest Service, (10)Harvard University, (11)University of Florida, (12)University of Colorado, Boulder, (13)University of California, (14)University of Wisconsin, (15)University of Alaska-Fairbanks, (16)Rocky Mountain Research Station, U.S. Forest Service. *Forest canopy temperature: A comparison between an isotopic approach, and photosynthesis-weighted air temperature*.

2:50 PM COS 68-5 Heskel, MA[1], D Bitterman[1], O Atkin[2], M Turnbull[3] and KL Griffin[4], (1)Columbia University, (2) The Australian National University, (3)University of Canterbury, (4)Lamont Doherty Earth Observatory. *Seasonal dynamics of photosynthesis and respiration in Arctic tundra species under warming*.

3:10 PM Break

3:20 PM COS 68-6 Pivovaroff, A[1], L Sack[2] and L Santiago[3], (1)UC Riverside, (2)UCLA, (3)University of California, Riverside. *Coordination of stem and leaf hydraulic conductances in California chaparral and coastal sage scrub: A test of the hydraulic segmentation hypothesis*.

3:40 PM COS 68-7 Jaikumar, NS, S Snapp and JA Flore, Michigan State University. *Life history and physiology in perennial cereals: Response to alterations of sink/source ratio*.

4:00 PM COS 68-8 Che-Castaldo, C[1], C Crisafulli[2], JG Bishop[3] and WF Fagan[1], (1)University of Maryland, (2)US Forest Service, (3)Washington State Univeristy. *Secondary sexual dimorphism in willow across a resource gradient: Is gender important in primary succession?*.

4:20 PM COS 68-9 Barnard, DM and WL Bauerle, Colorado State University. *Residual stomatal conductance: an underestimated parameter of global significance*.

4:40 PM COS 68-10 Mendez Alonzo, R[1], F Ewers[2] and L Sack[3], (1)University of California Los Angeles, (2)California State Polytechnic University, (3)UCLA. *Shifts in leaf biomechanics across Californian plant communities, and scaling with morphological traits*.

COS 69 - Population Dynamics And Regulation I

Portland Blrm 258, Oregon Convention Center

1:30 PM COS 69-1 Li, L[1], J Weiner[2], D Zhou[3] and L Sheng[1], (1)Northeast Normal University, (2)University of Copenhagen, (3)Chinese Academy of Science. *Mass-density relationships within and among self-thinning populations of Fagopyrum esculentum*.

1:50 PM COS 69-2 Haché, S[1], MA Villard[2] and EM Bayne[1], (1)University of Alberta, (2)Université de Moncton. *Numerical and functional responses of the Ovenbird (Seiurus aurocapilla) to selection harvesting in northern hardwood forests*.

2:10 PM COS 69-3 Johnson, CA and P Amarasekare, University of California, Los Angeles. *Species coexistence in a host-multiparasitoid community: The interplay between biotic and abiotic environmental variation*.

2:30 PM COS 69-4 Bin, Y[1], W Ye[2], HC Muller-Landau[3], L Wu[2], H Cao[4] and J Lian[2], (1)South China Botanical Garden, Chinese Academy of Sciences, China; School of Life Sciences, Sun Yat-Sen University, China, (2)South China Botanical Garden, Chinese Academy of Sciences, China, (3)University of Minnesota, (4)South China Botanical Garden, CAS. *Tree size distribution, population trend and shade tolerance*.

2:50 PM COS 69-5 van Leeuwen, A[1], M Huss[2], A Gårdmark[2], M Casini[2], F Vitale[2], J Hjelm[3], L Persson[4] and AM de Roos[1], (1)University of Amsterdam, (2)Swedish University of Agricultural Sciences, (3)Swedish Agency for Marine

and Water Management, (4)Umeå university. *Alternative resources for apex predators limit their population growth and top-down control of their prey*.

3:10 PM Break

3:20 PM COS 69-6 Hastings, A[1] and J Largier[2], (1)University of California, Davis, (2)University of California. *Dynamics of plankton blooms: lessons from an epidemiological model*.

3:40 PM COS 69-7 Phillips, JS, EM Novich, CS Hadan and CE Brassil, University of Nebraska-Lincoln. *Complex responses to environmental temperature fluctuations in populations of Lemna minor*.

4:00 PM COS 69-8 Fukaya, K[1], T Okuda[2], M Nakaoka[1] and T Noda[1], (1)Hokkaido University, (2)National Research Institute of Far Seas Fisheries. *Population dynamics across species range: Among-tidal level difference in population dynamics of intertidal barnacle Chthamalus dalli*.

4:20 PM COS 69-9 Wang, G[1], W Liu[2], Y Wang[3], X Wan[2] and W Zhong[2], (1)Mississippi State University, (2)Institute of Zoology, Chinese Academy of Sciences, (3)Zhejiang Normal University. *Within-group genetic relatedness affects survival and recruitment of group-living rodents*.

4:40 PM COS 69-10 Grorud-Colvert, K[1] and JE Caselle[2], (1) Oregon State University, (2)University of California, Santa Barbara. *Recruitment variability and the Marine Protected Area Effect: Considering multiple life stages in the evaluation of protected areas*.

COS 70 - Restoration Ecology III

B117, Oregon Convention Center

1:30 PM COS 70-1 Aubrey, D[1], CJ LeRoy[1], N Nadkarni[2], DJ Pacholke[3] and K Bush[1], (1)The Evergreen State College, (2)University of Utah, (3)State of Washington. *Rearing endangered butterflies in prison: Incarcerated women as collaborating conservation partners*.

1:50 PM COS 70-2 Hunter, EA[1], LJ Cayot[2], W Tapia[3] and JP Gibbs[1], (1)State University of New York College of Environmental Science and Forestry, (2)Galapagos Conservancy, (3)Galapagos National Park Service. *Resource use by giant tortoises introduced as "ecological analogs" to Pinta Island, Galápagos*.

2:10 PM COS 70-3 Bernard, RJ[1] and B Mortazavi[2], (1)The University of Alabama and the Dauphin Island Sea Lab, (2)University of Alabama and Dauphin Island Sea Lab. *The biogeochemistry of oyster restoration: Initial conditions determine potential mitigation*.

2:30 PM COS 70-4 Daniels, JM[1], AST Robbins[2], W Brinkley[3], K Wolf[4] and JM Chase[1], (1)US Forest Service, PNW Research Station, (2)University of Washington, School of Forestry, (3)FORTERRA, (4)University of Washington. *Estimating the economic value of environmental stewardship volunteer events: A cost based approach in King County, Washington*.

2:50 PM COS 70-5 Diefenderfer, HL and AB Borde, Pacific Northwest National Laboratory. *Conceptual model-driven ecological research to conserve and restore temperate zone tidal forested wetland habitat for endangered salmon*.

3:10 PM Break

3:20 PM COS 70-6 Andruk, CM and NL Fowler, University of Texas at Austin. *Is fire enough? The joint effects of fire and deer herbivory on hardwood regeneration and species composition in central Texas woodlands*.

3:40 PM COS 70-7 Triska, MD[1], RJ Hobbs[2], MD Craig[3], VL Stokes[4] and RP Pech[5], (1)The University of Western Australia, (2)University of Western Australia, (3)Murdoch University, (4)Alcoa of Australia, (5)Landcare Research. *Small mammal and reptile occupancy across unmined and restored forest in southwestern Australia*.

4:00 PM COS 70-8 Larkin, DJ[1], WJ Glisson[2], RS Brady[3] and AT Paulios[3], (1)Chicago Botanic Garden, (2)Northwestern University, (3)Wisconsin Department of Natural Resources. *Habitat requirements and restoration targets for secretive marshbirds in southeastern Wisconsin*.

4:20 PM COS 70-9 Beerens, JM[1], EG Noonburg[1], DE Gawlik[1] and D Donalson[2], (1)Florida Atlantic University, (2)US Army Corps of Engineers. *Wading bird foraging trade-offs in response to the production and concentration of prey*.

4:40 PM COS 70-10 Cosentino, BJ[1], RL Schooley[1], BT Bestelmeyer[2] and JM Coffman[3], (1)University of Illinois, (2)USDA Agricultural Research Service, (3)New Mexico State University. *Response of a keystone rodent to landscape-scale restoration of desert grasslands*.

COS 71 - Urban Ecosystems I

C120, Oregon Convention Center

1:30 PM COS 71-1 Robinson, L[1] and CB Halpern[2], (1)None, (2)University of Washington. *Urbanization and second-growth forests in the Pacific Northwest: Land-use change, fragmentation, and policy implications*.

1:50 PM COS 71-2 Dresner, M and V Shandas, Portland State University. *Integrating formal and informal approaches to environmental stewardship in ULTRA-Ex Portland-Vancouver*.

2:10 PM COS 71-3 Martinson, HM and MJ Raupp, University of Maryland. *Urban winners and losers: A meta-analysis of the effects of urbanization on terrestrial arthropods*.

2:30 PM COS 71-4 Clarke, LW[1] and GD Jenerette[2], (1)University of California, Riverside, (2)University of California. *Organization of extensive biodiversity and ecosystem service production within community gardens of Los Angeles, CA*.

2:50 PM COS 71-5 Lerman, SB[1], KH Nislow[1], DJ Nowak[2], S DeStefano[3], DI King[1] and DT Jones-Farrand[4], (1) Northern Research Station, USDA Forest Service, (2) USDA Forest Service, (3)U.S. Geological Survey, (4)US Fish & Wildlife Service. *Using urban forestry assessment tools to model urban bird habitat potential*.

3:10 PM Break

3:20 PM COS 71-6 Heffernan, J[1], MK Steele[1] and JW Munyon[2], (1)Duke University, (2)Florida International University. *Hydrologic and hydrographic convergence in urbanizing landscapes*.

3:40 PM COS 71-7 Leong, MT and GK Roderick, UC Berkeley. *Impacts of anthropogenic landscapes on bee community composition and seasonality*.

4:00 PM COS 71-8 Chang, GC, TA Gardunia, CR Burt, AM Garcia, CP Collins and CL Powers, Gonzaga University. *Biological control of Dalmatian toadflax breaks down in an urban ecosystem*.

4:20 PM COS 71-9 McCarthy, HR[1], DE Pataki[2] and G Maler[2], (1)University of Oklahoma, (2)University of California. *Variability in seasonal patterns of water use efficiency and growth of non-native urban tree species in the Los Angeles region using leaf sugars*.

4:40 PM COS 71-10 Hopkins, KG and DJ Bain, University of Pittsburgh. *Sewer construction, decay, and stream burial: Implications for urban ecosystems*.

4 pm-6 pm

ESA Ecological Applications Editorial Board Meeting

Ross Island, Doubletree Hotel

4:30 pm-6:30 pm

Royal Society Publishing Event (booth 204)

Exhibit Hall DE, Oregon Convention Center

OPS 2 - Building the National Ecological Observatory Network (NEON): Infrastructure, Field Sampling, Remote Sensing, Data Processing and Citizen Science During Year One of NEON Construction

Exhibit Hall DE, Oregon Convention Center

Organized by: WK Gram

NEON is a continental-scale ecological observation platform for understanding and forecasting the impacts of climate change, land use change, and invasive species on ecology.

OPS 2-1 Wee, B and J Taylor, National Ecological Observatory Network (NEON, Inc.). Multi-scalar strategy for connecting science to policy and resource management.

OPS 2-2 Gram, WK, J Walton, S Henderson and DL Ward, National Ecological Observatory Network (NEON, Inc.). NEON education and outreach: Building capacity for using data, engaging communities and participating in citizen science.

OPS 2-3 Fox, AM1, J Taylor1 and TJ Hoar2, (1)National Ecological Observatory Network (NEON, Inc.), (2)National Center for Atmospheric Research. The impacts of uncertainty in observations on a data assimilation system for ecological forecasting.

OPS 2-4 Berukoff, S, National Ecological Observatory Network (NEON, Inc.). NEON data products: Enabling continental-scale ecological science.

OPS 2-5 Springer, Y and RH Kao, National Ecological Observatory Network (NEON, Inc.). Sampling infectious diseases as part of the National Ecological Observatory Network.

OPS 2-6 Thibault, KM, National Ecological Observatory Network (NEON, Inc.). Bird and mammal sampling strategies: NEON's contribution to the continental-scale ecology of vertebrates.

OPS 2-7 Meier, CL, DT Barnett and K Krause, National Ecological Observatory Network (NEON, Inc.). Developing a methodology for consistent plant biomass and NPP estimates across NEON domains.

OPS 2-8 Roehm, CL, M Slater and H Powell, National Ecological Observatory Network (NEON, Inc.). Novel approach to define the morphology of shallow lakes.

OPS 2-9 Parker, S, H Powell and C Roehm, National Ecological Observatory Network (NEON, Inc.). NEON aquatic macroinvertebrate sampling strategies over the continental scale.

OPS 2-10 Krause, KS, N Leisso, TU Kampe, CL Meier, DT Barnett, ELS Hinckley and D Tazik, National Ecological Observatory Network (NEON, Inc.). Validation of NEON airborne remote sensing data.

OPS 2-11 Kampe, T, K Krause, N Leisso and B Karpowicz, National Ecological Observatory Network (NEON, Inc.). NEON airborne remote sensing.

OPS 2-12 Leisso, N, T Kampe, K Krause and B Karpowicz, National Ecological Observatory Network (NEON, Inc.). Early calibration results for the National Ecological Observatory Network's airborne observation platform.

OPS 2-13 Ayres, E1, HW Loescher1, P Duffy2 and H Luo1, (1)National Ecological Observatory Network (NEON, Inc.), (2)Neptune and Company, Inc. How many soil samples do I need and how far apart should I space them? A simple quantitative tool to guide soil sampling designs.

OPS 2-14 Luo, H1, B Vaughn2, D Kath1, V Morris2 and HW Loescher1, (1)National Ecological Observatory Network (NEON, Inc.), (2)University of Colorado. Long-term strategies of the lab and field calibration of a water isotopic instrument in the National Ecological Observatory Network.

OPS 2-15 Loescher, HW1, PM Groffman2, DS Schimel1, DE Pataki3, N Grimm4, C Polsky5, H Powell1, T Kampe1 and D Tazik1, (1)National Ecological Observatory Network (NEON, Inc.), (2)Cary Institute of Ecosystem Studies, (3)University of California, (4)Arizona State University, (5)Clark University. Key observations for long-term ecological understanding of urban environments.

OPS 2-16 Powell, H1, R Utz1, J Fischer2, S Parker1 and C Roehm1, (1)National Ecological Observatory Network (NEON, Inc.), (2)Iowa State University. The NEON fish sampling design.

PS 20 - Education: Community-Based Learning

Exhibit Hall DE, Oregon Convention Center

PS 20-17 Carey, TS1 and DW Katz2, (1)University of Michigan, Ann Arbor, (2)University of Michigan. Pollen and public health: A citizen science project.

PS 20-18 Trimboli, SR1, C Messenger2 and RS Toomey III1, (1) Mammoth Cave International Center for Science and Learning, (2)Mammoth Cave National Park. The Geoscience-Teachers-in-the-Park internship: A model for engaging local teachers in hands-on research within the National Parks.

PS 20-19 Beckstead, J, Gonzaga University. Creating authentic learning experiences that benefit undergraduate students and land management agencies.

PS 20-20 Newman, S, S Henderson and D Ward, NEON, Inc.. Partnerships for participation: Implementing continental-scale citizen science programs locally.

PS 20-21 Jobse, JC1, R van der Duim2, A Pellis2, M Meijering3 and W Helmer4, (1)Van Hall Larenstein University of Applied Sciences, part of Wageningen UR, (2)Wageningen University, (3)Helicon Opleidingen, (4)Rewilding Europe & Ark Nature. Educating Europe's future nature entrepreneurs.

PS 20-22 Kidd, JB1, JR Seiler1, M Monroe2 and S Sriharan3, (1) Virginia Tech, (2)University of Florida, (3)Virginia State University. The PINEMAP Intern Program: Integrating undergraduates into forest resource and climate change research and education.

PS 20-23 Cid, CR, Eastern Connecticut State University. Using the WonderWise model to engage minority students in ecology careers.

PS 20-24 Maltz, MR, University of California, Irvine. Service learning in the Ecuadorian Amazon: Developing an inexpensive and easily interpretable plant bioassay for monitoring bioamendment mediated reductions in soil toxicity.

PS 20-25 Wolf, JJ, University of Wisconsin - Parkside. Campus Partnership in a Citizen-Based Monitoring Network: Wisconsin Ephemeral Ponds Project.

PS 20-26 Poole, AA, The MASTERS Program Early College Charter High School. Sustaining interest in sustainability: High school students use inquiry and service learning to connect education, community and the environment.

PS 20-27 Sedgley, A1, P Hodum2, E Ward3, S Pearson4 and J Joyce1, (1)Seattle Audubon Society, (2)University of Puget Sound, (3)Northwest Fisheries Science Center, (4) Washington Department of Fish and Wildlife. Puget Sound seabird survey: Science by citizens.

PS 20-28 Barbosa, O1, J Díaz-Forestier1, W Marcelo1, K Godoy1, L Mansur2 and JL Celis-Diez1, (1)Institute of Ecology and Biodiversity, (2)Pontificia Universidad Católica de Chile. Outreach for sustainability practices in Chilean vineyards of Mediterranean climate.

PS 20-29 Schallert, KA, National Park Service. The Science Ambassadors: A case study of project based experiential learning as a tool to engage traditionally underserved communities in citizen science.

PS 20-30 Macfall, J, M Strickland and C Leupold, Elon University. Student professional development in applied ecology through civic engagement, project management and team building.

PS 20-31 Ward, DL1, S Henderson2 and S Newman2, (1)National Ecological Observatory Network (NEON, Inc.), (2)NEON, Inc.. Exploring event and status based phenological

monitoring in citizen science projects: Lessons learned from Project BudBurst.

PS 20-32 Garcia, YV, University of Northern Colorado. Field research experiences and middle school girls: Supporting ecological literacy and improving science perceptions.

PS 21 - Education: Pedagogy

Exhibit Hall DE, Oregon Convention Center

PS 21-33 Baack, EJ and EA Lynch, Luther College. Developing institutional support for land stewardship at a Midwestern liberal arts college.

PS 21-34 Switzer, CM, University of New Mexico. Inspiring future ESA members in elementary or middle school, using place-based inquiry.

PS 21-35 Grisé, DJ, CM Bailey, M Rivera, C Speights and AM Johnson, Texas A&M-Corpus Christi. Expansion of a successful mentoring program in an introductory biology course.

PS 21-36 Miller-Struttmann, N1 and C Galen2, (1)University of Missouri, (2)University of Missouri-Columbia. ShowMe Nature GK-12: It works because great minds don't think alike.

PS 21-37 Schussler, EE and JK Hickson, University of Tennessee - Knoxville. Changing undergraduate confidence in a large introductory biodiversity course.

PS 21-38 Preston, DL and PG Taylor, University of Colorado at Boulder. Global change in the K-12 classroom: An environmental outreach curriculum with mutual benefits for scientists and society.

PS 21-39 Runck, C, J Russell, A D'Costa, M Schlueter, A Barrera, D Barnes and R Haining, Georgia Gwinnett College. Inclusive and longitudinal educational research tools for promoting engaged student learning: Bridging the undergraduate experience with biodiversity and DNA barcoding.

PS 21-40 Rhode Ward, J, JL Horton and HD Clarke, University of North Carolina at Asheville. Implementing a research-infused botanical curriculum at a public liberal arts university.

PS 21-41 Stoffel, JL, N George, K McCarville, J Butikofer and K Opel, Upper Iowa University. Ecology education in the post-secondary setting: Opportunities abound for integration and transference.

PS 21-42 Ellison, AM1, ER Boose2, M Friedl3, CM Hart1, BS Lerner4, N Nkongolo5, LJ Osterweil6, MV Patel2, AD Richardson2 and J Tang7, (1)Harvard Forest (Harvard University), (2)Harvard University, (3)Boston University, (4) Mt. Holyoke College, (5)Lincoln University, (6)University of Massachusetts, (7)Marine Biological Laboratory. Group projects and group mentorship: Building research teams and building capacity at the Harvard Forest Summer Research Program in Ecology.

PS 21-43 Johns, JS and B Lindh, Willamette University. Sustainable agriculture education in the liberal arts? The case for instituting an experiential agroecological curriculum at Willamette University's Zena Farm.

PS 21-44 Lake, JK, Adrian College. Combining low-tech hands-on with high-tech computer simulations to model community dynamics in undergraduate ecology courses.

PS 21-45 Singer, F and J Hagen, Radford University. Meandering mealworm metapopulations in mesocosms go horizontal.

PS 21-46 Lanza, J, University of Arkansas at Little Rock. Seed germination as a model of developing inquiry laboratory exercises.

PS 21-47 Keller, DA1, SR Archer2, K Predick2 and TD Sutton2, (1) Sonoran Science Academy Davis-Monthan, (2)University of Arizona. The K-12 standards conundrum: Math, ecology, and authentic research.

PS 21-48 McGranahan, DA, Sewanee: The University of the South. Critiquing conventional and alternative agriculture in the environmental studies classroom with ecological diversity theory and Integral Ecology.

PS 21-49 Garrigan, DA and LR Huaracha, Carthage College. Using visual imagery and service learning to teach ecological concepts.

PS 21-50 Rockwood, LL, George Mason University. Vision and Change: Biology curriculum reform at George Mason University.

PS 22 - Education: Research And Assessment

Exhibit Hall DE, Oregon Convention Center

PS 22-51 Griscom, HP, KO Cresawn and PM Ludwig, James Madison University. Using DQCs to evaluate student retention of central biological concepts though a sequence of introductory biology courses.

PS 22-52 Loya, LJ, Saint Francis University. Challenges to implementing an ecology-based immersion semester program for undergraduates: What influences student participation?.

PS 22-53 Chynoweth, MW, LM Ellsworth, DK Iwashita and CA Lepczyk, University of Hawaii at Manoa. Human population growth: A need to raise awareness in our university curricula.

PS 22-54 Maskiewicz, AC1 and DD Vanderburg2, (1)Point Loma Nazarene University, (2)Madison High School. Helping students develop principle-based accounts of ecosystem functioning: A study of the effectiveness of an instructional intervention.

PS 22-55 Stylinski, CD1, S Palmquist2, JE Heimlich2 and R Youngs2, (1)University of Maryland Center for Environmental Science, (2)Institute for Learning Innovation. Climate change education in free-choice-learning settings: Approaches and beliefs of education staff.

PS 22-56 Rice, J, JH Doherty and CW Anderson, Michigan State University. Teaching principles first leads to large gains in student understanding of carbon-transforming processes.

PS 22-57 D'Avanzo, C1, JH Doherty2 and CW Anderson2, (1) Hampshire College, (2)Michigan State University. Beyond development and dissemination: The Diagnostic Questions Clusters (DQCs) project as a model for transforming introductory level courses.

PS 22-58 Roehrig, GH, D Bhattacharya and JR Corney, University of Minnesota. Assessing teachers' conceptual framework for understanding climate literacy principles.

PS 22-59 Hartley, LM1, C D'Avanzo2, JL Momsen3 and A Maskiewicz4, (1)University of Colorado Denver, (2)Hampshire College, (3) North Dakota State University, (4)Point Loma Nazarene University. Diagnostic question clusters: Differences in discourse in physical and life sciences can be confusing for ecology students.

PS 23 - Education: Tools And Technology

Exhibit Hall DE, Oregon Convention Center

PS 23-60 Lindquist, ES1, LJ Anderson2 and K Kuers3, (1)Meredith College, (2)Ohio Wesleyan University, (3)Sewanee: The University of the South. Variation of repeated DBH measurements by students in the Ecological Research as Education Network's (EREN) Pilot Permanent Forest Plot Project (PFPP).

PS 23-61 Klemow, KM1, P Allen2, D Kirschtel3, KL Shea4, T Mourad5 and C Smith5, (1)Wilkes University, (2)Cornell University, (3) Interlochen Arts Academy, (4)St. Olaf College, (5)Ecological Society of America. Using data discovery to promote ecological understanding in undergraduate ecology courses: The EcoEdDL and Science Pipes collaboration.

PS 23-62 Jensen, CXJ and A Cohen, Pratt Institute. The Evolution of Sustainable Use, a flash-based classroom tool for teaching population biology and sustainable resource management.

PS 23-63 Sivek, SC, Linfield College. The role of city magazines in informing the public about local ecological issues.

PS 23-64 Douglas, KE1, AL Porzecanski1, EC Vintinner1, N Christensen, KG Wheeler3, BC Weeks1 and EJ Sterling1, (1)American Museum of Natural History, (2)Water Balance Consulting. Exploring the Colorado River Basin: An interactive water management exercise.

PS 23-65 Bennett, I and M Farooque, Arizona State University. Tinkering with the temperature of the planet earth and designing synthetic organism: Engaging high school age students in participatory decision making about science and society.

PS 23-66 Hernandez, RR1, MS Mayernik2, ML Murphy3 and MF

Allen4, (1)Carnegie Institution for Science, (2)National Center for Atmospheric Research, (3)University of California Riverside, (4)University of California. Advanced technologies and data management practices in environmental science: Lessons from academia.

PS 23-67 Yang, S, Presbyterian College. Mistletoe: A model system for inquiry that spans the seasons.

PS 24 - Ecosystem Stability And Resilience

Exhibit Hall DE, Oregon Convention Center

PS 24-68 Elahi, R and KP Sebens, University of Washington. Functional redundancy and the non-additive impacts of marine consumers.

PS 24-69 Reuss, LM1, KD Zimmer1, BR Herwig2 and MA Hanson2, (1)University of St Thomas, (2)Minnesota Department of Natural Resources. Stability of alternative stable states in shallow lakes.

PS 24-70 Jaureguiberry, P and S Díaz, Instituto Multidisciplinario de Biología Vegetal (CONICET-Universidad Nacional de Córdoba). Post-burning regeneration of the Chaco seasonally dry forest: Germination response of dominant species to experimental heat shock.

PS 24-71 Cottingham, KL1, ML Greer2, HA Ewing2, KC Weathers3, A Lustig4, CM Herren1, S Leonard2, CC Carey5, LM Griesinger2 and E Traver1, (1)Dartmouth, (2)Bates College, (3)Cary Institute of Ecosystem Studies, (4)Mathematics, Bates College, Lewiston, ME and French Institute of Pondicherry (India), (5)Cornell University. Linking population dynamics and nutrient cycling: The effect of the nuisance cyanobacterium Gloeotrichia echinulata on lake ecosystem resilience.

PS 24-72 Parmenter, RR1, C Crisafulli2, TE Blackman2, G Parsons3 and JA MacMahon4, (1)Valles Caldera Trust, (2)US Forest Service, (3)Michigan State University, (4)Utah State University. Thirty years of post-eruption insect succession on the Mount St. Helens volcano: The Coleoptera (beetle) community 1980-2010.

PS 25 - Community Assembly And Neutral Theory

Exhibit Hall DE, Oregon Convention Center

PS 25-73 van Melis, J and FR Martins, Unicamp. Liana community assembly on fine spatial scale in a Neotropical seasonal dry forest.

PS 25-74 Moore, JE1 and SB Franklin2, (1)Christian Brothers University, (2)University of Northern Colorado. Water stress interacts with early arrival to influence inter and intra-specific priority competition: A test using a greenhouse study.

PS 25-75 Fuess, LE1 and L Jiang2, (1)College of Charleston, (2) Georgia Institute of Technology. Top-down and bottom-up regulation of community assembly.

PS 25-76 Flynn, SM and E Kraichak, University of California, Berkeley. Are you my host? Host-specificity of epiphytic algae on marine macroalgae thalli.

PS 25-77 Spickerman, K, JJ Weirich III, CN Maierhofer, CM Wojan, E Weiher and TA Wellnitz, University of Wisconsin - Eau Claire. Stochasitc vs. niche-based processes: What drives lichen community assembly following fire disturbance?.

PS 26 - Community Disturbance and Recovery

Exhibit Hall DE, Oregon Convention Center

PS 26-78 Otero Jiménez, B1 and B Scholtens2, (1)University of Michigan, (2)College of Charleston. Effects of accelerated succession on the saproxylic beetle community.

PS 26-79 Zobel, DB1 and JA Antos2, (1)Oregon State University, (2) University of Victoria. Understory plant recovery and initial conditions: Thirty years after burial by tephra from Mount St. Helens.

PS 26-80 Albornoz, FE1, A Gaxiola1, B Seaman1, FI Pugnaire2 and JJ Armesto3, (1)IEB, Universidad de Chile, CASEB, P. Universidad Catolica de Chile, (2)Consejo Superior de Investigaciones Científicas, (3)P. Universidad Catolica de Chile, IEB, Universidad de Chile; CASEB Departamento de Ecologia. Nucleated succession promotes ecosystem regeneration in a Chilean temperate rainforest.

PS 26-81 Antos, JA1 and DB Zobel2, (1)University of Victoria, (2) Oregon State University. Understory vegetation change after the 1980 tephra deposit from Mount St. Helens: 30 year results from permanent plots.

PS 26-82 Buchanan, ML1 and JL Hart2, (1)University of Minnesota, (2)University of Alabama. Canopy disturbance history in old-growth white oak sites throughout the eastern United States: Implications for oak management.

PS 26-83 Zimmermann, CR, R Morse-Heenan and N Kyrylova, Rogers State University. Influence of historic coffee cultivation on terrestrial snail communities in the Luquillo Experimental Forest, Puerto Rico.

PS 26-84 Cook, JE and ML Vine, UW-Stevens Point. Mechanisms of plant recovery following complete restoration in a small floodplain.

PS 26-85 Che-Castaldo, JP1, C Crisafulli2 and JA MacMahon3, (1) University of Maryland, College Park, (2)US Forest Service, (3)Utah State University. Plant community development and the role of species-level processes in successional dynamics on Mount St. Helens.

PS 26-86 Fiedler, KM1, CM Crisafulli2, GJ Binford1, MQ Rathbun1 and R Crawford3, (1)Lewis & Clark College, (2)U.S. Forest Service, (3)University of Washington. Arachnid community reassembly following the 1980 eruption of the Mount St. Helens volcano.

PS 26-87 Wiley, JJ Jr., CM Beier, W Zhuang and GE Mountrakis, SUNY College of Environmental Science and Forestry. Developing a LIDAR-based model of complexity in old-field successional trajectories across central New York State.

PS 27 - Community Pattern And Dynamics

Exhibit Hall DE, Oregon Convention Center

PS 27-88 León, MF and JR Gutierrez, Instituto de Ecología y Biodiversidad, Universidad de La Serena. Spatial variation of annual herb species in a Chilean coastal semi-desert.

PS 27-89 Lopes, PM1, SAJ Declerck2, JM Santangelo3, RL Bozelli4 and LM Bini5, (1)Federal University of Rio de Janeiro, (2)Netherlands Institute of Ecology, (3)Federal Rural University of Rio de Janeiro, (4)Universidade Federal do Rio de Janeiro, (5)Federal Univerisy of Goiás. The relative importance of egg bank recruitment and overland dispersal in the re-establishment of rotiferan and microcrustacean communities in temporary ponds.

PS 27-90 Anderson, GH and J Bellemare, Smith College. Variation in plant functional traits along a soil fertility gradient in temperate deciduous forests.

PS 27-91 Germain, RM and B Gilbert, University of Toronto. Evolution of species interactions: Finding meaning in community-level phylogenetic patterns.

PS 27-92 Bogar, LM and PG Kennedy, Lewis & Clark College. New wrinkles in an old paradigm: Testing the influence of host phylogeny on the specificity of Alnus-associated ectomycorrhizal assemblages.

PS 27-93 Morrison, LW1 and HR Dodd2, (1)Missouri State University, (2)National Park Service, Heartland Inventory & Monitoring Network. Spatiotemporal variation in community structure of fish assemblages in two river systems.

PS 27-94 Van Nuland, ME and WL Whitlow, Seattle University. Investigation of Pacific Northwest forest litter invertebrate communities and resilience along an urbanization gradient.

PS 27-95 Buelt, CA1, KD Zimmer1, MA Hanson2 and BR Herwig2, (1)University of St Thomas, (2)Minnesota Department of Natural Resources. Community concordance among fish, aquatic invertebrates, and submerged aquatic plants in shallow lakes.

PS 27-96 Diggins, TP, Youngstown State University. Successional overlap mimics intermediate disturbance in the diversity of a riparian woodland.

PS 27-97 Kim, TN1, BJ Spiesman1, AL Buchanan1, AS Hakes1, SL Halpern2, BD Inouye1, A Kilanowski1, N Kortessis1, DW McNutt1 and N Underwood1, (1)Florida State University, (2)Pacific University. Selective removal of insect herbivores from one plant species influences an old-field plant community.

PS 27-98 Crisafulli, C1, JJ Halvorson2 and DC Donato3, (1)US Forest

Service, (2)USDA, ARS, AFSRC, (3)University of Wisconsin. Vegetation responses and tephra characteristics following the 2008 eruption of Chaiten volcano, Chile.

PS 27-99 McCune, JL1 and M Vellend2, (1)University of British Columbia, (2)Université de Sherbrooke. Long-term changes in plant community diversity in the human-dominated landscape of southeastern Vancouver Island, Canada.

PS 27-100 Azevedo, FD1, PM Lopes2, AS Rosado1 and VF Farjalla1, (1)University Federal of Rio de Janeiro, (2)Federal University of Rio de Janeiro. Spatial turnover drives bacterial beta diversity in bromeliads tank.

PS 27-101 Fulton, MR, Bemidji State University. Predictability of fine-scale dynamics in a mixed forest stand: The effect of abundance measures.

PS 27-102 Zimmermann, CR1, L Green1, JC Zak2, BM Noblitt1 and R Hart1, (1)Rogers State University, (2)Texas Tech University. Using phytolith assemblages to reconstruct the history of a degraded desert grassland in Big Bend National Park.

PS 27-103 Hokkanen, MM, BL Dows, JC Zinnert and DR Young, Virginia Commonwealth University. Sex and shrub expansion: The interplay of sex ratio, seed production, and environmental filtering in shrub expansion patterns on an Atlantic coast barrier island.

PS 27-104 Resetarits, EJ1, KA Hubbard2, CH Ellis3, MS Parker3, EV Armbrust3 and DM Anderson2, (1)Columbia University, (2) Woods Hole Oceanographic Institution, (3)University of Washington. Co-occurrence of Pseudo-nitzschia species and the neurotoxin domoic acid in the Gulf of Maine during 2008 and 2010.

PS 27-105 Hédl, R1, M Svátek2, D Volařík2, RS Sukri3 and F Metali3, (1)Institute of Botany of the Czech Academy of Sciences, (2)Mendel Univesity, (3)Universiti Brunei Darussalam. Big tree fall as driving factor in the gap dynamics in a mixed Dipterocarp forest.

PS 27-106 Ferrari-Hoeinghaus, AP1, DJ Hoeinghaus1, RM Takemoto2 and GC Pavanelli2, (1)University of North Texas, (2) Universidade Estadual de Maringá. Island biogeography and fish endoparasite diversity.

PS 27-107 Reed, J1, L Souza2, AT Classen3 and NJ Sanders1, (1) University of Tennessee, (2)University of Oklahoma, (3) University of Tennessee, Knoxville. Do hemiparasites shape alpine plant community structure? An observational and experimental test with Castilleja in the Rocky Mountains, Colorado.

PS 27-108 Powell, S1, RJ Marquis2, HL Vasconcelos3, F Camarota4 and GV Priest2, (1)The George Washington University, (2) University of Missouri - St. Louis, (3)Universidade Federal de Uberlândia, (4)Universidade de Uberlandia. On the importance of ecosystem engineers in the Neotropical canopy: How beetle-produced cavities influence community composition in cavity-nesting arboreal ants.

PS 27-109 Bambrick, E and J Pither, University of British Columbia Okanagan. Identifying regional influences on beta diversity of vascular plants within and among British Columbia ecosystems.

PS 27-110 Hoeinghaus, DJ1, KB Gido2 and WK Dodds2, (1)University of North Texas, (2)Kansas State University. Assemblage-level diversity of life-history strategies along longitudinal gradients of river systems.

PS 27-111 Vert, JC, CC Walton, S Dunken, RA Gill and ZT Aanderud, Brigham Young University. From juniper woodlands to mountain meadows: Impacts of rainfall intensity on soil bacteria and CO2 pulses.

PS 27-112 Ebert-May, D1, DR Johnson2, PJ Webber1 and CE Tweedie2, (1)Michigan State University, (2)University of Texas at El Paso. A new 40-year analysis of plant community change on Niwot Ridge, Colorado shows increases in shrub cover and change along soil moisture gradient.

PS 28 - Competition

Exhibit Hall DE, Oregon Convention Center

PS 28-113 Wang, P and PP Mou, Beijing Normal University. Effects of root plastic responses to spatial and temporal nutrient heterogeneity on plant inter- and intra-specific competition.

PS 28-114 Esposito, RMM1, B Bedrosian2 and D Craighead2, (1) University of Louisiana at Lafayette, (2)Craighead Beringia South. Competition and cooperation in three species of sympatric corvids.

PS 28-115 Swanson, AB and C Packer, University of Minnesota. Fine-scale spatiotemporal partitioning facilitates coexistence between lions and cheetah in the Serengeti.

PS 28-116 Gosselin, JL and JJ Anderson, University of Washington. Competition for resources can increase the survival rate of a population.

PS 28-117 Boyden, SB1, RA Montgomery2, PB Reich2, BJ Palik3 and CC Canham4, (1)Clarion University, (2)University of Minnesota, (3)USDA Forest Service, Northern Research Station, (4)Cary Institute of Ecosystem Studies. Resource gradients affect competitive interactions of tree seedlings under a heterogeneous canopy.

PS 28-118 Statwick, JM1 and HE Braker2, (1)University of Denver, (2)Occidental College. The effects of aeolian nitrogen deposition gradients on sexual reproduction and competitive relationships of yucca (Hesperoyucca whipplei).

PS 28-119 Yin, J and RO Teskey, University of Georgia. Effect of root competition between loblolly pine and cherrybark oak seedlings on root hydraulic conductance under different rates of fertilization.

PS 28-120 Rehm, JC1, PJ Meyers1, MC Belk1 and C Creighton2, (1) Brigham Young University, (2)Purdue University, Calumet. Temporal niche partitioning in two sympatric species of burying beetles.

PS 29 - Mutualism And Facilitation

Exhibit Hall DE, Oregon Convention Center

PS 29-121 Warkus, EL, DK Nakase, JK Learned and SJ Hall, Arizona State University. Spatial associations between surface rocks and succulents in the Agua Fria National Monument.

PS 29-122 Nishi, AH1, J Vasconcellos-Neto2 and GQ Romero2, (1) Graduate course in Animal Biology, State University of Sao Paulo (UNESP), (2)State University of Campinas (UNICAMP). The role of multiple partners in the digestive mutualism with a protocarnivorous plant.

PS 29-123 Kim, YO1, SH Kim1, RS Redman1, M Tercek2 and R Rodriguez1, (1)University of Washington, (2)Walking Shadow Ecology. Fungal endophytes from yellowstone CO2 hot springs enhance plant growth due to elevated CO2 .

PS 29-124 Bell-Dereske, L, Rice University. Facilitative effects of dune ecosystem engineer Ammophila breviligulata increase with density and association with an aboveground symbiont.

PS 29-125 Kuhn, KM, University of Connecticut. Ontogenetic variation in the benefits of ants to their host plants in an obligate mutualism.

PS 29-126 Ness, JH1 and JL Bronstein2, (1)Skidmore College, (2) University of Arizona. Ants on Plants: Distribution of visitation across plant taxa and plant reproductive condition.

PS 30 - Parasitism And Host-Parasite Interactions

Exhibit Hall DE, Oregon Convention Center

PS 30-127 Frankel, VM1, AP Hendry2 and M Torchin3, (1)McGill University & Smithsonian Tropical Research Institute, (2)McGill University, (3)Smithsonian Tropical Research Institute. A community of biological invaders facilitates the emergence of a melting-pot of exotic parasites in the Panama Canal.

PS 30-128 Mocker, DM and ME Gompper, University of Missouri. Understanding spatial and temporal variation in the site of attachment by the parasitic copepod Salmincola californiensis on rainbow trout.

PS 30-129 Mlynarek, JJ, Carleton University. Parasite resistance due to host habitat specialization in damselfly-water mite associations.

PS 30-130 Kerr, KT and RL Burke, Hofstra University. Tick-host ecology in the southeastern U.S. and its implications for Lyme disease.

PS 30-131 Flanagan, S, AR Black and P Bhuta, Eastern Washington University. Parasite load, morphology, fecundity, and genetic structure of the salmon louse, Lepeophtheirus salmonis, parasitizing three species of pacific salmon.

PS 30-132 Evans, B and V Borowicz, Illinois State University. Tolerance of host plants to holoparasites depends on drought conditions.

PS 31 - Plant-Insect Interactions

Exhibit Hall DE, Oregon Convention Center

PS 31-133 Korpita, T1, S Gomez2 and CM Orians1, (1)Tufts University, (2)University of Rhode Island. Effects of a mutualist and an antagonist on tomato's primary metabolism.

PS 31-134 Gonda-King, L, L Radville and EL Preisser, University of Rhode Island. False ring formation in response to hemlock woolly adelgid feeding in eastern hemlocks.

PS 31-135 Kjeldgaard, M, K Loewy and SM Murphy, University of Denver. Local variation in host plant quality affects spatial distribution of fall webworms (Hyphantria cunea).

PS 31-136 Flansburg, A, KJ Loewy and SM Murphy, University of Denver. Effects of mid-development host switching on fall webworm (Hyphantria cunea) larval performance: evidence for compensatory growth.

PS 31-137 Rios-Casanova, L, G Martinez and H Godinez-Alvarez, Universidad Nacional Autonoma de Mexico. Seed removal in transformed habitats: Pogonomyrmex barbatus and five cactus species in a semiarid zone of central Mexico.

PS 31-138 Steets, JA, B Luttbeg and EJ Rebek, Oklahoma State University. The role of multitrophic interactions for mating system expression in Ruellia humilis.

PS 31-139 Pante, E1, D Johnson2 and KJ Haynes3, (1)Université de La Rochelle, (2)Virginia Commonwealth University, (3) University of Virginia. Geographic variation in the effect of drought on southern pine beetle outbreaks.

PS 31-140 LeCroy, KA, PA Van Zandt and W Shew, Birmingham-Southern College. An analysis of nocturnal moth visitation to the flora of the Ketona dolomite glades of Bibb County, Alabama, USA.

PS 31-141 Piper, FI1 and A Fajardo2, (1)Centro de Investigación en Ecosistemas de la Patagonia (CIEP), (2)Centro de Investigacioxn en Ecosistemas de la Patagonia. Leaf habit relates to herbivory tolerance in two Chilean Nothofagus species.

PS 32 - Pollination

Exhibit Hall DE, Oregon Convention Center

PS 32-142 Paine, KC1 and TH Roulston2, (1)Blandy Experimental Farm, (2)University of Virginia. Thieves or friends: Are specialist bees more efficient at removing pollen than generalists?.

PS 32-143 Gaines, HR and C Gratton, University of Wisconsin - Madison. Response of native bees to local farm management and landscape features in a perennial agroecosystem.

PS 32-144 Phifer, C1, E Stacy2, J Price2 and C Giardina3, (1)University of Hawai'i at Hilo, (2)University of Hawai'i at Hilo, (3)USDA Forest Service. Pollination ecology of Broussaisia arguta (Hydrangeaceae) in a fragmented forest on the Island of Hawai'i.

PS 32-145 Faivre, AE1 and CW Weekley2, (1)Cedar Crest College, (2)Archbold Biological Station. Assessing pollen viability among genotypes of the federally endangered Florida ziziphus (Ziziphus celata) Rhamnaceae.

PS 32-146 Alarcón, R, California State University Channel Islands. Are "generalists" poor quality pollinators?.

PS 32-147 Domic, AI and G Camilo, Saint Louis University. Pollination biology of a high-altitude wind-pollinated tree species.

PS 32-148 Schroeder, PC1, CS Ferguson1, KR Donham1 and ML Wineteer2, (1)Southern Oregon University, (2)Bureau of Land Management. Reproductive strategy of a rare gynodioecious shrub, Sidalcea hickmannii ssp. novum (Malvaceae), in southwestern Oregon.

PS 32-149 Straka, JR and BM Starzomski, University of Victoria. On which mark do they get set? Seed set of alpine plants is limited by a combination of temperature, seed-predation, and pollination.

PS 33 - Population Dynamics And Regulation

Exhibit Hall DE, Oregon Convention Center

PS 33-150 Cunnings, AM, University of Calgary. Modelling transport and deposition of fluvial dispersed seeds.

PS 33-151 Ganzhorn, SM1, J Lewis1, WW Thomas2 and FA Gaiotto3, (1)Fordham University, (2)The New York Botanical Garden, (3)Universidade Estadual de Santa Cruz. Genetic diversity of Manilkara maxima: An ecologically and economically important tree species from a biodiversity hotspot.

PS 33-152 Wall, WA1, WA Hoffmann2, TR Wentworth2, JB Gray3 and MG Hohmann1, (1)US Army Corps of Engineers ERDC - CERL, (2)North Carolina State University, (3) Fort Bragg. Short-term demographic effects of fire on two endemic plant species of the longleaf pine ecosystem.

PS 33-153 Chu, C1, KM Havstad2, D Peters2 and PB Adler1, (1)Utah State University, (2)USDA Agricultural Research Service. Comparison of lifespan and survival for 114 herbaceous perennials across five ecosystems in the western US.

PS 33-154 Ferguson, JM and JM Ponciano, University of Florida. Modeling extinction in experimental populations of Daphnia.

PS 33-155 Menges, ES, SA Smith and SM McAllister, Archbold Biological Station. Post-fire cohort demography of Florida rosemary, a foundation shrub in Florida scrub.

PS 33-156 Feldman, TS, The University of Wisconsin - Stevens Point. Demography and population viability of Fassett's locoweed (Oxytropis campestris var. chartacea), a rare endemic plant growing on lake shores in Wisconsin.

PS 33-157 Conway, AL, JP Carroll and SM Hernandez, University of Georgia. The use of camera traps to estimate occupancy and describe activity patterns for the pygmy hippopotamus (Choeropsis liberiensis) on and around Tiwai Island, Sierra Leone.

PS 33-158 Kellett, KM1 and RP Shefferson2, (1)Odum School of Ecology, The University of Georgia, (2)University of Georgia. Well-seasoned demography: The importance of intra-annual variation in populations of a Neotropical milkweed.

PS 33-159 Hinkey, TK, SM Eppley and TN Rosenstiel, Portland State University. Temperature stress and the sex bias: The influence of heat-shock events on bryophyte population dynamics.

PS 34 - Predation And Predator-Prey Interactions

Exhibit Hall DE, Oregon Convention Center

PS 34-160 Wacht Katz, M1, Z Abramsky1, BP Kotler2 and ML Rosenzweig3, (1)Ben-Gurion University, (2)The Jacob Blaustein Institutes for Desert Research, (3)University of Arizona. Behavioral games between predators and prey: Little Egrets and Gold Fish in test environment.

PS 34-161 Sendoya, SF, AVL Freitas and PS Oliveira, State University of Campinas - Unicamp. Ant-caterpillar interactions in a neotropical savanna: Defensive strategies against ant predation in an ant-rich environment.

PS 34-162 Barry, MJ and S Syal, Sultan Qaboos University. Metabolic responses of tadpoles to diffusible predation cues.

PS 34-163 Rafter, JL and EL Preisser, University of Rhode Island. Avoidance of prey toxicity by Chinese mantid, Tenodera sinensis.

PS 34-164 Woltz, JM and DA Landis, Michigan State University. Effect of transient coccinellid immigration on aphid suppression.

PS 34-165 Whitney, TD and JD Harwood, University of Kentucky. Tracking predation shifts in forest spiders over the cold season.

PS 34-166 Crumrine, PW1, S Kawecki2 and L Oquendo Diaz3, (1) Rowan University, (2)Loyola Marymount University, (3) University of Puerto Rico Bayamon. Differences in prey preference among top predators affects the size structure of prey communities.

PS 34-167 Hembre, LK, T Olson and D Carlson, Hamline University. Effects of fisheries management and the timing of stratification on the eutrophication of a Minnesota Lake.

PS 35 - Distributions And Range Limits

Exhibit Hall DE, Oregon Convention Center

PS 35-168 Chick, LD, KL Stuble, DA Fowler and NJ Sanders, University of Tennessee. The relationship between inter- and intraspecific variation in critical thermal limits and the distribution of ant biodiversity, now and (maybe) in the

future.

PS 35-169 Nelson, KR and J Bellemare, Smith College. Evidence of pollinator limitation and inbreeding effects in small, warm-margin distribution limit populations of a northern forest herb, Clintonia borealis (Liliaceae).

PS 35-170 Fullman, TJ, University of Florida. Assessing habitat suitability models for large herbivores in an elephant-impacted savanna in Botswana.

PS 35-171 Dugan, LE, C Parmesan, DA Hendrickson and J Huynh, University of Texas. Various aspects of temperature have differing effects on the potential distribution of an invasive fish.

PS 36 - Behavior

Exhibit Hall DE, Oregon Convention Center

PS 36-172 Forbes, ES1, S Heise-Pavlov2, C Anderson3 and M Prince3, (1)The School for Field Studies, Vassar College, (2) The School for Field Studies, Centre for Rainforest Studies, (3)Wildlife Habitat. Response of Lumholtz' tree-kangaroos (Dendrolagus lumholtzi) to odours from native arboreal and introduced terrestrial predators: A preliminary study.

PS 36-173 Rozylowicz, L1 and VD Popescu2, (1)University of Bucharest, (2)University of California Berkeley. Habitat selection and movement ecology of Eastern Hermann's tortoises in a rural Romanian landscape.

PS 36-174 Brown, RE and PL Koch, University of California, Santa Cruz. Marine resource use by modern and Holocene coyotes (Canis latrans) on the California coast.

PS 36-175 Ravenscraft, A and CL Boggs, Stanford University. Puddling Amazonian butterflies prefer sodium and urea.

PS 36-176 Harjoe, CC1, HC Gerhardt1 and MS Reichert2, (1)University of Missouri, (2)University of Wisconsin-Milwaukee. Effects of previous experience on aggressive behavior in male gray treefrogs (Hyla versicolor).

PS 36-177 Wheeler, CA and RT Cardé, University of California, Riverside. Stinky pyrazines repel predators while inviting conspecifics: Defensive allomones as aggregation phermones in the migratory Hippodamia convergens.

PS 36-178 Erickson, AA1, IC Feller2, VJ Paul3, LM Kwiatkowski3, L West4 and P Trejo5, (1)Louisiana State University Shreveport, (2)Smithsonian Environmental Research Center, (3)Smithsonian Marine Station at Fort Pierce, (4) Florida Atlantic University, (5)Johnson and Johnson. Red mangrove leaves improve with age like fine wine: The relationship between crab feeding, leaf age, and pre-existing herbivore damage.

PS 36-179 Wang, YJ1, RS Lin2 and PF Lee1, (1)College of Life Science, Institute of Ecology and Evolutional Biology, National Taiwan University, (2)Endemic Species Research Institute, Council of Agriculture, Executive Yuan. Song type matching and overlapping in the song contest of male Pomatorhinus erythrocnemis.

PS 36-180 Montovan, KJ1, NJ Karst2 and TD Seeley1, (1)Cornell University, (2)Babson College. Modeling a sustained cell allocation pattern in the comb of honey bees (Apis mellifera).

PS 36-181 Kleist, NJ1 and CD Francis2, (1)University of Colorado, (2) National Evolutionary Synthesis Center. Noise pollution changes vocalization and response to conspecific intruders in two species of high-desert songbirds from the family Emberizidae.

PS 36-182 Strombom, EH1, MV Price2 and DT Blumstein3, (1) Swarthmore College, (2)Rocky Mountain Biological Laboratory, (3)University of California, Los Angeles. Human activity modulates mule deer risk assessment.

PS 36-183 Hodgson, AG1 and AR Black2, (1)Eastern Washinton University, (2)Eastern Washington University. Prey color preference in brook stickleback (Culaea inconstans).

PS 37 - Biodiversity

Exhibit Hall DE, Oregon Convention Center

PS 37-184 Martínez-Ghersa, MA, AI Menéndez and PE Gundel, IFEVA/CONICET, Facultad de Agronomía, Universidad de Buenos Aires, Argentina. Troposphere ozone contamination produces unexpected changes in adaptive traits of Spergula arvensis in herbaceous communities.

PS 37-185 Uchida, K and A Ushimaru, Kobe University. Does Intermediate Disturbance Hypothesis explain mechanisms of biodiversity decline in agricultural lands? Perennial plants play key roles in maintaining herbivorous insect diversity.

PS 37-186 Ferrari, L and LJ Samuelson, Auburn University. Ground cover in fire-maintained longleaf pine forests varying in age from 5 to 87 years at Fort Benning, GA.

PS 37-187 Hernandez-Pacheco, R and EA Hernandez-Delgado, University of Puerto Rico. Sea surface warming and biodiversity loss in Caribbean coral reefs.

PS 37-188 Nolting, K1, N Swenson1, SC Keeley2 and JT Cantley2, (1) Michigan State University, (2)University of Hawaii. Evolution of climatic niche in the Pacific Island genus, Coprosma (Rubiaceae).

PS 37-189 Strecker, T1, RL Barnard2, PA Niklaus3, S Scheu1, A Weigelt4 and N Eisenhauer5, (1)University of Goettingen, (2)University of California, Berkeley, (3)University of Zurich, (4)University of Leipzig, (5)University of Minnesota. Fertilization superimposes the legume effect on microbial efficiency in a grassland plant diversity gradient.

PS 37-190 Poggio, SL and CM Ghersa, IFEVA/CONICET, Facultad de Agronomía, Universidad de Buenos Aires, Argentina.. Applying meta-community theory for understanding long-term changes in arable plant communities of intensively managed farmland.

PS 37-191 Liu, Y, C Staehelin, S Yu, F He and Z Xie, Sun Yat-sen University. Effects of a fungal pathogen on recruitment of Ormosia glaberrima seedlings in a subtropical forest.

PS 37-192 Simova, I1, C Violle2, NJB Kraft3, D Storch1, B Boyle4, JC Donoghue II4 and BJ Enquist4, (1)Center for Theoretical Study, Charles University in Prague and the Academy of Sciences of the Czech Republic, (2)CEFE/CNRS, (3) University of British Columbia, (4)University of Arizona. Scale-dependent trait filtering of woody diversity in North America.

PS 37-193 Li, J and S Yu, Sun Yat-sen University. Effect of environmental factors on negative plant-soil feedback in a subtropical forest.

PS 37-194 Hane, EN, Rochester Institute of Technology. Impacts of American beech sapling density on herbaceous plant diversity.

PS 37-195 Giencke, LM, LK Kirkman, RJ Mitchell, JD McGee and RS Taylor, Joseph W. Jones Ecological Research Center. Controls on ground cover species richness in the longleaf pine-wiregrass ecosystem.

PS 37-196 Wolf, SM and I Ibáñez, University of Michigan. Forest diversity and plant-soil feedback: The effects of mature trees on seedling survival.

PS 38 - Species-Area Relationship

Exhibit Hall DE, Oregon Convention Center

PS 38-197 Nolby, LE1, KD Zimmer1, BR Herwig2, MA Hanson2, SR Vaughn2 and RW Wright2, (1)University of St Thomas, (2) Minnesota Department of Natural Resources. Is island biogeography a poor fit to shallow Minnesota lakes?.

PS 38-198 Burns, LD1, F Le Taro2 and GW Otis1, (1)University of Guelph, (2)University of Burgundy. Spatial segregation of male and female Macoun's Arctic butterflies (Oeneis macounii) in Riding Mountain National Park, Manitoba: Consequences for conservation.

PS 38-199 Vaughan, A and WB Anderson, Drury University. Spatial subsidies affect plant diversity and distribution patterns within and among islands in the San Juan Archipelago, Washington, USA.

PS 38-200 Haller Crate, SJ and ES Menges, Archbold Biological Station. Florida scrub gap dynamics over time: Revisiting the relationship among species diversity, gap properties, and time-since-fire.

PS 39 - Trophic Dynamics And Interactions

Exhibit Hall DE, Oregon Convention Center

PS 39-201 Thomas, CL and BR Pohlad, Ferrum College. Do natural lakes and reservoirs' trophic dynamics behave differently and do reservoirs age.

PS 39-202 Burkle, LA1, JR Mihaljevic2 and KG Smith3, (1)Montana State University, (2)University of Colorado at Boulder, (3) Washington University in St. Louis. Effects of an invasive plant transcend ecosystem boundaries through a dragonfly-mediated trophic pathway.

PS 39-203 Trevino, JM, RM Pendleton, LJ Driver, T Ware, S Josephson, D Viera, G McMichael, B Steele, D Quigley, S Barnes III, A Morris and DJ Hoeinghaus, University of North Texas. Ecosystem effects of predator foraging efficiency and excretion stoichiometry interact with nutrient enrichment in experimental streams.

PS 39-204 Miller-ter Kuile, AT1, H Young2 and R Dirzo1, (1)Stanford University, (2)Harvard University. Resource availability determines abundance, predator body size, and food web structure in terrestrial arthropod communities at Palmyra Atoll.

PS 39-205 Dumoulin, CE1, A Milt2 and PR Armsworth1, (1)University of Tennessee, (2)University of Tennessee, Knoxville. Modeling spatial information transfer across trophic levels.

PS 39-206 Michel, NL1, TW Sherry1, WP Carson2 and SJ Wright3, (1) Tulane University, (2)University of Pittsburgh, (3)Smithsonian Tropical Research Institute. Pervasive effects of the native collared peccary (Pecari tajacu) on lianas, understory vegetation, leaf litter, and leaf litter arthropods in lowland Central American rain forest.

PS 39-207 Kroon, AR and JG Bishop, Washington State University. Top-down control by insectivorous birds during primary succession on Mount St. Helens.

PS 39-208 Koltz, AM and JP Wright, Duke University. Effects of wolf spider density on decomposer community structure and function in the Arctic.

PS 39-209 Solecki, AM, A Grégoire Taillefer, MS Blair, S Rochefort, E Vajda and TA Wheeler, McGill University. Trophic structure in an Arctic terrestrial Diptera assemblage.

PS 40 - Seed Production, Dispersal, And Predation

Exhibit Hall DE, Oregon Convention Center

PS 40-210 Kabeya, D1, Y Inagaki1, Y Chiba1, M Naramoto2 and Q Han1, (1)Forestry and Forest Products Research Institute, (2)Shizuoka Universty. Is reproductive event in Fagus crenata associated with the amount of individual level carbohydrate storage?.

PS 40-211 Brown, KR1 and JA Antos2, (1)KR Brown and Associates, (2)University of Victoria. Seedbanks and germination ecology of bitter cherry (Prunus emarginata) on southern Vancouver Island.

PS 40-212 Speights, C and DJ Grisé, Texas A&M-Corpus Christi. Seed production of summer and winter-active Helianthus on the Gulf Coast.

PS 40-213 Han, Q1, D Kabeya2, A Iio3 and Y Kakubari4, (1)Forestry and Forest Products Research Institute, (2)Forestry and Forestproducts Research Institute, (3)National institute for environmental studies, (4)University of Shizuoka. Masting affected intra- and inter- annual variations in stored nitrogen reserves in Fagus crenata trees.

PS 40-214 Tiansawat, P1, NG Beckman2 and JW Dalling1, (1) University of Illinois, (2)University of Nebraska. Effects of pre-dispersal seed predation and fungal infection on seed production and seed survival of the pioneer tree Luehea seemannii in Panama.

PS 40-215 Al-Lozi, A and JA Myers, Washington University. Unraveling the roles of dispersal limitation and a dominant herbivore on seedling diversity and dynamics in temperate forests.

PS 40-216 Funk, KA1, JMH Knops2 and WD Koenig3, (1)University of Nebraska - Lincoln, (2)University of Nebraska-Lincoln, (3) Cornell University. Fire effects on acorn production support the stored resource model of intermittent reproduction.

PS 40-217 Hillyer, RA and MR Silman, Wake Forest University. Seed predation along an elevation in and out of species' native ranges.

PS 40-218 Ko, AM1, CC Walton1, S Dunken1, JJ James2 and ZT Aanderud1, (1)Brigham Young University, (2)USDA-ARS. Snowpack influences potential fungal seed pathogens and the emergence of desert invasive and native grass seedlings.

PS 41 - Food Webs

Exhibit Hall DE, Oregon Convention Center

PS 41-219 Clark, JM1 and MW Kershner2, (1)Hiram College, (2)Kent State University. Habitat overlap and resource partitioning between a lotic fish assemblage and crayfish (Orconectes obscurus).

PS 41-220 LeVan, KE and DA Holway, University of California, San Diego. The broader ecological effects of aphid tending by the Argentine ant.

PS 41-221 Giery, ST, NP Lemoine, CM Hammerschlag-Peyer, R Abbey-Lee and CA Layman, Florida International University. Cross-habitat trophic coupling by arboreal predators: Allochthonous inputs follow diverse routes between food webs.

PS 41-222 Downs, KN, NM Hayes, AM Rock, MJ Vanni and MJ Gonzalez, Miami University. The effects of light and nutrient supply on bluegill (Lepomis macrochirus) fitness and stoichiometry.

PS 41-223 Fahimipour, AK1 and AM Hein2, (1)University of California, Riverside, (2)University of Florida. The ontogeny of food web structure.

5 pm-6:30 pm

ESA Musicians Central

Ginkoberry Concourse, Oregon Convention Center

5:30 pm-8:30 pm

FT 12 - Citizen Science Showcase at Forest Park

Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center

Organized by: M Dresner, A Rosemartin

6:30 pm-8 pm

All Tropical Biology Mixer Hosted by OTS

F150, Oregon Convention Center

British Ecological Society Journal of Ecology Centenary Reception (by invitation only)

Portland Blrm 256, Oregon Convention Center

ESA Applied Ecolgy, Agroecology, Human Ecology, Urban Ecosystem Ecology, and Environmental Justice Joint Mixer

Portland Blrm 258, Oregon Convention Center

ESA Asian Ecology Section Business Meeting and Mixer

Morrison, Doubletree Hotel

ESA Biogeosciences Mixer

Portland Blrm 255, Oregon Convention Center

ESA Education Section Mixer

E146, Oregon Convention Center

ESA Fund for the Future Reception (by invitation only)

Red Star Tavern Club Rm, Hotel Monaco

ESA Soil Ecology Section and Microbial Ecology Joint Mixer

E145, Oregon Convention Center

6:30 pm-9 pm; 8 pm-10 pm

ESA Student Section Business Meeting and Awards Ceremony

E148, Oregon Convention Center

NEON Meet & Greet

Mt. Helens, Doubletree Hotel

Pacific Northwest Prairie Conservation Science Mixer

Hawthorne, Doubletree Hotel

USGS Meet and Greet

C123, Oregon Convention Center

6:30 pm-9 pm

6:30 pm-9 pm

Oecologia Editorial Board Reception (by invitation only)

Halsey, Doubletree Hotel

8 pm-10 pm

SS 17 - Towards a Unified Ecology of Tropical Montane Cloud Forests

B113, Oregon Convention Center

Organized by: PH Martin (patrick.martin@colostate.edu), H Asbjornsen

Tropical montane cloud forests (TMCFs) play a critical role in ecosystems. Yet, TMCFs remain poorly studied and research lacks integration. This special session will build a community to study TMCFs across large spatial and environmental gradients, beginning with state-of-science discussions and planning to increase mechanistic and synthetic study of TMCFs.

SS 18 - Town Hall Meeting with the U.S. Department of Energy's Office of Biological and Environmental Research

A107, Oregon Convention Center

Organized by: DB Stover (Daniel.Stover@science.doe.gov)

This Town Hall meeting will engage the ESA community by discussing the Department of Energy's Terrestrial Ecosystem Science program, highlighting new program efforts such as the Next Generation Ecosystem Experiment in the Arctic, AmeriFlux, and proposed activities in the Amazon.

WK 36 - Water In the West: Diving Into the Availability, Distribution, and Policies of the West's Most Precious Resource.

D135, Oregon Convention Center

Organized by: MJ Armstrong (MJ.Armstrong2@gmail.com), H Woody

Nowhere in the United States is water availability more of an issue than in the West with its vast stretches of arid land. As part of the ESA SEEDS Western Sustainable Communities project, this workshop will focus on the highly complex issues surrounding water in the western region.

WK 37 - Developing Together Ecology Curriculum for Community and School Urban Gardens

D136, Oregon Convention Center

Organized by: AE Pérez-Quintero (anaelisa@comunidadesgaia.org), KA Marshall-Gillespie, LM Jablonski

We will look at the science of farming and how through that science we can develop curriculum that gardeners and agro-educators can use to improve the quality of their gardens. This workshop serves as an educational opportunity for farmers and ecologists to collaborate and incorporate community concerns into their teachings.

WK 38 - Empowering Ecology Outreach to Faith Communities: From Best Practices to a Speaker's Bureau

D137, Oregon Convention Center

Organized by: LM Jablonski (jablonski@udayton.edu), GE Hitzhusen

An interactive workshop to prepare ecologists for effective outreach, featuring renowned science communicators from diverse religious traditions, best practises, resources for outreach including applications to particular ecological issues and examples of successful outreach initiatives. Participants will also contribute to planning strategy and implementation for pilot efforts of a speakers bureau.

WK 39 - Submit Your Teaching Resource to ESA's EcoEd Digital Library

D138, Oregon Convention Center

Organized by: T Mourad (teresa@esa.org), ESJ Rauschert, KL Shea, KM Klemow, A McMillen, D Kirschtel, GE Small

Following an overview of ESA's EcoEd Digital Library of ecology education materials, participants will submit a resource for review and publication. Attendees should bring laptops if possible. To participate, please review EcoEdDL submission guidelines (http://ecoed.esa.org/) and contact in advance Celia Smith, ESA Education Programs Coordinator (Celia@esa.org) to discuss ideas.

WK 40 - Frontiers in Ecosystem Science: Energizing the Research Agenda

D139, Oregon Convention Center

Organized by: PM Groffman (groffmanP@caryinstitute.org), KC Weathers

This workshop will focus on exciting developments in ecosystem ecology and its interfaces with other disciplines as part of a National Science Foundation funded, multi-scientific society effort to address frontiers in ecosystem science and produce a white paper" that will serve as an evaluation and direction for the discipline.

Wednesday, August 8

Business Meetings and Receptions

5:30 am-7 am

ESA Portland Fun Run/Walk
Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center

7 am-8:30 am

ESA Historical Records Committee Business Meeting
Broadway, Doubletree Hotel

7 am-9 am

Ecosystems Editorial Board Meeting
Sellwood, Doubletree Hotel

ESA Development Business Meeting
Three Sisters, Doubletree Hotel

ESA Meetings Committee Business Meeting
D130, Oregon Convention Center

ESA Publications Committee Business Meeting
Halsey, Doubletree Hotel

7:30 am-9 am

ESA Public Affairs Committee Business Meeting
Weidler, Doubletree Hotel

11:30 am-12 pm

ESA Presider/AV Training
C123, Oregon Convention Center

11:30 am-1:15 pm

Ecological Research as Education Network Luncheon (EREN Members and their guests only)
Three Sisters, Doubletree Hotel

ESA Environmental Justice Section Meeting and Discussion
Halsey, Doubletree Hotel

ESA Human Ecology Brown Bag Luncheon
Weidler, Doubletree Hotel

ESA Microbial Ecology Section Business Meeting
C124, Oregon Convention Center

USA National Phenology Network Brown Bag Lunch
VIP B, Oregon Convention Center

12 pm-1:15 pm

Ecology Letters Editorial Board Meeting
D130, Oregon Convention Center

12:15 pm-1:15 pm

PL 3 - ESA Recent Advances Lecture
Portland Blrm 256, Oregon Convention Center

5 pm-6:30 pm

ESA Musicians Central
Ginkoberry Concourse, Oregon Convention Center

6:30 pm-8 pm

Bring the Eugene P. Odum School of Ecology to Portland
D135, Oregon Convention Center

Colorado State University Ecologists Mixer
D139, Oregon Convention Center

Ecology Letters Drinks Reception (Invitation only)
Holladay, Doubletree Hotel

ESA Diversity Celebration (formerly Diversity Mixer)
Mt. Bachelor, Doubletree Hotel

ESA Mid-Atlantic Chapter Business Meeting
Halsey, Doubletree Hotel

ESA Natural History Section Mixer/ Business Meeting
Three Sisters, Doubletree Hotel

ESA Physiological Ecology Section Mixer and Business Meeting
Portland Blrm 251, Oregon Convention Center

ESA Plant Population Ecology Business Meeting
Portland Blrm 252, Oregon Convention Center

ESA Policy Section and Public Affairs Committee Mixer
E145, Oregon Convention Center

ESA Researchers at Undergraduate Institutions Business Meeting
Weidler, Doubletree Hotel

ESA Statistical Ecology Section Business Meeting and Mixer
Portland Blrm 253, Oregon Convention Center

SESYNC-NCEAS Mixer
F150, Oregon Convention Center

Wednesday Sessions

5:30 am-7 am

ESA Portland Fun Run/Walk

Martin Luther King Jr., Lobby-ticket booth area, Oregon Convention Center

7 am-8:30 am

ESA Historical Records Committee Business Meeting

Broadway, Doubletree Hotel

7am-9 am

Ecosystems Editorial Board Meeting

Sellwood, Doubletree Hotel

ESA Development Business Meeting

Three Sisters, Doubletree Hotel

ESA Meetings Committee Business Meeting

D130, Oregon Convention Center

ESA Publications Committee Business Meeting

Halsey, Doubletree Hotel

7:30 am-9 am

ESA Public Affairs Committee Business Meeting

Weidler, Doubletree Hotel

8 am-11:30 am

SYMP 10 - Growing Risk: Assessing the Invasive Potential of Bioenergy

Portland Blrm 251, Oregon Convention Center

Organized by: A Glaser (glasera@nwf.org)

Endorsed by: Agroecology

Moderator: J Sibbing

Rapid expansion of the bioenergy industry has led to increased interest in the use of non-native, potentially invasive species. This symposium addresses the current state of knowledge on the invasive potential of biomass and the ability of current policies and screening tools to avoid and mitigate risks to native ecosystems.

8:00 AM SYMP 10-1 Glaser, A and P Glick, National Wildlife Federation. *An overview of the invasive species potential of bioenergy feedstocks*.

8:25 AM SYMP 10-2 Barney, JN, Virginia Polytechnic Institute and State University. *Predicting the unpredictable: Assessing the invasion risk of bioenergy crops*.

8:50 AM SYMP 10-3 Porter, R, Environmental Law Institute. *Biofuels and invasive species risks: Assessing and managing risks through feedstock selection and cultivation strategies*.

9:15 AM SYMP 10-4 Lambert, A, University of California Santa Barbara. *Risks associated with the use of the invasive reed grass, Arundo donax, for biomass production*.

9:40 AM Break

9:50 AM SYMP 10-5 Eckberg, J[1], N Anderson[1], N Jordan[1], R Shaw[1], C Sheaffer[1], G Johnson[1], M Casler[2], S Flint[1], R Schafer[3] and D Wyse[1], (1)University of Minnesota, (2) USDA - Agricultural Research Service, (3)Central Lakes College. *Invasion risks associated with switchgrass biomass production: A discussion*.

10:15 AM SYMP 10-6 Gordon, DR[1], SL Flory[2] and SK Morris[2], (1)The Nature Conservancy, (2)University of Florida. *Potential invasiveness of Eucalyptus species in the U.S.: Implications for bioenergy crop development*.

10:40 AM SYMP 10-7 Endres, AB[1], J McCubbins[2], LD Quinn[1] and JN Barney[3], (1)University of Illinois, (2)Energy Biosciences Institute, (3)Virginia Polytechnic Institute and State University. *The legal and policy framework for mitigating invasive species risk in the bioenergy context*.

11:05 AM Discussion

SYMP 11 - Translational Ecology: Forging Effective Links Between Knowledge and Action

Portland Blrm 252, Oregon Convention Center

Organized by: MW Brunson (Mark.Brunson@usu.edu), EG King

Endorsed by: Rangeland Ecology Section, Applied Ecology Section, International Affairs Section, Human Ecology Section

Moderator: EG King

Translational ecology describes ecological research that establishes collaborative, multi-directional ties between research, policy and the public. We investigate theoretical challenges and opportunities; present tools and frameworks; evaluate outcomes of translational ecology research; and explore innovations to enhance translational ecology in the future.

8:00 AM SYMP 11-1 Brunson, MW and S Hoffmann, Utah State University. *Definitions, dimensions and directions for translational ecology*.

8:25 AM SYMP 11-2 Gibson, K, Utah State University. *The science of communication: Translational ecology requires learning how others learn*.

8:50 AM SYMP 11-3 Neff, M, Allegheny College. *Competing visions of science and policy within the ecological research community: Opportunities for and/or barriers to translational ecology*.

9:15 AM SYMP 11-4 Reid, R[1], M Fernandez-Gimenez[1], KA Galvin[1], D Nkedianye[2] and J Thompson[1], (1)Colorado State University, (2)University of Nairobi. *Creating new ways to bring people and knowledge together: Evolving 'translational ecology' into 'transformational ecology'*.

9:40 AM Break

9:50 AM SYMP 11-5 Huber-Sannwald, E, M Ribeiro Palacios and RM Martinez Peña, Instituto Potosino de Investigación Científica y Tecnológica. *Using the Drylands Development Paradigm for translational ecology to overcome inequities and obstacles to sustainable development*.

10:15 AM SYMP 11-6 Angerer, JP, Texas A&M University. *Livestock early warning systems: Translational ecology to improve risk management decision-making in pastoral regions*.

10:40 AM SYMP 11-7 Lach, D, Oregon State University. *Salmon: A crucible for translational ecology in the Pacific Northwest*.

11:05 AM SYMP 11-8 Palmer, MA, University of Maryland. *Synthesis: The present and future of translational ecology*.

SYMP 12 - Ecosystem Consequences of Species Alterations: Special Symposium in Memory of Late Professor Joan Ehrenfeld

Portland Blrm 253, Oregon Convention Center

Organized by: W Zhu, RV Pouyat, E Stander, L Windham-Myers, MM Carreiro

Endorsed by: Mid-Atlantic chapter , Urban Ecosystem Ecology

Moderator: RV Pouyat

A special symposium in memory of the scientific, educational, and personal legacies of the late Professor Joan Ehrenfeld will present a synthesis on Dr. Ehrenfeld's areas of major contributions: ecosystem-species feedbacks, ecosystem consequences of biological invasions, and human alterations of urban wetlands.

8:00 AM SYMP 12-1 Zhu, W[1], E Stander[2], L Windham-Myers[3] and RV Pouyat[4], (1)State University of New York - Binghamton, (2)USAID/AAAS, (3)USGS, (4)United States Forest Service. *Professor Joan Ehrenfeld's scientific legacy*.

8:25 AM SYMP 12-2 Bohlen, PJ, University of Central Florida. *Something new under the ground: Ecosystem consequences of earthworm invasions*.

8:50 AM SYMP 12-3 Gurevitch, J, Stony Brook University. *Exotic plant invasions and ecosystem function: The influence of Ehrenfeld's work*.

9:15 AM SYMP 12-4 Groffman, PM, Cary Institute of Ecosystem Studies. *Nitrogen cycling in urban wetlands*.

9:40 AM Break

9:50 AM SYMP 12-5 Czerwinski, E, N Lynn-Bell and P Kourtev, Central Michigan University. *Invasive plants modify the composition and function of soil microbial communities*.

10:15 AM SYMP 12-6 Patel, M[1], MFJ Aronson[2], K O'Neill[1], J Dowd[1], R Shwom[1] and JG Ehrenfeld[1], (1)Rutgers University, (2)Hofstra University. *Ecological and social connectivity in an urban river system*.

10:40 AM SYMP 12-7 Kentula, ME, USEPA, NHEERL-WED. *Wetland research can influence policy*.

11:05 AM SYMP 12-8 Stander, E[1], W Zhu[2], L Windham-Myers[3] and RV Pouyat[4], (1)USAID/AAAS, (2)State University of New York - Binghamton, (3)USGS, (4)United States Forest Service. *Professor Ehrenfeld's legacy as an educator and a mentor*.

OOS 22 - The Ecological Intersection of Biofuels and Food Production

A105, Oregon Convention Center

Organized by: DM Rosenthal (davidrosenthal2@gmail.com), SC Davis

Moderator: DM Rosenthal

What are the opportunities for sustainable co-development of food and biofuel?

8:00 AM OOS 22-1 Nackley, LL and SH Kim, University of Washington. *Ecophysiology of Arundo donax, an invasive energy feedstock*.

8:20 AM OOS 22-2 Alerding, AB and MR Waalkes, Virginia Military Institute. *Developing soybeans as a source of sustainable food and energy*.

8:40 AM OOS 22-3 Behrman, KD[1], JR Kiniry[1], TH Keitt[2] and T Juenger[3], (1)USDA-ARS, (2)The University of Texas at Austin, (3)University of Texas. *Trade-offs between biofuel production, agricultural production, and conservation of biodiversity*.

9:00 AM OOS 22-4 van Noordwijk, M[1], S Budidarsono[1], N Khasanah[1], S Dewi[1] and F Agus[2], (1)World Agroforestry Centre (ICRAF), (2)Indonesian Soil Research Institute. *Palm oil carbon footprints across scales and the limits of industry self-regulation in response to consumer pressure*.

9:20 AM OOS 22-5 Davis, SC, University of Illinois at Urbana-Champaign. *Effects of managment choices on the ecological impact of biofuel crops*.

9:40 AM Break

9:50 AM OOS 22-6 Parton, WJ[1], BD Duval[2], E DeLucia[2], SC Davis[3], M Hartman[1], S DelGrosso[4] and M Khanna[5], (1) Colorado State University, (2)University of Illinois, (3) University of Illinois at Urbana-Champaign, (4)USDA/ ARS, (5)University of Illinois, Energy Biosciences Institute. *Use of low productivity land to grow biofuel crops in the U.S*.

10:10 AM OOS 22-7 Gelfand, I[1], T Zenone[2], P Jasrotia[1], J Chen[2], SK Hamilton[3] and GP Robertson[1], (1)Michigan State University, (2)University of Toledo, Toledo, OH 43606, (3)Department of Zoology, Michigan State University, East Lansing, MI 48824. *Carbon balance of converting conservation reserve program (CRP) grasslands to agriculture*.

10:30 AM OOS 22-8 DeLucia, EH[1], KJ Anderson-Teixeira[2], BD Duval[2], SC Davis[2], CJ Bernacchi[3] and WJ Parton[4], (1) University of Illinois at Urbana-Champaign, (2)University of Illinois, (3)University of Illinois/USDA-ARS, (4)Colorado State University. *Impacts of growing perennial grasses for biofuel in the U.S. corn belt*.

10:50 AM OOS 22-9 Khanna, M, University of Illinois, Energy Biosciences Institute. *Food, fuel and GHG mitigation with biofuels: Trade-offs under alternative policies*.

OOS 23 - The Great Indoors: Recent Advances In the Ecology of Built Environments

C124, Oregon Convention Center

Organized by: BJM Bohannan, TD Bruns

Moderator: BJM Bohannan

The proposed symposium will present new perspectives on the ecology of built environments, and will provide examples of the role ecologists are playing in increasing our understanding of buildings as ecosystems.

8:00 AM OOS 23-1 Adams, AR[1] and TD Bruns[2], (1)University of California, Berkeley, (2)University of California. *Buildings as habitats and sinks for fungi: Resolving the sources of the fungi we live and work with*.

8:20 AM OOS 23-2 Green, JL, BJM Bohannan, GZ Brown, SW Kembel, J Kline, M Moriyama, TK O'Connor and AM Womack, University of Oregon. *Buildings as metacommunities*.

8:40 AM OOS 23-3 Kent, AD, AR Green, C Chu, GT Sales and RS Gates, University of Illinois at Urbana-Champaign. *Management factors influence microbial ecology in commercial poultry*.

9:00 AM OOS 23-4 Dannemillier, K and J Peccia, Yale University. *Physiological ecology of toxic molds in built environments*.

OOS 24 - Understanding the Influence of Ecosystem Structure on Function: Honoring the Enduring Impact of Dr. Jerry Franklin on Forest Ecology

A106, Oregon Convention Center

Organized by: K Hagmann (hokulea@u.washington.edu), J Chen, JA Freund

Moderator: K Hagmann

Understanding the influence of structure and composition on function is essential for the adaptive management of forested socio-ecosystems to maintain or increase the capacity of these systems to meet society's diverse spiritual, cultural, economic, and ecological objectives.

8:00 AM OOS 24-1 North, MP, USFS Pacific Southwest Research Station. *Biological legacies and mimicking*

natural disturbance regimes in Sierra Nevada forests.

8:20 AM OOS 24-2 Alaback, P, University of Montana. *Restoration of northern temperate rainforest: An application of principles from studies of old-growth forests*.

8:40 AM OOS 24-3 MacKinnon, A and SC Saunders, British Columbia Forest Service, Coast Area. *Spatial and temporal dynamics of old-growth forests on the British Columbia coast*.

9:00 AM OOS 24-4 Beese, WJ, Vancouver Island University. *Application of variable retention for biodiversity conservation in British Columbia*.

9:20 AM OOS 24-5 Pearson, A, Ecologia. *The influence of logging history on second-growth forest structure and ecosystem recovery on Lyell Island, Haida Gwaii*.

9:40 AM Break

9:50 AM OOS 24-6 Palik, BJ[1] and S Fraver[2], (1)USDA Forest Service, Northern Research Station, (2)USDA Forest Service. *Validating an ecological forestry approach in Great Lakes mixed-pine forests*.

10:10 AM OOS 24-7 Keeton, WS[1], CE Kraft[2], DR Warren[2], JP Stovall[1] and MT Curzon[3], (1)University of Vermont, (2) Cornell University, (3)University of Minnesota. *A re-evaluation of biomass dynamics and riparian functions in late-successional forests of the northeastern U.S.*.

10:30 AM OOS 24-8 Mitchell, RJ, The Joseph W. Jones Ecological Research Center at Ichauway. *Fire, wind, and water: Disturbance and ecological forestry in pine grasslands of the Southeastern Coastal Plains*.

10:50 AM OOS 24-9 Chen, J, The University of Toledo. *Coupling humans and nature at regional scales*.

11:10 AM OOS 24-10 Johnson, KN, Oregon State University. *Wild Science: The recent role of political ecology in shaping federal forest management in the Pacific Northwest*.

OOS 25 - Ecology in a Dusty World: Integrating Dust Flux, Human Dimensions, and Ecological Processes in Drylands

A107, Oregon Convention Center

Organized by: HL Throop, RL McCulley, SR Archer, PW Barnes

Moderator: PW Barnes

This session will explore the controls over dust transport in drylands and the subsequent consequences for ecological processes and humans.

8:00 AM OOS 25-1 Throop, HL[1], SR Archer[2], RL McCulley[3] and PW Barnes[4], (1)New Mexico State University, (2) University of Arizona, (3)University of Kentucky, (4) Loyola University. *Integrating transport processes into ecological research: Moving beyond spatial stasis*.

8:20 AM OOS 25-2 Ravi, S, Stanford University. *Role of rapid vegetation changes and disturbances on dust emissions*.

8:40 AM OOS 25-3 Field, JP, OF Villar, JL Csavina, DD Breshears and EA Betterton, The University of Arizona. *Impacts of vegetation dynamics on the redistribution of sediment, nutrients, and contaminants by wind and water*.

9:00 AM OOS 25-4 Barger, NN[1], HS Guenther[1], ME Miller[2] and JE Herrick[3], (1)University of Colorado, (2)National Park Service, (3)USDA Agricultural Research Service. *Consequences of fuel load management on erosional processes in pinyon-juniper systems*.

9:20 AM OOS 25-5 Sankey, JB[1], CSA Wallace[2], SM Munson[3] and M Miller[4], (1)USGS, (2)U.S. Geological Survey, (3) USGS - Southwest Biological Science Center, (4)National Park Service. *Effects of fire regime changes and post-fire treatments on dust emission in sagebrush shrublands of the Great Basin, USA*.

9:40 AM Break

9:50 AM OOS 25-6 Eldridge, DJ[1], SK Travers[2] and TB Koen[3], (1) University of New South Wales, (2)University of NSW, (3) Office of Environment and Heritage. *Soil disturbance by native animals maintains key ecosystem processes in an arid Australian woodland*.

10:10 AM OOS 25-7 Hewins, DB[1], EM Levi[2], HL Throop[1] and SR Archer[2], (1)New Mexico State University, (2)University of Arizona. *Decomposition in a dusty world: Soil-litter mixing enhances leaf litter decomposition and soil aggregate formation*.

10:30 AM OOS 25-8 McCulley, RL[1], JA Nelson[1], HL Throop[2], SR Archer[3], PW Barnes[4], K Predick[3] and EM Levi[3], (1) University of Kentucky, (2)New Mexico State University, (3)University of Arizona, (4)Loyola University. *Lipid profiles of decomposing plant litter: UV-B and soil deposition interactions*.

10:50 AM OOS 25-9 Conner, LG and RA Gill, Brigham Young University. *Cross-community comparison of ecosystem effects of dust-caused early snowmelt*.

11:10 AM OOS 25-10 Okin, GS, UCLA. *The importance of desert dust transported long distances: Ecosystem effects and human health*.

OOS 26 - Nutrient Additions Alter Community and Ecosystem Processes: Lessons Learned From the Long-Term Ecological Research (LTER) Network

B110, Oregon Convention Center

Organized by: KJ La Pierre (kimberly.lapierre@yale.edu), SE Koerner

Moderator: KJ La Pierre

We aim to synthesize the broad body of knowledge gained from nutrient addition experiments across the Long-Term Ecological Research network in order to determine whether nutrient additions have consistent impacts across a broad range of ecosystems, including grasslands, forests, marine, and urban systems.

8:00 AM OOS 26-1 DeMarco, J[1], MC Mack[2], MS Bret-Harte[3] and GR Shaver[4], (1)New Mexico State University, (2) University of Florida, (3)University of Alaska Fairbanks, (4)Marine Biological Laboratory. *Plant and ecosystem response to long term experimental warming and nutrient additions in arctic shrub tundra*.

8:20 AM OOS 26-2 Gasarch, EI[1] and T Seastedt[2], (1)University of Colorado, (2)University of Colorado at Boulder. *Alpine plant community response to long-term moisture and nitrogen accumulation along an elevational gradient, Niwot Ridge, CO*.

8:40 AM OOS 26-3 Bernzott, ED[1], MN Gooseff[1] and DM McKnight[2], (1)Pennsylvania State University, (2) University of Colorado. *Nutrient cycling in glacial meltwater streams of the McMurdo Dry Valleys Antarctica is strongly dependent on stream-sediment interactions*.

9:00 AM OOS 26-4 Kara, EL, University of Wisconsin-Madison. *The effect of future nutrient scenarios on a eutrophic lake: Insights from aquatic ecosystem simulations*.

9:20 AM OOS 26-5 Dickson, TL and KL Gross, Michigan State University. *Long-term dynamics of plant species richness in response to fertilization: What are the effects of colonization, dominance, and species functional traits?*.

9:40 AM Break

9:50 AM OOS 26-6 Koerner, SE[1], ML Avolio[2], KJ La Pierre[2], KR

Wilcox[3], MD Smith[2] and SL Collins[1], (1)University of New Mexico, (2)Yale University, (3)Colorado State University. *Long-term nutrient additions cause divergence in tallgrass prairie plant communities*.

10:10 AM OOS 26-7 Hall, S[1], EM Cook[1], MK Schmoker[1] and RA Sponseller[2], (1)Arizona State University, (2)Swedish University of Agricultural Sciences. *Are arid ecosystems resistant to nutrient enrichment? Curious results from an urban-rural gradient in the Phoenix metro area*.

10:30 AM OOS 26-8 Perez, A, G Puig-Santana, JW Fourqurean and L Collado-Vides, Florida International University. *The effects of nutrient addition on seagrass beds in sub-tropical oligotrophic systems*.

10:50 AM OOS 26-9 Frey, SD, University of New Hampshire. *Ecosystem responses to long-term nitrogen additions in a temperate hardwood forest*.

11:10 AM OOS 26-10 Hicks, S[1], E Farrer[2], RL Sinsabaugh[1], KN Suding[2] and A Porras-Alfaro[3], (1)University of New Mexico, (2)University of California at Berkeley, (3) Western Illinois University. *Root endophyte communities are affected by nitrogen differentially in two co-dominant alpine tundra plants from Niwot, LTER*.

OOS 27 - Increasing Representation of Minorities In Ecology: What Works?

B113, Oregon Convention Center

Organized by: T Mourad (teresa@esa.org), D Goldberg

Moderator: MJ Armstrong

The symposium will generate awareness of the issues, challenges and opportunities to engage underrepresented minorities and launch an ongoing knowledge sharing of effective interventions

8:00 AM OOS 27-1 Goldberg, DE, University of Michigan. *Bridging from high school to college and college to the Ph.D.: Programs that work*.

8:20 AM OOS 27-2 Van Lopik, W, College of the Menominee Nation. *Traditional ecological knowledge in the college classroom*.

8:40 AM OOS 27-3 Dimov, L, G Brown, K Ward, C Christian and D Lawson, Alabama A&M University. *Increasing diversity in the field of forestry and forest ecology through academic support and job opportunities*.

9:00 AM OOS 27-4 Nilon, CH, University of Missouri. *Preparing students for graduate school and careers in ecology: Best practices from NSF undergraduate research and mentoring programs - UMEB/URM*.

9:20 AM OOS 27-5 Mourad, T[1] and MJ Armstrong[2], (1)Ecological Society of America, (2)Northern Arizona University. *SEEDS: The power of a national mentoring and minority peer network*.

9:40 AM Break

9:50 AM OOS 27-6 Strickland, JT[1], L Neuman-Lee[2], N Bradley[3], S Thol[3] and F Janzen[3], (1)US Fish & Wildlife Service, (2) Utah State University, (3)Iowa State University. *Planting a TREE for underrepresented students: Immersion at USFWS site*.

10:10 AM OOS 27-7 Young, T, Rutgers University. *From field trips to Facebook: A low-cost model for conducting ecology outreach with urban minority high school students*.

OOS 28 - Restoration of Colorado Plateau Ecosystems: Establishing Resilient Communities In the Face of Climate and Land Use Change

B116, Oregon Convention Center

Organized by: T Wood (twood@usgs.gov)

Moderator: W Padgett

Restoration of degraded ecosystems on the arid and semi-arid lands of the Colorado Plateau requires the collaboration of diverse specialists, each with a refined understanding of how his/her research fits into the broader picture of building a highly interacting community that provides a suite of services.

8:00 AM OOS 28-1 Baker, B[1], R Gillies[2], SYS Wang[2] and T Wood[3], (1)The Nature Conservancy, (2)Utah State University, (3)U.S. Geological Survey. *Climatic implications for restoration of ecosystems on the Colorado Plateau under a changing climate*.

8:20 AM OOS 28-2 Strittholt, J, T Sheehan and B Ward, Conservation Biology Institute. *Mapping landscape intactness for BLM rapid ecoregional assessments*.

8:40 AM OOS 28-3 Memmott, K, USDA. *Assessing the ecological amplitude of candidate native grasses to inform plant materials development for the Colorado Plateau*.

9:00 AM OOS 28-4 Choo, M[1], T Nakazato[1], ME Miller[2] and T Wood[3], (1)University of Memphis, (2)National Park Service, (3)U.S. Geological Survey. *Population genetic structure in three foundational grassland species: Implications for restoration in arches and canyonlands national parks*.

9:20 AM OOS 28-5 Rowe, CJ[1] and EA Leger[2], (1)USDA Forest Service, (2)University of Nevada, Reno. *Evolution meets ecology: Can native grasses evolve in response to cheatgrass invasion?*.

9:40 AM Break

9:50 AM OOS 28-6 Pendleton, R[1], B Pendleton[1], SE Meyer[2], BA Richardson[2], TC Esque[3] and SG Kitchen[2], (1)USDA Forest Service Rocky Mountain Research Station, (2) USDA Forest Service, Rocky Mountain Research Station, (3)US Geological Survey, Westen Ecological Science Center. *Ecological dynamics of blackbrush (Coleogyne ramosissima), an iconic landscape dominant*.

10:10 AM OOS 28-7 DeCrappeo, NM[1], MA Bowker[2] and VB Chaudhary[3], (1)U.S. Geological Survey, Forest & Rangeland Ecosystem Science Center, (2)U.S. Geological Survey, Southwest Biological Science Center, (3)Northern Arizona University. *Reducing erosion, ameliorating stress, resisting invasion: Roles for soil organisms in ecological restoration*.

10:30 AM OOS 28-8 Eisenberg, C and DE Hibbs, Oregon State University. *How predators influence communities: Fire, wolves, elk and aspen trophic cascades, case studies from the Rocky Mountains*.

10:50 AM OOS 28-9 Ware, IM, Utah State University. *The effects of bison on cattle winter range in the Henry Mountains in South Central Utah: Resolving a conflict*.

COS 72 - Aquatic-Terrestrial Linkages I

A103, Oregon Convention Center

8:00 AM COS 72-1 Halupka, KC[1] and WHCWG Washington Wildlife Habitat Connectivity Working Group[2], (1)U.S. Fish and Wildlife Service, (2)Washington Connected Landscapes Project. *Assessment of habitat connectivity at two spatial scales using focal species and landscape integrity approaches*.

8:20 AM COS 72-2 Jones, SE, JJ Coloso, WE West and D Pitts, University of Notre Dame. *Implications of agriculture for lake contributions to the global methane cycle*.

8:40 AM COS 72-3 Sato, T[1], T Egusa[2], K Fukushima[1], T Oda[2], N Ohte[2], N Tokuchi[1], K Watanabe[1], M Kanaiwa[3], I

Murakami[4] and KD Lafferty[5], (1)Kyoto University, (2)The University of Tokyo, (3)Tokyo University of Agriculture, (4) Regional Environmental Planning Inc., (5)USGS Western Ecological Research Center. *Nematomorph parasites indirectly alter the food web and ecosystem function of streams through behavioral manipulation of their cricket hosts*.

9:00 AM COS 72-4 Wenzel, A[1], T Vrede[2], M Jansson[1] and AK Bergström[1], (1)Umeå University, (2)Swedish University of Agricultural Sciences. *Poor direct exploitation of terrestrial particulate organic carbon by Daphnia galeata*.

9:20 AM COS 72-5 McNeish, RE[1], ME Benbow[1] and RW McEwan[2], (1)University of Dayton, (2)The University of Dayton. *Riparian forest invasion by a terrestrial shrub (Lonicera maackii) impacts aquatic organic matter processing and biota in headwater streams*.

9:40 AM Break

9:50 AM COS 72-6 Taub, FB and AK McLaskey, University of Washington. *Light is required for cellulose to support Daphnia populations in closed ecological systems*.

10:10 AM COS 72-7 Batt, RD[1], SR Carpenter[1], JJ Cole[2], ML Pace[3], TJ Cline[1], RA Johnson[3] and DA Seekell[3], (1) University of Wisconsin - Madison, (2)Cary Institute of Ecosystem Studies, (3)University of Virginia. *Resources supporting the food web of a naturally productive lake*.

10:30 AM COS 72-8 Fox, CH[1], R El-Sabaawi[1], PC Paquet[2] and TE Reimchen[1], (1)University of Victoria, (2)Raincoast Conservation Foundation. *Pacific herring spawn and macroalgae subsidize intertidal detritivores*.

10:50 AM COS 72-9 Moreno Mateos, D[1] and ME Power[2], (1) Stanford University, (2)University of California, Berkeley. *Insect fluxes from forest toward open habitats in a Mediterranean landscape*.

11:10 AM COS 72-10 Abuzeineh, AA[1], JR Troy[2], MM Chumchal[3], MC Green[2] and WH Nowlin[2], (1)University of Southern Mississippi, (2)Texas State University, (3)Texas Christian University. *Transfer of mercury across ecosystem boundaries in arid streams*.

COS 73 - Biodiversity I

B112, Oregon Convention Center

8:00 AM COS 73-1 Carlucci, MB, VD Pillar and LDS Duarte, Universidade Federal do Rio Grande do Sul. *The relative importance of phylogeny and environment for sapling community assembly varies from individual to species scale*.

8:20 AM COS 73-2 Cisneros, LM and MR Willig, University of Connecticut. *Effects of landscape structure on multiple dimensions of bat biodiversity*.

8:40 AM COS 73-3 Becker, CG and KR Zamudio, Cornell University. *Effects of landcover change on amphibian disease risk*.

9:00 AM COS 73-4 McKee, AM[1], JC Maerz[2], LL Smith[3] and TC Glenn[1], (1)University of Georgia, (2)The University of Georgia, (3)Joseph W. Jones Ecological Research Center. *Correlations between and habitat predictors of species and genetic diversity in pond-breeding amphibians*.

9:20 AM COS 73-5 Valenzuela, LA[1], VP Weinberger[1], J Escobar[2], A Parada[3], M Barahona[2], C Gonzalez[2], FD Alfaro[1], A Gaxiola[4], JJ Armesto[4] and PA Marquet[4], (1)Institute of Ecology and Biodiversity, (2)Estación Costera de investigaciones Marinas, (3)Pontificia Universidad Católica de Chile, (4)Institute of Ecology and Biodiversity, Laboratorio Internacional en Cambio Global (LINCGlobal, CSIC-PUC). *Biodiversity drives diversity: The hidden loop*.

9:40 AM Break

9:50 AM COS 73-6 Casas, G, BO Azambuja, PMA Ferreira, VAG Bastazini and VD Pillar, Universidade Federal do Rio Grande do Sul. *A framework to assess the relative influence of functional traits and phylogeny on interaction networks*.

10:10 AM COS 73-7 Morin, X, CNRS. *The impact of tree species diversity and climate change on forest productivity in central Europe*.

10:30 AM COS 73-8 Woods, LM, Washington University. *The influence of dispersal on diversity patterns of aquatic metacommunities*.

10:50 AM COS 73-9 Egerton, TA and HG Marshall, Old Dominion University. *Phytoplankton and zooplankton species richness along a tidal estuarine gradient*.

11:10 AM COS 73-10 Tittensor, DP[1], M Harfoot[2], T Newbold[2], D Purves[3] and J Scharlemann[4], (1)United Nations Environment Program World Conservation Monitoring Centre / Microsoft Research Cambridge / Dalhousie University, (2)United Nations Environment Program World Conservation Monitoring Centre / Microsoft Research Cambridge, (3)Microsoft Research, Cambridge, (4)United Nations Environment Program World Conservation Monitoring Centre. *Modelling global ecosystem structure and function on land and sea*.

COS 74 - Biogeochemistry: Aboveground-Belowground Interactions I

B114, Oregon Convention Center

8:00 AM COS 74-1 Brzostek, ER, D Dragoni and RP Phillips, Indiana University. *Root carbon inputs to the rhizosphere stimulate extracellular enzyme activity and increase nitrogen availability in temperate forest soils*.

8:20 AM COS 74-2 Zelikova, TJ[1], NN Barger[2] and SC Reed[1], (1) USGS, (2)University of Colorado. *Livestock grazing on the Colorado Plateau: Impacts on above and belowground carbon stocks*.

8:40 AM COS 74-3 Martina, JP[1], SK Hamilton[2] and MR Turetsky[3], (1)Michigan State University, (2)Department of Zoology, Michigan State University, East Lansing, MI 48824, (3)University of Guelph. *Effects of aboveground biomass and litter on biogeochemical cycling in stands of the invasive wetland plant, Phragmites australis*.

9:00 AM COS 74-4 Burri, SA[1], P Sturm[2], T Baur[1], A Knohl[3] and N Buchmann[1], (1)Institute of Agricultural Sciences, ETH Zurich, (2)Empa, (3)Bioclimatology group, Georg-August-University Göttingen. *From photosynthesis to soil respiration: Carbon tracing in a temperate grassland under simulated summer drought*.

9:20 AM COS 74-5 Vadeboncoeur, MA, AP Ouimette and EA Hobbie, University of New Hampshire. *A robust method confirming organic nitrogen uptake by mycorrhizal roots in a temperate forest*.

9:40 AM Break

9:50 AM COS 74-6 Gutknecht, JL, C Lachmann and Z Pei, Helmoltz- Centre for Environmental Research- UFZ. *Early growth of subtropical tree species affect soil microbial communities individually and along a diversity gradient*.

10:10 AM COS 74-7 Ball, BA[1] and RA Virginia[2], (1)Arizona State University at the West Campus, (2)Dartmouth College. *Moss nutrient plasticity in a polar desert: insights from a hot desert comparison*.

10:30 AM COS 74-8 van Huysen, TL[1] and BZ Houlton[2], (1) University of California-Davis, (2)University of California, Davis. *Mass loss dynamics during decomposition of leaf*

litter along the Ecological Staircase.

10:50 AM COS 74-9 Hernandez, DL[1], E Esch[1], C Alster[1], MJ McKone[1] and P Camill[2], (1)Carleton College, (2) Bowdoin College. *Rapid accumulation of soil carbon and nitrogen in restored prairie is not predicted using a chronosequence approach*.

11:10 AM COS 74-10 Schellenberg, DL, JM Jenkins, CA Almanza, P Wong, LN Lawless, CA Buckingham, SA Mansfield, CM Stockert, MM Alsina and DR Smart, University of California Davis. *Gross nitrogen transformations and ^{15}N assimilation after arid land fertilization at the tree scale*.

COS 75 - Biogeochemistry: C And N Cycling In Response To Global Change I

B115, Oregon Convention Center

8:00 AM COS 75-1 Gundale, M, Swedish University of Agricultural Sciences. *The effect of climate change factors on biological N-fixation by bryophyte-cyanobacteria associations in Boreal forests*.

8:20 AM COS 75-2 Gill, RA[1] and CS Campbell[2], (1)Brigham Young University, (2)Decagon Devices. *Impacts of altered precipitation frequency and amount on ecosystem processes in the subalpine*.

8:40 AM COS 75-3 Giling, DP, M Grace, RM Thompson and R Mac Nally, Monash University. *Restoring stream processes in a degraded landscape: The case of in-stream carbon*.

9:00 AM COS 75-4 Feng, W[1], AF Plante[1], M Xu[2] and J Six[3], (1)University of Pennsylvania, (2)Chinese Academy of Agricultural Sciences, (3)University of California-Davis. *Changes in biological and thermal stability of soil organic matter after long-term carbon amendments*.

9:20 AM COS 75-5 Warnock, DD, ME Litvak and RL Sinsabaugh, University of New Mexico. *Piñon mortality and summer monsoon rains affect extra cellular enzyme activity of soil microbial communities living beneath tree canopies in a Piñon-Juniper woodland*.

9:40 AM Break

9:50 AM COS 75-6 Harms, TK[1] and JB Jones[2], (1)University of Alaska, (2)University of Alaska Fairbanks. *Transport and transformation of nitrogen in permafrost-influenced catchments*.

10:10 AM COS 75-7 Mueller, KE, SE Hobbie and PB Reich, University of Minnesota. *Effects of plant diversity on grassland soil N cycling are greater and more temporally dynamic than effects of elevated carbon dioxide*.

10:30 AM COS 75-8 Qi, X and Y Luo, University of Oklahoma. *Effect of elevated CO_2 on ecosystem nitrogen fluxes and pools: Meta-analysis*.

10:50 AM COS 75-9 Lucash, MS[1], RM Scheller[1], AM Kretchun[1], KL Clark[2], J Hom[2] and SK Chapman[3], (1)Portland State University, (2)USDA Forest Service, (3)Villanova University. *Nitrogen cycling in the New Jersey Pine Barrens as a consequence of insect outbreaks and wildfire*.

11:10 AM COS 75-10 Franklin, RB[1], DJ Berrier[1] and SC Neubauer[2], (1)Virginia Commonwealth University, (2)Baruch Marine Field Laboratory - University of South Carolina. *Impact of saltwater intrusion on microbial community function and organic matter breakdown in tidal freshwater wetlands*.

COS 76 - Climate Change II

D135, Oregon Convention Center

8:00 AM COS 76-1 King, DH[1], J Wasley[2], JD Turnbull[1], E Ryan-Colton[1], K Mullany[1] and SA Robinson[1], (1)University of Wollongong, (2)Australian Antarctic Division. *Monitoring impacts of a changing climate on plant communities of Continental Antarctica*.

8:20 AM COS 76-2 Cooper, CB[1], W Hochochka[1] and AT Degaetano[2], (1)Cornell Lab of Ornithology, (2)Cornell University. *Expanded geographic extent of seasonal increases in partial hatching failure in Eastern Bluebirds over five decades*.

8:40 AM COS 76-3 Lee, H II[1], D Reusser[2] and E Saarinen[3], (1) U.S. Environmental Protection Agency, (2)USGS, (3) University of Michigan-Dearborn. *Predicting the relative vulnerability of near-coastal species to climate change using a rule-based ecoinformatics approach*.

9:00 AM COS 76-4 Earnest, C and M Kummel, Colorado College. *Treeline dynamics on Pikes Peak, Colorado: Is the treeline moving and what is controlling the rate of movement*.

9:20 AM COS 76-5 Robinson, EA, ML Scott, RH Hallett and JA Newman, University of Guelph. *Temperature effects on the overwintering survival and date of emergence of the bean leaf beetle (Cerotoma trifurcata)*.

9:40 AM Break

9:50 AM COS 76-6 Guéry, LC[1], S Jenouvrier[2], K Delord[3], C Barbraud[4] and H Weimerskirch[4], (1)Université du Québec à Rimouski (UQAR), (2)Woods Hole Oceanographic Institution- Centre d'étude biologiques de Chizé, (3) Centre d'Etudes Biologiques de Chizé, (4)Centre d'Etude Biologiques de Chizé. *Impact of climate changes on an Antarctic seabird: Role of individual quality*.

10:10 AM COS 76-7 Jenouvrier, S[1] and H Weimerskirch[2], (1) Woods Hole Oceanographic Institution- Centre d'étude biologiques de Chizé, (2)Centre d'Etude Biologiques de Chizé. *Linking foraging behaviours to demography to study a seabird population response to climate change*.

10:30 AM COS 76-8 Dybala, KE[1], T Gardali[2] and JM Eadie[3], (1) University of California-Davis and PRBO Conservation Science, (2)PRBO Conservation Science, (3)University of California - Davis. *Effects of weather on survival differ between dependent and independent juvenile Song Sparrows*.

10:50 AM COS 76-9 Gedalof, Z and DR Norris, University of Guelph. *Spatio-temporal analysis of Gray Jay (Perisoreus canadensis) population dynamics: A test of the "hoard rot hypothesis"*.

11:10 AM COS 76-10 Donner, SD, University of British Colombia. *Coral reefs in a warming world: Lessons on resilience from the Central Equatorial Pacific*.

COS 77 - Climate Change: Plants III

F150, Oregon Convention Center

8:00 AM COS 77-1 Kreyling, J, D Thiel, L Nagy, A Jentsch and C Beierkuhnlein, University of Bayreuth. *Within-species variability and past climatic experience influence the response to late spring frost in five common temperate grass and tree species*.

8:20 AM COS 77-2 Blonder, B, B Boyle and BJ Enquist, University of Arizona. *Leaf venation networks link carbon economics to climate, paleo and present*.

8:40 AM COS 77-3 Spasojevic, MJ, V Bullard, HW Day, RJ Southard and S Harrison, University of California - Davis. *Assessing the potential for assisted colonization in four serpentine endemic plants: the importance of geology, soils and biotic interactions*.

9:00 AM COS 77-4 Compagnoni, A and PB Adler, Utah State University. *Warming and reduced snow cover improve cheatgrass (Bromus tectorum) performance in the*

Intermountain West.

9:20 AM COS 77-5 Ettinger, AK and J HilleRisLambers, University of Washington. *Testing the limits: Effects of climate and competition on conifer distributions*.

9:40 AM Break

9:50 AM COS 77-6 Way, DA[1], JC Domec[2] and RB Jackson[3], (1)University of Western Ontario, (2)North Carolina State University, (3)Duke University. *Elevated growth temperatures alter hydraulic characteristics in trembling aspen (Populus tremuloides) seedlings: Implications for tree drought tolerance*.

10:10 AM COS 77-7 Jongen, M, S Unger, X Lecomte and JS Pereira, Instituto Superior de Agronomia, Universidade Técnica de Lisboa. *The impact of changes in the timing of precipitation on the herbaceous understorey of Mediterranean evergreen oak woodlands*.

10:30 AM COS 77-8 Prasad, A[1], L Iverson[1], SN Matthews[2] and MP Peters[1], (1)Northern Research Station, USDA Forest Service, (2)The Ohio State University. *Evaluating future colonizable habitats of four oak species in the eastern United States using decision-tree based ensemble and cellular simulation models*.

10:50 AM COS 77-9 Fisher, DM, University of Oregon. *Postglacial dynamics of Olympic Peninsula forests: Comparing predictions and observations*.

11:10 AM COS 77-10 Vandegrift, AW, BA Roy, LE Pfeifer-Meister, TE Tomaszewski, BR Johnson and SD Bridgham, University of Oregon. *Climate change and Epichloë endophyte infection influences arbuscular mycorrhizal colonization rates in grasses*.

WEDNESDAY

COS 78 - Community Pattern And Dynamics IV

F151, Oregon Convention Center

8:00 AM COS 78-1 Czekanski-Moir, JE, University of Oklahoma. *The geometry of coexistence: Resource configuration alters richness and limiting similarity in an ant assemblage*.

8:20 AM COS 78-2 Flügge, AJ, SC Olhede and DJ Murrell, University College London. *The memory of spatial patterns – Using information from spatial pattern to detect changes in the abundance of tropical tree species*.

8:40 AM COS 78-3 Craven, DJ[1], M van Breugel[2], J Hall[2], MS Ashton[1] and GP Berlyn[1], (1)Yale University, (2) Smithsonian Tropical Research Institute. *Coordination of plant functional traits in predicting relative abundance of 42 tropical tree species during secondary succession in Central Panama*.

9:00 AM COS 78-4 Richgels, KLD, JT Hoverman and PT Johnson, University of Colorado. *Evaluating community structure and the role of regional and local processes in larval trematode metacommunities of Helisoma trivolvis*.

9:20 AM COS 78-5 Lampert, A, Weizmann Institute. *Resonance-Induced Multimodal Body-Size Distributions*.

9:40 AM Break

9:50 AM COS 78-6 Zhang, J[1], WD Kissling[2] and F He[1], (1) University of Alberta, (2)Aarhus University. *Local forest structure, climate, and human land cover determine broad-scale gradients of boreal bird species richness*.

10:10 AM COS 78-7 Grönroos, MM[1], JM Heino[1], LM Bini[2], T Siqueira[3], VL Landeiro[2] and JA Kotanen[4], (1)Finnish Environment Institute, (2)Federal University of Goiás, (3) Universidade Estadual Paulista, (4)Centre for Economic Development, Transport and the Environment for South Savo. *Does the importance of environmental and spatial variables in structuring stream macroinvertebrate metacommunities depend on dispersal mode?*.

10:30 AM COS 78-8 Fresquez, CC, University of California, Santa Cruz. *Distributional boundaries of salt marsh ecotone plant community are influenced by competitive interactions at both harsh and benign ends of an environmental gradient*.

10:50 AM COS 78-9 Cornell, SJ[1], J O'Dwyer[2] and O al Hammal[1], (1)University of Leeds, (2)Santa Fe Institute. *Linking species area curves to spatially explicit community models*.

11:10 AM COS 78-10 D'Amato, AW[1], M Reinikainen[1], S Fraver[2], BJ Palik[3] and K Gill[1], (1)University of Minnesota, (2) USDA Forest Service, (3)USDA Forest Service, Northern Research Station. *Stand dynamics and structure of old-growth Fraxinus nigra systems: Critical baselines for a foundation species in peril*.

COS 79 - Conservation Management IV

D136, Oregon Convention Center

8:00 AM COS 79-1 Henareh Khalyani, A, AL Mayer, CR Webster and MJ Falkowski, Michigan Technological University. *Protection impact assessment at two scales in the Bozin and Marakhil protected area, Iran*.

8:20 AM COS 79-2 Connors, B[1], D Braun[1], R Peterman[1], A Cooper[1], J Reynolds[1], L Dill[1], G Ruggerone[2] and M Krkosek[3], (1)Simon Fraser Univeristy, (2)Natural Resources Consultants, (3)University of Otago. *Migration links ocean-scale competition and local climate with exposure to farmed salmon to shape wild salmon dynamics*.

8:40 AM COS 79-3 Knowlton, JL[1], DJ Flaspohler[1] and T Fukami[2], (1)Michigan Technological University, (2) Stanford University. *Interactive effects of invasive rats and forest fragmentation on nest survival and behavior of native Hawaiian birds*.

9:00 AM COS 79-4 Fordham, DA[1], HR Akcakaya[2], BW Brook[1], MJ Watts[1], A Rodriguez[3] and M Araújo[4], (1)University of Adelaide, (2)Stony Brook University, (3)Estación Biológica de Doñana (CSIC), (4)Museo Nacional de Ciencias Naturales. *Climate change, prey availability and managed relocations: Mitigating extinction risk for Iberian Lynx, the world's most threatened cat*.

9:20 AM COS 79-5 Oo, WP, Yokohama National University. *Conservation prioritization of dry forest community types, and species in the central dry of Myanmar*.

9:40 AM Break

9:50 AM COS 79-6 Bierzychudek, P[1] and K Warner[2], (1) Lewis & Clark College, (2)Colorado State University. *Understanding caterpillar movement to guide habitat restoration for the Oregon Silverspot Butterfly, Speyeria zerene hippolyta*.

10:10 AM COS 79-7 Randall, LA[1], DHV Smith[1], BL Jones[1], DRC Prescott[2] and A Moehrenschlager[1], (1)Calgary Zoo, (2) Alberta Sustainable Resource Development. *No evidence of non-assisted northern leopard frog (Lithobates pipiens) recovery in southern Alberta, Canada*.

10:30 AM COS 79-8 Freed, S, EF Granek and V Dujon, Portland State University. *Influence of resource use and management on coral reef health in the Comoros*.

10:50 AM COS 79-9 Veloz, SD[1], N Nur[1], L Salas[1], D Stralberg[2], D Jongsomjit[1], J Wood[1], L Liu[1] and G Ballard[1], (1) PRBO Conservation Science, (2)University of Alberta. *Prioritizing tidal marsh conservation and restoration efforts given high uncertainty due to future environmental change*.

11:10 AM COS 79-10 Kurle, CM[1], ME Finkelstein[2], J Aukema[3],

D George[4], J Burnett[5], J Brandt[6] and DR Smith[2], (1) University of California San Diego, (2)University of California, (3)Aukema Conservation Science, (4)National Park Service, (5)Ventana Wildlife Society, (6)United States Fish and Wildlife Service. *The role of marine-derived contamination in the diets of California condors: Combining toxicology with stable isotope analysis*.

COS 80 - Disease And Epidemiology I

D137, Oregon Convention Center

8:00 AM COS 80-1 Pascual, M[1], D Alonso[2], Y Artzy[1] and A Dobson[3], (1)University of Michigan AND Howard Hughes Medical Institute, (2)Consejo Superior de Investigaciones Cientificas, CEAB-CSIC, (3)Princeton Universitty. *Malaria population dynamics with superinfection: Critical transitions and responses to forcing*.

8:20 AM COS 80-2 Luis, AD, Colorado State University. *Viral sharing in bats and rodents: Viruses may pass more easily between sympatric bat species than sympatric rodent species*.

8:40 AM COS 80-3 Streicker, DG[1], JC Blackwood[2], S Recuenco[3], W Valderrama[4], J Gomez[5], V Pacheco[6], CE Rupprecht[3], P Rohani[2] and S Altizer[1], (1)University of Georgia, (2) University of Michigan, (3)Centers for Disease Control and Prevention, (4)Ministry of Agriculture, (5)Ministry of Health, (6)National University of San Marcos. *Ecological and anthropogenic drivers of rabies exposure in vampire bats: Implications for transmission and control*.

9:00 AM COS 80-4 Leach, CB[1], CT Webb[1] and PC Cross[2], (1) Colorado State University, (2)US Geological Survey. *Environmental pathogen reservoirs and habitat heterogeneity in a metapopulation*.

9:20 AM COS 80-5 Yuan, S and K Koelle, Duke University. *A model for the evolutionary dynamics of receptor binding avidity in influenza A and its effect on antigenic drift*.

9:40 AM Break

9:50 AM COS 80-6 Truitt, AM, Portland State University. *Investigating the effects of a ubiquitous endosymbiotic bacteria and its relationship with a threatened butterfly species*.

10:10 AM COS 80-7 Grossman, M[1], K Vasco[2], L Zhang[3], W Cevallos[2], G Trueba[2], JNS Eisenberg[3] and K Levy[1], (1) Emory University, (2)Universidad San Francisco de Quito, (3)University of Michigan. *Environmental and domestic transmission of antibiotic resistance in community chicken farms in rural Ecuador*.

10:30 AM COS 80-8 Hayman, DTS, Colorado State University. *Understanding lyssavirus dynamics in an African fruit bat population*.

10:50 AM COS 80-9 Brunner, J, Washington State University. *Fear, food, and infections: Linking host behaviors to disease transmission in an experimental tadpole system*.

11:10 AM COS 80-10 Dodge, CM and VT Vredenburg, San Francisco State University. *The sad song of the Yosemite toad: The role of the amphibian chytrid fungus in an enigmatic decline*.

COS 81 - Ecosystem Function I

D138, Oregon Convention Center

8:00 AM COS 81-1 Yanai, RD[1], J Campbell[2], SL LaDeau[3], KC Weathers[3], CR See[1] and MB Green[4], (1)SUNY College of Environmental Science and Forestry, (2)United States Department of Agriculture Forest Service, (3) Cary Institute of Ecosystem Studies, (4)Plymouth State University. *Quantifying uncertainty in precipitation estimates*.

8:20 AM COS 81-2 Mitchell, RM and JD Bakker, University of Washington. *The spice of life: Quantifying intraspecific functional trait variation*.

8:40 AM COS 81-3 Rinella, MJ[1], KO Reinhart[2] and DJ Johnson[3], (1)USDA-Agricultural Research Service, (2) US Department of Agriculture, Agricultural Research Service, (3)Indiana University. *Evidence for large positive effects of species richness on biomass in U.S. forests*.

9:00 AM COS 81-4 Smith, CM[1], MB David[1] and CA Mitchell[2], (1)University of Illinois, (2)Univeristy of Illinois. *Perennial biofuel crops reduce nitrogen losses during establishment in central Illinois*.

9:20 AM COS 81-5 Pfister, CA[1], MA Altabet[2], S Pather[2], DM Post[3] and JA Gilbert[1], (1)University of Chicago, (2) University of Massachusetts, (3)Yale University. *Nitrogen regeneration mediates species interactions and enhances coastal productivity*.

9:40 AM Break

9:50 AM COS 81-6 Gonçalves, AZ[1], FL Hoffmann[2], H Mercier[3], P Mazzafera[1] and GQ Romero[4], (1)UNICAMP, (2)UNESP, (3)USP, (4)State University of Campinas. *Nutrient cycling in bromeliad phyllosphere*.

10:10 AM COS 81-7 DeForest, JL[1], DJ Burke[2], SR Carrino-Kyker[3], CR Hewins[2], LA Kluber[3] and KA Smemo[2], (1) Ohio University, (2)The Holden Arboretum, (3)Case Western Reserve University. *Are maples limited by phosphorus in acidic unglaciated forests?*.

10:30 AM COS 81-8 Summers, EN[1] and X Chen[2], (1)Alabama A & M University, (2)Alabama A&M University. *Forests and ecological services: Wildlife ecological services and air quality at the Bankhead National Forest in Alabama*.

10:50 AM COS 81-9 Coffey, EED[1], B Fournier[2] and EAD Mitchell[2], (1)University of Oxford - Long-term Ecology Laboratory, (2)University of Neuchâtel. *Amoebae or finches? Walking in the footsteps of Darwin, but looking under our feet!*.

COS 82 - Education: Community-Based Learning

D139, Oregon Convention Center

8:00 AM COS 82-1 Crall, A[1], RC Jordan[2], K Holfelder[1], G Newman[1], J Graham[3] and D Waller[4], (1)Colorado State University, (2)Rutgers University, (3)Natural Resource Ecology Laborary, (4)University of Wisconsin-Madison. *The impacts of an invasive species citizen science training program on participant attitudes, behavior, and science literacy*.

8:20 AM COS 82-2 Clavel, J[1], V Maris[2] and T Giraud[3], (1) Université Paris 6, CNRS, Muséum National d'Histoire Naturelle, (2)Centre d'Ecologie Fonctionnelle et Evolutive, (3)Université Paris-Sud Orsay. *The scientific concept of biodiversity understanding by teenagers. a study case in France.*.

8:40 AM COS 82-3 Kamarainen, AM, S Metcalf, T Grotzer, A Browne, D Mazzuca, MS Tutwiler and C Dede, Harvard University. *Ecomobile: Integrating augmented reality and probeware with ecology education field trips*.

9:00 AM COS 82-4 Litle, K[1], TW Clay[2] and AG Sprenger[2], (1) Washington Sea Grant, (2)University of Washington. *Supporting collaboration among boat-based programs and scientists: A model for citizen science*.

9:20 AM COS 82-5 Dewsbury, BM, Florida International University. *Confluence: Where life and science meet*.

9:40 AM Break

9:50 AM COS 82-6 Smith, SA and ES Menges, Archbold Biological Station. *Inspiring future ecologists through experiential education*.

10:10 AM COS 82-7 West, SE[1], KJ Rich[2] and M Ridealgh[2], (1)Stockholm Environment Institute, (2)University of York. *Using citizen science to survey invertebrate and plant communities on reclaimed collieries in Yorkshire, England*.

10:30 AM COS 82-8 Boulay, MC[1], AS Thorpe[2], KA Lynch[1] and J Krueger[3], (1)University of Oregon, (2)Institute for Applied Ecology, (3)Lane Council of Governments. *The intersection of research, teaching, and service: Designing science-based service learning projects to meet learning and research objectives*.

10:50 AM COS 82-9 Henderson, S[1], D Ward[1], K Meymaris[2], LA Wasser[1] and S Newman[1], (1)NEON, Inc., (2)KKM Consulting. *Citizen Science Academy: Exploring online professional development courses for educators to enhance participation*.

11:10 AM COS 82-10 Martinson, R and JG Lambrinos, Oregon State University. *The use of ecoregional data by green industry professionals in Oregon*.

COS 83 - Effects Of Multiple Global Changes On Communities And Ecosystems II

E141, Oregon Convention Center

WEDNESDAY

8:00 AM COS 83-1 Grant, K, J Kreyling, C Beierkuhnlein and A Jentsch, University of Bayreuth. *Community shifts in grassland due to more extreme intra-annual precipitation variability and warming*.

8:20 AM COS 83-2 Miller, AE[1] and RL Sherriff[2], (1)National Park Service, (2)Humboldt State University. *Stand age structure, mortality, and regeneration dynamics across a forest gradient in southwest Alaska*.

8:40 AM COS 83-3 Luo, Y and HYH Chen, Lakehead University. *Climate change effects on tree mortality is stronger in young than old-growth forests*.

9:00 AM COS 83-4 Toth, AB[1], AK Behrensmeyer[2] and SK Lyons[3], (1)Smithsonian Institute, National Museum of Natural History, (2)Smithsonian Institution, National Museum of Natural History, (3)National Museum of Natural History. *Increased diversity and decreased uniqueness in Kenyan mammal communities over the past century*.

9:20 AM COS 83-5 Pincebourde, S[1], E Sanford[2], J Casas[3] and B Helmuth[4], (1)CNRS, (2)University of California Davis, (3) Centre National de la Recherche Scientifique - University of Tours, (4)University of South Carolina. *Temporal coincidence of environmental stress events modulates predation rates*.

9:40 AM Break

9:50 AM COS 83-6 Menge, BA, Oregon State University. *Dynamics of coastal meta-ecosystems: The intermittent upwelling hypothesis and a test in rocky intertidal regions*.

10:10 AM COS 83-7 Albert, CH[1], W Thuiller[2] and A Gonzalez[1], (1) McGill University, (2)Université Joseph Fourier. *The joint effect of land use and climate change on biodiversity in a highly fragmented landscape*.

10:30 AM COS 83-8 MacLennan, MM and RD Vinebrooke, University of Alberta. *Ecological surprises by an invasive species and environmental warming*.

10:50 AM COS 83-9 Van de Voorde, TFJ[1], TM Bezemer[2], JW van Groenigen[1] and L Mommer[1], (1)Wageningen University, (2)Netherlands Institute of Ecology (NIOO-KNAW). *Soil amendment with biochar: Consequences for plant and soil communities in a natural ecosystem*.

11:10 AM COS 83-10 Rochefort, RM[1], S Howlin[2] and M Bivin[3], (1)National Park Service, (2)Western Ecosystems Technology, Inc., (3)North Cascades National Park. *Five year trends in health of whitebark pine populations in North Cascades and Mount Rainier national parks*.

COS 84 - Evolution: Selection And Adaptation III

E142, Oregon Convention Center

8:00 AM COS 84-1 Zimmerman, N and PM Vitousek, Stanford University. *Pyrosequencing of tropical fungal endophytes provides evidence for adaptation to high elevation*.

8:20 AM COS 84-2 Siepielski, AA[1], K Gotanda[2], JD DiBattista[3], SE Diamond[4] and S Carlson[5], (1)University of San Diego, (2)McGill University, (3)University of Hawaii at Manoa, (4)North Carolina State University, (5)University of California, Berkeley. *The spatial dynamics of phenotypic selection in the wild*.

8:40 AM COS 84-3 Sullam, KE[1], CM Dalton[2], JA Russell[1], SS Kilham[1] and AS Flecker[2], (1)Drexel University, (2)Cornell University. *Gut responses of Trinidadian guppies to different diets*.

9:00 AM COS 84-4 Townley, S[1], RA Johstone[2] and B Kuijper[2], (1)University of Exeter, (2)University of Cambridge. *Maternal effects, stabilizing selection and information fidelity*.

9:20 AM COS 84-5 Welsh, DP, University of Illinois at Urbana-Champaign. *Is there evidence for local adaptation to lakes and streams? A study using the blackstripe topminnow, Fundulus notatus*.

9:40 AM Break

9:50 AM COS 84-6 Shade, J, University of California Berkeley. *Floral evolution in lupines: Responses to selection in outcrossing and selfing populations*.

10:10 AM COS 84-7 Panetta, AM[1] and M Stanton[2], (1)University of California, Davis, (2)University of California Davis. *Androsace septentrionalis and the warming meadow: A montane forb's response to long-term experimental warming*.

10:30 AM COS 84-8 Hovick, SM[1], LH Rieseberg[2] and KD Whitney[1], (1)Rice University, (2)University of British Columbia. *Replaying the clock in hybrid evolution: A field experimental evolution study using sunflowers (Helianthus)*.

10:50 AM COS 84-9 Kooyers, NJ and KM Olsen, Washington University in St. Louis. *Stressed out: Tradeoffs corresponding to water and nutrient limitations may maintain cyanogenesis clines in white clover (Trifolium repens L.)*.

11:10 AM COS 84-10 Phillis, CC[1], JW Moore[1], SA Hayes[2], JC Garza[3] and DE Pearse[4], (1)Simon Fraser University, (2) NOAA Southwest Fisheries Science Center, (3)NOAA Fisheries, (4)NOAA National Marine Fisheries Service. *Dam evolution: Rapid evolution of fish migration in response to novel river barriers*.

COS 85 - Food Webs I

E143, Oregon Convention Center

8:00 AM COS 85-1 Howe, ER and CA Simenstad, University of Washington. *Detrital shadows: Stable isotopes reveal estuarine food web connectivity depends on fluvial influence and consumer feeding mode*.

8:20 AM COS 85-2 Rohr, RP and J Bascompte, Estación Biológica de Doñana, CSIC. *Components of phylogenetic signal in trophic and mutualistic networks*.

8:40 AM COS 85-3 Kamenova, S[1], E Coissac[2], C Miquel[2], B Gauffre[3], V Bretagnolle[3], P Taberlet[2] and M Plantegenest[4], (1)CNRS/INRA, (2)Université de Grenoble, (3)CNRS, (4) INRA-Agrocampus Ouest. *Trophic relationships among carabid beetles and their potential for biological control*.

9:00 AM COS 85-4 Lin, Y and WJ Sutherland, University of

Cambridge. *Resilience of dynamic ecological networks with multiple interaction types*.

9:20 AM COS 85-5 Allen, DC, KE McCluney and JL Sabo, Arizona State University. *Water limitation structures terrestrial animal communities*.

9:40 AM Break

9:50 AM COS 85-6 Klecka, J[1], DS Boukal[1] and AP Beckerman[2], (1)University of South Bohemia, (2)University of Sheffield. *Body mass dependent dispersal and feeding constraints drive food web assembly*.

10:10 AM COS 85-7 Ruppert, JLW[1], L Vigliola[2], MJ Travers[3], MJ Fortin[1] and MG Meekan[3], (1)University of Toronto, (2)Institut de recherche pour le développement, (3) Australian Institute of Marine Science. *Apex predators and human populations as structuring agents on Indo-Pacific coral reefs*.

10:30 AM COS 85-8 Young, H, Harvard University. *Effects of productivity on food chain length in tropical insular systems*.

10:50 AM COS 85-9 McIntosh, AR[1], PA McHugh[2] and RM Thompson[3], (1)University of Canterbury, (2)Statewide Salmon & Steelhead Unit, (3)Monash University. *Habitat size influences on river food web structure and subsequent stability*.

11:10 AM COS 85-10 Thurber, AR, Oregon State University. *Diet-dependant incorporation of biomarkers from microbial food sources: Implications for food-web studies that use stable isotope and fatty acid analyses*.

COS 86 - Herbivory: Plant Defenses II

E144, Oregon Convention Center

8:00 AM COS 86-1 Kersch-Becker, MF and JS Thaler, Cornell University. *Plant resistance regulates the strength of density-dependent processes in aphid populations*.

8:20 AM COS 86-2 Callis, K, K Kitajima, H McAuslane and DJ Levey, University of Florida. *Silica as a plant defense against herbivorous insects*.

8:40 AM COS 86-3 Trowbridge, AM[1], DM Bowers[2] and RK Monson[3], (1)University of Colorado, (2)University of Colorado at Boulder, (3)University of Colorado, Boulder. *Individual and synergistic effects of monoterpenes on caterpillar growth and immune response: Herbivore-induced resistance versus susceptibility*.

9:00 AM COS 86-4 Meyer, ST[1], J Loranger[2], B Shipley[2] and WW Weisser[1], (1)TU Munich, (2)University of Sherbrooke. *Predictions of herbivory in monocultures and mixtures based on plant functional traits*.

9:20 AM COS 86-5 Oikawa, PA[1], L Li[2], M Timko[2], J Mak[3] and M Lerdau[2], (1)University of California, Riverside, (2) University of Virginia, (3)State University of New York. *Methanol production and emission by plants in response to damage and wounding*.

9:40 AM Break

9:50 AM COS 86-6 McNutt, DW and N Underwood, Florida State University. *The adaptive value and costs of plasticity in the induced defenses and tolerance to herbivory of Solanum carolinense*.

10:10 AM COS 86-7 Ballhorn, DJ[1], S Kautz[2] and M Schädler[3], (1)Portland State University, (2)Field Museum of Natural History, (3)Helmholtz-Centre for Environmental Research - UFZ. *Rhizobial symbiosis affects higher trophic levels by altering direct and indirect plant defenses*.

10:30 AM COS 86-8 Kautz, S[1] and DJ Ballhorn[2], (1)Field Museum of Natural History, (2)Portland State University. *Concerted effects of direct and indirect plant defenses in nature: A case study using lima bean (Phaseolus lunatus L.)*.

10:50 AM COS 86-9 Le Gall, M, Texas A&M University. *Nutrient-allelochemical interactions and generalist insect herbivores: A fitness landscape approach* .

11:10 AM COS 86-10 Kelly, CA, University of Colorado. *Chemical mediation of Penstemon-herbivore interactions: A comparison among Colorado populations*.

COS 87 - Invasion: Community Effects I

E146, Oregon Convention Center

8:00 AM COS 87-1 Metz, MR[1], JM Varner[2], KM Frangioso[1], RK Meentemeyer[3] and DM Rizzo[1], (1)University of California, Davis, (2)Mississippi State University, (3)University of North Carolina, Charlotte. *Interacting disturbances: Unexpected increases in coast redwood mortality from synergistic effects of fire and a non-native pathogen*.

8:20 AM COS 87-2 Schultz, E[1], J Phillips[1], A Tucker[1], K McEachern[2] and D Thomson[1], (1)Claremont McKenna, Pitzer and Scripps Colleges, (2)USGeological Survey - Western Ecological Research Center. *Effects of introduced herbivore removal on an island rare and endemic plant community* .

8:40 AM COS 87-3 Anderson, RC[1], JT Bauer[2] and MR Anderson[1], (1)Illinois State University, (2)Indiana University. *Garlic mustard's (Alliaria petiolata) effectiveness as an invader of Eastern North American deciduous forest groundlayers*.

9:00 AM COS 87-4 Molinari, N and CM D'Antonio, University of California Santa Barbara. *Structural and compositional differences between native and non-native dominated grasslands*.

9:20 AM COS 87-5 Rodriguez-Cabal, MA[1], MN Barrios Garcia[1], GC Amico[2] and NJ Sanders[1], (1)University of Tennessee, (2)INIBIOMA, CONICET-Universidad Nacional del Comahue. *Direct and indirect impacts of introduced species on community dynamics*.

9:40 AM Break

9:50 AM COS 87-6 Chapman, SK[1], KA Devine[1] and RO Jones[2], (1)Villanova University, (2)University of Nevada-Reno. *Interactions between herbivory and nitrogen availability alter invasive plant dynamics in forest understory communities*.

10:10 AM COS 87-7 Iannone, BV III[1], L Heneghan[2], D Rijal[1] and DH Wise[1], (1)University of Illinois at Chicago, (2)DePaul University. *Discovering the belowground causes and consequences of Rhamnus cathartica L. (European buckthorn) invasions*.

10:30 AM COS 87-8 Stoner, EW, LA Yeager and CA Layman, Florida International University. *Epibenthic jellyfish blooms: Effects of a native-invader on community structure of Bahamian seagrass ecosystems*.

10:50 AM COS 87-9 Rabie, PA, University of Minnesota. *Patch expansion and community characteristics associated with Bromus inermis stands in mixed-grass prairie*.

11:10 AM COS 87-10 Lekberg, Y[1], S Gibbons[1], S Rosendahl[2] and PW Ramsey[1], (1)MPG Ranch, (2)Copenhagen University. *Legacies of plant invasions - not always a story of doom and gloom*.

COS 88 - Invasion: Species Interactions I

Portland Blrm 254, Oregon Convention Center

8:00 AM COS 88-1 Carrillo, J[1], Y Wang[2], J Ding[2], K Klootwyk[1], B Li[3], S Fu[4], J Zou[5] and E Siemann[1], (1)Rice University, (2)Wuhan Botanical Garden, (3)Fudan University, (4) South China Botanical Garden, (5)Nanjing Agricultural University. *Biotic interactions and decreased indirect*

defense in the invasive tree, Triadica sebifera.

8:20 AM COS 88-2 Meza-Lopez, MM and E Siemann, Rice University. *Pomacea insularum facilitates Alternanthera philoxeroides invasion but there is no evidence of invasional meltdown in wetland communities*.

8:40 AM COS 88-3 Burns, JH, NM Zimmerman, SC Leahy and AJ Brandt, Case Western Reserve University. *Phenotypic plasticity in plant trait expression may facilitate mutual invasibility between close relatives*.

9:00 AM COS 88-4 Nuñez, MA[1], J Hayward[2], TR Horton[2], GC Amico[3], R Dimarco[1], N Barrios-Garcia[1] and D Simberloff[1], (1)The University of Tennessee, (2)State University of New York - College of Environmental Science and Forestry, (3)INIBIOMA, CONICET-Universidad Nacional del Comahue. *Non-native mammals disperse non-native fungi that promote invasion of non-native trees*.

9:20 AM COS 88-5 Lieurance, D[1], S Chakraborty[2], P Bonello[2], SR Whitehead[3], DM Bowers[3] and D Cipollini[1], (1) Wright State University, (2)The Ohio State University, (3)University of Colorado at Boulder. *Does variation in defensive secondary metabolites in native and non-native Lonicera species explain invasive success? Responses to nutrient availability and relationships with herbivore resistance in a common garden experiment*.

9:40 AM Break

9:50 AM COS 88-6 Shiels, A, USDA, APHIS, National Wildlife Research Center. *Niche differentiation based on diet analysis of three introduced rodents in tropical montane forest*.

10:10 AM COS 88-7 Bunn, RA[1], Y Lekberg[2] and C Gallagher[1], (1)Western Washington University, (2)MPG Ranch. *A new invader, Potentilla recta, and its effect on the native mycorrhizal symbiosis*.

10:30 AM COS 88-8 Aslan, AB[1] and PJ Hart[2], (1)University of Hawaii - Hilo, (2)University of Hawaii at Hilo. *Implications of a novel mutualist for fecundity metrics of two endemic Hawaiian plants*.

10:50 AM COS 88-9 Imamura, JL and GK Roderick, University of California. *Exotic species and temporal variation in Hawaiian floral visitation networks*.

11:10 AM COS 88-10 Kent, SM, Northeastern University's Marine Science Center. *The importance of the ecological neighborhood: Quantifying the effect of exotic plants on native species interactions*.

COS 89 - Modeling II

Portland Blrm 255, Oregon Convention Center

8:00 AM COS 89-1 Bunyan, M[1], JR Jaeger[2], RD Inman[3], DM Fletcher[4] and KE Nussear[5], (1)University of Nevada Las Vegas, School of Life Sciences, (2)University of Nevada Las Vegas, (3)U.S. Geological Survey, Western Ecological Research Center, (4)Great Basin Bird Observatory, (5)US Geological Survey, Westen Ecological Research Center. *Assessing niche partitioning and competition between sympatric thrashers*.

8:20 AM COS 89-2 See, KE[1], C Jordan[2], M Ward[3], C Beasley[4], N Bouwes[5], J White[4] and C Volk[6], (1)National Marine Fisheries Service, National Oceanic and Atmospheric Administration, (2)NOAA Fisheries, (3)Terraqua, (4) Quantitative Consultants, Inc., (5)Utah State University, (6)South Fork Research. *Boosted regression tree analysis of juvenile salmonids and their freshwater habitat in the Pacific Northwest*.

8:40 AM COS 89-3 Graham, J[1], N Young[2], C Jarnevich[3], G Newman[2], P Evangelista[2] and TJ Stohlgren[4], (1) Natural Resource Ecology Laborary, (2)Colorado State University, (3)United States Geological Survey, (4)US Geological Survey, Fort Collins Science Center and Natural Resource Ecology Laboratory. *The Hyper-Envelope Modeling Interface (HEMI): A novel approach to habitat suitability modeling*.

9:00 AM COS 89-4 Saint-Béat, B[1], C Dupuy[1], P Bocher[1], M De Crignis[1], C Fontaine[1], K Guizien[2], J Lavaud[1], S Lefebvre[3], H Montanié[1], JL Mouget[4], PY Pascal[5], G Quaintenne[1], G Radenac[1], P Richard[1], F Robin[1] and N Niquil[1], (1)UMR Littoral Environnement et Sociétés, (2) Laboratoire d'Océanographie Biologique de Banyuls, (3)Laboratoire d'Océanographie et de Géoscience, (4) Ecophysiologie et Métabolisme des Microalgues, (5) UFR SEN. *Consequences for shorebirds of an intertidal mudflat (Brouage, NE Atlantic) food web functioning in winter*.

9:20 AM COS 89-5 Bartley, ML and WJ Boeing, New Mexico State University. *Predicting optimum growth and lipid accumulation of the microalgae Nannochloropsis salina and minimizing invading organisms with a response surface model*.

9:40 AM Break

9:50 AM COS 89-6 Wang, L and DA Jackson, University of Toronto. *Effects of sample size and species response shape on the performance of different species distribution models: A simulation study*.

10:10 AM COS 89-7 Green, SJ[1], NK Dulvy[1], A Cooper[2] and IM Côté[3], (1)Simon Fraser University, (2)Simon Fraser Univeristy, (3)Simon Fraser University/Vancouver Island University. *Past, present, and future impacts of invasive Indo-Pacific lionfish on high-diversity Atlantic fish communities*.

10:30 AM COS 89-8 Baskerville, EB[1] and M Pascual[2], (1) University of Michigan, (2)University of Michigan AND Howard Hughes Medical Institute. *Flexible Bayesian modeling of groups and niches in food webs*.

10:50 AM COS 89-9 Merow, C[1], M Smith[2] and J Silander[1], (1) University of Connecticut, (2)Microsoft Research. *New approaches to species distribution modeling with Maxent: Rethinking model interpretation, model complexity and prior assumptions*.

COS 90 - Mycorrhizae

Portland Blrm 256, Oregon Convention Center

8:00 AM COS 90-1 Fernandez, CW[1] and RT Koide[2], (1)The Pennsylvania State University, (2)Pennsylvania State University. *Melanin: A functional trait conferring tolerance to water stress in ectomycorrhizal fungi*.

8:20 AM COS 90-2 Kennedy, PG, Lewis & Clark College. *Colonization-competition tradeoffs as a mechanism driving successional dynamics in ectomycorrhizal fungal communities*.

8:40 AM COS 90-3 Becklin, KM, JS Medeiros and JK Ward, University of Kansas. *Mycorrhizal functioning across the glacial-interglacial transition: Evidence from stable isotopes*.

9:00 AM COS 90-4 Treseder, KK, University of California, Irvine. *Percent mycorrhizal root length is a reliable indicator of benefits to host plants: Results from a meta-analysis*.

9:20 AM COS 90-5 Hewitt, RE[1], TN Hollingsworth[2], DL Taylor[1] and FS Chapin III[1], (1)University of Alaska Fairbanks, (2) Pacific Northwest Research Station. *The role of fire in facilitating treeline expansion: Getting to the root of the matter*.

9:40 AM Break

9:50 AM COS 90-6 Walker, JKM[1], V Ward[2] and MD Jones[2],

(1)Lewis and Clark College, (2)University of British Columbia, Okanagan Campus. *Ectomycorrhizal (ECM) root tip community structure and enzyme activity varies between forest and clearcut plots, and there is evidence of functional complementarity among dominant ECM taxa in forest plots*.

10:10 AM COS 90-7 Keymer, DP and RA Lankau, University of Georgia. *Linking structure and function in plant-soil feedbacks during Alliaria petiolata invasion*.

10:30 AM COS 90-8 McCormick, MK, DF Whigham and JP O'Neill, Smithsonian Environmental Research Center. *Conservation of Isotria medeoloides, a tale of dormancy and fungi*.

10:50 AM COS 90-9 Phillips, WS[1] and EW Seabloom[2], (1)Oregon State University, (2)University of Minnesota. *Arbuscular mycorrhizal community assembly in the roots of two endangered and two common prairie plant species*.

11:10 AM COS 90-10 Ji, B, K Mack, E Koziol and JD Bever, Indiana University. *Reciprocal exchange of limiting resources as a mechanism for the maintenance of mycorrhizal mutualism*.

COS 91 - Physiological Ecology IV

Portland Blrm 257, Oregon Convention Center

8:00 AM COS 91-1 Via, SM[1], JC Zinnert[2] and DR Young[1], (1) Virginia Commonwealth University, (2)US Army Corps of Engineers. *From cradle to grave: The impacts of RDX across three life stages of Morella cerifera*.

8:20 AM COS 91-2 Meinzer, FC[1], KA McCulloh[2], DM Johnson[3] and DR Woodruff[1], (1)USDA Forest Service, (2)Oregon State University, (3)Duke University. *The dynamic pipeline: Hydraulic capacitance and xylem hydraulic safety in four tall conifer species*.

8:40 AM COS 91-3 Goldsmith, GR[1] and TE Dawson[2], (1) University of California, Berkeley, (2)UC Berkeley. *The prevalence and significance of foliar water uptake in tropical montane cloud forest plants*.

9:00 AM COS 91-4 Coe, KK[1], J Belnap[2], SP Ellner[1] and JP Sparks[1], (1)Cornell University, (2)USGS. *Predictions for desert biocrust moss performance and decline under future precipitation scenarios*.

9:20 AM COS 91-5 van den Berg, FT, MB Thompson and DF Hochuli, The University of Sydney. *Being young and hot: Fitness-related implications of thermal variation associated with retreat site use across ontogenetic stages in the spider, Morebilus plagusius*.

9:40 AM Break

9:50 AM COS 91-6 Creese, C[1], S Oberbauer[2] and L Sack[1], (1) UCLA, (2)Florida International University. *New insights into fern stomatal behavior based on leaf responses to light, CO_2, and VPD in a common garden*.

10:10 AM COS 91-7 Ambrose, AR[1], SC Sillett[2], TE Dawson[3], GW Koch[4] and SS Burgess[5], (1)University of California, (2) Humboldt State University, (3)UC Berkeley, (4)Northern Arizona University, (5)University of Western Australia. *Within-crown and whole-tree water use patterns in Giant Sequoia (Sequoiadendron giganteum) trees*.

10:30 AM COS 91-8 Ocheltree, TW, J Nippert, PVV Prasad and MB Kirkham, Kansas State University. *Drought tolerance strategies of grasses: The trade-off between stress tolerance and growth*.

10:50 AM COS 91-9 Berry, ZC and WK Smith, Wake Forest University. *Effects of cloud immersion and elevation on sapling photosynthesis and water status in relic spruce-fir (Picea rubens and Abies fraseri) forest, southern Appalachian Mountains, USA*.

11:10 AM COS 91-10 Schenk, HJ[1], S Espino[1], K Mocko[2], H Martinez-Cabrera[2] and CS Jones[2], (1)California State University Fullerton, (2)University of Connecticut. *Protections against drought-induced xylem embolisms in shrubs: Resistance, repair, and redundancy*.

COS 92 - Plant-Insect Interactions II

Portland Blrm 258, Oregon Convention Center

8:00 AM COS 92-1 Barber, NA[1], LS Adler[2], ET Kiers[3], N Theis[4] and RV Hazzard[5], (1)Northern Illinois University, (2) University of Massachusetts, (3)Vrije Universiteit, (4) Elms College, (5)University of Massachusetts Amherst. *Linking agricultural practices, mycorrhizal fungi, and traits mediating plant-insect interactions*.

8:20 AM COS 92-2 Murphy, SM[1], K Grenis[1], TM Stoepler[2] and JT Lill[2], (1)University of Denver, (2)George Washington University. *Guild-specific parasitism of forest caterpillars: Size matters*.

8:40 AM COS 92-3 Erwin, AC, MA Geber and AA Agrawal, Cornell University. *Specific impacts of two root herbivores and soil nutrients on plant performance and insect-insect interactions*.

9:00 AM COS 92-4 Olito, CJ, University of Calgary. *Using a bottom-up model of plant-pollinator interaction networks to investigate the role of foraging decisions v.s. topological constraints in determining network structure*.

9:20 AM COS 92-5 Loewy, KJ and SM Murphy, University of Denver. *Trade-offs in host choice by an herbivorous insect based on parasitism and host plant quality*.

9:40 AM Break

9:50 AM COS 92-6 Prado, SG and SD Frank, North Carolina State University. *Effect of parasitoid host choice on apparent competition between pest and non-pest aphids*.

10:10 AM COS 92-7 Garcia, LC and MD Eubanks, Texas A&M University. *Overcompensatory plant responses to insect herbivory: A meta-analysis of the prevalence and conditions*.

10:30 AM COS 92-8 Briggs, HM[1] and BJ Brosi[2], (1)University of California, Santa Cruz, (2)Emory University. *Pollinator Losses and Plant Reproductive Function*.

10:50 AM COS 92-9 Nelson, G[1], M Kreiser[1], PD Wragg[2], P Blum[3], G Wilbrandt[4] and S Erlandson[2], (1)University of Wisconsin-Eau Claire, (2)University of Minnesota, (3) Appalachian State University, (4)Cedar Creek Ecosystem Science Reserve. *Pollen-removing ants interfere with pollination of Asclepias ovalifolia (Apocynaceae)*.

11:10 AM COS 92-10 McCall, AC[1], S Jordan[1] and JL Bronstein[2], (1)Denison University, (2)University of Arizona. *Intruders in a pollination mutualism: exploring the impacts of florivores and honeybees on the floral biology of Datura wrightii*.

COS 93 - Population Dynamics And Regulation II

B117, Oregon Convention Center

8:00 AM COS 93-1 van den Berg, E[1], RL Chazdon[2] and BS Corrêa[3], (1)Federal University of Lavras, (2)University of Connecticut, (3)Centro Federal de Educação Tecnológica de Minas Gerais. *Tree growth and death in a tropical gallery forest in Brazil: understanding the relationships among size, growth, and survivorship for understory and canopy dominant species*.

8:20 AM COS 93-2 Caughlin, TT[1], JM Ferguson[1] and S Bunyavejchewin[2], (1)University of Florida, (2)Royal Forest Department. *Seeds move but trees stand still: quantifying the importance of spatial structure for plant populations*.

8:40 AM COS 93-3 Cheatham, T II, BA Murry and JJ Student, Central Michigan University. *Evaluation of the resilience of a fishery restoration success: source-sink population dynamics of walleye, Sander vitreus, in Saginaw Bay, Lake Huron*.

9:00 AM COS 93-4 Lesser, MR[1] and ST Jackson[2], (1)Syracuse University, (2)University of Wyoming. *Some of these trees are not like the others: Individual tree contributions to population growth over five centuries in colonizing ponderosa pine populations*.

9:20 AM COS 93-5 Dibble, CJ and VHW Rudolf, Rice University. *Intraspecific priority effects mediate population growth and trait change in a host-pathogen system*.

9:40 AM Break

9:50 AM COS 93-6 West, DC and DM Post, Yale University. *Effect of climate driven shifts in initial population size on the phytoplankton spring bloom*.

10:10 AM COS 93-7 Miller, J[1], DJ Teel[2], A Baptista[3] and CA Morgan[1], (1)Oregon State University, (2)NOAA Fisheries, (3)Oregon Health Sciences University. *Disentangling bottom-up and top-down control during a critical period in the life history of an anadromous fish*.

10:30 AM COS 93-8 Brouwer, N[1] and S Kalisz[2], (1)University of PIttsburgh, (2)University of Pittsburgh. *The ups and downs of dormancy: the importance of accounting for prolonged dormancy in plant populations*.

10:50 AM COS 93-9 Brooks, ME[1], MR Darrigo[2], EM Bruna III[1], P Rubim[2] and M Uriarte[3], (1)University of Florida, (2)INPA, (3)Columbia University. *Variability in demographic rates on multiple scales: Heliconia acuminata in fragments of the Amazon*.

11:10 AM COS 93-10 Powell, KI and TM Knight, Washington University in St. Louis. *Effects of an invasive plant on the population dynamics of common and rare native species explain patterns of invasions on biodiversity*.

COS 94 - Restoration Ecology IV

C120, Oregon Convention Center

8:00 AM COS 94-1 Thorpe, AS[1], SS Perakis[2], TN Kaye[1] and C Catricala[2], (1)Institute for Applied Ecology, (2)US Geological Survey. *Nutrient limitation of native and invasive N_2-fixing plants in Willamette Valley prairies*.

8:20 AM COS 94-2 Havill, SA[1], S Schwinning[1], KG Lyons[2] and PS Williamson[3], (1)Texas State University, (2)Trinity University, (3)Texas State University-San Marcos. *Can prescribed fire be used to manage a C(4) invasive grass in a C(4) grassland?*.

8:40 AM COS 94-3 Gallagher, MK, University of California Irvine. *Seed source impacts germination and early establishment of dominant grasses in prairie restorations*.

9:00 AM COS 94-4 Cook, VK and KR Hickman, Oklahoma State University. *Integrating the fire-grazing interaction with herbicide treatments: A novel approach to controlling Lespedeza cuneata in the tallgrass prairie*.

9:20 AM COS 94-5 Silva, LCR[1], R Corrêa[2], T Doane[1] and W Horwath[3], (1)University of California, (2)University of Brasilia, (3)University of California, Davis. *Invasive grasses increase soil carbon sequestration from near zero to forest-like levels following the restoration of mined areas in central Brazil*.

9:40 AM Break

9:50 AM COS 94-6 Sutton, MP[1], M Macias[2] and DR Sandquist[1], (1)California State University, Fullerton, (2)California State University, Fullerton.. *Effect of exotic grass removal and native seed augmentation on re-establishment of common oak understory species on Santa Catalina Island, California*.

10:10 AM COS 94-7 Highland, SA[1] and MV Santelmann[2], (1) National Research Council, (2)Oregon State University. *Long-term plant community changes in restored and remnant Willamette valley wet prairie wetlands*.

10:30 AM COS 94-8 Powers, RC[1], JMH Knops[2] and CE Brassil[2], (1)University of Nebraska-Lincoln, (2)University of Nebraska. *Prairie diversity: Relative roles of biotic and abiotic factors in a managed grassland system*.

10:50 AM COS 94-9 Gallagher, KJ[1] and AS Thorpe[2], (1)Oregon State University, (2)Institute for Applied Ecology. *Recruitment predictors of endangered prairie species: A case study of Erigeron decumbens*.

11:10 AM COS 94-10 Hamman, ST, Center for Natural Lands Management. *Using arbuscular mycorrhizae in prairie restoration: Sources, methods, and short-term successes*.

COS 95 - Sustainability

C123, Oregon Convention Center

8:00 AM COS 95-1 Wilberding, S, Pennsylvania State University. *Configuring urban green infrastructure for flood mitigation using the EPA SUSTAIN model*.

8:20 AM COS 95-2 Rivrud, IM[1], K Sonkoly[2], R Lehoczki[2], S Csányi[2], GO Storvik[1] and A Mysterud[1], (1)Centre for Ecological and Evolutionary Synthesis (CEES), (2) Institute for Wildlife Conservation. *Towards sustainable trophy hunting: No evidence of a long term negative trend (1881-2008) of red deer antler sizes with restricted trophy hunting in Hungary*.

8:40 AM COS 95-3 Chan, KMA[1], TD Sisk[2], G Singh[1], J Tam[1], SC Klain[1], M Mach[1] and RG Martone[1], (1)University of British Columbia, (2)Northern Arizona University. *Barriers and incentives to engagement in public policy and discourse*.

9:00 AM COS 95-4 Chang, H[1], IW Jung[1], AL Strecker[1], D Wise[2], M Lafrenz[1], V Shandas[1], H Moradkhani[1], JA Yeakley[1], Y Pan[1], R Bean[1], M Psaris[1] and G Johnson[1], (1)Portland State University, (2)US Geological Survey. *Multidimensional assessment of the spatial distribution of water resource vulnerability in the Columbia River basin, USA*.

9:20 AM COS 95-5 Smith, WK[1], CC Cleveland[1], SC Reed[2], NL Miller[3] and SW Running[1], (1)University of Montana, (2)U.S. Geological Survey, (3)University of California Berkeley. *Bioenergy potential of the United States constrained by satellite observations of existing productivity*.

9:40 AM Break

9:50 AM COS 95-6 Molnar, JL, T Kroeger, RI McDonald and S Walsh, The Nature Conservancy. *Seeking solutions for business and nature: Incorporating ecosystem services into corporate decisions*.

10:10 AM COS 95-7 Kline, KL, Oak Ridge National Laboratory. *Methods for understanding land-use change dynamics and improving assessment of sustainable service provision: Models, science and causal analysis*.

10:30 AM COS 95-8 Graves, JH, Green Mountain College. *Recognizing biodiversity conservation as a sustainability initiative on the college campus: How the STARS system rates species decline*.

COS 96 - Urban Ecosystems II

E145, Oregon Convention Center

8:00 AM COS 96-1 McClintock, N[1], G Sposito[2] and N Sayre[2], (1)Portland State University, (2)University of California.

Loam, lead, and land use in Oakland, California: Towards an interdisciplinary study of urban soils.

8:20 AM COS 96-2 Bang, C[1], SH Faeth[2] and JL Sabo[1], (1)Arizona State University, (2)The University of North Carolina at Greensboro. *Plant-arthropod-bird relationships in a desert city*.

8:40 AM COS 96-3 Starry, O and J Lea-Cox, University of Maryland, College Park. *The effect of Sedum species on stormwater retention by greenroofs*.

9:00 AM COS 96-4 Litwhiler, ME[1], P Weis[2], FJ Gallagher[3] and C Holzapfel[4], (1)New Jersey Institute of Technology/Rutgers University, (2)UMDNJ - New Jersey Medical School, (3) Rutgers University, (4)Rutgers University Newark. *Heavy metal bioaccumulation and avian frugivory in an urban forest*.

9:20 AM COS 96-5 Meineke, EK[1], SD Frank[1], R Dunn[2] and JO Sexton[3], (1)North Carolina State University, (2)NCSU, (3) University of Maryland. *Hot in the city: Urban warming drives pest insect abundance*.

9:40 AM Break

9:50 AM COS 96-6 Sritrairat, S[1], PT McPhearson[1], MI Palmer[2] and R Karty[1], (1)The New School, (2)Columbia University. *Urban soil heterogeneity and plant-soil interactions in New York City parkland*.

10:10 AM COS 96-7 Enloe, HA[1], G Lockaby[1] and W Zipperer[2], (1)Auburn University, (2)USDA Forest Service. *Impact of land use change on biogeochemical cycling in the Florida Panhandle*.

10:30 AM COS 96-8 Cornell, JJ and CV Baxter, Idaho State University. *Effects of recreational land use on an urban fringe stream ecosystem*.

10:50 AM COS 96-9 White, M and JC Stromberg, Arizona State University. *Nutrients and nitrophiles: Effects of treated wastewater on dryland riparian plant communities*.

11:30 am-12 pm

ESA Presider/AV Training

C123, Oregon Convention Center

11:30 am-1:15 pm

Ecological Research as Education Network Luncheon (EREN Members and their guests only)

Three Sisters, Doubletree Hotel

ESA Environmental Justice Section Meeting and Discussion

Halsey, Doubletree Hotel

ESA Human Ecology Brown Bag Luncheon

Weidler, Doubletree Hotel

ESA Microbial Ecology Section Business Meeting

C124, Oregon Convention Center

USA National Phenology Network Brown Bag Lunch

VIP B, Oregon Convention Center

12 pm-1:15 pm

Ecology Letters Editorial Board Meeting

D130, Oregon Convention Center

12:15 pm-1: 15pm

PL 3 - ESA Recent Advances Lecture

Portland Blrm 256, Oregon Convention Center

1:30 pm-5 pm

SYMP 13 - Bioenergy and Biodiversity: Oxymoron or Opportunity?

Portland Blrm 251, Oregon Convention Center

Organized by: B Robertson

Moderator: DA Landis

The goal of this session is to explore the implications of future bioenergy production systems on biodiversity ecosystem services broadly, and ask if bioenergy production and biodiversity might co-exist in a complimentary fashion.

1:30 PM SYMP 13-1 Robertson, B, Smithsonian Conservation Biology Institute. *Biodiversity and agroenergy: The implications of energy sprawl*.

1:55 PM SYMP 13-2 Gratton, C[1], TD Meehan[1], BP Werling[2], H Liere[1], J Tuell[2], R Isaacs[2] and DA Landis[2], (1)University of Wisconsin - Madison, (2)Michigan State University. *Arthropod-mediated ecosystem services in bioenergy landscapes*.

2:20 PM SYMP 13-3 Schmidt, T, Michigan State University. *Microbial diversity and the flux of greenhouse gases from soils*.

2:45 PM SYMP 13-4 Malmstrom, CM[1], AC Schrotenboer[2], HM Alexander[3], A Busch[1] and P Trebicki[1], (1)Michigan State University, (2)Trinity Christian College, (3)University of Kansas. *Pathogen considerations in the deployment of bioenergy grass crops*.

3:10 PM Break

3:20 PM SYMP 13-5 Dale, VH, Oak Ridge National Laboratory. *Environmental and socioeconomic indicators of bioenergy sustainability*.

3:45 PM SYMP 13-6 Secchi, S, Southern Illinois University. *Integrating biofuel production and mitigation strategies into agricultural landscapes*.

4:10 PM SYMP 13-7 Firbank, L, University of Leeds. *Agriculture, bioenergy and ecosystem services: A British perspective*.

4:35 PM Discussion

SYMP 14 - The New Grand Challenge for Ecology: Sustaining Agriculture While Promoting Environmental Justice

Portland Blrm 252, Oregon Convention Center

Organized by: RG Smith (richard.smith@unh.edu), I Perfecto

Endorsed by: Human Ecology, Applied Ecology, Environmental Justice

Moderator: RG Smith

By providing a state-of-the-discipline overview from the foremost authorities in agroecology and socio-environmental science, this symposium will present a compelling case for why ecologists MUST engage in agricultural issues both domestically and internationally if the goals of preserving and sustaining the world's ecosystems are to be realized.

1:30 PM SYMP 14-1 Daily, GC, Stanford University. Reinventing agriculture to harmonize people and nature.

2:00 PM SYMP 14-2 Snapp, S1, R Bezner Kerr2 and K Isaacs1, (1)Michigan State University, (2)Cornell University.

Farming for services in Africa: Ecology and justice are the *foundation for a greener revolution*.

2:30 PM SYMP 14-3 Perfecto, I, University of Michigan. *Greening coffee production for biodiversity preservation and socio-environmental justice in Central America*.

3:00 PM Break

3:10 PM SYMP 14-4 Liebman, M, CA Chase, R Dietzel, SM Hirsh, MJ Helmers, ME Jarchow and LA Schulte, Iowa State University. *Using biodiversity to link agricultural productivity and profitability with environmental quality: Results from three field experiments in Iowa*.

3:40 PM SYMP 14-5 Mortensen, D[1], JF Egan[1], RG Smith[2], MR Ryan[1] and BD Maxwell[3], (1)The Pennsylvania State University, (2)University of New Hampshire, (3)Montana State University. *Potential agroecological implications of second generation herbicide resistant GM crops*.

4:10 PM SYMP 14-6 Buck, L and ID Bailey, Cornell University. *Facilitating multi-stakeholder innovations that integrate ecological conservation, agricultural production and livelihood goals*.

4:40 PM Discussion

WEDNESDAY

SYMP 15 - Tales From the Concrete Jungle: Understanding and Sustaining the Earth's Urban Biodiversity From Local to Global Scales

Portland Blrm 253, Oregon Convention Center

Organized by: MFJ Aronson (Myla.Aronson@hofstra.edu), M Goddard, M Katti, F La Sorte, CA Lepczyk, M McDonnell, CH Nilon, PS Warren, NSG Williams

Endorsed by: Urban Ecosystems Ecology

Moderator: MFJ Aronson

This symposium will bring together an international group of urban ecologists to identify: 1) global patterns of biodiversity within and across cities; 2) their environmental and social drivers; and 3) opportunities for using ecological knowledge to develop effective biodiversity management, restoration and planning strategies.

1:30 PM SYMP 15-1 McDonnell, MJ and AK Hahs, Australian Research Centre for Urban Ecology. *Challenges and opportunities of studying the comparative ecology of cities and towns*.

1:55 PM SYMP 15-2 La Sorte, F[1], MFJ Aronson[2], CH Nilon[3], M Katti[4], MA Goddard[5], C Lepczyk[6], PS Warren[7] and NSG Williams[8], (1)Cornell Lab of Ornithology, (2)Rutgers University, (3)University of Missouri, (4)California State University, Fresno, (5)University of Leeds, (6)University of Hawai'i at Manoa, (7)University of Massachusetts, (8) University of Melbourne. *Global patterns and correlates of urban biodiversity*.

2:20 PM SYMP 15-3 MacGregor-Fors, I, Instituto de Ecología, A.C.. *Birds and the city: General patterns in urban Mexico*.

2:45 PM SYMP 15-4 Warren, PS[1], SB Lerman[2], CH Nilon[3], M Katti[4], M Strohbach[1], R Danford[1], LS Adler[1] and RE Irwin[5], (1)University of Massachusetts, (2)USDA Forest Service Northern Research Station, (3)University of Missouri, (4)California State University, Fresno, (5) Dartmouth College. *Human influences on species interactions in urban communities: Insights from the LTER and ULTRA-Ex networks*.

3:10 PM Break

3:20 PM SYMP 15-5 Goddard, MA, AJ Dougill and TG Benton, University of Leeds. *The ecological and social drivers of biodiversity in residential landscapes at multiple scales: An interdisciplinary approach*.

3:45 PM SYMP 15-6 Williams, NSG[1], J Lundholm[2] and JS MacIvor[3], (1)University of Melbourne, (2)Saint Mary's University, (3)York University. *Do green roofs really benefit urban biodiversity?*.

4:10 PM SYMP 15-7 Chan, L, National Biodiversity Centre, National Parks Board of Singapore. *Applying the Singapore Index on cities' biodiversity*.

4:35 PM SYMP 15-8 Nilon, CH, University of Missouri. *Incorporating urban biodiversity theory and research into monitoring, design and planning*.

OOS 29 - Land Sparing or Land Sharing? Different Visions for Producing Enough Food While Preserving Ecosystems In a Changing World

A105, Oregon Convention Center

Organized by: D Gurian-Sherman (dgurian-sherman@ucsusa.org), J Vandermeer

Moderator: D Gurian-Sherman

This session evaluates contrasting approaches to agricultural sustainability that emphasize maximizing productivity on existing land, to spare refuges for biodiversity, or making agriculture itself friendlier to biodiversity, while providing enough food in coming decades.

1:30 PM OOS 29-1 Vandermeer, J, University of Michigan. *Agriculture and natural areas as parts of landscape matrices: Biodiversity in agricultural matrices*.

1:50 PM OOS 29-2 Chappell, MJ, Washington State University Vancouver. *"How far to the edge of the earth?" Land-sparing vs. land-sharing and other questionable questions*.

2:10 PM OOS 29-3 Drinkwater, LE, Cornell University. *Agricultural intensification in the Mississippi River Basin: Spatial heterogeneity, drivers and consequences*.

2:30 PM OOS 29-4 Egan, JF, The Pennsylvania State University. *Building multifunctional agricultural through the interplay between land-sparing and land-sharing practices*.

2:50 PM OOS 29-5 Herren, HR, Millennium Institute. *What agricultural systems will deliver on the need for a paradigm shift while addressing the sustainability development goals*.

3:10 PM Break

3:20 PM OOS 29-6 Mendenhall, CD[1], BJ Brosi[2], G Ceballos[3], MC Horner-Devine[4], MM Mayfield[5], F Oviedo Brenes[6], TH Ricketts[7], PR Ehrlich[1] and GC Daily[1], (1)Stanford University, (2)Emory University, (3)Universidad Nacional Autónoma de México, (4)University of Washington, (5)The University of Queensland, (6)Organization for Tropical Studies, (7)World Wildlife Fund. *Lessons from land sharing: Predicting and sustaining biodiversity in tropical countryside*.

3:40 PM OOS 29-7 Boucher, DH, Union of Concerned Scientists. *Land sparing: It's an economic question*.

4:00 PM OOS 29-8 Anderson-Teixeira, KJ[1], BD Duval[1], SP Long[2] and EH DeLucia[2], (1)University of Illinois, (2)University of Illinois at Urbana-Champaign. *Biofuels on the landscape: Is land sharing preferable to land sparing?*.

4:20 PM OOS 29-9 Pagnutti, C[1], C Bauch[2] and M Anand[2], (1) University of Western Ontario and University of Guelph, (2)University of Guelph and Princeton University. *The global landscape: outlook on a worldwide forest transition*.

4:40 PM OOS 29-10 Gennet, S, JK Howard, M Reynolds and SA Morrison, The Nature Conservancy. *Food safety farm practices: An emerging challenge for riparian and floodplain habitats and solutions from the Salinas River Valley, California*.

OOS 30 - Building Epistemological Bridges: Indigenous Knowledge-Holders and Western Ecologists Seek to Resolve Philosophical Impasses and Find Common Ground for Collaborative Research In Cross-Cultural Dialogue

A107, Oregon Convention Center

Organized by: D Martinez (iprn@snowcrest.net), T Chapin

Moderator: RL Trosper

This cross-cultural dialogue between Indigenous knowledge-holders and Western ecologists will probe some common Western assumptions about Indigenous cultures and their place in nature, with the aim of clarifying differences while emphasizing areas of complementarity in possible future collaborative research projects.

1:30 PM OOS 30-1 Martinez, D, Indigenous Peoples Restoration Network. *How Western ecologists and indigenous knowledge-holders from two stand-alone epistemologies can find common ground and join forces in ecological restoration and conservation biology*.

1:50 PM OOS 30-2 Vitousek, PM[1] and K Beamer[2], (1)Stanford University, (2)Kamehameha Schools. *Restoring cultural landscapes: Applying Hawaiian values in the twenty-first century*.

2:10 PM OOS 30-3 Nelson, M, The Cultural Conservancy. *Toward a poly-cognitive science: The Native ecologies of tribal canoe revitalization*.

2:30 PM OOS 30-4 Holland, EA, S Hemstock, V Iese, H Jacot Des Combe, A Koroi, L Limalevu, K McNamara, DF Ocherton, J Sutherland, M Wairiu, A De Ramon N'Yeurt and IC Coordinators, University of the South Pacific. *Integrating traditional ecological knowledge and western science in the development of climate change action plans in the Pacific Islands region*.

2:50 PM OOS 30-5 Hardison, P, The Tulalip Tribes. *The emics, etics, ethics and equity in the dialogue between worlds: Beyond bridges, integration, partnerships, scales and other common concepts in the utilization of traditional ecological knowledge*.

3:10 PM Break

3:20 PM OOS 30-6 Striplen, C, University of California, Berkeley/ San Francisco Estuary Institute. *The role of tribes in off-reservation watershed planning and management: A nascent programmatic approach in California*.

3:40 PM OOS 30-7 Smythe, W, Oregon Health & Science University. *Incorporating traditional ecological knowledge into geoscience education*.

4:00 PM OOS 30-8 Nabhan, GP, University of Arizona. *Traditional ecological knowledge of climate change: Reaffirimng natural history's multicultural roots to advance biocultural restoration*.

OOS 31 - Global Comparisons In Forest Dynamics: Results From Permanent Plots

B110, Oregon Convention Center

Organized by: J Lutz (jlutz@u.washington.edu), AJ Larson

Moderator: J Lutz

The Smithsonian worldwide permanent plot network allows novel comparisons of dynamics across ecosystems. This session emphasizes comparative studies that elucidate commonalities and associated ecological principles with broad generality, and conversely, that reveal divergent or individualistic patterns among sites, suggesting a hierarchal structure to the underlying mechanisms that regulate forest dynamics.

1:30 PM OOS 31-1 Ostertag, R[1], S Cordell[2], TW Giambelluca[3], CP Giardina[2], FM Inman-Narahari[4], CM Litton[3], L Sack[4] and JR VanDeMark[1], (1)University of Hawaii at Hilo, (2) USDA Forest Service, (3)University of Hawaii at Manoa, (4)UCLA. *Decoupling of tropical forest structure and diversity: Stand characteristics, growth, and mortality in wet and dry Hawaiian forests and global comparisons*.

1:50 PM OOS 31-2 Kenfack, D[1], GB Chuyong[2] and D Thomas[3], (1)Center for Tropical Forest Science & Smithsonian Global Earth Observatory, (2)University of Buea, (3) Oregon State University. *Tree mortality and growth among topographical habitats in a diverse tropical rain forest in Cameroon*.

2:10 PM OOS 31-3 Thomas, SC and J Schurman, University of Toronto. *Gymnosperms vs. angiosperms in an intact mixed forest ecosystem: Resources or beavers*.

2:30 PM OOS 31-4 Hao, Z and D Xing, Institute of Applied Ecology, Chinese Academy of Sciences. *Decomposing uncertainty in species abundances in tropical and temperate forests*.

2:50 PM OOS 31-5 Johnson, DJ[1], NA Bourg[2], RW Howe[3], WJ McShea[2], AT Wolf[3] and K Clay[1], (1)Indiana University, (2)Smithsonian Institution - National Zoological Park, (3) University of Wisconsin-Green Bay. *Temperate forest regeneration dynamics: a comparison of three mapped forests*.

3:10 PM Break

3:20 PM OOS 31-6 Read, J[1] and T Jaffré[2], (1)Monash University, (2)IRD, UMR AMAP. *Monodominance in Nothofagus (Nothofagaceae) forests from contrasting latitudes: Insights from permanent plots into mechanisms of persistence in species-rich forests*.

3:40 PM OOS 31-7 Wang, X, Institute of Applied Ecology, Chinese Academy of Sciences. *Effects of intrinsic and extrinsic factors on tree survival in an old-growth temperate forest, northeastern China*.

4:00 PM OOS 31-8 De Cáceres, M[1], P Legendre[1], R Valencia[2], M Cao[3], LW Chang[4], GB Chuyong[5], R Condit[6], Z Hao[7], CF Hsieh[8], SP Hubbell[9], D Kenfack[10], K Ma[11], X Mi[11], NSM Noor[12], AR Kassim[12], SH Su[4], IF Sun[13], D Thomas[14], W Ye[15] and F He[16], (1)Université de Montréal, (2)Pontificia Universidad Católica del Ecuador, (3)Xishuangbanna Tropical Botanical Garden, CAS, (4) Taiwan Forestry Research Institute, (5)University of Buea, (6)Smithsonian Tropical Research Institute, (7)Institute of Applied Ecology, Chinese Academy of Sciences, (8) National Taiwan University, (9)University of California, (10)Smithsonian Center for Tropical Forest Science, (11) Institute of Botany, the Chinese Academy of Sciences, (12)Forest Research Institute Malaysia, (13)Tunghai University, (14)Oregon State University, (15)South China Botanical Garden, Chinese Academy of Sciences, China, (16)University of Alberta. *The variation of tree beta diversity across a global network of forest plots*.

4:20 PM OOS 31-9 Eitzel, MV[1], JJ Battles[2], R York[1], J Knape[2] and P de Valpine[3], (1)UC Berkeley, (2)University of California, Berkeley, (3)University of California - Berkeley. *Estimating tree growth models from complex forest monitoring permanent plot data*.

4:40 PM OOS 31-10 Mobley, ML and DD Richter, Duke University. *Changes in dead plant carbon over 50 years of old-field forest development*.

OOS 32 - Seeking Conceptual Equity In Forest Carbon Balances: Looking Beyond NPP

B113, Oregon Convention Center

Organized by: RM Scheller, ME Harmon

Moderator: RM Scheller

We will present cutting-edge research and discuss the challenges of projecting forest carbon dynamics including empirical relationships and robust models that integrate net primary productivity, detritus generation, heterotrophic respiration, and the residence times of various soil organic carbon components.

1:30 PM OOS 32-1 Harmon, ME, Oregon State University. *An integrated perspective of woody carbon in forests: The live to soil continuum*.

1:50 PM OOS 32-2 Woodall, CW[1], GM Domke[2] and JE Smith[3], (1)USDA Forest Service, Northern Research Station, (2) USDA Forest Service, (3)US Forest Service, Northern Research Station. *Attributes of dead wood carbon stocks across forests of the U.S.*.

2:10 PM OOS 32-3 Araujo, PI[1] and AT Austin[2], (1)University of Buenos Aires and IFEVA-CONICET, (2)University of Buenos Aires, IFEVA-CONICET. *A shady business: Effects of pine afforestation on litter decomposition along a precipitation gradient in Patagonia, Argentina*.

2:30 PM OOS 32-4 Kleber, M, Oregon State University. *How important is molecular structure for the decomposition of soil organic matter?*.

2:50 PM OOS 32-5 Phillips, C, Lawrence Livermore National Laboratory. *Forest carbon cycling: Insights gained from radiocarbon measurements*.

3:10 PM Break

3:20 PM OOS 32-6 Scheller, RM, Portland State University. *Modeling spatial, temporal, and taxonomic heterogeneity: Landscape-scale estimates of forest C dynamics*.

3:40 PM OOS 32-7 Boisvenue, C[1], W Kurz[1], G Stinson[2], C Smyth[1], J Metsaranta[1] and E Neilson[1], (1)Canadian Forest Service, (2)Pacific Forestry Centre, Canadian Forest Service. *Regional modelling of forest carbon dynamics for national reporting*.

4:00 PM OOS 32-8 Loudermilk, L[1], RM Scheller[1], P Weisberg[2], J Yang[2], AE Stanton[3], C Skinner[4] and T Dilts[2], (1) Portland State University, (2)University of Nevada-Reno, (3)Research Botanist, (4)US. Forest Service, Pacific SW Research Station. *Climate change and landscape legacy effects on forest carbon dynamics and wildfires in the Lake Tahoe Basin*.

OOS 33 - Growing Pains: Taking Ecology Into the 21st Century

A106, Oregon Convention Center

Organized by: C Strasser (carly.strasser@ucop.edu), J Tewksbury, S Hampton

Moderator: C Strasser

A discussion of the most important steps for ecology to take to address the complex problems set before our field by society

1:30 PM OOS 33-1 Tewksbury, J[1], S Hampton[2], TA Wheeler[3] and K Rowell[1], (1)University of Washington, (2)National Center for Ecological Analysis and Synthesis, (3)McGill University. *21st Century natural history – no longer alone on the Beagle*.

1:50 PM OOS 33-2 Hampton, S[1], C Strasser[2], JJ Tewksbury[3], WK Gram[4], A Budden[5], A Batcheller[6], C Duke[7] and JH Porter[8], (1)National Center for Ecological Analysis and Synthesis, (2)University of California Office of the President, (3)University of Washington, (4)National Ecological Observatory Network (NEON, Inc.), (5) DataONE, University of New Mexico, (6)Northrop Grumman Corporation, (7)Ecological Society of America, (8)Univeristy of Virginia. *Big data and the future for ecology*.

2:10 PM OOS 33-3 Olson, R, Filmmaker,. *Storyomics: Proof that scientists evolved from humans*.

2:30 PM OOS 33-4 Kareiva, P[1], V Matzek[2], J Kiesecker[1] and JL Molnar[1], (1)The Nature Conservancy, (2)Santa Clara University. *Beyond doomsday ecology: What if engaging with business were the answer for ecological science*.

2:50 PM OOS 33-5 Ruckelshaus, M, Natural Capital Project. *I'm with stupid: The power of cross-sector partnerships for conservation*.

3:10 PM Break

3:20 PM OOS 33-6 Chapin III, FS[1], E Fernandez[2], STA Pickett[3] and ME Power[4], (1)University of Alaska Fairbanks, (2) Stanford University, (3)Cary Institute of Ecosystem Studies, (4)University of California, Berkeley. *Bridging the disciplinary gap: Roles for individuals, professional societies, and social movements*.

3:40 PM OOS 33-7 Byrnes, JE, National Center for Ecological Analysis and Synthesis. *Taking the ecological conversation online*.

4:00 PM OOS 33-8 Harris, N, University of California, Berkeley. *Shaping the future: A view from conservation and management*.

4:20 PM OOS 33-9 Kearns, F, Pew Environment Group. *Working with conflict: A missing piece of science communication and community engagement puzzle*.

4:40 PM OOS 33-10 Swanson, AB, M Kosmala and C Packer, University of Minnesota. *Serengeti Live: Engaging the public in science through exploration and discovery*.

OOS 34 - Global Ecology to Address Global-Scale Environmental Change: Results From the Nutrient Network

B116, Oregon Convention Center

Organized by: EM Lind (elind@umn.edu), ET Borer

Moderator: ET Borer

This session presents a spectrum of results from a globally distributed experiment designed to answer fundamental questions about human impacts on grassland ecosystems, including the roles of increased nutrient availability, vertebrate herbivory, and species invasions and extirpations on community dynamics and ecosystem processes.

1:30 PM OOS 34-1 Anderson, TM[1] and N Network[2], (1)Wake Forest University, (2)Multiple Institutions. *Getting over the hump: Multivariate control of the productivity-diversity relationship*.

1:50 PM OOS 34-2 Harpole, WS[1] and N Network[2], (1)Iowa State University, (2)Multiple Institutions. *Nutrients destroy niches*.

2:10 PM OOS 34-3 Gruner, DS[1], ET Borer[2], H Hillebrand[3] and N Network[4], (1)University of Maryland, (2)University of Minnesota, (3)University of Oldenburg, (4)Multiple Institutions. *Interactive control of global grassland productivity and diversity by consumers and nutrients*.

2:30 PM OOS 34-4 Davies, KF[1], N Network[2] and BD Working Group[3], (1)University of Colorado, (2)Multiple Institutions, (3)NCEAS. *Relative influence of deterministic versus stochastic community assembly under increasing productivity*.

2:50 PM OOS 34-5 Lind, EM[1], ET Borer[1], EW Seabloom[1] and N Network[2], (1)University of Minnesota, (2)Multiple Institutions. *Constraints in grassland plant communities: A growth-defense tradeoff is the norm*.

3:10 PM Break

3:20 PM OOS 34-6 Orrock, JL[1] and N Network[2], (1)University

of Wisconsin - Madison, (2)Multiple Institutions. *Large-scale studies reveal strong relationships between climatic conditions and seed predation across central North America*.

3:40 PM OOS 34-7 Williams, RJ[1], KS Hofmockel[1], WS Harpole[1] and N Network[2], (1)Iowa State University, (2)Multiple Institutions. *A global scale analysis of grassland soil stoichiometry using the Nutrient Network Global Research Cooperative*.

4:00 PM OOS 34-8 Firn, JL[1] and N Network[2], (1)Queensland University of Technology, (2)Multiple Institutions. *Herbaceous species respond differently to increased nutrients and grazing exclusion at sites away from home*.

4:20 PM OOS 34-9 Seabloom, EW[1], ET Borer[1], E Cleland[2], JL Firn[3], WS Harpole[4], AS MacDougall[5], EM Lind[1], S Prober[6] and N Network[7], (1)University of Minnesota, (2)University of California – San Diego, (3)Queensland University of Technology, (4)Iowa State University, (5) University of Guelph, (6)CSIRO, (7)Multiple Institutions. *Universal drivers of exotic species dominance in terrestrial ecosystems: The origin of species does matter*.

4:40 PM OOS 34-10 Cleary, MJ, I Burke, WK Lauenroth and U Norton, University of Wyoming. *The role of dissolved organic nitrogen and nitrogen reallocation along a precipitation gradient in US grasslands*.

OOS 35 - How Mountains Maintain Diversity: Evaluating Climate Refugia From Genetics, Paleoecology, and Models

C124, Oregon Convention Center

Organized by: DG Gavin, S Dobrowski, FS Hu

Moderator: DG Gavin

The past offers much insight into the long-term persistence of populations through significant climate change, but reconstructing past populations on the landscape requires an interdisciplinary approach.

1:30 PM OOS 35-1 Hampe, A, INRA. *Climate refugia: Archive and source of biodiversity*.

1:50 PM OOS 35-2 Henne, PD[1], S Samartin[2], P Kaltenrieder[1], O Heiri[2] and W Tinner[1], (1)University of Bern, (2)University of Bern, Switzerland. *Combining paleoecology with a dynamic landscape model to uncover a cryptic full-Glacial refuge in Northern Italy*.

2:10 PM OOS 35-3 Clegg, BF[1], MC Fernandez[1], KD Heath[2] and FS Hu[1], (1)University of Illinois at Urbana-Champaign, (2)University of Illinois, Urbana-Champaign. *Fossil and genetic evidence of glacial refugia for the boreal-forest species of North America*.

2:30 PM OOS 35-4 Gugger, PF[1], M Ikegami[2] and VL Sork[3], (1) University of California, (2)University of California, Santa Barbara, (3)University of California, Los Angeles. *Late Quaternary demography and selection shape modern genetic structure of California valley oak: Insights from phylogeography, ecological niche modeling, and multivariate statistics*.

2:50 PM OOS 35-5 Dobrowski, S, University of Montana. *Climate displacement vectors of the contiguous United States during the 20th century: Implications for identifying climate refugia*.

3:10 PM Break

3:20 PM OOS 35-6 Ackerly, DD[1] and W Cornwell[2], (1)University of California, (2)Vrije University. *Topoclimates and plant distributions: Modeling the impacts of climate change on Mediterranean-climate vegetation*.

3:40 PM OOS 35-7 Herring, EM and DG Gavin, University of Oregon. *Climate and vegetation in a putative Pleistocene refugium in northern Idaho inferred from sediment records*.

4:00 PM OOS 35-8 Ford, KR, AK Ettinger, JD Lundquist, MS Raleigh and J Hille Ris Lambers, University of Washington. *Spatial heterogeneity in ecologically relevant climate variables at coarse and fine scales*.

4:20 PM OOS 35-9 Rodríguez-Sánchez, F[1], DA Coomes[1] and DW Purves[2], (1)University of Cambridge, (2)Microsoft Research Cambridge. *An integrative model of species range dynamics to assess responses to past climate changes*.

4:40 PM OOS 35-10 Forester, BR[1], EG DeChaine[2] and AG Bunn[2], (1)Duke University, (2)Western Washington University. *Integrating ensemble species distribution modeling and statistical phylogeography to inform projections of climate change impacts on species distributions*.

COS 97 - Aquatic-Terrestrial Linkages II

A103, Oregon Convention Center

1:30 PM COS 97-1 Hessing-Lewis, M[1], B Keeling[1], AK Salomon[1], A Gerrard[1], D Lepofsky[1], K Lertzman[1], C Housty[2], G Housty[2], W Gladstone[2], K Gladstone[2] and R Moody[2], (1)Simon Fraser University, (2)Heilstuk First Nation. *Pacific herring (Clupea pallasi) subsidies to nearshore socio-ecological systems*.

1:50 PM COS 97-2 Hocking, MD[1], NK Dulvy[1], JD Reynolds[1], RA Ring[2] and TE Reimchen[3], (1)Simon Fraser University, (2)Royal BC Museum, (3)University of Victoria. *Salmon subsidize an escape from a size spectrum*.

2:10 PM COS 97-3 Wellnitz, TA, EC Merten, ZR Snobl, CM Wojan and O Xiong, University of Wisconsin - Eau Claire. *Do stream logjams enhance aquatic export to riparian habitats?*.

2:30 PM COS 97-4 Chaves-Ulloa, R[1], NA Baer[2], CY Chen[1], KL Cottingham[1], HA Ewing[3], HJ Roebuck[1], BW Taylor[1] and KC Weathers[4], (1)Dartmouth College, (2)Colby-Sawyer College, (3)Bates College, (4)Cary Institute of Ecosystem Studies. *Movement of mercury from streams to terrestrial consumers by aquatic insects across a gradient of land cover types and dissolved organic carbon*.

2:50 PM COS 97-5 Hoekman, D, J Dreyer and C Gratton, University of Wisconsin - Madison. *Midges deliver aquatic resources and enrich terrestrial arthropod food webs*.

3:10 PM Break

3:20 PM COS 97-6 Dreyer, J[1], PA Townsend[1], JC Hook III[1], MJ Vander Zanden[2], D Hoekman[1], A Singh[1] and C Gratton[1], (1)University of Wisconsin - Madison, (2)University of Wisconsin-Madison. *Modeling masses of midges: Following the path of aquatic insects from a lake onto land*.

3:40 PM COS 97-7 Devotta, DA[1], JM Fraterrigo[1], P Walsh[2], S Lowe[2], DE Schindler[3], T Sands[4] and FS Hu[1], (1) University of Illinois at Urbana-Champaign, (2)US Fish and Wildlife Service, (3)University of Washington, (4) Alaska Department of Fish and Game. *Evaluating alder and salmon as drivers of nutrient availability and lake productivity in southwestern Alaska*.

4:00 PM COS 97-8 Walsh, R, University of California, Davis. *Enhancing or essential? Aquatic insect availability influences the diet and reprodutive success of a riparian songbird*.

4:20 PM COS 97-9 Lisi, PJ and DE Schindler, University of Washington. *Landscape characteristics drive the schedule of salmon subsidies and species they support in terrestrial ecosystems*.

4:40 PM COS 97-10 Brett, MT[1], G Arhonditsis[2], S Chandra[3] and M Kainz[4], (1)University of Washington, (2)University of Toronto, (3)University of Nevada, Reno, (4)Donau-Universität Krems. *The potential importance of terrestrial derived dissolved carbon inputs for lake zooplankton production: A mass balance assessment*.

COS 98 - Behavior: Foraging And Diet

B112, Oregon Convention Center

1:30 PM COS 98-1 Crawford, TG[1], LR Gerber[1] and CM Kurle[2], (1)Arizona State University, (2)University of California San Diego. *Intracolony niche partitioning among California sea lions in the Gulf of California, Mexico*.

1:50 PM COS 98-2 Tran, MV, Michigan State University. *Behavioral reactions to novel food odors by intertidal hermit crabs*.

2:10 PM COS 98-3 Boucek, RE and JS Rehage, Florida International University. *No free lunch: Resource partitioning among an estuarine and two freshwater mesoconsumers at a marsh-mangrove ecotone in response to a seasonal marsh subsidy*.

2:30 PM COS 98-4 Bockoven, AA, CJ Coates and MD Eubanks, Texas A&M University. *Intraspecific behavioral variation and the red imported fire ant foraging gene*.

2:50 PM COS 98-5 Steensma, KMM and SA Utsumi, Michigan State University. *Is the grass always greener? Foraging decisions of dairy cattle (Bos taurus) in a free-choice pasture system*.

3:10 PM Break

3:20 PM COS 98-6 Riginos, C, Princeton University. *Fear or food? Climate alters the landscape of fear in an African savanna*.

3:40 PM COS 98-7 Harwood, GP, University of British Columbia. *How cooperation and colony size affect prey size use among sympatric social spider species*.

4:00 PM COS 98-8 Newbury, RK and KE Hodges, University of British Columbia Okanagan. *A dietary based energetics model for bobcats (Lynx rufus) in a deep snow environment*.

4:20 PM COS 98-9 Russell, MC, JG Lambrinos and G Ellen, Oregon State University. *Carabidae in conservation biological control: The distributions, activity patterns, and feeding habits of common western Oregon ground beetles, and their relation to pest predation risk across agricultural landscapes*.

4:40 PM COS 98-10 Fogarty, SP, UC Davis. *Emergent frequency-dependent social foraging: Individual variation in shoaling rules enhances social foraging success*.

COS 99 - Biodiversity II

B114, Oregon Convention Center

1:30 PM COS 99-1 Gotelli, NJ[1] and AM Ellison[2], (1)University of Vermont, (2)Harvard Forest (Harvard University). *Reconciling museum records and ecological surveys in biogeographic analyses of New England's ant fauna*.

1:50 PM COS 99-2 Scheiner, SM, National Science Foundation. *A metric of biodiversity that integrates abundance, phylogeny, and function*.

2:10 PM COS 99-3 Letourneau, DK[1], SG Bothwell Allen[1] and JO Stireman III[2], (1)University of California-Santa Cruz, (2) Wright State University. *Do perennial habitat fragments support greater parasitoid diversity and pest regulation in ephemeral crops?*.

2:30 PM COS 99-4 Tan, J and L Jiang, Georgia Institute of Technology. *Temporal niche dynamics promote biodiversity: An experimental demonstration*.

2:50 PM COS 99-5 Post, DM[1], JK Bailey[2], S des Roches[3], AP Hendry[4], MT Kinnison[5], EP Palkovacs[6], J Schweitzer[2], NE Turley[7] and M Vellend[8], (1)Yale University, (2)University of Tennessee, Knoxville, (3)University of Idaho, (4)McGill University, (5)University of Maine, (6)Duke University, (7) University of Toronto, (8)Université de Sherbrooke. *The ecological importance of diversity within species*.

3:10 PM Break

3:20 PM COS 99-6 Benavides, JC[1] and DH Vitt[2], (1)Oregon State University, (2)Southern Illinois University. *The changing face of Andean Peatlands: The effects of climate and human disturbance on ecosystem structure and function*.

3:40 PM COS 99-7 Veldman, JW[1], LA Brudvig[2] and WB Mattingly[3], (1)University of Wisconsin, (2)Michigan State University, (3)University of Wisconsin-Madison. *Differing effects of savanna trees and forest trees on savanna understory plant diversity*.

4:00 PM COS 99-8 Freitas, H, S Costa, H Castro, AM Azul and A Gouveia, Center for Functional Ecology. *Land use and biotic factors contribute to the ecological sustainability of Montado Ecosystems*.

4:20 PM COS 99-9 Sokol, ER[1], JE Barrett[1], JM Hoch[2] and JC Trexler[2], (1)Virginia Tech, (2)Florida International University. *The influence of ecological context over community assembly processes and diversity patterns*.

4:40 PM COS 99-10 Pattengill-Semmens, CV[1], BX Semmens[2] and J Nichols[1], (1)Reef Environmental Education Foundation (REEF), (2)UC San Diego. *Patterns of fish biodiversity in the Salish Sea*.

COS 100 - Biogeochemistry: Aboveground-Belowground Interactions II

B115, Oregon Convention Center

1:30 PM COS 100-1 Stolt, MH[1], MC Ricker[2] and M Richardson[3], (1)University of Rhode Island, (2)Auburn University, (3)USDA-NRCS. *Soil organic carbon flux in riparian ecosystems*.

1:50 PM COS 100-2 Nakayama, T, National Institute for Environmental Studies (NIES), and Centre for Ecology & Hydrology (CEH). *Toward better understanding of heterogeneous succession process in mire*.

2:10 PM COS 100-3 MacKenzie, MD, PT Sorenson, SA Quideau and SM Landhausser, University of Alberta. *Spatial patterns of stand characteristics and soil nutrient availability in reclaimed boreal forests*.

2:30 PM COS 100-4 Martinez, NG, RL Sinsabaugh and DE Northup, University of New Mexico. *Extracellular enzyme activities in soils and ferromanganese deposits from several New Mexican caves*.

2:50 PM COS 100-5 Pierfelice, KN[1], G Lockaby[1], WH Conner[2] and KW Krauss[3], (1)Auburn University, (2)Clemson University, (3)U.S. Geological Survey. *Net primary productivity of tidal freshwater forested wetlands along a salinity gradient in South Carolina*.

3:10 PM Break

3:20 PM COS 100-6 Hawlena, D[1], MS Strickland[2], MA Bradford[2] and OJ Schmitz[2], (1)The Hebrew University of Jerusalem, (2)Yale University. *Fear of predation slows plant-litter decomposition*.

3:40 PM COS 100-7 Poinsatte, JP[1], JG Bishop[1], JL Smith[2] and RD Evans[1], (1)Washington State University, (2)USDA-ARS, Washington State University. *Carbon and nitrogen mass balance during primary succession on Mount St. Helens*.

4:00 PM COS 100-8 Triebwasser, DJ[1], N Tharayil[1], CM Preston[2]

and P Gerard[1], (1)Clemson University, (2)Pacific Forestry Centre. *Enzyme inhibition capacity of tannins as affected by their molecular identity and site history*.

4:20 PM COS 100-9 Wurzburger, N[1] and SJ Wright[2], (1)University of Georgia, (2)Smithsonian Tropical Research Institute. *Root functional traits reveal complexity in soil nutrient limitation in a lowland tropical forest*.

4:40 PM COS 100-10 Fricks, BE[1], MD Wallenstein[1], FJ Calderon[2] and W Gao[1], (1)Colorado State University, (2)USDA-ARS Central Great Plains Research Station. *UV-B exposure alters the lignin chemistry of plant litter: a potential mechanism for UV-B effects on decomposition rates in arid ecosystems*.

COS 101 - Biogeochemistry: C And N Cycling In Response To Global Change II

D135, Oregon Convention Center

1:30 PM COS 101-1 Pendall, EG[1], Y Carrillo[1], JL Heisler-White[2], FA Dijkstra[3], J Morgan[4], DG Williams[1], MD Wallenstein[5], A Brennan[1] and K Ogle[6], (1)University of Wyoming, (2) TriHydro, Inc, (3)University of Sydney, (4)USDA-ARS, (5) Colorado State University, (6)Arizona State University. *Carbon cycling in a native grassland exposed to elevated CO_2 and warming: A role for priming*.

1:50 PM COS 101-2 Tucker, C[1], K Ogle[2] and EG Pendall[1], (1) University of Wyoming, (2)Arizona State University. *Carbon-use efficiency explains thermal acclimation of soil respiration*.

2:10 PM COS 101-3 Lilleskov, EA, USDA Forest Service. *Non-destructive field method reveals diel hysteresis in ectomycorrhizal fungal temperature-respiration relationships*.

2:30 PM COS 101-4 Trahan, NA[1], DJP Moore[2], B Brayden[1], P Wilkes[3], T Quaife[4], AR Desai[5], J Negron[6], B Stephens[7], K Elder[8] and RK Monson[2], (1)University of Colorado, Boulder, (2)University of Arizona, (3)King's College, (4) University of Exeter, (5)University of Wisconsin, (6)United States Forest Service, (7)National Center for Atmospheric Research, (8)USDA Forest Service. *Mountain pine beetle induced mortality impacts on forest carbon balance*.

2:50 PM COS 101-5 Graham, EB[1], DE Wolfe[2] and PD Blanken[3], (1) University of Colorado at Boulder, (2)National Oceanic and Atmospheric Administration, (3)University of Colorado, Boulder. *Regional eddy covariance measurements of CO_2 exchange over an anthropogenically-altered landscape from a tall tower near Denver, Colorado*.

3:10 PM Break

3:20 PM COS 101-6 See, CR, RD Yanai and BA Quintero, SUNY College of Environmental Science and Forestry. *Foliar resorption ratios suggest greater phosphorus limitation with stand age in White Mountain National Forest*.

3:40 PM COS 101-7 Gerber, S[1], LO Hedin[2], SG Keel[2], SW Pacala[2] and E Shevliakova[2], (1)University of Florida IFAS, (2) Princeton University. *Land-use feedbacks constrain the land's uptake of anthropogenic CO_2*.

4:00 PM COS 101-8 McLauchlan, KK[1], JJ Williams[1], JM Craine[1] and ES Jeffers[2], (1)Kansas State University, (2)University of Oxford. *Global nitrogen cycling changed during the Holocene as terrestrial ecosystems accumulated carbon*.

4:20 PM COS 101-9 Taylor, PG[1], WR Wieder[2], CC Cleveland[3] and AR Townsend[4], (1)University of Colorado, (2)National Center for Atmospheric Research, (3)University of Montana, (4)University of Colorado, Boulder. *Hotspots of tropical rainforest aboveground production and biomass: Mechanisms and patterns*.

4:40 PM COS 101-10 Bridgham, SD[1], R Ye[1], JK Keller[2], SA McAllister[1], Q Jin[1] and BJM Bohannan[1], (1)University of Oregon, (2)Chapman University. *Why does the efficiency of methane production vary so much among peatlands?*.

COS 102 - Climate Change: Communities I

F150, Oregon Convention Center

1:30 PM COS 102-1 Kimball, S, S Parker, GC Winston, A Fellows and M Goulden, University of California, Irvine. *Type conversions in response to precipitation and nitrogen manipulations in Southern California grassland and Coastal Sage Scrub systems*.

1:50 PM COS 102-2 Sudderth, EA[1], E Dixon[1], KM Byrne[2], LA Gherardi[3], LG Reichmann[3], PB Adler[4], EL Brodie[5] and OE Sala[3], (1)Brown University, (2)Colorado State University, (3)Arizona State University, (4)Utah State University, (5)Lawrence Berkeley National Laboratory. *Microbial community, fungal hyphae, and plant productivity responses to altered rainfall in Western US grasslands*.

2:10 PM COS 102-3 Rudolf, VHW and M Singh, Rice University. *Disentangling climate change effects on species interactions: Body size mediates interaction of temperature and phenological shifts*.

2:30 PM COS 102-4 White, SR, EW Bork and JF Cahill Jr., University of Alberta. *Search for generality in grassland responses to climate change: replicated experiment in three prairie sites*.

2:50 PM COS 102-5 Hergott, NM, CR Jackson and JD Hoeksema, University of Mississippi. *Linking the functional diversity of ectomycorrhizal fungal species to soil carbon dynamics and the genetics of a foundational tree species*.

3:10 PM Break

3:20 PM COS 102-6 Lynch, EA[1], SC Hotchkiss[2], R Calcote[3] and MA Tweiten[4], (1)Luther College, (2)University of Wisconsin, (3)University of Minnesota, (4)University of Wisconsin - Madison. *Climate change and inertia: A long-term perspective from pine and oak-dominated communities in northwestern Wisconsin*.

3:40 PM COS 102-7 Farrer, EC[1] and KN Suding[2], (1)University of California, Berkeley, (2)University of California at Berkeley. *Carbon allocation to soil microbes and storage differs in a winner and loser species during nitrogen deposition*.

4:00 PM COS 102-8 Tucker, CM[1], S Wadgymar[1], K Carscadden[1] and MW Cadotte[2], (1)University of Toronto, (2)University of Toronto - Scarborough. *Changes in flowering phenology in response to warming are constrained by community interactions*.

4:20 PM COS 102-9 Yavit, NM, Wake Forest University. *Compositional trends in the primary floodplain forest of Manu National Park, Peru*.

4:40 PM COS 102-10 Menke, SB[1], J Harte[2] and RR Dunn[3], (1) Lake Forest College, (2)University of California, Berkeley, (3)NCSU. *Long term study of shifts in ant community composition over a naturally occuring climate gradient and experimental heating manipulation*.

COS 103 - Climate Change: Plants IV

F151, Oregon Convention Center

1:30 PM COS 103-1 White, DA1 and JM Visser2, (1)Loyola University New Orleans, (2)University of Louisiana at Lafayette. Multiple effects of the Mississippi River's water on annual wetland plant biomass within it's bird-foot delta over a 2.5 decade study period - still mainly a climate impact.

1:50 PM COS 103-2 Turner, JB1, N Fetcher2, JB McGraw1, JL Chandler1, CC Bennington3, GR Shaver4 and MC

Vavrek5, (1)West Virginia University, (2)Wilkes University, (3)Stetson University, (4)Marine Biological Laboratory, (5)Glenville State College. A test of the adaptational lag hypothesis using a long-term reciprocal transplant study with an arctic sedge (Eriophorum vaginatum).

2:10 PM COS 103-3 Gerhart, LM1, JM Harris2 and JK Ward1, (1)University of Kansas, (2)Natural History Museum of Los Angeles County. Growth responses of glacial and modern trees to changes in atmospheric [CO2] since the Last Glacial Maximum.

2:30 PM COS 103-4 Prevéy, JS and T Seastedt, University of Colorado at Boulder. *Precipitation change alters community composition of a semi-arid grassland*.

2:50 PM COS 103-5 Ladwig, LM, SL Collins and WT Pockman, University of New Mexico. *Regrowth of desert shrubs following a natural extreme cold event*.

3:10 PM Break

3:20 PM COS 103-6 Wertin, TM, SC Reed and J Belnap, USGS. *Increased temperature negatively affects carbon assimilation and growth of Achantherum hymenoides bunchgrass*.

3:40 PM COS 103-7 Copeland, SM and SP Harrison, University of California, Davis. *Effects of species interactions on plant topographic realized niche across an elevation gradient*.

4:00 PM COS 103-8 Rehm, E and KJ Feeley, Department of Biological Sciences. *Will above-timberline forest patches facilitate the upward migration of Andean montane cloud forests in response to climate change*.

4:20 PM COS 103-9 Galvez, D, SM Landhausser and MT Tyree, University of Alberta. *Carbon and water dynamics of two Populus species under drought stress: The role of hydraulic transport as modulator of carbon reserves*.

4:40 PM COS 103-10 Pattison, RR Jr.[1] and JM Welker[2], (1)Pacific Northwest Research Station, (2)University of Alaska. *Long-term reduced snow limits leaf gas exchange in three dominant species of moist acidic tundra in northern Alaska*.

COS 104 - Community Disturbance And Recovery I

D136, Oregon Convention Center

1:30 PM COS 104-1 Abella, SR[1], WW Covington[2], JE Crouse[2] and JD Springer[2], (1)University of Nevada Las Vegas, (2) Northern Arizona University. *Asymmetrical application of ecological theory along a forest landscape ecosystem gradient*.

1:50 PM COS 104-2 Campbell, EY[1], RW Merritt[2], KW Cummins[3] and ME Benbow[4], (1)Michigan State University (currently at: Oregon State University), (2)Michigan State University, (3)Humboldt State University, (4)University of Dayton. *Spatial and temporal shifts of macroinvertebrates within spawning and non-spawning habitats during a salmon run in Southeast Alaska*.

2:10 PM COS 104-3 Turner, MG[1], DC Donato[1], WH Romme[2] and DB Tinker[3], (1)University of Wisconsin, (2)Colorado State University, (3)University of Wyoming. *Warmer climate and increased fire frequency in Greater Yellowstone: Does field evidence suggest that forest resilience could change?*.

2:30 PM COS 104-4 Hougen, KE and GR Matlack, Ohio University. *Forest vegetation and soils still show evidence of industrial disturbance 120 years after abandonment from charcoal-iron manufacture*.

2:50 PM COS 104-5 Kayes, LJ[1] and DB Tinker[2], (1)Oregon State University, (2)University of Wyoming. *Projected future forest conditions and live carbon pools following a mountain pine beetle epidemic in southeastern Wyoming*.

3:10 PM Break

3:20 PM COS 104-6 Donato, DC[1], MG Turner[1], WH Romme[2] and BJ Harvey[1], (1)University of Wisconsin, (2)Colorado State University. *Disturbance at the edge: Douglas-fir beetle outbreaks and potential forest-grassland shifts near the lower tree line of Greater Yellowstone*.

3:40 PM COS 104-7 Rossiter, SC[1], KA Yurkonis[1], MA Ahlering[2] and BJ Goodwin[1], (1)University of North Dakota, (2) The Nature Conservancy. *The role of seed banks in regeneration in established reconstructed tallgrass prairies*.

4:00 PM COS 104-8 Snyder, LJ and CJ Peterson, University of Georgia. *Assessing disturbance severities: Wind and cumulative disturbance data from Eastern Deciduous forests*.

4:20 PM COS 104-9 Holz, A[1] and TT Veblen[2], (1)University of Tasmania, (2)University of Colorado-Boulder. *Synergistic influences of climate and burning practices on tree regeneration in western Patagonia temperate rainforests*.

4:40 PM COS 104-10 Harvey, BJ[1], MG Turner[1], WH Romme[2] and DC Donato[1], (1)University of Wisconsin, (2)Colorado State University. *Douglas-fir beetle impacts on fire severity and postfire tree regeneration in lower montane forests of Greater Yellowstone*.

COS 105 - Community Pattern And Dynamics V

D137, Oregon Convention Center

1:30 PM COS 105-1 Comita, LS[1] and TCFTFS Working Group[2], (1)The Ohio State University, (2)Smithsonian Tropical Research Institute. *Does variation in the strength of negative density dependence explain differences in species diversity among tropical forests?*.

1:50 PM COS 105-2 Lamb, EG and D Guedo, University of Saskatchewan. *Climate but not disturbance history controls grassland plant community structure*.

2:10 PM COS 105-3 Gilarranz, LJ and J Bascompte, Estación Biológica de Doñana, CSIC. *Patch dynamics and the structure of mutualistic networks*.

2:30 PM COS 105-4 Guelzow, N, Y Wahlen, R Ptacnik and H Hillebrand, Institute for chemistry and biology of the marine evironment (ICBM). *Effect of nutrient dispersal on diversity and resource use efficiency in a marine meta-ecosystem experiment*.

2:50 PM COS 105-5 D'Andrea, R, AM Ostling and G Barabás, University of Michigan. *A new metric for trait-based investigations of niche assembly*.

3:10 PM Break

3:20 PM COS 105-6 Murrell, E and SA Juliano, Illinois State University. *Predation resistance does not trade off with competitive ability in early-colonizing aquatic Diptera*.

3:40 PM COS 105-7 Pesek, MF and BL Foster, University of Kansas. *Bottom-up forces and recurrent disturbance shape arthropod community composition and diversity in a tallgrass prairie ecosystem*.

4:00 PM COS 105-8 Ohlberger, J, Langangen, NC Stenseth and LA Vøllestad, University of Oslo. *Community-level consequences of cannibalism*.

4:20 PM COS 105-9 Hurlbert, AH, University of North Carolina. *The relative importance of resource availability and habitat structure for bird communities in the Southern Appalachians*.

4:40 PM COS 105-10 Angelini, C and BR Silliman, University of Florida. *A habitat- forming facilitation cascade*

regulates biodiversity and trophic structure in a tree-epiphyte system.

COS 106 - Disease And Epidemiology II

D138, Oregon Convention Center

1:30 PM COS 106-1 Farnsworth, ML[1], RS Miller[1], K Pedersen[2], MW Lutman[2], SR Swafford[2], PD Riggs[1] and CT Webb[3], (1)United States Department of Agriculture, (2) USDA-Wildlife Services, (3)Colorado State University. *Environmental and demographic determinants of avian influenza viruses in waterfowl across the contiguous United States*.

1:50 PM COS 106-2 Kilpatrick, AM[1], MJ Jones[2], LD Kramer[3], P Marra[4] and P Daszak[5], (1)University of California, Santa Cruz, (2)New York State Department of Health, (3)Wadsworth Center, New York State Dept Health and SUNY Albany, (4)Smithsonian Migratory Bird Center, (5) EcoHealth Alliance (formerly Wildlife Trust). *Biodiversity and disease risk: Dilution effect or simply habitat change?*.

2:10 PM COS 106-3 Zwart, DC and SH Kim, University of Washington. *Increased plant resistance to stem-lesions caused by Phytophthora spp. following biochar amendment*.

2:30 PM COS 106-4 Paull, SH and PT Johnson, University of Colorado. *Beyond temperature: Comparing the roles of temperature, nutrients and evaporation on parasite seasonality and amphibian disease risk in natural systems*.

2:50 PM COS 106-5 Okanga, S[1], GS Cumming[1], PAR Hockey[1] and JL Peters[2], (1)University of Cape Town, (2)Wright State University. *Water quality and the incidence of Avian Malaria in the Western Cape, South Africa*.

3:10 PM Break

3:20 PM COS 106-6 Rasmussen, DA[1], EM Volz[2] and K Koelle[1], (1)Duke University, (2)University of Michigan. *Inferring epidemiological parameters and dynamics in structured populations from sequence data*.

3:40 PM COS 106-7 Lambden, JP and PTJ Johnson, University of Colorado. *Quantifying the biomass of parasites in amphibian hosts to understand their role in aquatic food webs*.

4:00 PM COS 106-8 Jani, AJ[1] and CJ Briggs[2], (1)University of California - Santa Barbara, (2)University of California, Santa Barbara. *Shifts in amphibian symbiotic bacterial communities are linked to epidemic spread of the fungal pathogen Batrachochytrium dendrobatidis*.

4:20 PM COS 106-9 Molnár, PK[1], SJ Kutz[2], BM Hoar[2] and AP Dobson[1], (1)Princeton University, (2)University of Calgary. *A metabolic modeling framework to predict geographical and temporal changes in parasite fitness under climate change*.

4:40 PM COS 106-10 Harth, JE, MJ Ferrari and AG Stephenson, The Pennsylvania State University. *Predicting the evolutionary fate of the virus resistant transgene in wild populations of Cucurbita pepo*.

COS 107 - Ecosystem Function II

D139, Oregon Convention Center

1:30 PM COS 107-1 Van Diepen, LTA, WK Thomas and SD Frey, University of New Hampshire. *Soil metatranscriptomics reveals changes in expression of transcripts encoding lignocellulolytic enzymes in the forest floor of a temperate forest under increased N deposition*.

1:50 PM COS 107-2 Ewers, BE[1], DS Mackay[2], E Pendall[1], JM Frank[3], DE Reed[1], WJ Massman[3], TL Aston[1], JL Angstmann[1], K Nathani[1] and B Mitra[2], (1)University of Wyoming, (2)SUNY-Buffalo, (3)Rocky Mountain Research Station, U.S. Forest Service. *Use of plant hydraulic theory to predict plant controls over mass and energy fluxes in response to changes in soils, elevation and mortality*.

2:10 PM COS 107-3 DeWitt, TH[1], SR Pacella[2], CL Folger[1] and PM Eldridge[1], (1)U.S. EPA, (2)Oregon State University. *Size matters: The contribution of mega-infauna to the food webs and ecosystem services of an Oregon estuary*.

2:30 PM COS 107-4 Nadrowski, K[1], X Liu[2], K Ma[3], L Maicher[4], X Mi[3], M Prilop[1], S Ratcliffe[1], D Seifarth[1], K Welter[1] and C Wirth[5], (1)University Leipzig, (2)Chinese Academy of Sciences, (3)Institute of Botany, the Chinese Academy of Sciences, (4)Fraunhofer-Zentrum für Mittel- und Osteuropa (MOEZ), (5)University of Leipzig. *BEFdata: A platform for onsite data gathering and online data amalgamation in collaborative research projects*.

2:50 PM COS 107-5 Burdon, FJ, JS Harding and AR McIntosh, University of Canterbury. *Dead leaves and the dirty ground: Sediment pollution reduces detrital resource availability to consumers in agricultural stream food webs*.

3:10 PM Break

3:20 PM COS 107-6 Dijkstra, JA, J Boudreau and M Dionne, Wells National Estuarine Research Reserve. *Species-specific mediation of temperature and community interactions by multiple foundation species*.

3:40 PM COS 107-7 Hansen, WD[1], TS Rupp[1], FS Chapin[2], DL Verbyla[2] and HT Naughton[3], (1)University of Alaska, Fairbanks, (2)University of Alaska Fairbanks, (3) University of Montana. *Linked disturbance interactions in Alaska: The effects of spruce bark beetle outbreaks on subsequent wildfire dynamics*.

4:00 PM COS 107-8 Wissinger, SA[1], AJ Klemmer[2], EJ Thornton[1] and M Perchik[1], (1)Allegheny College, (2)University of Canterbury. *Effects of detritivore density on detritus processing rates and nutrient feedbacks on benthic algae in shallow aquatic habitats*.

4:20 PM COS 107-9 Meyer, WM III, University of Arizona. *Decomposition in the Santa Catalina Mountains: A study of the effects of litter type and invertebrate exclusion among plant biomes across an elevation gradient*.

4:40 PM COS 107-10 Gomez-Casanovas, N[1], K Anderson-Teixeira[1], M Zeri[2], CJ Bernacchi[3] and EH DeLucia[1], (1) University of Illinois at Urbana-Champaign, (2)Centro de Ciência do Sistema Terrestre, (3)University of Illinois at Urbana-Champaign/USDA-ARS. *Gap filling strategies for annual estimates of soil respiration*.

COS 108 - Ecosystem Services Assessment I

E141, Oregon Convention Center

1:30 PM COS 108-1 Wessman, CA[1], B Muller[1], BJ Buma[2], MM Bagher[1], T Flohr[1] and MP Heris[1], (1)University of Colorado, (2)University of Colorado, Boulder. *Phenology of green infrastructure in cities: A window into ecosystem services in urban environments*.

1:50 PM COS 108-2 Klain, SC and KMA Chan, University of British Columbia. *Participatory mapping of ecosystem services for marine spatial planning in Vancouver Island, Canada*.

2:10 PM COS 108-3 Heath, LS[1], D Zheng[2] and MJ Ducey[2], (1) USDA Forest Service, Northern Research Station, (2) The University of New Hampshire. *Carbon benefits from forested protected areas for biodiversity conservation in the conterminous United States*.

2:30 PM COS 108-4 Lavelle, P[1], N Rodríguez[2], E Rodríguez[1], MDP Hurtado[1], S Loaiza[1], C Botero[1] and SJ Fonte[1], (1) International Center for Tropical Agriculture (CIAT), (2) Corporación Colombiana de Investigación Agropecuaria. *Ecological indicators of agroecosystem function in the rapidly developing eastern plains of Colombia*.

2:50 PM COS 108-5 Ettl, GJ[1], S Tóth[1], N Konnyu[1], J Comnick[1], K Ceder[1], S Rabotyagov[1], A Wirsing[2] and L Rogers[1], (1) University of Washington, (2)College of Forest Resources, University of Washington. *ECOSEL, an online market-based tool for monetizing ecosystem services: Pack Forest A Case Study*.

3:10 PM Break

3:20 PM COS 108-6 Gutrich, JJ[1], K Gigliello[1], L Woods[1], KR Vest[2] and AJ Elmore[2], (1)Southern Oregon University, (2)University of Maryland Center for Environmental Science. *Water management, native plant communities and air quality in Owens Valley, California: A cost-effective ecological economic analysis of maintenance or restoration of alkali meadow communities*.

3:40 PM COS 108-7 Hinners, SJ and MP Buchert, Metropolitan Research Center. *Incorporating ecosystem services into an urban scenario planning package*.

4:00 PM COS 108-8 Lonsdorf, E[1], CM Kennedy[2], MC Neel[3], NM Williams[4] and C Kremen[5], (1)Chicago Botanic Garden, (2)The Nature Conservancy, (3)University of Maryland, (4) University of California, Davis, (5)University of California, Berkeley. *Using MCMC parameterization to improve accuracy of an ecologically-scaled landscape index of pollinator abundance*.

4:20 PM COS 108-9 Galicia, L Sr. and AE Zarco-Arista Sr., Universidad Nacional Autónoma de México. *Description of multiple ecosystem services in temperate forest ecosystem in Mexico*.

4:40 PM COS 108-10 McPhearson, PT, P Kremer and Z Hamstead, The New School. *Non-economic ecosystem services assessment of urban land in the New York City social-ecological system*.

COS 109 - Environmental Gradients

E142, Oregon Convention Center

1:30 PM COS 109-1 Ziv, Y[1] and Y Gavish[2], (1)Ben-Gurion University, (2)Ben-Gurion University of the Negev. *An ecotone pattern is revealed only after controlling for spatial blurring effects*.

1:50 PM COS 109-2 La Pierre, KJ and MD Smith, Yale University. *The role of plant traits and their plasticity in determining community and ecosystem responses to alteration in nutrient availability*.

2:10 PM COS 109-3 Sexton, JP[1], MB Hufford[2], A Bateman[3], DB Lowry[4], H Meimberg[5], SY Strauss[2] and KJ Rice[6], (1)University of Melbourne, (2)University of California, Davis, (3)University of Oregon, (4)University of Austin, (5)Campus Agrário de Vairão, (6)University of California Davis. *Patterns of gene flow and genetic variation inform mechanisms underlying climatic limits of a species' range*.

2:30 PM COS 109-4 Chisholm, CL and TJ Davies, McGill University. *Phylogeny as a tool for assessing community turnover in response to environmental change: Applications in the Canadian Subarctic*.

2:50 PM COS 109-5 Ezeakacha, FN and DA Yee, University of Southern Mississippi. *Environmental impacts on complex life cycles: Results from mosquitoes response to temperature variation*.

3:10 PM Break

3:20 PM COS 109-6 Holden, Z[1], S Dobrowski[2] and J Abatzoglou[3], (1)USDA Forest Service, (2)University of Montana, (3) University of Idaho. *Topoclimatic influences on climatic water balance in complex terrain: Implications for modeling tree species distributions*.

3:40 PM COS 109-7 Martinez-Berdeja, A, University of California, Riverside. *Desert seasonal rainfall variability and seed retention in Chorizanthe rigida*.

4:00 PM COS 109-8 Geyer, KM[1], AE Altrichter[1], JE Barrett[1], C Takacs-Vesbach[2] and MN Gooseff[3], (1)Virginia Tech, (2)University of New Mexico, (3)Pennsylvania State University. *Influence of resource gradients on soil microbial communities in a polar desert*.

4:20 PM COS 109-9 Ramirez, AR, University of California. *Are island plants whimpy? Evidence for low stress tolerance in chaparral shrubs on Santa Catalina Island, California*.

4:40 PM COS 109-10 Dohn, J[1], NP Hanan[2], A Tredennick[1], F Dembélé[3] and M Karembé[4], (1)Colorado State University, (2)South Dakota State University, (3)Institut Polytechnique Rurale de Formation et de Recherche Appliqué, (4)Université de Bamako. *Tree-grass interactions in savannas: Investigating competitive and facilitative mechanisms across a precipitation gradient*.

COS 110 - Evolution: Genetic Isolation And Differentiation

E143, Oregon Convention Center

1:30 PM COS 110-1 Mobley, KB[1], F Johansson[2], G Englund[2], D Lussetti[2] and F Bokma[2], (1)Max Planck Institute for Evolutionary Biology, (2)Umea University. *Morphological and genetic divergence in European postglacial nine-spind stickleback (Pungitius pungitius) populations*.

1:50 PM COS 110-2 Frishkoff, LO, GC Daily and EA Hadly, Stanford University. *Modern ecology explains ancient population structure in a human-dominated landscape*.

2:10 PM COS 110-3 Finn, DS, SH Sønderland and AM Milner, University of Birmingham. *Coho salmon population genetics and food-web complexity along a stream-age gradient in Glacier Bay National Park, Alaska*.

2:30 PM COS 110-4 Dohms, KM and TM Burg, University of Lethbridge. *Genetic markers and paleodistribution modeling reveal complex history in a widespread boreal bird*.

2:50 PM COS 110-5 Hannaford, OD, MJ Anderson and PB Rainey, Massey University. *The relationship between environmental variation and genetic variation in Vibrio populations*.

3:10 PM Break

3:20 PM COS 110-6 Gladieux, P[1], F Guérin[2], T Giraud[3], V Caffier[4], C Lemaire[4], L Parisi[5], F Didelot[4] and B Le Cam[4], (1)University of California, (2)Universite de la Reunion, (3)Université Paris-Sud/CNRS, (4)INRA/ Universite d'Angers, (5)INRA. *Emergence of novel fungal pathogens by ecological speciation: Importance of the reduced viability of immigrants*.

3:40 PM COS 110-7 Antwi, JB, GA Sword, M Mateos and RF Medina, Texas A&M University. *Differences in bacterial communities associated with cotton fleahopper on two host plants across Texas*.

4:00 PM COS 110-8 Angert, AL[1], S Kimball[2], TE Huxman[3] and DL Venable[3], (1)Colorado State University, (2)University of California, Irvine, (3)University of Arizona. *Genetic constraints and community structure: Testing the concordance of trade-offs within and among species*.

4:20 PM COS 110-9 Sackett, LC, University of Colorado. *Ecological and genetic divergence in Gunnison's prairie*

dogs (Cynomys gunnisoni).

4:40 PM COS 110-10 Musial, TS, MB Cruzan and LA Ruedas, Portland State University. *Landscape genetics of the North American mountain lion*.

COS 111 - Food Webs II

E144, Oregon Convention Center

1:30 PM COS 111-1 Thierry, A[1], OL Petchey[2], PH Warren[3] and AP Beckerman[3], (1)The University of Sheffield, (2)University of Zurich, (3)University of Sheffield. *Sampling effects and patterns in food web structure*.

1:50 PM COS 111-2 Young, T[1], OP Jensen[1], BC Weidel[2] and S Chandra[3], (1)Rutgers University, (2)US Geological Survey, (3)University of Nevada, Reno. *Interannual variability in trophic relationships of fish in a pristine northern temperate lake*.

2:10 PM COS 111-3 Taylor, BW, Dartmouth College. *Tritrophic effects of nuisance algal blooms on top predators in rivers*.

2:30 PM COS 111-4 Bellmore, JR[1], CV Baxter[2] and PV Connolly[1], (1)US Geological Survey, (2)Idaho State University. *Influence of landscape complexity on the strength of predator-prey interactions*.

2:50 PM COS 111-5 Fetcher, N[1], S Agosta[1], JA Stratford[1], MA Steele[1] and JC Moore[2], (1)Wilkes University, (2) Colorado State University. *The food web of a severely contaminated site in Pennsylvania following restoration*.

3:10 PM Break

3:20 PM COS 111-6 Cross, WF[1], CV Baxter[2], RO Hall Jr.[3], E Rosi-Marshall[4], TA Kennedy[5], K Donner[6], H Wellard Kelly[7], S Seegert[8], K Behn[5] and D Kincaid[9], (1)Montana State University, (2)Idaho State University, (3)University of Wyoming, (4)Cary Institute of Ecosystem Studies, (5) U.S. Geological Survey, Grand Canyon Monitoring and Research Center, (6)Little Traverse Bay Bands of Odawa Indians, (7)Loyola University Chicago, (8)Great Lakes Fishery Commission, (9)Michigan State University. *Trophic basis of production and patterns of interaction strength in food webs of a river discontinuum: Toward prediction of ecological responses to river management*.

3:40 PM COS 111-7 Malloy, EM, AJ Meier, VA Gilkison, S Grubbs and JM Yates, Western Kentucky University. *Stable isotopic analysis of the Upper Green River in Hart County, Kentucky*.

4:00 PM COS 111-8 Kovach-Orr, C and GF Fussmann, McGill University. *Evolutionary and plastic rescue in multitrophic model communities*.

4:20 PM COS 111-9 Messinger, SM and AM Ostling, University of Michigan. *Can spatial structure promote the evolutionary stability of food webs?*.

4:40 PM COS 111-10 Douglas, MM, Charles Darwin University. *Key drivers of river and wetland food webs in Australia's wet-dry tropics*.

COS 112 - Global Change Biology

E145, Oregon Convention Center

1:30 PM COS 112-1 Wepprich, TM[1], SE Diamond[1], NM Haddad[1], CN Jenkins[1], H Lessig[1] and L Ries[2], (1)North Carolina State University, (2)University of Maryland. *Urbanization interacts with annual temperature to predict butterfly phenology in a long-term survey of Ohio*.

1:50 PM COS 112-2 Calcote, R[1], SC Hotchkiss[2] and EA Lynch[3], (1)University of Minnesota, (2)University of Wisconsin, (3)Luther College. *Importance of soil texture in pollen-based climate reconstructions*.

2:10 PM COS 112-3 Batdorf, KE, PG Rodewald, SN Matthews and MB Shumar, The Ohio State University. *Are all species moving poleward? Distributional shifts in Ohio's breeding birds and potential drivers of change*.

2:30 PM COS 112-4 Chen, S[1] and Z Ouyang[2], (1)Nanjing Institute of Environmental Sciences, Ministry of Environmental Protection, (2)Chinese Academy of Sciences. *Predicting the upper bounds of aboveground forest biomass across climatic gradients*.

2:50 PM COS 112-5 Moise, ERD and HAL Henry, University of Western Ontario. *Influence of nitrogen and silica concentration on grass palatability and digestion in the meadow vole, Microtus pennsylvanicus* .

3:10 PM Break

3:20 PM COS 112-6 Langley, JA[1], KA Shepard[2], TJ Mozdzer[3] and JP Megonigal[4], (1)Villanova University, (2)Cary Institute of Ecosystem Studies, (3)Smithsonian Institution, (4) Smithsonian Environmental Research Center. *Tidal marsh tolerance for sea-level rise in response to elevated CO_2 and nitrogen pollution*.

3:40 PM COS 112-7 Hein, R[1], G Stuhldreher[2], J Walter[3], J Kreyling[3], C Beierkuhnlein[3] and A Jentsch[3], (1) Bayreuth University, (2)Institute of Landscape Ecology, (3)University of Bayreuth. *Effects of expected climate change on the endangered butterfly Erebia medusa in Central Europe*.

4:00 PM COS 112-8 Hoover, DL[1], AK Knapp[1] and MD Smith[2], (1) Colorado State University, (2)Yale University. *Ecological responses to an extreme climatic event in the tallgrass prairie ecosystem*.

4:20 PM COS 112-9 Wolf, SG, Center for Biological Diversity. *Protecting species threatened by climate change under the U.S. Endangered Species Act: Opportunities and challenges*.

4:40 PM COS 112-10 Barbet-Massin, M, CY Ko and W Jetz, Yale University. *Assessing the potential effects of climate change on bird functional diversity at global scale*.

COS 113 - Invasion: Community Effects II

E146, Oregon Convention Center

1:30 PM COS 113-1 Tuttle, GM[1], AP Norton[2] and GL Katz[3], (1) Colorado State University, (2)Colorado State Universtity, (3)Appalachian State University. *Russian olive (Elaeagnus angustifolia) impacts on soil N, light, and plant community structure in eastern Colorado*.

1:50 PM COS 113-2 Smith, LM and HL Reynolds, Indiana University. *Extended leaf phenology as an invasion mechanism for Alliaria petiolata*.

2:10 PM COS 113-3 Smith, JN[1] and D Pearson[2], (1)The University of Montana, (2)USDA Forest Service, Rocky Mountain Research Station. *Community reassembly: Causes and consequences of web spider community restructuring following simulated plant invasion*.

2:30 PM COS 113-4 Meier, S[1] and H Hillebrand[2], (1)Institute for chemistry and biology of the marine environment, (2) University of Oldenburg. *Dominance of the invasive diatom Mediopyxis helysia (Kühn et al., 2006) irrespective of prevailing Si:N ratios*.

2:50 PM COS 113-5 Pitt, DB and DP Batzer, University of Georgia. *Potential impacts of Tsuga canadensis (L.) Carr. demise on macroinvertebrates in a Georgia Appalachian stream*.

3:10 PM Break

3:20 PM COS 113-6 Setterfield, SA, NA Rossiter-Rachor and MM Douglas, Charles Darwin University. *Turning up the heat: The impact of invasion of Australia's tropical*

savannas by an alien grass.

3:40 PM COS 113-7 Pyšek, P[1], V Jarošík[2], PE Hulme[3], J Pergl[1] and M Vilà[4], (1)Institute of Botany, Academy of Sciences of the Czech Republic, (2)Charles University in Prague, Faculty of Science, (3)Lincoln University, (4)Estación Biológica de Doñana (EBD-CSIC). *Impacts of alien invasive plants on resident species, communities and ecosystems: a global assessment*.

4:00 PM COS 113-8 Beauchamp, VB, Towson University. *Niche requirements and competitive effects of a new forest invader, Oplismenus hirtellus spp. undulatifolius (wavyleaf basket grass)*.

4:20 PM COS 113-9 LeBrun, EG[1], JC Abbott[2] and LE Gilbert[1], (1)University of Texas at Austin, (2)University of Texas. *Adding insult to injury in Texas grasslands: Crazy ant extirpates imported fire ant and further reduces native ant and arthropod diversity*.

4:40 PM COS 113-10 Bugnot, AB[1], RA Coleman[2], WF Figueira[3] and EM Marzinelli[4], (1)University of Sydney, (2)The University of Sydney, (3)The University of Sidney, (4)University of New South Wales. *The non-indigenous isopod Cirolana harfordi in Australia: Does a non-native in great abundance impact local assemblages?*.

WEDNESDAY

COS 114 - Invasion: Species Interactions II

Portland Blrm 254, Oregon Convention Center

1:30 PM COS 114-1 Barak, R, K Skogen and J Fant, Chicago Botanic Garden/Northwestern University. *Assessing competitive potential of native forbs from cheatgrass dominated habitats*.

1:50 PM COS 114-2 Swope, SM, USDA ARS. *Biocontrol attack exacerbates resource- and pollen- limitation in its target weed (Centaurea solstitialis) across a soil moisture gradient*.

2:10 PM COS 114-3 Wigginton, RD[1], L Grenier[2], H Spautz[3] and CR Whitcraft[1], (1)CSU Long Beach, (2)State Coastal Conservancy, (3)California Department of Fish and Game. *Impacts of Lepidium latifolium on food web structure of Suisun song sparrows in a brackish marsh*.

2:30 PM COS 114-4 Meckel, HM[1], S Schwinning[1] and PA Fay[2], (1)Texas State University, (2)USDA, Agricultural Research Service. *Mechanisms of competitive suppression of native grasses by Johnsongrass*.

2:50 PM COS 114-5 Hannam, MP, University of Washington. *Microtopography mediates competition between an native and an introduced seagrass*.

3:10 PM Break

3:20 PM COS 114-6 Cumming, WP, The University of Colorado. *An analysis of year-to-year changes in native and non-native vegetation abundance in response to climate and soil variability*.

3:40 PM COS 114-7 Heckman, RW[1], JP Wright[2] and CE Mitchell[1], (1)University of North Carolina, (2)Duke University. *The effects of soil nutrients on foliar herbivory and disease on native and exotic old field species*.

4:00 PM COS 114-8 Zhang, Y, Q Fang, L Chen and W Wang, Key Laboratory of the Ministry of Education for Coastal and Wetland Ecosystems, Xiamen University. *Invasion of mangroves by Spartina alterniflora: Interspecific interactions across latitudinal gradient in southeast China*.

4:20 PM COS 114-9 Schultheis, EH and JA Lau, Michigan State University. *Do altered biotic interactions drive invasion?*.

COS 115 - Land-Use And Land-Use History

Portland Blrm 255, Oregon Convention Center

1:30 PM COS 115-1 Six, LJ[1], JD Bakker[2] and RE Bilby[1], (1)Weyerhaeuser NR Company, (2)University of Washington. *The importance of spatiotemporal scale in understanding agroforestry management effects on grassland vegetation*.

1:50 PM COS 115-2 Riskin, SH[1], C Neill[2], S Porder[1], R McHorney[3], H Elsenbeer[4] and AV Krusche[5], (1)Brown University, (2) Marine Biological Laboratory, (3)Woods Hole Marine Biological Laboratory, (4)Universität Potsdam, Potsdam, Germany, (5)CENA/USP. *Solute concentrations and annual export from Amazon headwater streams following conversion from forest to intensive soybean agriculture*.

2:10 PM COS 115-3 Karp, DS[1], A Rominger[2], J Ranganathan[3], J Zook[4], PR Ehrlich[1] and GC Daily[1], (1)Stanford University, (2)University of California Berkeley, (3)National Center for Ecological Analysis and Synthesis, (4)Unión de Ornitólogos de Costa Rica.. *Intensive agriculture erodes beta-diversity at large scales*.

2:30 PM COS 115-4 Habeck, C[1], LA Brudvig[1] and JL Orrock[2], (1)Michigan State University, (2)University of Wisconsin - Madison. *Scale-dependant legacies of agricultural land-use on soils and understory plant communities in longleaf pine woodlands*.

2:50 PM COS 115-5 Jackson, MM[1], MG Turner[1] and SM Pearson[2], (1)University of Wisconsin, (2)Mars Hill College. *Climate and logging history influence native forest herb performance in the Southern Appalachians*.

3:10 PM Break

3:20 PM COS 115-6 Allen, JM[1], TJ Leininger[2], JD Hurd Jr[1], DL Civco[1], AE Gelfand[2] and JA Silander Jr.[1], (1)University of Connecticut, (2)Duke University. *Socioeconomics drive invasive woody plants in New England through forest fragmentation*.

3:40 PM COS 115-7 Shirley, SM, Y Zhiqiang, RA Hutchinson and MG Betts, Oregon State University. *Unclassified landsat TM predicts bird distributions at fine resolutions in forested landscapes*.

4:00 PM COS 115-8 Kaplan, JO, KM Krumhardt, M Pfeiffer, BAS Davis and M Zanon, Ecole Polytechnique Fédérale de Lausanne. *From forest to farmland and meadow to metropolis: Integrated modeling of Holocene land cover change*.

4:20 PM COS 115-9 McElroy, DJ[1] and RA Coleman[2], (1)School of Biological Sciences, (2)The University of Sydney. *The effect of copper and contamination history on micro-algal type and abundance*.

4:40 PM COS 115-10 Sandel, B, L Arge and JC Svenning, Aarhus University. *Topographic controls on the distribution of tree cover from local to global scales*.

COS 116 - Modeling III

Portland Blrm 256, Oregon Convention Center

1:30 PM COS 116-1 Peper, PJ[1] and G McPherson[2], (1)USDA Forest Service, (2)US Forest Service. *How large is large? Urban tree allometrics from 16 U.S. climate regions*.

1:50 PM COS 116-2 Shakir hanna, S, Texas Gulf Coast Environmental Data (TEXGED) Center, Prairie View A&M University. *Sustainable economy of ecological footprint in USA: Economic analysis and impacts*.

2:10 PM COS 116-3 Gregr, EJ and KMA Chan, University of British Columbia. *Uncertainty in social-ecological models of marine systems: Implications for management*.

2:30 PM COS 116-4 Ryals, R[1], WL Silver[1], WJ Parton[2], M Hartman[2] and M DeLonge[1], (1)University of California, Berkeley, (2)Colorado State University. *Simulating long-term responses of rangeland soil carbon storage*

and greenhouse gas emissions to organic matter amendments.

2:50 PM COS 116-5 Thebeau, KS[1], JP Caspersen[1], MC Vanderwel[2], D Purves[3] and H Zeng[1], (1)University of Toronto, (2)Microsoft Research, (3)Microsoft Reserach, Cambridge. *Maximizing productivity and economic value of selection-managed stands using a cohort-based canopy competition model*.

3:10 PM Break

3:20 PM COS 116-6 Wang, F[1], D Mladenoff[1], J Forrester[1], J Blanco[2], R Scheller[3], S Peckham[1] and C Keough[4], (1) University of Wisconsin-Madison, (2)University of British Columbia, (3)Portland State University, (4)Colorado State University. *Multi-model simulations of long-term effects of forest harvesting on ecosystem productivity and C/N cycling*.

3:40 PM COS 116-7 Perlinski, AT[1], GB Paige[1], SN Miller[1], DP Guertin[2] and J Vithanage[1], (1)University of Wyoming, (2) University of Arizona. *Parameterization of a rangeland watershed model using ecological sites*.

4:00 PM COS 116-8 Xia, J[1], Y Luo[1] and Y Wang[2], (1)University of Oklahoma, (2)CSIRO Marine and Atmospheric Research. *Traceable components of modeled carbon storage capacity in terrestrial ecosystem*.

4:20 PM COS 116-9 Withey, JC[1], S Polasky[2], AJ Plantinga[3], DJ Lewis[4], JJ Lawler[5], VC Radeloff[6], EJ Nelson[7], D Pennington[8] and E Lonsdorf[9], (1)Florida International University, (2)University of Minnesota, (3)Oregon State University, (4)University of Puget Sound, (5)University of Washington, (6)University of Wisconsin-Madison, (7) Bowdoin College, (8)World Wildlife Fund, (9)Chicago Botanic Garden. *Integrated economic and ecological modeling to estimate changes in carbon storage and vertebrate habitats due to projected land-use change in the conterminous U.S.A*.

4:40 PM COS 116-10 Purucker, T and K Price, U.S. Environmental Protection Agency. *Preserving flow variability in watershed model calibrations*.

COS 117 - Plant-Insect Interactions III

Portland Blrm 257, Oregon Convention Center

1:30 PM COS 117-1 Patankar, R[1], G Starr[1], B Mortazavi[2] and SF Oberbauer[3], (1)University of Alabama, (2)University of Alabama and Dauphin Island Sea Lab, (3)Florida International University. *The effects of arthropod galling on the physiological function of arctic willows*.

1:50 PM COS 117-2 Prather, CM and SC Pennings, University of Houston. *Relative importance of plant communities and nutrient concentrations in regulating prairie herbivore communities*.

2:10 PM COS 117-3 Abdala-Roberts, L and KA Mooney, University of California at Irvine. *Examining the mechanisms by which environmental and plant genetic variation influence tritrophic interactions in a simple food web*.

2:30 PM COS 117-4 Frank, JM[1], WJ Massman[1] and BE Ewers[2], (1)Rocky Mountain Research Station, U.S. Forest Service, (2)University of Wyoming. *Linking bark beetle caused hydraulic failure to declining ecosystem fluxes in a high elevation Rocky Mountain (Wyoming, USA) forest*.

2:50 PM COS 117-5 Hourston, J[1], AE Bennett[1], SN Johnson[2] and A Gange[3], (1)James Hutton Institute, (2)University of Western Sydney, (3)Royal Holloway, University of London. *Are vine weevils influenced by the presence of mycorrhizae when feeding upon Rubus idaeus?*.

3:10 PM Break

3:20 PM COS 117-6 Singer, MS[1], I Lichter-Marck[1], TE Farkas[1] and KA Mooney[2], (1)Wesleyan University, (2)University of California at Irvine. *Consequences of herbivore diet breadth for bird predation and parasitism*.

3:40 PM COS 117-7 Krimmel, BA, UC Davis. *Sticky plant traps insects to enhance indirect defense*.

4:00 PM COS 117-8 Kambo, D and PM Kotanen, University of Toronto. *Differences in performance and herbivory along a latitudinal gradient for common burdock (Arctium minus)*.

4:20 PM COS 117-9 Gaylord, ML[1], TE Kolb[1], A Macalady[2], JA Plaut[3], WT Pockman[3], EA Yepez[4] and NG McDowell[5], (1)Northern Arizona University, (2)University of Arizona, (3)University of New Mexico, (4)Instituto Tecnológico de Sonora, (5)Los Alamos National Laboratory. *Drought and insect attacks cause decline of piñon-juniper woodlands*.

4:40 PM COS 117-10 Severns, PM, Washington State University-Vancouver. *Shifts in reproductive strategy by Hemileuca eglanterina (Lepidoptera: Saturniidae): Adaptive response to host plant quality following a prescribed burn*.

COS 118 - Pollination I

Portland Blrm 258, Oregon Convention Center

1:30 PM COS 118-1 Button, L and E Elle, Simon Fraser University. *Native pollinator contributions to crop yield for two cultivars of highbush blueberry*.

1:50 PM COS 118-2 Gillespie, SD[1] and LS Adler[2], (1) University of Massachusetts, Amherst, (2)University of Massachusetts. *Mutualisms in trophic cascades: Parasitism of bumblebees and pollination service to plants*.

2:10 PM COS 118-3 Leonhardt, SD, University of Lüneburg. *Does resin represent a neglected component of bee ecology? A comparison between Old and New World bees*.

2:30 PM COS 118-4 Elwell, SL and E Elle, Simon Fraser University. *The effects of livestock grazing on flowering plant and pollinator communities in shrubsteppe ecosystems*.

2:50 PM COS 118-5 Carper, AL[1], RE Irwin[1], LS Adler[2] and PS Warren[2], (1)Dartmouth College, (2)University of Massachusetts. *Pollination in suburban landscapes: Increased bee abundance does not benefit native plants*.

3:10 PM Break

3:20 PM COS 118-6 Lever, JJ[1], EH van Nes[2], J Bascompte[3] and M Scheffer[2], (1)Wageningen University & Estación Biológica de Doñana, CSIC, (2)Wageningen University, (3) Estación Biológica de Doñana, CSIC. *Critical transitions and the collapse of mutualistic networks*.

3:40 PM COS 118-7 Wray, JC, LA Neame and E Elle, Simon Fraser University. *Surrounding landscape and floral resources influence pollinator community composition in oak-savannah fragments of British Columbia, Canada*.

4:00 PM COS 118-8 Tartaglia, ES and SN Handel, Rutgers University. *Nectar plant preferences and pollen loads in Hemaris moths: Diet analysis of pollen collected from individuals*.

4:20 PM COS 118-9 Burkle, LA[1] and TM Knight[2], (1)Montana State University, (2)Washington University in St. Louis. *Accumulating species interactions with area: Testing mechanisms with plant-pollinator interaction networks*.

COS 119 - Restoration Ecology V

B117, Oregon Convention Center

1:30 PM COS 119-1 Johnson, LR and SN Handel, Rutgers University. *Future urban forests: The influence of management on outcomes of ecological restoration in*

New York City.

1:50 PM COS 119-2 Dunwiddie, PW[1], JD Bakker[1] and EG Delvin[2], (1)University of Washington, (2)The Nature Conservancy. *Staged-scale restoration: A systematic approach for improving restoration effectiveness* .

2:10 PM COS 119-3 Schulz, KE, Southern Illinois University Edwardsville. *Educating nature preserve advocates: Critical ecological principles concerning nature preserve management*.

2:30 PM COS 119-4 LeRoy, CJ[1], NM Nadkarni[2], DJ Pacholke[3], K Bush[1], MP Hayes[3], J Lynch[4], P Dunn[5], MJ Linders[3], C Elliott[1], D Aubrey[1], S Weber[1], E Hayduk[1], B Gallagher[1] and A Martin[1], (1)The Evergreen State College, (2) University of Utah, (3)State of Washington, (4)US Dept. of Defense, (5)Center for Natural Lands Management. *Linking Ecological and Human Restoration: The Sustainability in Prisons Project*.

2:50 PM COS 119-5 Barnas, KA[1], DE Hamm[2] and M Diaz[3], (1) NOAA- NWFSC, (2)Hamm Consulting, (3)PSMFC. *Salmon habitat restoration: Are we putting the right types of projects in the right watersheds?*.

3:10 PM Break

3:20 PM COS 119-6 Latterell, J, D Eastman, L Hartema and H Berge, King County. *Process-based river restoration near cities: Effects of levee removal on habitat-forming river dynamics at the confluence of the Tolt and Snoqualmie Rivers, Washington State*.

3:40 PM COS 119-7 Uselman, SM[1], KA Snyder[1], EA Leger[2] and SE Duke[1], (1)USDA Agricultural Research Service, (2) University of Nevada, Reno. *Use of native annual forbs and early seral species in seeding mixtures for improved success in Great Basin restoration*.

4:00 PM COS 119-8 Grove, S[1], IM Parker[1], N Benson[2] and KA Haubensak[3], (1)University of California, Santa Cruz, (2) Fort Lewis, (3)Northern Arizona University. *Soil mediated impacts of Cytisus scoparius limits restoration success*.

4:20 PM COS 119-9 Ross, KA[1], C Watkins[2], P Gobster[3], L Heneghan[4], A Wali[5], L Westphal[6], DH Wise[1] and M Zellner[7], (1)University of Illinois at Chicago, (2)Field Museum, (3)United States Forest Service, (4)DePaul University, (5)The Field Museum, (6)USDA Forest Service, (7)University of Illinois- Chicago. *Linking the decision making process of ecological restoration to biodiversity outcomes in the Chicago Wilderness Region*.

4:40 PM COS 119-10 Ross, MS, S Stoffella, JP Sah, P Sullivan, PL Ruiz, S Subedi, L Scinto and R Price, Florida International University. *Integrating experimental approaches into tree island restoration in the Everglades*.

COS 120 - Species Interactions I

C120, Oregon Convention Center

1:30 PM COS 120-1 Shefferson, RP and C Cowden, University of Georgia. *The macroevolution of broad interactions: specificity and symbiont community are phylogenetically determined in lady's slipper orchids (Cypripedium spp.)*.

1:50 PM COS 120-2 Shelton, AL and JA Henning, Indiana University. *White-tailed deer alter a wide array of forest community components: Effects on arbuscular mycorrhizae, vascular plants, animals, and more*.

2:10 PM COS 120-3 Celiker, H and J Gore, MIT. *Competition between species can drive public-goods cooperation within a species*.

2:30 PM COS 120-4 Stouffer, DB[1] and J Bascompte[2], (1)University of Canterbury, (2)Estación Biológica de Doñana, CSIC. *How exotic species integrate into pollination networks*.

2:50 PM COS 120-5 Tulloss, EM and ML Cadenasso, University of California, Davis. *Effects of nitrogen deposition on interactions between native and exotic grasses of the California oak savanna are life stage specific*.

3:10 PM Break

3:20 PM COS 120-6 Soper Gorden, NL and LS Adler, University of Massachusetts. *Floral antagonists affect plant reproduction and leaf herbivory*.

3:40 PM COS 120-7 Busby, PE[1], LJ Lamit[2], AR Keith[2], G Newcombe[3], T Whitham[2] and R Dirzo[1], (1)Stanford University, (2)Northern Arizona University, (3)University of Idaho. *Disease-initiated trophic cascades are modulated by genetic variation in plant enemy resistance*.

4:00 PM COS 120-8 Warburton, HJ and AR McIntosh, University of Canterbury. *Predator-prey interaction strengths do not consistently depend on body-size ratios*.

4:20 PM COS 120-9 Miller, TEX and JA Rudgers, Rice University. *Non-linear interaction dynamics of grasses and vertically transmitted fungal symbionts*.

4:40 PM COS 120-10 Bravo, A[1], KE Harms[2] and LH Emmons[3], (1)American Museum of Natural History, (2)Louisiana State University, (3)Smithsonian Institution. *Keystone resource (Ficus) chemistry explains lick visitation by frugivorous bats*.

COS 121 - Trophic Dynamics And Interactions I

C123, Oregon Convention Center

1:30 PM COS 121-1 Kratina, P and M Winder, University of California Davis. *Shifts in zooplankton species composition affect nutritional food quality for fish*.

1:50 PM COS 121-2 Venarsky, MP[1], BM Huntsman[2], JP Benstead[1] and AD Huryn[1], (1)University of Alabama, (2)West Virginia University. *Testing carbon limitation of a cave stream ecosystem using a whole-reach detritus amendment*.

2:10 PM COS 121-3 Sandom, CJ, B Sandel, L Dalby, WD Kissling, KT Nielsen, C Flojgaard, J Lenoir Jr., R Ejrnæs and JC Svenning, Aarhus University. *Predator-prey interactions as macro-scale drivers of species diversity in mammals*.

2:30 PM COS 121-4 Baines, SB, Stony Brook University. *Dissolved organic matter as a direct energetic subsidy to aquatic consumers*.

2:50 PM COS 121-5 Nifong, JC and BR Silliman, University of Florida. *The effects of a large-bodied apex predator cascade through a salt marsh food web*.

3:10 PM Break

3:20 PM COS 121-6 Amundrud, SL, MI O'Connor and DS Srivastava, University of British Columbia. *Bottom-up and top-down processes affect eelgrass communities in British Columbia*.

3:40 PM COS 121-7 Schmidt, AE[1], LW Botsford[1], JM Eadie[1], RW Bradley[2] and J Jahncke[2], (1)University of California, Davis, (2)PRBO Conservation Science. *Contrasting responses to changing ocean conditions: A tale of two seabirds*.

4:00 PM COS 121-8 Clark, RM[1] and JH Fewell[2], (1)Texas A&M University, (2)Arizona State University. *Nutrient supplementation alters trophic dynamics within nests of the desert leafcutter ant Acromyrmex versicolor*.

4:20 PM COS 121-9 Jones, ME[1], T Hollings[1], N Mooney[2] and HI McCallum[3], (1)University of Tasmania, (2)Department of Primary Industry, Parks, Water and Environment, (3) Griffith University. *Trophic cascades following disease-induced decline of an apex predator: Tasmanian devils, environmental variability and top-down vs bottom-up control*.

4:40 PM COS 121-10 Cline, TJ[1], DA Seekell[2], SR Carpenter[1], JR Hodgson[3], JF Kitchell[1], ML Pace[2] and BC Weidel[4], (1)University of Wisconsin-Madison, (2)University of Virginia, (3)St. Norbert College, (4)US Geological Survey. *Spatial early warning signals discerned from prey fish behavior in whole-ecosystem regime shift experiment*.

4:30 pm-6:30 pm

OPS 3 - The Scientific Legacy of the Late Professor Joan Ehrenfeld: Current Research Findings From Alumni of Dr. Ehrenfeld's Laboratory

Exhibit Hall DE, Oregon Convention Center

Organized by: E Stander (estander@usaid.gov), L Windham-Myers

As a companion to the symposium in memory of Dr. Joan Ehrenfeld, this organized poster session highlights the current work of Dr. Ehrenfeld's former advisees and is a venue for alumni to reflect on Dr. Ehrenfeld's influence on their professional and personal lives and pay tribute to their former mentor.

OPS 3-1 Gilchrist, S1, E Stander2 and M Borst1, (1)US Environmental Protection Agency, (2)USAID/AAAS. Designing bioretention systems to improve nitrogen removal.

OPS 3-2 Clough, B, JG Ehrenfeld and E Green, Rutgers University. Effects of white-tailed deer over-browse on soil microclimate and leaf litter decomposition.

OPS 3-3 Shappell, LJ and JG Ehrenfeld, Rutgers University. Urban wetlands: Hope on the invasion front.

OPS 3-4 Palta, MM1 and D Gimenez2, (1)Arizona State University, (2)Rutgers University. Soil texture and water retention as spatial predictors of denitrification in urban wetlands.

OPS 3-5 Elgersma, KJ, R Wildova and D Goldberg, University of Michigan. Does translocation influence growth or invasiveness of clonal cattail (Typha) species?.

OPS 3-6 Sedia, E1, G Zimmermann1 and A Windisch2, (1)Richard Stockton College of New Jersey, (2)NJ Department of Environmental Protection. Broom crowberry habitat preferences in the New Jersey Pinelands.

OPS 3-7 Yu, S, J Ding, X Luo, D Sun and J Ma, Key Laboratory of Urban Environment and Health, Institute of Urban Environment, Chinese Academy of Sciences. Spartina alterniflora invasion pace in an introduced coastal wetland of China explored by 13C abundance of sediments.

OPS 3-8 McHale, MR and S Beck, North Carolina State University. International Mentoring of Advanced Graduates for INterdisciplinary Excellence (IMAGINE): Science that contributes to the well-being of communities in need.

OPS 3-9 Windham-Myers, L, USGS. Coastal freshwater peat accretion – Physiologic processes and legacy impacts of dominant wetland plant species.

OPS 3-10 Barrett, JE1, JS Norman1, T Ursell2 and MA Bradford2, (1)Virginia Tech, (2)Yale University. The influence of Microstegium invasions on soil nitrifier communities.

OPS 3-11 Caruso, A, JD Lewis and AR Tuininga, Fordham University. Physiological and morphological responses of the invasive grass, Microstegium vimineum, to varying resource availabilities.

OPS 3-12 Kerin, T, AR Tuininga and J Lewis, Fordham University. Evidence of mycorrhizal host generality for hemlock woolly adelgid-infested Tsuga canadensis trees growing in a Quercus-dominated landscape.

OPS 3-13 Lynn-Bell, N, E Czerwinski and P Kourtev, Central Michigan University. The effect of an invasive shrub (autumn olive, Elaeagnus umbellata) on soil microbial communities depends on the proximity of soil to the invasive plant.

OPS 3-14 Faillace, CA, JS Caplan, JC Grabosky and JG Ehrenfeld, Rutgers University. Root productivity in nutrient-rich soil patches by invasive and native Northeastern shrubs.

OPS 3-15 Baxter, JW1, JW White2, K Tyler3 and D Scheerer2, (1) California State University, Sacramento, (2)Humboldt State University, (3)The American Mercury, Inc.. The California Environmental Legacy Project: A multiplatform educational media project about environmental change.

PS 42 - Invasion

Exhibit Hall DE, Oregon Convention Center

PS 42-16 Aiello-Lammens, M, Stony Brook University. Using herbaria records to examine the spread of the invasive woody plant Frangula alnus.

PS 42-17 West, AM1, T Wakie1, S Kumar1, CS Brown1, TJ Stohlgren2, M Laituri1 and J Bromberg3, (1)Colorado State University, (2)US Geological Survey, Fort Collins Science Center and Natural Resource Ecology Laboratory, (3)U.S. National Park Service. Effects of climate change on Bromus tectorum distribution in Rocky Mountain National Park, Colorado, USA.

PS 42-18 Davies, KW, USDA - Agricultural Research Service. Biodiversity and native plant abundance decline with increasing abundance of an exotic annual grass.

PS 42-19 Guerra-García, A1, J Golubov Sr.2 and MDC Mandujano3, (1)Universidad Nacional Autónoma de México, (2) Universidad Autónoma Metropolitana, (3)Instituto de Ecología, UNAM. Clonal success in an invasive species Kalanchoe delagoensis (Crassulaceae).

PS 42-20 Waring, EF and AS Holaday, Texas Tech University. The response of leaf nitrogen metabolism in competing invasive Phalaris arundinacea and native Carex stricta to seasonal changes in ammonium and nitrate.

PS 42-21 Smith, MC and RN Mack, Washington State University. Current status of naturalized temperate Asian bamboos in the United States: An on-going survey.

PS 42-22 O'Neill, MR1, EB Allen1, MF Allen1 and L Santiago2, (1) University of California, (2)University of California, Riverside. Divergent patterns of growth and biomass allocation in native and introduced ranges of the annual grass Bromus rubens.

PS 42-23 Ulrich, JL, KK Bohn and PJ Minogue, University of Florida. Effect of environmental variables on germination of Japanese climbing fern spores.

PS 42-24 Latzka, AW and J Vander Zanden, University of Wisconsin. How invaded is our lakescape?: Enumerating invaded lakes in the Northern Highlands Lake District of Wisconsin.

PS 42-25 Pollnac, FW, M Lavin, BD Maxwell, ML Taper and LJ Rew, Montana State University. Climbing high: Probability of occurrence and patterns of invasion of Linaria dalmatica along an elevation gradient.

PS 42-26 Wang, Y and BA Koerner, Emporia State University. Utilization of rhizobia by the invasive legume, Sericea Lespedeza (Lespedeza cunteata).

PS 42-27 ŠTajerová, K1, P Pyšek2, V Jarosik3, M Hejda4, DM Blumenthal5, RM Callaway6, DL Larson7, PM Kotanen8 and U Schaffner9, (1)Institute of Botany of the ASCR, (2) Institute of Botany, Academy of Sciences of the Czech Republic, (3)Charles University, (4)Botanical Institute, Academy of Sciences of the Czech Republic, (5)USDA-ARS, (6)University of Montana, (7)US Geological Survey, (8)University of Toronto, (9)CABI Europe - Switzerland. A transcontinental biogeographic comparison of native and invasive dominants: Are invasives indeed doing something different than natives?.

PS 43 - Invasion: Community Effects

Exhibit Hall DE, Oregon Convention Center

PS 43-28 Cole, RJ1 and CM Litton2, (1)University of Colorado at Boulder, (2)University of Hawaii at Manoa. Vegetation recovery is site specific following removal of nonnative feral pigs from Hawaiian tropical montane wet forest.

PS 43-29 Han, C and SL Young, University of Nebraska-Lincoln. Resistance by perennial grass communities to the invasion and establishment of musk thistle.

PS 43-30 Crawford, KM and TM Knight, Washington University in St. Louis. Effect of an invasive plant on individual species and plant community structure through alteration of abiotic and biotic soil properties.

PS 43-31 Gonzalez-Muñoz, N1, P Castro-Díez1 and IM Parker2, (1) University of Alcalá, (2)University of California, Santa Cruz. Contrasting impacts on the nitrogen cycle of co-occurring exotic species.

PS 43-32 Hill, KC and DG Fischer, The Evergreen State College.

Native-exotic species richness relationships across spatial scales in a prairie restoration matrix.

PS 43-33 Nelson, JM, JR Peebles, TO Crist and DL Gorchov, Miami University. The effects of White-tailed deer (Odocoileus virginianus) and Amur honeysuckle (Lonicera maackii) on native forest floor plants and associated ant communities in SW Ohio.

PS 43-34 Masters, JA, AN Bryant, MM Carreiro and SM Emery, University of Louisville. The impact of bush honeysuckle (Lonicera maackii) removal on arthropod diversity in an urban forest.

PS 43-35 Smith, JR1, SN Murray2, SC Vogt2, FN Creedon2 and DJ Eernisse2, (1)California State Polytechnic University, Pomona, (2)California State University, Fullerton. Non-native seaweeds on urban southern California rocky shores: Effects on native community structure and trophic dynamics.

PS 43-36 Lekberg, Y1, AC Cornell1 and PA Olsson2, (1)MPG Ranch, (2)Lund University. Do invasive plants alter soil microbial communities and does this influence plant competitive interactions.

PS 43-37 Johnston, CA and DS Gruner, University of Maryland. Foraging patterns of an invasive predator, Eleutherodactylus coqui, indicate potential direct and indirect effects on invertebrate prey food webs.

PS 44 - Invasion: Dynamics, Population Processes

Exhibit Hall DE, Oregon Convention Center

PS 44-38 Zenni, RD and D Simberloff, The University of Tennessee. Number of source populations as a potential driver of pine invasions in Brazil.

PS 44-39 Kelly, LJ1, RN Mack1 and SJ Novak2, (1)Washington State University, (2)Boise State University. Genetic variation in Bromus tectorum (Poaceae) from the Mediterranean Region: Biogeographical history of native populations.

PS 44-40 Marko, K1, H Lee II1 and D Reusser2, (1)U.S. Environmental Protection Agency, (2)USGS. Nonindigenous near-coastal and estuarine species in the North Pacific: Similarities and disparities in species invasion patterns.

PS 44-41 Maines, AP and TR Seastedt, University of Colorado at Boulder. Effects of disturbance and site on spotted knapweed (Centaurea stoebe) seedling establishment in Colorado.

PS 44-42 Taylor, K1, B Maxwell1 and A Pauchard2, (1)Montana State University, (2)Universidad de Concepción, Instituto de Ecología y Biodiversidad (IEB). Drivers of Pinus contorta invasion in Patagonia, Chile.

PS 44-43 Maxwell, BD, T Brummer, PG Lawrence, EA Lehnhoff, J Rotella and LJ Rew, Montana State University. An empirical assessment of a Linaria dalmatica invasion in Yellowstone National Park.

PS 44-44 Marchini, GL and MB Cruzan, Portland State University. Competitive interactions in a newly invasive plant, Brachypodium sylvaticum.

PS 44-45 Altamirano-Vázquez, HG1, C Martínez-Peralta2, J Golubov Sr.3, M Rojas-Aréchiga2 and MC Mandujano4, (1)Depto. El hombre y su ambiente, (2)Instituto de Ecología, Universidad Nacional Autónoma de México, (3)Universidad Autónoma Metropolitana, (4)Instituto de Ecología. Universidad Nacional Atónoma de México. Germination of the succulent, invasive species Kalanchoe delagoensis.

PS 44-46 Wilson, CE, JR Albers, IJ Csargo and AC Kraemer, University of St. Thomas. Demographic variation among sites within a continuous population of Rhamnus cathartica.

PS 45 - Invasion: Ecosystem Processes

Exhibit Hall DE, Oregon Convention Center

PS 45-47 Sheley, RL1 and S Bansal2, (1)USDA-ARS, (2)United States Department of Agriculture. Plant litter effects on nutrient mineralization and vegetation dynamics in sage-steppe communities with differing levels of annual grass invasion.

PS 45-48 Schuster, MJ and JS Dukes, Purdue University. Non-additive decomposition of native-invasive tree litter mixtures.

PS 45-49 Oleksy, IA1, AM Handler2, N Rigolino3, DC Arscott4, CA Gibson5, T Hoellein6 and DC Richardson3, (1)University of New Hampshire, (2)Franklin & Marshall College, (3) SUNY New Paltz, (4)Stroud Water Research Center, (5) Skidmore College, (6)Loyola University. A spatial analysis of Didymosphenia geminata (rock snot) in the New York City watershed.

PS 45-50 McCleery, TL1 and DF Cusack2, (1)UCLA, (2)UC - Los Angeles. Invasive tree species in tropical forests along an urban-rural gradient.

PS 45-51 Lee, MR and JP Wright, Duke University. Linking species with their effects on ecosystem processes: Can an invasive species' density and relative abundance account for variability in soil net nitrification potential?.

PS 46 - Invasion: Invasibility, Stability, And Diversity

Exhibit Hall DE, Oregon Convention Center

PS 46-52 Huebner, CD, USDA Forest Service. Survivorship and productivity of invasive plant species in response to different forest management regimes across regional and local environmental gradients.

PS 46-53 Hilbig, BE and EB Allen, University of California, Riverside. Effects of soil inocula on the growth responses of native annual forbs and the invasive annual grass, Bromus diandrus.

PS 46-54 Brainard, AS and KL Schulz, State University of New York College of Environmental Science and Forestry. Propagule pressure and disturbance as drivers of invasive macrophyte abundance in public versus private lakes.

PS 46-55 Shaff, SE1, DA Pyke1, AI Lindgren1, EW Schupp2, J Burnham2, PS Doescher3 and J Chambers4, (1)U.S. Geological Survey, (2)Utah State University, (3)Oregon State University, (4)USDA Forest Service. Inter-perennial gaps may indicate invasibility of sagebrush systems.

PS 46-56 Chaneton, EJ, AI Bonomo and MG Longo, IFEVA - Facultad de Agronomía, Universidad de Buenos Aires. Plant richness and composition within a native functional group control invasion success in grassland microcosms.

PS 46-57 Chupp, AD and LL Battaglia, Southern Illinois University. Disease induced canopy gaps and the persistence niche.

PS 46-58 Satterlee, SR, IJ Renne and TP Diggins, Youngstown State University. Landscape and successional influences on plant invader success in a primary successional riparian zone.

PS 47 - Invasion: Prevention And Management

Exhibit Hall DE, Oregon Convention Center

PS 47-59 Seiler, LK, DR Decoteau and DD Davis, Penn State University. Exploring Ailanthus altissima as a bioindicator of ozone pollution.

PS 47-60 Lehnhoff, EA1, MG Hohmann2, PG Lawrence1, BD Maxwell1 and LJ Rew1, (1)Montana State University, (2)US Army Corps of Engineers ERDC - CERL. Monitoring invasive plant populations for management efficacy: Problems and solutions.

PS 47-61 Davis, C1, CS Brown1 and SM Esser2, (1)Colorado State University, (2)Rocky Mountain National Park. Effects of selective imazapic application on Bromus tectorum and non-target species in Rocky Mountain National Park.

PS 47-62 Gazal, R1, ML Burkowski1, RM Thomas1, M Takase2, K Gyokusen2 and K Otsuki2, (1)Glenville State College, (2)Kyushu University. Leaf structure and physiological attributes of Ailanthus altissima in cool and warm temperate regions.

PS 47-63 Watts, AL, University of Washington. Identifying stand attributes correlated to the presence of Ilex aquifolium (English holly) within a Pacific Northwest forest.

PS 47-64 Shrestha, S, KR Hickman and GWT Wilson, Oklahoma State University. Assessing plant-soil feedbacks following biological invasions: Implications for restoration.

PS 47-65 Board, DI1, JC Chambers2, RO Jones3, DW Johnson4 and RR Blank5, (1)USDA Forest Service Rocky Mountain Research Station, (2)USDA Forest Service, (3)University of Nevada-Reno, (4)University of Nevada, Reno, (5)USDA Agricultural Research Service. Effects of repeated burning of cheatgrass (Bromus tectorum) dominated ecosystems on plant density, biomass and seed production: Implications for restoration.

PS 47-66 Jones, RO1, DW Johnson2, JC Chambers3, DI Board4 and RR Blank5, (1)University of Nevada-Reno, (2)University of Nevada, Reno, (3)USDA Forest Service, (4)USDA Forest Service Rocky Mountain Research Station, (5)USDA Agricultural Research Service. Effects of repeated burning of cheatgrass (Bromus tectorum) dominated ecosystems on litter, soil and plant nitrogen: Implications for restoration.

PS 47-67 Miller, SN, KK Bohn and M Thetford, University of Florida. Effect of herbicide treatments on above- and belowground biomass of Japanese climbing fern.

PS 47-68 Meier, JA, Bowling Green State University. Enhancing the restoration of wet prairie following the removal of Frangula alnus (Glossy Buckthorn).

PS 47-69 Burnham, J1, EW Schupp1, SE Shaff2, DA Pyke2, A Lindgren2, JC Chambers3 and PS Doescher4, (1)Utah State University, (2)USGS, (3)USDA Forest Service, (4)Oregon State University. Effects of tebuthiuron and imazapic on sagebrush and herbaceous understory.

PS 47-70 Pasari, J1, G Ashton2, I Davidson3, ED Grosholz4, G Ruiz2, SL Williams5 and CJ Zabin2, (1)University of California, Davis, (2)Smithsonian Environmental Research Center, (3) Portland State, (4)University of California, (5)UC Davis. Risk assessment of six marine invasion pathways into California estuaries.

PS 47-71 Kurtz, CM, U.S. Forest Service. An assessment of invasive plant species monitored in the Northern Research Station Region, 2005 through 2010.

PS 48 - Invasion: Species Interactions

Exhibit Hall DE, Oregon Convention Center

PS 48-72 Gorney, R and M Watzin, University of Vermont. Evaluation of foodweb shifts with the addition of two species of invasive planktivorous fish.

PS 48-73 Skalova, H1, L Moravcova1, J Cuda2 and P Pysek3, (1) Institute of Botany, Academy of Sciences, Czech Republic, (2)Charles University, (3)Institute of Botany, Academy of Sciences, Pruhonice, Czech Republic. Role of traits, plasticity and local differentiation in plant invasions: Comparison of three balsam (Impatiens) species with different invasion status with their native congener.

PS 48-74 Cuda, J1, H Skalova2, Z Janovsky1 and P Pysek3, (1) Charles University, Prague, (2)Institute of Botany, Academy of Sciences of the Czech Republic, (3)Institute of Botany, Academy of Sciences, Pruhonice, Czech Republic. Ecological requirements, short-term dynamics and competition of native and invasive balsam (Impatiens) species: A field study.

PS 48-75 Gabrielson, SM, ML Ronsheim and KL VanCamp, Vassar College. Potential synergistic interactions between Celastrus orbiculatus (oriental bittersweet) and Agrilus planipennis (emerald ash borer): Implications for northeastern forests.

PS 48-76 Bao, Z and ET Nilsen, Virginia Polytechnic Institute and State University (Virginia Tech). The interaction between invasive tree Ailanthus altissima and native Robinia pseudoacacia in eastern deciduous forest.

PS 48-77 Chung, YA1, LA Burkle2 and TM Knight3, (1)Rice University, (2)Montana State University, (3)Washington University in St. Louis. Early stage invasion of a flowering shrub fails to disrupt native plant-pollinator interactions.

PS 48-78 Morrison, JA1, C Zymaris1, K Mauck2, C Akparanta1, M Fertitta1, J Sblendorio1 and P Fourounjian1, (1)The College of New Jersey, (2)The Pennsylvania State University. Competition and herbivory in co-invasive, non-native plants of the suburban/exurban forest herb layer.

PS 48-79 Zelles, AM and TP Rooney, Wright State University. Positive feedback does not occur between garlic mustard (Alliaria petiolata) and Eurasian earthworms.

PS 48-80 Fertitta, M, C Zymaris, A DiBartolo, J Sblendorio, P Fourounjian, C Akparanta and JA Morrison, The College of New Jersey. Deer pressure in suburban/exurban forests and its relation to deer browse on invasive plants.

PS 48-81 Newsom, AJ, Sea Grant Fellow, California State Lands Commission. Feeding and functional responses of invasive European green crabs (Carcinus maenas) in the presence of an introduced sea slug (Philine orientalis).

PS 48-82 Borowicz, V and JE Armstrong, Illinois State University. Growth of an exotic legume on a restored prairie depends on light, soil fertility, and root parasitism.

PS 48-83 Sauby, KE1, AM Woodard2, RD Holt1 and TD Marsico2, (1) University of Florida, (2)Arkansas State University. Impacts of native and invasive herbivores on Opuntia demography in Florida.

PS 48-84 Sommers, P and P Chesson, University of Arizona. Buffelgrass (Pennisetum ciliare) potentially inhibits recruitment of suite of Sonoran perennials.

PS 48-85 Freed, TZ, University of Maryland. Roles of competition and predation in the North American invasion of the Asian bush mosquito aedes japonicus.

PS 49 - Physiological Ecology

Exhibit Hall DE, Oregon Convention Center

PS 49-86 Stokes, TA and LJ Samuelson, Auburn University. Physiological adaptation to shade in longleaf pine.

PS 49-87 Kaufman, NT, University of California, Santa Cruz. The effects of albinism on the water relations and stem hydraulics of S. sempervirens shoots.

PS 49-88 Grisé, DJ, AM Johnson, EE O'Brien and JS Gray, Texas A&M-Corpus Christi. Photosynthetic characteristics of winter-active Helianthus on the Gulf Coast.

PS 49-89 Barber, A1, F Busch2, JB Skillman3 and J Pitterman1, (1) University of California Santa Cruz, (2)Australian National University, (3)California State University. Long-lived photosynthesis: Five decades of photosynthetic activity and foliar senescence in the needles of Pinus longaeva in California's White Mountains.

PS 49-90 Liu, JW1, CT Wu2, YH Wu2, CC Tsai3, P Chesson4 and CR Sheue1, (1)National Chung Hsing University, (2) National Chiayi University, (3)Kaohsiung District Agricultural Research and Extension Station, (4)University of Arizona. Novel adaptation to deep shade environments in basal vascular plants: Bizonoplasts of Selaginella.

PS 49-91 Reuss-Schmidt, K, Portland State University. Interactions between mycorrhizal fungi and sex-specific physiology in Distichlis spicata..

PS 49-92 Keen, KD1, JL Horton2, HD Clarke2 and JR Ward2, (1) UNC-Asheville, (2)University of North Carolina at Asheville. Effects of environmental and physiological factors on the production of bioactive chemicals in Panax quinquefolius L. (American ginseng).

PS 49-93 Gloser, V1, M Balaz1, R Jupa1 and S Jansen2, (1)Masaryk University, (2)Universität Ulm. Do xylem vessels of a liana species behave like ideal capillaries?.

PS 49-94 Sendall, KM1, CH Lusk2 and PB Reich1, (1)University of Minnesota, (2)University of Waikato. Ontogenetic variation in whole-plant carbon balance of juvenile evergreen trees.

PS 49-95 Little, TK and MR Fulton, Bemidji State University. Physiological and environmental differences between the top and bottom of a Pinus strobus canopy during cold hardening.

PS 49-96 Hudson, PJ1, WT Pockman2 and NG McDowell3, (1) University of New Mexico- Albuquerque, (2)University of New Mexico, (3)Los Alamos National Laboratory. Adjustment of xylem vulnerability to cavitation in a precipitation manipulation experiment.

PS 49-97 Warpeha, K1, LS Kaufman1, J Gibbons1 and JH Sullivan2, (1)University of Illinois at Chicago, (2)University of Maryland. Supplemental supply of phenylalanine to soybean seeds reduces damage by ultraviolet radiation in etiolated seedlings.

PS 49-98 Mortazavi, B1, G Starr2, SF Oberbauer3 and H Genet2, (1)University of Alabama and Dauphin Island Sea Lab, (2) University of Alabama, (3)Florida International University. Assimilation and partitioning of photosynthates into metabolic pools by the Arctic vegetation.

PS 49-99 Boutz, AL1, WT Pockman1 and NG McDowell2, (1)University of New Mexico, (2)Los Alamos National Laboratory. Canopy adjustment in Pinus edulis as a response to experimental manipulations of water availability.

PS 49-100 Nguyen, ML1, A Kertho2 and AS Verhoeven1, (1)University of St. Thomas, (2)North Dakota State University. Light-dependent regulation of state transitions in gymnosperms

compared with angiosperms.

PS 49-101 Soper, FM1, JP Sparks1 and TW Boutton2, (1)Cornell University, (2)Texas A&M University. Temporal variation in nitrogen fixation during encroachment of Prosopis glandulosa into grasslands of the Rio Grande Plains.

PS 49-102 Marias, DE1, FC Meinzer2, D Shaw1, DR Woodruff2, SL Voelker3 and B Lachenbruch1, (1)Oregon State University, (2)USDA Forest Service, (3)Southern Oregon University. Effect of hemlock dwarf mistletoe on the physiology of host western hemlock using tree rings and C and O stable isotopes.

PS 49-103 Bretfeld, M1, SB Franklin1 and RM Hubbard2, (1)University of Northern Colorado, (2)USDA Forest Service. Stress response, annual and diurnal patterns in root sap flow of Populus tremuloides.

PS 49-104 Slate, ML, SM Eppley and TN Rosenstiel, Portland State University. Sex-specific variation in physiological and morphological features of the moss Ceratodon purpureus.

PS 49-105 Martínez-Villegas, JA1, J Márquez-Guzmán2, I Pisanty2 and A Orozco-Segovia1, (1)Instituto de Ecología, Universidad Nacional Autónoma de México, (2)Facultad de Ciencias, Universidad Nacional Autónoma de México. Effect of temperature and osmotic potential on the germination of two Asteraceae growing in a lava field in central Mexico.

PS 49-106 Taylor-Laine, SD1, S Espino1, A Downey2 and HJ Schenk1, (1)California State University Fullerton, (2)ICT International. A new method for in-situ measurements of stem hydraulic conductance in intact plants.

PS 49-107 Carpenter, K, J Cannon and NM Hughes, High Point University. The implausibility of the osmotic adjustment hypothesis for anthocyanin synthesis in leaves.

PS 49-108 Boyce, RL and MS Brown, Northern Kentucky University. Transpiration in the shrubs Amur honeysuckle, paw-paw, and spicebush: Differential responses to soil water availability and vapor pressure deficit.

PS 49-109 Lunch, CK1, ZG Cardon1, SM Thomas1, LA Lewis2, HA Frank2, MM Enriquez2 and AM LaFountain2, (1)Marine Biological Laboratory, (2)University of Connecticut. Diverse photoprotection dynamics in desert-dwelling algae and their aquatic relatives.

PS 49-110 Thomas, SM1, D Bruce2, ZG Cardon1, MM Enriquez3, HA Frank3, LA Lewis3, CK Lunch1 and K Schaven2, (1)Marine Biological Laboratory, (2)Brock University, (3)University of Connecticut. Dried out but not dead! Photophysiological signatures of desiccation tolerance in desert green algae.

PS 49-111 Saffell, BJ1, FC Meinzer2, B Lachenbruch1, SL Voelker3 and D Shaw1, (1)Oregon State University, (2)USDA Forest Service, (3)Southern Oregon University. Use of tree-ring stable isotopes to quantify Swiss Needle Cast disease severity in Douglas-fir.

PS 49-112 McCulloh, KA1, DM Johnson2, JP Petitmermet1, BE McNellis3, FC Meinzer4 and B Lachenbruch5, (1)Oregon State University, (2)Duke University, (3)Western Oregon University, (4)USDA Forest Service, (5)Department of Forest Ecosystems & Society. Are shrubs short because of their hydraulic architecture? A comparison of co-occurring trees and shrubs.

PS 50 - Ecosystem Function

Exhibit Hall DE, Oregon Convention Center

PS 50-113 Schedlbauer, JL, West Chester University. Carbon dioxide exchange in the serpentine barrens of southeastern Pennsylvania: examining the role of fire management and environmental drivers.

PS 50-114 Whelan, A1, G Starr1, R Mitchell2, CL Staudhammer1 and HW Loescher3, (1)University of Alabama, (2)Joseph W. Jones Ecological Research Center, (3)National Ecological Observatory Network (NEON, Inc.). Effects of cyclic fire and water availability on longleaf pine carbon dynamics.

PS 50-115 Krutsinger, R, RB Brugam and KE Schulz, Southern Illinois University Edwardsville. Increasing productivity through time in an Illinois tallgrass prairie restoration.

PS 50-116 Petrie, MD, ME Litvak and SL Collins, University of New Mexico. Precipitation events drive ecosystem water fluxes across an elevation gradient in New Mexico, USA.

PS 50-117 Yao, J1 and D Peters2, (1)New Mexico State University, (2) USDA Agricultural Research Service. Seasonal distribution of net primary production by functional groups in Chihuahuan Desert, and the role of seasonal precipitation.

PS 50-118 Iio, A1, NPR Anten2, K Hikosaka3, Y Nakagawa4 and A Ito5, (1)National institute for environmental studies, (2)Utrecht University, (3)Tohoku University, (4)Tsukuba University, (5)National Institute for Environmental Studies. Global meta-analysis of field-observed leaf area index for woody species.

PS 50-119 Blakeslee, SC1, D Tomback1, JC Pyatt1, ER Pansing1 and LM Resler2, (1)University of Colorado, (2)Virginia Tech. Whitebark Pine (Pinus albicaulis) vigor and functional roles within the alpine treeline ecotone.

PS 50-120 Archer, AA and LJ Samuelson, Auburn University. Soil respiration in a longleaf pine chronosequence.

PS 50-121 Beverly, D1, RM Hubbard2, SB Franklin1 and CC Rhoades3, (1)University of Northern Colorado, (2)USDA Forest Service, (3)USDA Forest Service Research. Soil CO2 efflux in salvage logged versus untreated beetle-kill forests.

PS 50-122 Wood, SJ1, NJ Sanders1 and AT Classen2, (1)University of Tennessee, (2)University of Tennessee, Knoxville. The above- and below-ground legacies of ant colonies .

PS 50-123 Pyatt, JC1, DF Tomback1, SC Blakeslee1, ER Pansing1 and LM Resler2, (1)University of Colorado Denver, (2)Virginia Tech. The role of Pinus albicaulis as a tree island initiator in the alpine-treeline ecotone: Comparing microclimates among microsites.

PS 51 - Ecosystem Function: Biodiversity

Exhibit Hall DE, Oregon Convention Center

PS 51-124 Hoskinson, SA and VT Eviner, University of California Davis. Plant species abundance mediates plant traits and ecosystem processes.

PS 51-125 Elliott, KJ1, J Vose1, JD Knoepp1, BD Clinton1 and BD Kloeppel2, (1)USDA Forest Service Southern Research Station, (2)Western Carolina University. Does a diverse herbaceous layer contribute to ecosystem function.

PS 51-126 Zimmerman, EK and BJ Cardinale, University of Michigan. How does biodiversity relate to the functioning of 'real-world' ecosystems.

PS 51-127 Jenkins, DG1, ER Moran2, N Nafzger1, E Rysak1, C Grimont1, J Houder1 and M Gutierrez1, (1)University of Central Florida, (2)Washington University. Equifinal ecosystem productivity despite biodiversity variance in replicate, open ecosystems.

PS 51-128 Fritschie, KJ, PA Venail, A Narwani and BJ Cardinale, University of Michigan. Phylogenetic diversity affects biomass production through two opposing forces.

PS 51-129 Patry, C1, C Messier1, D Kneeshaw1, I Aubin2 and M Salemaa3, (1)Université du Québec à Montréal, (2)Great Lakes Forestry Centre, (3)The Finnish Forest Research Institute. Functional trait analysis of the impact of a gradient of forest management on understory plants: Multi-scale approach comparing Canada vs Finland.

PS 52 - Detritus And Decomposition

Exhibit Hall DE, Oregon Convention Center

PS 52-130 Graham, BD1, MA Jenkins1, SR Shifley2, MA Spetich2 and CA Lowney1, (1)Purdue University, (2)USDA Forest Service. Structural properties of woody debris populations in old-growth Central Hardwood Region forests: Twenty years of change.

PS 52-131 Tardif, A and B Shipley, University of Sherbrooke. Predicting mixed-species litter decomposition with community-aggregated means via the idiosyncratic hypothesis.

PS 52-132 Montemarano, JJ1, M Sasa-Marin2 and MW Kershner1, (1)Kent State University, (2)Instituto Clodomiro Picado. Litter richness decreases decomposition rates in a tropical wetland.

PS 52-133 Montes, AC1, RE Rockwell1, KD Zimmer1, LM Domine1 and JB Cotner2, (1)University of St Thomas, (2)University of Minnesota - Twin Cities. Effects of water depth, type of primary producer, and whole lake factors on decomposition rates in shallow lakes.

PS 52-134 Probst, DT1, AT Goding1, KD Zimmer1, LM Domine1, BR

Herwig2, JB Cotner3 and WO Hobbs4, (1)University of St Thomas, (2)Minnesota Department of Natural Resources, (3)University of Minnesota - Twin Cities, (4)Science Museum of Minnesota. Consumption of organic carbon from lake sediments by detritivorous fish: Implications for carbon sequestration in shallow lakes.

PS 52-135 Edelman, LT, J Garza and GL Vourlitis, California State University. Litter and soil C and N mineralization dynamics for a coastal sage scrub ecosystem exposed to chronic experimental N deposition.

PS 52-136 Mahaney, WM1, KA Smemo2 and CR Hewins2, (1) ENVIRON International Corp., (2)The Holden Arboretum. Leaf litter composition and understory herb effects on temporal decomposition dynamics in a northern hardwood forest.

PS 52-137 Aguillon, SM1, K Predick1, EM Levi1, JA Nelson2, RL McCulley2, HL Throop3, PW Barnes4 and SR Archer1, (1)University of Arizona, (2)University of Kentucky, (3) New Mexico State University, (4)Loyola University. Does UV radiation alter short-term leaf litter decomposition in contrasting dryland canopy regimes?.

PS 53 - Disease Ecology And Epidemiology

Exhibit Hall DE, Oregon Convention Center

PS 53-138 Marchetto, KM and AG Power, Cornell University. Coinfection dynamics of two pathogens of barley with different transmission modes.

PS 53-139 Juliano, SA1, G Ribeiro2, RM de Freitas2, M Castro2, C Codeço2, RL de Oliveira2 and LP Lounibos3, (1)Illinois State University, (2)Instituto Oswaldo Cruz, (3)University of Florida. Everybody knows she's a femme fatale: What are the ecological conditions that produce good disease vectors?.

PS 53-140 Rhodes, C1, LF Altfeld1, BE Engle1 and B Allam2, (1)Wilson College, (2)Stony Brook University. Effects of synthetic estrogen,17ř-ethinyl estradiol on hard clam (Mercenaria mercenaria) immunity and QPX (Quahog Parasite Unknown) Infection.

PS 53-141 Gilliam, WF and RJ Brinkerhoff, University of Richmond. Variation in black-legged tick (Ixodes scapularis) density and pathogen infection prevalence at a spatial expansion front.

PS 53-142 Duple, SA1, P Lee1, GC Davis1, AB Koss1, SR Hall2, MA Duffy3, Z Rapti1 and CE Cáceres1, (1)University of Illinois at Urbana-Champaign, (2)Indiana University, (3)Georgia Institute of Technology. Interspecific competition for algal resources alters disease dynamics in Daphnia.

PS 53-143 Knudsen, GR, University of Idaho. The potential role of bat epidermal microbes in biological control of white-nose syndrome.

PS 53-144 Baughman, OW1, SE Meyer2 and J Beckstead3, (1) University of Nevada Reno, (2)USDA Forest Service, Rocky Mountain Research Station, (3)Gonzaga University. Exploring the causes and effects of cheatgrass die-offs in the Great Basin, USA.

PS 53-145 Langwig, KE1, WF Frick2, JT Bried3, T Kunz1 and AM Kilpatrick2, (1)Boston University, (2)University of California, Santa Cruz, (3)The Nature Conservancy. Sociality determines persistence of populations suffering from a novel fungal disease, white-nose syndrome.

PS 54 - Spatial Scale And Scaling

Exhibit Hall DE, Oregon Convention Center

PS 54-146 Hartman, KM and SL Hiley, Missouri Western State University. The distribution of prairie soil resources along a topographic gradient in the loess hills of northwest Missouri using portable x-ray fluorescence (PXRF).

PS 54-147 Brooks, JR1, JE Compton1, AT Herlihy2, DJ Sobota3, JL Stoddard1 and M Weber1, (1)US EPA, (2)Oregon State University, (3)National Research Council Postdoctoral Fellow. Using ř15N of Chironomidae to help assess lake condition and possible stressors in EPA's National Lakes Assessment.

PS 54-148 Hui, D1, J Wang2, W Shen2, X Le1, E Nwaneri1, P Ganter1 and H Ren2, (1)Tennessee State University, (2)Chinese Academy of Sciences. Influences of biotic and abiotic factors on allometry and productivity-biomass relationship in Chinese forests.

PS 54-149 Smith, SDP1, D Allan1, PB McIntyre2, B Halpern3, G Boyer4, A Buchsbaum5, A Burton1, L Campbell6, WL Chadderton7, JJH Ciborowski8, PJ Doran9, T Eder10, D Infante11, LB Johnson12, C Joseph1, AL Marino1, J Read13, E Rutherford14, S Sowa9 and AD Steinman15, (1)University of Michigan, (2)University of Wisconsin, (3)University of California, (4)State University of New York, (5)National Wildlife Federation, (6)Saint Mary's University, (7)The Nature Conservancy c/o Center for Aquatic Conservation, (8)University of Windsor, (9)The Nature Conservancy, (10) Great Lakes Commission, (11)Michigan State University, (12)University of Minnesota, (13)Michigan Sea Grant, (14) NOAA Great Lakes Environmental Research Laboratory, (15)Grand Valley State University. Assessing the cumulative influence of multiple stressors at large spatial scales in the Great Lakes.

PS 54-150 Lee, MB and JP Carroll, University of Georgia. Assessing scale dependencies in avian species in a pine forest, agriculture and urban matrix.

PS 55 - Genetics And Molecular Techniques

Exhibit Hall DE, Oregon Convention Center

PS 55-151 Hoffman, AM, KE Mellor and M Timko, University of Virginia. Composite plants: A novel method for gene screening in cowpea.

PS 55-152 Khorasani, M, NG Johnson and R Edmonds, University of Washington. Root rot pathogen: Cylindrocarpon spp. in Douglas-fir forest nursery in the PNW USA and their management.

PS 55-153 Voordeckers, JW1, M Yuan1, J Zhang1, K Xue1, L Wu1, EAG Schuur2 and J Zhou1, (1)University of Oklahoma, (2)University of Florida. Changes in fungal community composition during permafrost thawing.

PS 55-154 Hubbard, KA1, EJ Resetarits2, CH Ellis3, EV Armbrust3 and DM Anderson1, (1)Woods Hole Oceanographic Institution, (2)Columbia University, (3)University of Washington. Seasonal, spatial, and niche-driven patterns of species succession in Gulf of Maine communities of the toxic marine diatom Pseudo-nitzschia.

PS 55-155 Perkins, SL and MJ Jenny, University of Alabama. Differential expression of several stress response genes between two freshwater mussels, Villosa nebulosa and Villosa lienosa, in response to heat shock.

PS 56 - Evolution

Exhibit Hall DE, Oregon Convention Center

PS 56-156 Lee, CE and MB Cruzan, Portland State University. Reduced mycorrhizal dependence of invasives necessary for successful invasions.

PS 56-157 Dick, CA1, JA Herman1, SB Saffouri2, RE O' Dell3 and JB Whittall1, (1)Santa Clara University, (2)Pomona College, (3)Bureau of Land Management. Genetic diversity and population differentiation in the rare serpentine endemic, San Benito evening primrose (Camissonia benitensis; Onagraceae).

PS 56-158 Duran, PD1, KW Floyd2 and EJ Walsh1, (1)The University of Texas at El Paso, (2)University of Texas at El Paso. Genetic effects of roads on Northern Chihuahuan Desert populations of the lizard Uta stansburiana.

PS 56-159 Moore, CM and SB Vander Wall, University of Nevada, Reno. Seed dispersal syndromes in a fire adapted plant.

PS 56-160 Weiss-Lehman, CP, University of Colorado at Boulder. Temperature dependent selection in microbial genomes: An examination of intergenic regions and GC composition.

PS 56-161 Will, R1, CJ Lilly2, J Stewart1 and CG Tauer3, (1)Oklahoma State University, (2)Campbell Group 300 Champions Dr. Apt. 211, Lufkin, TX 75901, (3)Retired. Sprouting capacity of shortleaf and shortleaf x loblolly pine hybrid seedlings in response to topkill: Is there a relationship between fire suppression and increasing abundance of the hybrids?.

PS 56-162 Ishibashi, CDA, TR Kartzinel and DW Trapnell, University of Georgia. Chloroplast DNA sequencing reveals deep phylogeographic split among populations of the lady of the night orchid, Brassavola nodosa, in northwestern Costa Rica.

PS 56-163 Carr, DE1, TA Junek2 and MD Eubanks2, (1)University of Virginia, (2)Texas A&M University. Multiple effects of inbreeding in populations undergoing directional selection.

PS 56-164 Chamberlain, SA, KD Whitney and JA Rudgers, Rice University. Effects of agriculture on evolution of native species.

PS 57 - Statistical Ecology

Exhibit Hall DE, Oregon Convention Center

PS 57-165 Xiao, X and EP White, Utah State University. The adequate currency for community-level energetic constraint based on Maximum Entropy.

PS 57-166 Inouye, BD, Florida State University. Connecting theory and data demands reevaluation of experimental design.

PS 57-167 Schoolmaster, DR Jr.1, JB Grace2 and EW Schweiger3, (1)Five Rivers Services at US Geological Survey, (2)US Geological Survey, (3)National Park Service. Wetland bioassessment using Naïve Bayesian indicator species analysis.

PS 57-168 Domke, GM1, CW Woodall1, JE Smith2 and RE McRoberts1, (1)USDA Forest Service, Northern Research Station, (2)US Forest Service, Northern Research Station. Examining imputation techniques for time-series estimates of forest carbon stocks in the United States.

PS 58 - Remote Sensing And Image Analysis

Exhibit Hall DE, Oregon Convention Center

PS 58-169 Butnor, JR1, JL Campbell2 and JB Shanley3, (1)U.S. Forest Service, (2)USDA Forest Service, (3)USGS. Using ground penetrating radar to characterize soil frost for ecological applications.

PS 58-170 Huang, CY1, SR Archer2, MP McClaran2 and SE Marsh2, (1)National Taiwan University, (2)University of Arizona. Shrub encroachment into grasslands: end of an era?.

PS 58-171 Manley, PV1, JC Zinnert2, RD Massaro2, ER Crawford1, SN Bissett1 and D Young1, (1)Virginia Commonwealth University, (2)US Army Corps of Engineers. Lasers on a plane! Using LiDAR to analyze spatial variations in shrub thicket canopies and light attenuation in coastal environments.

PS 58-172 McNally, A1, J Michaelsen2 and B Cappelaere3, (1) University of California, Santa Barbara, (2)University of California, (3)Laboratory HydroSciences Montpellier. Using satellite derived vegetation indices to predict root zone soil moisture in the African Sahel.

PS 59 - Microbial Ecology

Exhibit Hall DE, Oregon Convention Center

PS 59-173 Armitage, DW1, KL Gallagher2, ND Youngblut3, DH Buckley4 and SH Zinder4, (1)University of California, Berkeley, (2)University of Connecticut, (3)University of Illinois at Urbana-Champaign, (4)Cornell University. Patterns of phylogenetic and functional diversity in a salt marsh microbial mat.

PS 59-174 Fazzino, L and HE Kirkpatrick, University of Puget Sound. Scotch broom's nitrogen-fixing symbiotic bacteria: Are there roommates in nodules?.

PS 59-175 Hill, RS and RB Franklin, Virginia Commonwealth University. Microbial diversity: A spatial study of microbial community assemblages in the Floridian Aquifer.

PS 59-176 Eberhart, JL and JL Parke, Oregon State University. Forest Phytophthoras, a new international journal and website.

PS 59-177 Carrell, A and AC Frank, University of California. Diversity of endophytic bacterial communities in Pinus flexilis foliage.

PS 59-178 Brown, SP and A Jumpponen, Kansas State University. Microbial primary successional dynamics: An assessment of community convergence/divergence patterns.

PS 59-179 Wohl, DL1, W Curry2 and JR Miller2, (1)Elizabethtown College, (2)Pennsylvania State University Milton S. Hershey Medical Center. Disrupting primary succession during childbirth: Is there a long-term consequence?.

PS 59-180 Palanivel, RU1, JA Langley2 and SK Chapman1, (1)Villanova University, (2)Villanvoa University. Microbes mend oil spills? Investigating how nitrogen impacts oil degradation.

PS 59-181 Ryan, CN, G Mayer and SB Cox, Texas Tech University. The effects of heavy metals on the community structure of symbiotic gut microbes in Fundulus heteroclitus.

PS 60 - Soil Ecology

Exhibit Hall DE, Oregon Convention Center

PS 60-182 Lawrence, S1, GL Vourlitis1, FDA Lobo2 and C Ortiz3, (1) California State University, (2)Universidade Federal de Mato Grosso, (3)Universidade Federal de Mato Grosso, Brazil. Interactions between soil nutrient and organic matter content, tree density, and grass cover in Brazilian Cerrado.

PS 60-183 Coleman, MD, DL Smith and S Shan, University of Idaho. Black carbon decreases soil activity of biomass degrading enzymes and increases protease activity.

PS 60-184 Moratto, SM1, RL Hale1, D Huber2 and NB Grimm3, (1) Arizona State University, (2)Idaho State University, (3) National Science Foundation. Is urbanization only skin deep? Deep soil cores in an arid urban ecosystem.

PS 60-185 McNicol, G and WL Silver, University of California, Berkeley. Separate effects of flooding and anoxia on soil biogeochemistry and greenhouse gas emissions.

PS 60-186 de Graaff, MA1, S Gillette1, JD Jastrow2 and SD Wullschleger3, (1)Boise State University, (2)Argonne National Laboratory, (3)Oak Ridge National Laboratory. Differential priming of soil carbon driven by soil depth and root impacts on carbon lability.

PS 60-187 Salley, SW, PH Martin, AK Knapp and EF Kelly, Colorado State University. Soil landscape development in the short-grass steppe ecosystem- assessing the vulnerability of soils to climate change.

PS 60-188 Rehman, AA1, J Taura1, JA Koch1, M Johnson1, KD McConnaughay1, EA Paul2 and SJ Morris1, (1)Bradley University, (2)Colorado State University. The effects of calcium and nitrogen amendments on soil organic matter dynamics in pine forest stands at Sand Ridge State Forest.

PS 60-189 Hartshorn, AS1, A Bondurant1, J Vallotton1, ZH Leggett2 and EB Sucre2, (1)James Madison University, (2) Weyerhaeuser Company. Doubled organic matter levels increase soil respiration from intensively managed loblolly pine plantations.

PS 60-190 Anthony, MA1 and AR Contosta2, (1)Hampshire College, (2)University of New Hampshire. Evidence for the influence of different dairy practices on seasonal nitrous oxide (N2O) fluxes and fungal and bacterial N2O contributions.

PS 60-191 Zhu, X1 and W Horwath2, (1)UCDavis, (2)University of California, Davis. Nitrous oxide production via ammonium oxidation at low oxygen availability in agricultural soils.

PS 60-192 Markewitz, D1, JC Ike1 and LR Boring2, (1)The University of Georgia, (2)Joseph W. Jones Ecological Research Center. Restoration and prescribed fire in longleaf pine ecosystems: Impacts on black carbon storage in soils.

PS 60-193 Taylor, AE, LH Zeglin, TA Wanzek, DD Myrold and PJ Bottomley, Oregon State University. Cropping phase and seasonal effects on population dynamics and relative contributions of ammonia oxidizing archaea and bacteria to soil nitrification potential activities.

PS 60-194 Leggett, ZH and EB Sucre, Weyerhaeuser Company. The impact of annual harvesting of switchgrass intercropped in loblolly pine plantations on soil compaction and long-term soil productivity.

PS 60-195 Ariza, MC, WE Rogers, FE Smeins and JR Hammons, Texas A&M University. In situ seed germination and mycorrhizal associations of the endangered terrestrial orchid Spiranthes parksii .

PS 60-196 Ladd, MP, ZL Rinkes and MN Weintraub, University of Toledo. Effects of elevated nitrogen on the interaction between microbial activity and plant litter chemistry during decomposition of Acer saccharum litter.

PS 60-197 Thoman, HM, ZL Rinkes and MN Weintraub, University of Toledo. Respiration and biomass dynamics during the early stage of Acer rubrum leaf litter decay.

PS 61 - Mycorrhizae

Exhibit Hall DE, Oregon Convention Center

PS 61-198 Cappellazzi, JE1, JE Smith2, PJ Bottomley3 and DD Myrold1, (1)Oregon State University, (2)USDA Forest

Service, Pacific Northwest Research Station, Forestry Sciences Lab, (3)Department of Crop and Soil Science. The birth and death of ectomycorrhizal mats: Response of ectomycorrhizal fungal communities to a reciprocal soil transplant experiment.

PS 61-199 Villard, L, A Roger and IR Sanders, University of Lausanne. Mediation of plant community structure and productivity by arbuscular mycorrhizal fungi phylogenetic diversity.

PS 61-200 Hewins, CR and DJ Burke, The Holden Arboretum. Seasonal variation of fungal communities on roots of Allium tricoccum (wild leek) in a mature mixed hardwood forest.

PS 61-201 Garcia, MO1, JE Smith2 and DL Luoma1, (1)Oregon State University, (2)USDA Forest Service, Pacific Northwest Research Station, Forestry Sciences Lab. Examining ectomycorrhizal communities in ponderosa pine and lodgepole pine ecosystems.

PS 61-202 Sharma, J1, DL Taylor2, M Pandey3, D Bogarin4, F Pupulin4 and J Warner4, (1)Texas Tech University, (2) Institute of Arctic Biology, (3)TTU, (4)University of Costa Rica. A common epiphytic orchid forms narrow, specific mycorrhizal associations.

PS 61-203 Graves, WR1, J Sharma2 and M Pandey3, (1)Iowa State University, (2)Texas Tech University, (3)TTU. Assessment of mycorrhizal colonization in the genus Dirca.

PS 62 - Life History Theory And Evolution

Exhibit Hall DE, Oregon Convention Center

PS 62-204 Zattara, EE1 and PV Casanovas2, (1)University of Maryland, College Park, (2)University of Maryland. Population effects of resource allocation strategies in asexually reproducing annelids.

PS 62-205 Billman, EJ and AD Jones, Brigham Young University. A test of the cost of reproduction hypothesis in environments with different extrinsic mortality rates.

PS 62-206 Laidlaw, CT1, MC Belk1 and C Creighton2, (1)Brigham Young University, (2)Purdue University, Calumet. Variation in current versus future reproduction and tolerance to over-reproduction across a latitudinal cline in a burying beetle.

PS 62-207 Meyers, PJ1, JC Rehm1, MC Belk1 and C Creighton2, (1) Brigham Young University, (2)Purdue University, Calumet. Differences in lifetime reproductive output on varying resource sizes in a burying beetle.

PS 62-208 Bourret, SL1, B Kennedy1, CC Caudill2 and L Borgerson3, (1)University of Idaho, (2)University of Idhao, (3)Oregon Department of Fish and Wildlife. The influence of anthropogenic disturbance on juvenile Chinook salmon life history variability in the Willamette Valley.

PS 63 - Habitat Structure, Fragmentation, Connectivity

Exhibit Hall DE, Oregon Convention Center

PS 63-209 Mallinger, RE1 and C Gratton2, (1)University of Wisconsin-Madison, (2)University of Wisconsin - Madison. Impacts of landscape structure and pesticides on wild bees in southern Wisconsin.

PS 63-210 Grenis, K and SM Murphy, University of Denver. Ecological impacts of habitat fragmentation on moth communities in an urban ecosystem.

PS 63-211 Truong, HS, JL Hwan and SM Carlson, University of California: Berkeley. The effects of stream fragmentation on the movements of juvenile salmonids in a Mediterranean-climate stream.

PS 63-212 Kovach, T1, PJ Hart1, CP Giardina2, RJ Camp3 and R Ostertag1, (1)University of Hawaii at Hilo, (2)USDA Forest Service, (3)USGS Hawaii Cooperative Studies Unit. Determinants of avian density across a fragmented landscape.

PS 63-213 Tiede, J1 and C Gratton2, (1)University of Wisconsin-Madison, (2)University of Wisconsin - Madison. Influence of landscape composition on the physiological condition of common Coccinellidae.

PS 63-214 Love, JM and W Mackay, University of Texas El Paso. Revision of the ant genus Xenomyrmex Forel.

4:30 pm-6:30 pm; 5 pm-6:30 pm; 6:30 pm-8 pm

PS 64 - Herbivory

Exhibit Hall DE, Oregon Convention Center

PS 64-215 Dunham, NR, SM Markegard and KA Yurkonis, University of North Dakota. Effects of fungal endophyte presence in cool-season grasses native to the Northern Great Plains.

PS 64-216 Tao, L and MD Hunter, University of Michigan. Effects of plant defense chemicals on insect performance depend on plant nutrient levels.

PS 64-217 Stady, L and DJ Ballhorn, Portland State University. Testing predictions of the optimal defense theory in vegetative and reproductive structures of lima bean (Phaseolus lunatus L.).

PS 64-218 Godschalx, AL and DJ Ballhorn, Portland State University. Co-variation of chemical and mechanical defenses in lima bean (Phaseolus lunatus L.).

PS 64-219 Meier, AR and R Niesenbaum, Muhlenberg College. The ontogeny of defense: Age specific leaf characters and herbivory in sun and shade leaves of Lindera benzoin.

PS 64-220 Newman, JR1 and D Wagner2, (1)University of Alaska Fairbanks, (2)University Of Alaska Fairbanks. The influence of herbivory and water availability on extrafloral nectar secretion in quaking aspen (Populus tremuloides Michx).

PS 64-221 Avila Sakar, G and J Kornelsen, University of Winnipeg. Resistance and tolerance to herbivory vary among accessions of Arabidopsis thaliana.

PS 64-222 Mazía, N1, EJ Chaneton1, T Kitzberger2 and LA Garibaldi3, (1)Universidad de Buenos Aires, (2)CONICET - Universidad Nacional del Comahue, (3)CONICET - Universidad del Comahue. Long-term climate influence on insect folivory in northern Patagonia forests, Argentina.

PS 64-223 Russell, FL and GR Houseman, Wichita State University. High soil nitrogen levels and insect herbivory suppress tall thistle (Cirsium altissimum) rosette survival.

PS 64-224 Ariano, E and CA Heinz, Benedictine University. Preferences and performance of a specialist herbivore on N- and/or P-fertilized host plants.

5 pm-6:30 pm

ESA Musicians Central

Ginkoberry Concourse, Oregon Convention Center

6:30 pm-8 pm

Bring the Eugene P. Odum School of Ecology to Portland

D135, Oregon Convention Center

Colorado State University Ecologists Mixer

D139, Oregon Convention Center

Ecology Letters Drinks Reception (Invitation only)

Holladay, Doubletree Hotel

ESA Diversity Celebration (formerly Diversity Mixer)

Mt. Bachelor, Doubletree Hotel

ESA Mid-Atlantic Chapter Business Meeting

Halsey, Doubletree Hotel

ESA Natural History Section Mixer/Business Meeting

Three Sisters, Doubletree Hotel

ESA Physiological Ecology Section Mixer and Business Meeting

Portland Blrm 251, Oregon Convention Center

ESA Plant Population Ecology Business Meeting

Portland Blrm 252, Oregon Convention Center

5 pm-6:30 pm; 8 pm-10 pm

ESA Policy Section and Public Affairs Committee Mixer

E145, Oregon Convention Center

ESA Researchers at Undergraduate Institutions Business Meeting

Weidler, Doubletree Hotel

ESA Statistical Ecology Section Business Meeting and Mixer

Portland Blrm 253, Oregon Convention Center

SESYNC-NCEAS Mixer

F150, Oregon Convention Center

8 pm-10 pm

SS 19 - Riverwebs: A Documentary Film On River Food Webs and the Scientists Who Explore Them

B113, Oregon Convention Center

Organized by: J Monroe (info@freshwatersillustrated.org)

RiverWebs chronicles the inspiring life of the pioneering Japanese ecologist, Dr. Shigeru Nakano. From his boyhood exploration of Japan's mountain streams to his large-scale experiments, Nakano's life demonstrates the passion that drives scientific discovery. Yet it is through Nakano's tragic death that we see the personal impact of his life.

SS 20 - Global Environmental Challenges Require Global Ecological Research

B114, Oregon Convention Center

Organized by: WS Harpole (harpole@iastate.edu), EM Lind, ET Borer

Preserving and enhancing the Earth's life-support systems requires a new, inter-disciplinary, global-scale approach to ecological research. This Special Session will explore a range of approaches to conducting large-scale ecology, representing regional to global efforts, with the objective to create opportunities for synthesis and collaboration.

SS 21 - Lakes As Climate Sentinels: Developing a Theoretical Framework

B115, Oregon Convention Center

Organized by: CE Williamson, JE Saros

The "Lakes as Climate Sentinels" Special Session will feature a short presentation and open discussion of lakes as sensors in the landscape, seeking to develop a coherent theoretical framework for deciphering the best sentinel responses of lakes to climate forcing.

SS 22 - The Action Ecologist: Building the Ecologists' Guide to Working with Communities

A105, Oregon Convention Center

Organized by: AE Pérez-Quintero (anaelisa@comunidadesgaia.org), MM Gregory, CL Wright, SM Gabrielson

Moderator: B Otero

Active ecologists collaborate with communities in conducting research and communicating scientific knowledge. This session will provide experienced and aspiring "active ecologists" with an opportunity to contribute ideas for a guide to working with communities. We hope to engage ecologists, as well as promote systemic change in ecology and related fields.

Speakers:
KA Marshall-Gillespie, Chicago State University

SS 23 - PalEON Open Discussion

D136, Oregon Convention Center

Organized by: JS McLachlan

This special session provides an open forum to discuss the current activities, challenges, and opportunities in the PalEON project and to engage the broader community working across paleoecology, statistics, and modeling disciplines at regional scales.

WK 41 - The Latin American Side of Ecology

D137, Oregon Convention Center

Organized by: S Cruz Maysonet (stephanie.cruz@upr.edu), NO Bonilla, MJ Armstrong, AE Pérez-Quintero, E Portier

Moderator: S Cruz Maysonet

Perspectives on land use patterns, food security, scientific and traditional knowledge, invasive species, and pollination services in Latin America are discussed to generate strategies on the expansion of the forum of ESA for these countries.

Speakers:
I Perfecto, University of Michigan
TA Carlo, The Pennsylvania State University
H Morales, El Colegio de la Frontera Sur
M Quesada, Universidad Nacional Autónoma de México
E Huber Sanwald, Instituto Potosino de Investigacion Cientifica y Tecnologica (IPICYT)

Thursday, August 9

Business Meetings and Receptions

7:30 am-9:30 am

ESA Education and Human Resources Committee Business Meeting

Halsey, Doubletree Hotel

11:30 am-1:15 pm

ESA Diversity Luncheon: Generation Z: Past, Present, and Future for ESA's Diversity and Education

Portland Blrm 256, Oregon Convention Center

4 pm-5 pm

ESA SEEDS Closing

Broadway, Doubletree Hotel

5 pm-6:30 pm

Musicians Central

Ginkoberry Concourse, Oregon Convention Center

7 pm-9 pm

ESA Closing Social Event: Portland Taiko Drums and Portland Beer Tasting

Oregon Square Courtyard, Doubletree Hotel

Thursday Sessions

7:30 am-9:30 am

ESA Education and Human Resources Committee Business Meeting

Halsey, Doubletree Hotel

8 am-11:30 am

SYMP 16 - Ecological Consequences of Multiple Changes in Asia and Their Implications to Global Sustainability

Portland Blrm 251, Oregon Convention Center

Organized by: H Tian, L Liu, Q Wang

Endorsed by: Asian Ecology Section

Moderator: H Tian

The session will explore how the interactions of multiple global changes, such as climate, water environment, air quality and land use, affect Asia's ecosystem services, and their implications to global sustainability.

8:00 AM SYMP 16-1 Ojima, DS[1], C Togtohyn[2], KA Galvin[1] and J Qi[3], (1)Colorado State University, (2)National University of Mongolia, (3)Michigan State University. *Social-ecological adaptive capacity of Mongolian pastoral systems to global change in the 21st Century*.

8:25 AM SYMP 16-2 Tian, H, Auburn University. *Climate impact and food benefit of nitrogen fertilizer use in China*.

8:50 AM SYMP 16-3 Wang, Q[1], M Watanabe[2], J Liu[3], O Batkhishig[4] and Y Yang[5], (1)National Institute for Environmental Studies, (2)Keio University, (3)Chinese Academy of Sciences, (4)Mongolian Academy of Sciences, (5)Institute of Genetics and Developmental Biology, Chinese Academy of Sciences. *Dynamics of terrestrial ecological indicators in East Asia during last decades*.

9:15 AM SYMP 16-4 Sun, G[1], X Feng[2], J Xiao[3], A Shiklomanov[3], S Wang[4] and J Chen[5], (1)USDA Forest Service, (2)Chinese Academy of Sciences, (3)University of New Hampshire, (4)North China Electric Power University, (5)The University of Toledo. *Climate change, land management, and water resources in the Drylands East Asia*.

9:40 AM Break

9:50 AM SYMP 16-5 Huang, Y and W Sun, Institute of Botany, Chinese Academy of Sciences. *Estimating terrestrial GHG emissions and uptake in China: Progress and prospects*.

10:15 AM SYMP 16-6 Liu, L[1], X Wang[1], S Xu[1] and W Lin[2], (1) Institute of Botany, Chinese Academy of Sciences, (2)Chinese Academy of Meteorological Sciences, China Meteorological Administration. *The effects of anthropogenic aerosol on carbon uptake and allocation: A gradient study from Beijing metropolitan region, China*.

10:40 AM SYMP 16-7 Ellis, EC, University of Maryland Baltimore County. *The Great Transition: Long-term ecological changes in China's ancient village landscapes*.

11:05 AM SYMP 16-8 Ren, W and H Tian, Auburn University. *Climate change, air pollution and food security in Asia*.

SYMP 17 - Ecosystem Capacity for Sustaining Long-term Water Supplies

Portland Blrm 252, Oregon Convention Center

Organized by: JA Jones (jonesj@geo.oregonstate.edu), NB Grimm, CN Dahm, AP Covich, MW Williams

Endorsed by: long-term studies

Moderator: JA Jones

The objective of the symposium is to examine how ecological processes contribute to sustained water yield; how climate change, natural and anthropogenic disturbance have altered ecosystem water yield and water quality; and how these ecological processes and effects on water supplies vary among major regions of North America.

8:00 AM SYMP 17-1 Jones, JA, Oregon State University. *Ecosystem capacity for sustaining long-term water supplies – Overview of symposium*.

8:25 AM SYMP 17-2 Creed, IF and A Spargo, University of Western Ontario. *Application of the Budyko curve to explore sustainability of water yields from headwater catchments under changing environmental conditions*.

8:50 AM SYMP 17-3 Childers, DL, NB Grimm and B Ruddell, Arizona State University. *Sustaining water demands to urban ecosystems in the southwestern United States*.

9:15 AM SYMP 17-4 Dahm, CN, University of New Mexico. *Providing a reliable water supply for California and*

restoring the Sacramento-San Joaquin Delta ecosystem: Can we achieve the co-equal goals?.

9:40 AM Break

9:50 AM SYMP 17-5 Bourgeron, PS[1], MW Williams[2] and D Clow[3], (1)University of Colorado at Boulder, (2)University of Colorado, (3)USGS. *Climate variability and water supplies in Rocky Mountain ecosystems*.

10:15 AM SYMP 17-6 Campbell, JL[1], SD Sebestyen[1], ER Boose[2], EG Booth[3], RJ Stewart[4], W Wollheim[4] and EH Stanley[3], (1)USDA Forest Service, (2)Harvard University, (3)University of Wisconsin, (4)University of New Hampshire. *Climate change, snowpacks, and biogeochemical cycling in northern temperate forest ecosystems*.

10:40 AM SYMP 17-7 Ford, CR[1], SN Laseter[1], G Sun[2] and J Vose[3], (1)USDA Forest Service, (2)US Forest Service Southern Research Station, (3)USDA Forest Service Southern Research Station. *Drought, exurban expansion, and water yield in southern forest ecosystems*.

11:05 AM SYMP 17-8 Arismendi, I, A Argerich and JA Jones, Oregon State University. *Climate trends and water management for salmonids in Pacific Northwest ecosystems*.

SYMP 18 - Grappling with Intangibles: Bringing Cultural Ecosystem Services Into Decision-Making

Portland Blrm 253, Oregon Convention Center

Organized by: KMA Chan (kaichan@ires.ubc.ca), A Guerry, R Gould

Endorsed by: Canada Chapter, Mexico Chapter

Moderator: SC Klain

This symposium presents recent advances in understanding non-material dimensions of ecosystem services and integrating them into decision-making.

8:00 AM SYMP 18-1 Guerry, A[1], KMA Chan[2], D Satz[3] and R Russell[4], (1)The Natural Capital Project & Stanford University, (2)University of British Columbia, (3)Stanford University, (4)The Sandhill Institute for Sustainability and Complexity. *Cultural ecosystem services: Just warm fuzzies or critical for decision-making?*.

8:20 AM SYMP 18-2 Chan, KMA[1], A Guerry[2], P Balvanera[3], SC Klain[1] and T Satterfield[1], (1)University of British Columbia, (2)The Natural Capital Project & Stanford University, (3)Universidad Nacional Autónoma de México. *Not impossible: Integrating ecological considerations and cultural values into decision-making*.

8:40 AM SYMP 18-3 Satterfield, T, SC Klain and KMA Chan, University of British Columbia. *Talking about what matters: Eliciting cultural service values from communities*.

9:00 AM SYMP 18-4 Gould, R[1], SC Klain[2], KMA Chan[2], T Satterfield[2], G Daily[1], NM Ardoin[1], U Woodside[3] and N Hannahs[3], (1)Stanford University, (2)University of British Columbia, (3)Kamehameha Schools. *Understanding cultural ecosystem services: Findings from pilot studies in Hawaii and British Columbia*.

9:20 AM SYMP 18-5 Russell, R[1], A Guerry[2], P Balvanera[3], KMA Chan[4] and SA Wood[5], (1)The Sandhill Institute for Sustainability and Complexity, (2)The Natural Capital Project & Stanford University, (3)Universidad Nacional Autónoma de México, (4)University of British Columbia, (5)The Natural Capital Project, Stanford University. *Roots of happiness: Global connections between ecosystems and human well-being*.

9:40 AM Break

9:50 AM SYMP 18-6 Norton, B, Georgia Institute of Technology. *The role of transformative values in ecosystem service valuation*.

10:10 AM SYMP 18-7 Lazos, E, Universidad Nacional Autónoma de México. *Cultural ecosystem services: Concept in question, concept in discussion*.

10:30 AM SYMP 18-8 Turner, N, University of Victoria. *Not just a tree: Recognizing, understanding and assessing intangible cultural values of nature*.

10:50 AM SYMP 18-9 Hannahs, N, Kamehameha Schools. *Notes from the field: A manager's perspective*.

11:10 AM Discussion

OOS 36 - Ecological Consequences of Climate- and Infestation-Caused Tree Mortality: Effects On Organisms and Processes From Local to Global Scales.

A105, Oregon Convention Center

Organized by: HD Adams (henry@email.arizona.edu), JM Kane, NG McDowell

Moderator: HD Adams

This session will address the consequences of tree mortality across scales of ecological organization from populations and communities through ecosystems, watersheds, and biosphere-atmosphere interactions of energy, water and carbon.

8:00 AM OOS 36-1 Juday, GP, TA Grant III and DL Spencer, University of Alaska Fairbanks. *Boreal Alaska aspen growth rate collapse and mortality from high temperatures and drought and insect attack*.

8:20 AM OOS 36-2 Sherriff, RL[1], AE Miller[2], K Muth[1] and M Schriver[1], (1)Humboldt State University, (2)National Park Service. *Tree growth and mortality responses to climate and disturbance across a broad forest gradient in southwest Alaska*.

8:40 AM OOS 36-3 Tissue, DT, University of Western Sydney. *Sensitivity to climate change across temporal and spatial scales: Interactive effects of rising CO_2, elevated temperature, and heat waves on drought mortality in trees*.

9:00 AM OOS 36-4 Kane, JM, Northern Arizona University. *Pinyon pine and juniper mortality impact understory vegetation and pinyon pine juvenile growth*.

9:20 AM OOS 36-5 Whipple, AV[1], L Flores-Rentería[1], K McCallum[1], CM Sthultz[2], AC Stone[1], TG Whitham[1] and CA Gehring[1], (1)Northern Arizona University, (2)Harvard University. *Linking drought related mortality to plant genetics, susceptibility to herbivory, and associations with mycorrhizal fungi*.

9:40 AM Break

9:50 AM OOS 36-6 Cobb, RC, University of Califorina Davis. *Hemlock woolly adelgid and sudden oak death: Contrasting drivers of ecosystem change*.

10:10 AM OOS 36-7 Brooks, PD[1], HR Barnard[2], J Biederman[1], B Borkhuu[3], SL Edburg[4], BE Ewers[3], D Gochis[5], E Gutmann[5], AA Harpold[1], JA Hicke[6], DJP Moore[7], E Pendall[3], D Reed[3], A Somor[1] and PA Troch[1], (1)University of Arizona, (2)University of Colorado, (3)University of Wyoming, (4)University of Idaho, (5)NCAR, (6)USDA Forest Service and University of Idaho, (7)University Of Arizona. *Multi-scale observations of hydrologic partitioning following insect-induced tree mortality: Implications for ecosystem water and biogeochemical cycles*.

10:30 AM OOS 36-8 Clow, DW[1], CC Rhoades[2] and JS Briggs[1], (1)U.S. Geological Survey, (2)USDA Forest Service Research. *Responses of soil and water chemistry to mountain pine beetle induced tree mortality in Grand County, Colorado, USA*.

10:50 AM OOS 36-9 Rauscher, S, Los Alamos National Laboratory. *Vegetation change over western North America towards the end of 21st century*.

11:10 AM OOS 36-10 Running, SW, University of Montana. *Global drought disturbance monitoring and impacts on net primary productivity at large scales*.

OOS 37 - Mixed Severity Fire Regime As a Guiding Concept for Forest Management: Variability In Space and Time, Restoration, and Future Challenges

A107, Oregon Convention Center

Organized by: RT Belote (travis_belote@tws.org), CA Cansler, M Crist

Moderator: GH Aplet

The OOS showcases new research on the ecology and restoration challenges associated with forests historically characterized by mixed severity fire regimes, which are extensive in the western U.S. This session highlights agency, academic, and NGO ecologists working throughout western North America in diverse ecosystems and across spatial scales.

8:00 AM OOS 37-1 Belote, RT[1], CA Cansler[2], M Crist[1] and GH Aplet[1], (1)The Wilderness Society, (2)University of Washington. *Mixed severity fire: Conceptual and empirical overview of ecology and case studies of restoration challenges*.

8:20 AM OOS 37-2 Naficy, CE[1], TT Veblen[2] and PF Hessburg[3], (1)University of Colorado, (2)University of Colorado-Boulder, (3)USDA-FS, Pacific Northwest Research Station. *A cross-scale assessment of historical and contemporary fire effects, forest conditions, and tree physiology in mixed-severity fire regime forests of the northern Rockies: Implications for forest restoration*.

8:40 AM OOS 37-3 Kolden, C[1] and JA Lutz[2], (1)University of Idaho, (2)University of Washington. *Characterization and distribution of unburned area within fire perimeters in three western North America forest types*.

9:00 AM OOS 37-4 Hutto, RL, University of Montana. *The post-fire distribution of bird species in relation to fire severity*.

9:20 AM OOS 37-5 Cansler, CA[1] and D McKenzie[2], (1)University of Washington, (2)US Forest Service. *Using remotely-sensed burn severity data from modern reference ecosystems as a guide for land management: Describing fire regimes, identifying burn severity levels, and quantifying patchiness*.

9:40 AM Break

9:50 AM OOS 37-6 Kane, VR and J Lutz, University of Washington. *Restoring natural gap variability: Relationships between forest type, fire severity, forest structure, and gap patterns in Yosemite National Park*.

10:10 AM OOS 37-7 Metlen, KL, D Borgias and D Olson, The Nature Conservancy in Oregon. *Application of mixed severity fire history to restoration prescriptions in Mediterranean mixed conifer/hardwood forests of southwestern Oregon*.

10:30 AM OOS 37-8 Bunn, WA, EG Gdula and MJC Kearsley, National Park Service. *Wildfire decisions in Grand Canyon National Park high elevation forests with a mixed severity fire regime*.

10:50 AM OOS 37-9 Wan, HY[1], SG Kitchen[2], S Petersen[1] and SB St Clair[1], (1)Brigham Young University, (2)U.S. Forest Service. *The effects of fire severity on tolerance and resistance of aspen against ungulate herbivory*.

11:10 AM OOS 37-10 Nelson, CR, University of Montana. *Improving restoration of mixed-severity fire regimes: Looking back to move ahead*.

OOS 38 - Modeling to Learn: Using An Authentic Assessment to Evaluate Student Understanding of Science

A106, Oregon Convention Center

Organized by: T Long, JL Momsen, J Dauer

Moderator: KM Kostelnik

Bringing together ecologists and learning scientists, this session investigates (1) the theoretical underpinnings of model-based instruction, (2) current evidence about student learning with models, and (3) how a model-based instructional approach can be adapted and implemented into diverse instructional formats.

8:00 AM OOS 38-1 Long, TM[1], J Dauer[1], JL Momsen[2], E Bray Speth[3] and SA Wyse[4], (1)Michigan State University, (2) North Dakota State University, (3)Saint Louis University, (4)Bethel University. *Confronting the system: Can modeling practice facilitate systems-based teaching and learning in college-level biology?*.

8:20 AM OOS 38-2 Momsen, JL[1], SA Wyse[2], T Long[3], E Bray Speth[4] and D Ebert-May[3], (1)North Dakota State University, (2)Bethel University, (3)Michigan State University, (4)Saint Louis University. *How student-constructed models reveal content understanding*.

8:40 AM OOS 38-3 Dauer, J, T Long, KM Kostelnik, PA Zdziarska and N Wagley, Michigan State University. *Long-term skill retention in undergraduate biology students*.

9:00 AM OOS 38-4 Jordan, R, C Hmelo-Silver, WR Brooks and S Gray, Rutgers University. *Lessons from implementing a model-based pedagogy in the K12 classroom*.

9:20 AM OOS 38-5 Abraham, JK[1], J Wang[2], H Scheintaub[3], J Sheldon[4], S Yoon[2] and E Klopfer[4], (1)California State University, Fullerton, (2)University of Pennsylvania, (3) The Governor's Academy, (4)Massachusetts Institute of Technology. *Complex systems training in biology using an agent-based modeling approach*.

OOS 39 - Insights and Innovations From Sustained, Place-Based Collaborations In Arts, Humanities, and Environmental Sciences

B110, Oregon Convention Center

Organized by: FJ Swanson (fred.swanson@oregonstate.edu), N Nadkarni

Moderator: FJ Swanson

Long-term, place-based collaborations at the arts-humanities-science interface within several Long-Term Ecological Research and other site programs are reviewed in the context of their contributions to outreach, education, primary inquiry, and inter-site networking activities.

8:00 AM OOS 39-1 Leigh, MB and FS Chapin, University of Alaska. *In a time of change – Performing and visual arts at Bonanza Creek LTER*.

8:20 AM OOS 39-2 Kaspari, D[1], DR Foster[1], C Hart[2] and J Hirsch[1], (1)Harvard University, (2)Harvard Forest (Harvard University). *On the interplay of cultural and natural elements in the forest landscape: An artist's perspective*.

8:40 AM OOS 39-3 Daulton, T[1] and EH Stanley[2], (1)3310 N. Kein Rd., (2)University of Wisconsin. *LTEArts: Visual arts at North Temperate Lakes LTER*.

9:00 AM OOS 39-4 Goodrich, C[1], KD Moore[1] and FJ Swanson[2], (1)Oregon State University, (2)US Forest Service, Pacific Northwest Research Station. *Long-Term Ecological Reflections program – A decade of humanities-science collaboration at Andrews Forest LTER*.

9:20 AM OOS 39-5 Kimmerer, RW, SUNY College of Environmental Science and Forestry. *The Fortress, the*

River and the Garden: Becoming indigenous to place.

9:40 AM Break

9:50 AM OOS 39-6 Nelson, M, Michigan State University. *The role of philosophers in decisions about how we live on the land: The significance of sustained, place-based inquiry*.

10:10 AM OOS 39-7 Nadkarni, N, University of Utah. *Understanding rainforest canopies through Intersections of arts-humanities-science and its communication to academic and public audiences*.

10:30 AM OOS 39-8 Brodie, N[1], C Goodrich[1] and FJ Swanson[2], (1)Oregon State University, (2)US Forest Service, Pacific Northwest Research Station. *The emerging Ecological Reflections network of sites and programs*.

10:50 AM OOS 39-9 Sobczak, WV[1] and RM Holmes[2], (1) Holy Cross College, (2)Woods Hole Research Center. *Undergraduate education and research opportunities in the Siberian Arctic: The Polaris Project*.

11:10 AM OOS 39-10 Limm, EB, Save The Redwoods League. *A citizen science laboratory beyond museum walls: Climate change research in the redwood forest outside of Chabot Space and Science Center*.

OOS 40 - Aquatic Contaminants of Emerging Concern: Integrating Across Multiple Disciplines and Scales

B113, Oregon Convention Center

Organized by: JA Balachowski (jbalachowski@ucdavis.edu), MT Niles, JM Abbott

Moderator: JM Abbott

This OOS offers a multidisciplinary perspective on an emerging environmental issue--aquatic contaminants of emerging concern. Scientists from academia, government agencies, and non-governmental organizations will present research that considers the issue at multiple ecological scales (including social-ecological networks), and will conclude with a panel discussion to integrate across scales and disciplines.

8:00 AM OOS 40-1 Balachowski, JA[1], MT Niles[1], JM Abbott[2], CJ Cortez[1] and S Chen[1], (1)University of California, Davis, (2)University California, Davis. *Fragrance chemicals in personal care products: What's the stink?*.

8:20 AM OOS 40-2 Brander, S[1], R Connon[1], G He[1], J Hobbs[1], K Smalling[2], S Teh[1], JW White[3], I Werner[4], M Denison[1] and G Cherr[5], (1)University of California, Davis, (2) U.S. Geological Survey, (3)University of North Carolina Wilmington, (4)Swiss Centre for Applied Ecotoxicology, (5)Bodega Marine Lab, University of California, Davis. *From 'omics to otoliths: Using responses to endocrine disrupting compounds at multiple biological scales to predict population dynamics*.

8:40 AM OOS 40-3 Niles, J, Susquehanna University. *Marcellus Shale development in Pennsylvania and the emerging aquatic contamination concerns*.

9:00 AM OOS 40-4 Barron, MG, U.S. Environmental Protection Agency. *Ecological impacts of the Deepwater Horizon oil spill*.

9:20 AM OOS 40-5 Rochman, C[1], E Hoh[1], B Hentschel[1] and S Teh[2], (1)San Diego State University, (2)University of California, Davis. *Discarded plastics and priority pollutants: A multiple stressor in marine habitats*.

9:40 AM Break

9:50 AM OOS 40-6 Sutton, R, S Lunder and J Congleton, Environmental Working Group. *Household cleaning products in aquatic systems: Changing human behavior to prevent contaminations*.

10:10 AM OOS 40-7 Granek, EF[1], Z Rodriguez del Rey[1] and S Sylvester[2], (1)Portland State University, (2)Washington State University. *Occurrence and concentration of caffeine in Oregon coastal waters*.

10:30 AM OOS 40-8 Kerby, J and JR Brown, University of South Dakota. *Impacts of chytrid and contaminants on South Dakota amphibians*.

10:50 AM OOS 40-9 Erickson, RA, JL Oates, TA Anderson and SB Cox, Texas Tech University. *The impact of a pesticide, pendimethalin, on interspecific competition between two Daphnia species*.

OOS 41 - Ecosystem Services Valuation: Its Evolution, Innovative Approaches, and the Current State of the Science

B116, Oregon Convention Center

Organized by: KR Campbell (kcampbell@environcorp.com), L Moran

Moderator: KR Campbell

This session will provide an overview and understanding of the evolving ecosystem services field and present innovative, interdisciplinary approaches that have been developed to quantify ecosystem services.

8:00 AM OOS 41-1 Nicolette, J, ENVIRON International Corp.. *Origin and evolution of ecosystem services*.

8:20 AM OOS 41-2 Rockel, M, ENVIRON International Corp.. *Environmental economic methods for ecosystem service valuation and quantification*.

8:40 AM OOS 41-3 Cassin, J, Forest Trends. *Bundling multiple benefits: A necessary framework for sustaining ecosystem services*.

9:00 AM OOS 41-4 Reub, G, ENVIRON International Corp.. *Overview of an ecosystem services approach to comply with international lending standards for large development projects*.

9:20 AM OOS 41-5 Greene, G, G Reub, K Toal and S Beadle, ENVIRON International Corp.. *An ecosystem services approach to comply with international lending standards for large international projects: The human aspect*.

9:40 AM Break

9:50 AM OOS 41-6 Keeler, BL[1], KA Brauman[2] and S Polasky[2], (1) Institute on the Environment, (2)University of Minnesota. *Water quality and well-being: Valuing the impacts of changing water quality on multiple ecosystem services*.

10:10 AM OOS 41-7 Richardson, KND, MR Guzy and JG Lambrinos, Oregon State University. *Improving the quality and extending the usability of an ecosystem services tool*.

10:30 AM OOS 41-8 Cardinale, BJ, PA Venail and A Narwani, University of Michigan. *What is biodiversity's role in providing ecosystem goods and services? A data synthesis*.

10:50 AM OOS 41-9 Ringold, PL[1], M Weber[2] and J Boyd[3], (1)US EPA, Western Ecology Division, (2)US EPA, (3)Resources for the Future. *The gap between what we measure and what we want to know about ecosystem services in streams to link to human values*.

OOS 42 - Bringing Biodiversity and Ecosystem Science to Global Policy Making

C124, Oregon Convention Center

Organized by: MG Collins, PH Raven, A Larigauderie, H Mooney

Moderator: PH Raven

The ESA Community will play a key role in the Intergovernmental Science-policy Platform on Biodiversity and Ecosystem Services (IPBES), a new, IPCC-like international interface designed to bring

the best available ecosystem science to policymakers; this session aims to start the process.

8:00 AM OOS 42-1 Mooney, H, Stanford University. *The science community in the origins and future of the IPBE*.

8:20 AM OOS 42-2 Beard, TD Jr., USGS. *IPBES, governments, and stakeholders: Bridging the divide between science and policy*.

8:40 AM OOS 42-3 Joly, C, State University of Campinas/ UNICAMP. *BIOTA + 10: Learning lessons from a successful experience in combining biodiversity research with capacity building in a megadiverse country*.

9:00 AM OOS 42-4 Adeney, M[1] and A Dehgan[2], (1)USAID, (2)USAID Science and Technology Adviser to the Administrator. *Science for development: IPBES, development agencies, and the international science community*.

9:20 AM OOS 42-5 Perrings, C, Arizona State University. *Science and decision-making in the implementation of IPBES*.

9:40 AM Break

9:50 AM OOS 42-6 Obersteiner, M, International Institute of Applied Systems Analysis (IIASA). *The challenges of linking biological and climate models*.

10:10 AM OOS 42-7 Balvanera, P[1], SR Carpenter[2], C Folke[3], A Nostrom[3], O Olsson[3], L Schultz[3], B Agarwal[4], B Campbell[5], JC Castilla[6], W Cramer[7], RS DeFries[8], P Eyzaguirre[9], T Hughes[10], S Polasky[11], Z Sanuzi[12], RJ Scholes[13] and M Spierenburg[14], (1)Universidad Nacional Autónoma de México, (2)University of Wisconsin - Madison, (3)Stockholm University, (4)Dehli University, (5)International Centre for Tropical Agriculture, (6) Universidad Católica de Chile, (7)Institut Méditerranéen de Biodiversité et Ecologie (IMBE), (8)Columbia University, (9)Biodiversity International, (10)James Cook University, (11)University of Minnesota, (12)Universiti Sains, (13)Council for Scientific and Industrial Research, (14)VU University. *Contributing to knowledge creation in IPBES: The program on ecosystem change and society*.

10:30 AM OOS 42-8 Raven, PH, Chair, U.S. National Committee for DIVERSITAS. *International scientific priorities, biodiversity, and the IPBES*.

COS 122 - Agricultural Systems

A103, Oregon Convention Center

8:00 AM COS 122-1 Fox, AF, SC Reberg-Horton, D Orr and C Moorman, North Carolina State University. *Increasing vegetative diversity in a conservation program to enhance weed seed predation services*.

8:20 AM COS 122-2 Krauss, J[1], I Gallenberger[2] and I Steffan-Dewenter[1], (1)University of Würzburg, (2)Technical University of München. *Effects of organic and conventional farming of triticale cereals on biological pest control*.

8:40 AM COS 122-3 Remfert, J[1], L Cortes-Ortiz[2] and I Perfecto[2], (1)University of Mchigan, (2)University of Michigan. *Pattern of colony formation of Azteca instabilis in a coffee agroecosystem*.

9:00 AM COS 122-4 Whittinghill, LJ, B Rowe and B Cregg, Michigan State University. *Evaluation of vegetable production on extensive green roofs*.

9:20 AM COS 122-5 Sylvain, I and T James, University of Michigan. *A global perspective on the fungal community structure in green coffee beans*.

9:40 AM Break

9:50 AM COS 122-6 Opatovsky, I[1], I Musli[2], PG Weintraub[3] and Y Lubin[4], (1)Ben-Gurion University, Israel, (2)Ben-Gurion, (3)Agricultural research organization, Gilat Research Center, (4)Ben-Gurion University. *How to compose an attractive agroecosystem for natural enemies?*.

10:10 AM COS 122-7 Wyatt, SA[1] and J González-Maya[2], (1) Yale School of Forestry and Environmental Studies, (2) National University of Mexico/ProCAT International. *Faunal diversity in oil palm plantations in Cesar, Colombia*.

10:30 AM COS 122-8 Lubell, M[1], BB Cutts[2], M Hamilton[1], L Jasny[1], LM Roche[3], AT O'Geen[3], VT Eviner[3], JD Derner[4], EJ Kachergis[4] and KW Tate[3], (1)University of California Davis, (2)University of Illinois, (3)University of California, Davis, (4)USDA-ARS, Rangeland Resources Research Unit. *Rancher participation in conservation easements: Survey results from California*.

10:50 AM COS 122-9 Ellen, G, MC Russell and JG Lambrinos, Oregon State University. *Building a regional network for linking science, policy, and practitioners to enhance biodiversity in agricultural ecosystems*.

COS 123 - Arctic, Alpine, Antarctic Systems

B112, Oregon Convention Center

8:00 AM COS 123-1 Robinson, SA[1], LJ Clarke[2], MJ Waterman[1], J Bramley-Alves[1], Q Hua[3], W Wanek[4] and D Fink[3], (1) University of Wollongong, (2)University of Adelaide, (3) Australian Nuclear Science and Technology Organisation, (4)University of Vienna. *Radiocarbon bomb spike reveals climate change is stunting growth of century old Antarctic moss shoots*.

8:20 AM COS 123-2 Waterman, MJ[1], Q Hua[2], PA Keller[1] and SA Robinson[1], (1)University of Wollongong, (2)Australian Nuclear Science and Technology Organisation. *Ceratodon purpureus: Cell wall sunscreens, radiocarbon dating, and life of an Antarctic moss under an elevated UV climate*.

8:40 AM COS 123-3 Remke, M, Fort Lewis College. *The demise of alpine plant specialists? Implications of warming temperatures and advanced snowmelt on alpine plant communities, southwestern Colorado*.

9:00 AM COS 123-4 Johnson, AC[1] and JA Yeakley[2], (1)USDA Forest Service, (2)Portland State University. *Assessing conifer seedling regeneration on two substrates at timberline-alpine meadow borders*.

9:20 AM COS 123-5 DeLuca, TH[1], O Zackrisson[2], I Bergman[3], B Díez[4] and B Bergman[5], (1)Bangor University, (2) Swedish University of Agricultural Sciences, (3)Institute for Subarctic Landscape Research, (4)Pontificia Universidad Católica de Chile, (5)Stockholm University. *Biological nitrogen-fixation explains ancient sustained use of subarctic alluvial meadows*.

9:40 AM Break

9:50 AM COS 123-6 McLaren, JR and L Gough, University of Texas at Arlington. *Shrub abundance and seasonal variation in ecosystem properties across a fertilization chronosequence in moist acidic tundra*.

10:10 AM COS 123-7 Leingärtner, A, J Krauss and I Steffan-Dewenter, University of Würzburg. *Species richness and life-history traits of butterfly communities along an altitudinal gradient in the German Alps*.

10:30 AM COS 123-8 Boot, CM[1], JP Schimel[2] and MD Wallenstein[1], (1)Colorado State University, (2)University of California, Santa Barbara. *Seasonal and vegetation driven shifts in Arctic dissolved organic carbon composition using metabolomics and fluorescence characterization*.

10:50 AM COS 123-9 Farinas, SA, University of Michigan (SEEDS alumni). *How do changing climate variables impact alpine*

plant communities?: Linking gradients of temperature, precipitation, and available soil nitrogen to plant growth and chemistry.

COS 124 - Behavior: Migration And Movement

B114, Oregon Convention Center

8:00 AM COS 124-1 Breckheimer, I[1], NM Haddad[2], WF Morris[3], B Hudgens[4], RT Jobe[5], AM Trainor[6], WR Fields[2], JR Walters[7] and A Moody[1], (1)University of North Carolina, Chapel Hill, (2)North Carolina State University, (3)Duke University, (4)Institute for Wildlife Studies, (5)University of North Carolina, Chapel Hill, NC, (6)Yale University, (7)Virginia Polytechnic Institute and State University. *Connectivity flagships and umbrellas: Evaluating surrogate species for the conservation of landscape connectivity*.

8:20 AM COS 124-2 Hoch, JM, MR Bush and JC Trexler, Florida International University. *Inferring directional migration of fish in a seasonally varying wetland*.

8:40 AM COS 124-3 Cumming, GS[1], N Gaidet[2] and M Ndlovu[3], (1)University of Cape Town, (2)Cirad, (3)Percy FitzPatrick Institute. *Linking movement ecology and biogeography: The fascinating case of afrotropical ducks*.

9:00 AM COS 124-4 Kölzsch, A[1], A Alzate[2], F Bartumeus[3] and J Van de Koppel[4], (1)Netherlands Institute of Ecology (NIOO-KNAW), (2)University of Groningen, (3)Centre d'Estudis Avancats de Blanes (CEAB-CSIC), (4)Royal Netherlands Institute for Sea Research (NIOZ). *Mud snails move with fat tails: Experimental evidence for intrinsic Lévy signatures*.

9:20 AM COS 124-5 Laidre, K[1], EW Born[2], E Gurarie[1], Wiig[3], R Dietz[4] and H Stern[1], (1)University of Washington, (2) Greenland Institute of Natural Resources, (3)University of Oslo, (4)Aarhus University. *Females roam while males patrol: Divergence in large-scale movements of polar bears during the spring pack-ice breeding season*.

9:40 AM Break

9:50 AM COS 124-6 Niebuhr, BBS[1], EP Raposo[2], GM Viswanathan[3], MGE da Luz[1] and MR Pie[1], (1) Universidade Federal do Paraná, (2)Universidade Federal de Pernambuco, (3)Universidade Federal de Alagoas. *Using spatially explicit random walk models of animal movement as a tool for the outline of conservation areas*.

10:10 AM COS 124-7 Bush, MR and JC Trexler, Florida International University. *Landscape factors affecting movement decisions by large predators in an aquatic ecosystem*.

10:30 AM COS 124-8 Armstrong, JB[1], D Schindler[2], CP Ruff[1], CE Torgersen[3], GE Brooks[4] and KE Bentley[1], (1)University of Washington School of Aquatic and Fisheries Science, (2)University of Washington, (3)U.S. Geological Survey, (4)National Oceanic and Atmospheric Association. *Dine and dash: Juvenile coho salmon eliminate trade-offs between thermal and trophic resources during a pulsed subsidy*.

10:50 AM COS 124-9 Cooney, SA[1], EM Schauber[1] and EC Hellgren[2], (1)Southern Illinois University Carbondale, (2) Southern Illinois University. *Quantifying edge and matrix permeability for a terrestrial wetland specialist*.

11:10 AM COS 124-10 LovellFord, RM[1], RL Flitcroft[2], MV Santelmann[1], GE Grant[2], SL Lewis[1], M Safeeq[1] and LS Jackson[3], (1)Oregon State University, (2)US Department of Agriculture Forest Service, (3)Oregon Department of Fish and Wildlife. *Different cues at different scales: Hydrologic regimes cue upstream migration of coho salmon (Oncorhynchus kisutch) at different locations within the stream network of the Umpqua River Basin*.

COS 125 - Biodiversity III

B115, Oregon Convention Center

8:00 AM COS 125-1 Lopez, BE[1], KR Burgio[2], MB Carlucci[3], KA Palmquist[1], A Parada[4], PA Wilfahrt[1] and VP Weinberger[5], (1)University of North Carolina, (2) University of Connecticut, (3)Universidade Federal do Rio Grande do Sul, (4)Pontificia Universidad Católica, (5)Pontificia Universidad Catolica de Chile, Instituto de Ecología y Biodiversidad. *A novel conceptual framework for using functional and phylogenetic diversity to identify community assembly processes along environmental gradients*.

8:20 AM COS 125-2 Liu, X, M Liang and S Yu, Sun Yat-sen University. *Host functional traits can explain within-species variation of the Janzen-Connell effect*.

8:40 AM COS 125-3 Coyle, JR, P Wilfahrt, BE Lopez, K Palmquist, FW Halliday, K Becraft, C Fieseler, C Hakkenberg, CJ Payne, K Peck, D Tarasi, C Urbanowicz, C Mitchell, RK Peet and AH Hurlbert, University of North Carolina. *Inference of ecological processes structuring tree communities in eastern North America using functional and phylogenetic diversity*.

9:00 AM COS 125-4 Lefcheck, J, A Bucheister, S Chak, T Clardy, KM Laumann, PL Reynolds, K Sobocinski, M Stratton and JE Duffy, Virginia Institute of Marine Science, The College of William & Mary. *Components of biodiversity in a Chesapeake Bay groundfish assemblage: A high-resolution analysis of patterns and drivers*.

9:20 AM COS 125-5 Janousek, CN and CL Folger, US Environmental Protection Agency. *High plant diversity in Oregon tidal wetlands and multiple threats to its persistence*.

9:40 AM Break

9:50 AM COS 125-6 Podgaiski, LR[1], F Joner[1], S Lavorel[2], M Moretti[3], S Ibanez[3], M Mendonça Jr.[1] and VD Pillar[1], (1)Universidade Federal do Rio Grande do Sul, (2) Université Joseph Fourier, (3)Swiss Federal Research Institute WSL. *Resilience of spider functional diversity to fire in South Brazilian Grasslands*.

10:10 AM COS 125-7 Marín, L[1], B Connor Berrie[1], KK Ennis[2], DJ Gonthier[3], HY Hsieh[3], A Iverson[1], J Remfert[1], BJ Cardinale[3] and I Perfecto[3], (1)University of Mchigan, (2) University of Toledo, (3)University of Michigan. *Tradeoffs and synergies of ecosystem services in diverse and non-diverse agroecosystems*.

10:30 AM COS 125-8 Anacker, BL and SP Harrison, University of California, Davis. *Historical and ecological controls on phylogenetic diversity in Californian plant communities*.

10:50 AM COS 125-9 Ebeling, A[1], N Eisenhauer[2], ST Meyer[3], A Vogel[1] and WW Weisser[4], (1)Friedrich Schiller University, (2)University of Minnesota, (3)TU Munich, (4) TUM Munich. *Plant diversity enhances the density and diversity of aboveground arthropods and the ecosystem processes they govern*.

11:10 AM COS 125-10 Yuan, C and P Chesson, University of Arizona. *The role of asymmetric sensitivities in environmental responses on promoting species coexistence in variable environment*.

COS 126 - Biogeochemistry: Biogeo Patterns Along Environmental Gradients I

F150, Oregon Convention Center

8:00 AM COS 126-1 Moon-Nielsen, LG and CH Orr, Washington State University. *Improving estimates of in-stream*

nitrogen transformations by applying spatiotemporal variability in a semi-arid agricultural stream.

8:20 AM COS 126-2 Ruan, L and GP Roberston, Michigan State University. *Non-linear nitrous oxide (N_2O) response to N fertilizer during switchgrass establishment*.

8:40 AM COS 126-3 Batterman, SA[1], J Hall[2], M van Breugel[3] and L Hedin[1], (1)Princeton University, (2)Smithsonian Tropical Research Institute, (3)Smithsonian Tropical Research Institution. *Biodiversity of nitrogen fixers facilitate tropical forest carbon recovery*.

9:00 AM COS 126-4 Knoll, LB[1], MJ Vanni[2], WH Renwick[2] and EK Dittman[3], (1)Lacawac Sanctuary, (2)Miami University, (3)North Carolina State University. *Hydrological and land use controls on the export of carbon, nitrogen, and phosphorus from two contrasting Midwestern US watersheds*.

9:20 AM COS 126-5 Bell, MD[1], JO Sickman[2], A Bytnerowicz[3] and EB Allen[4], (1)University of California, Riverside, (2) UC Riverside, (3)USDA Forest Service, (4)Univeristy of California, Riverside. *Determining ecological indicators of anthropogenic nitrate deposition in a desert ecosystem using stable isotopes of nitrogen and oxygen*.

9:40 AM Break

9:50 AM COS 126-6 Welsch, DL, S Deacon and JT Saville, Canaan Valley Institute. *Vegetation controls soil CO_2 flux in a complex moist Appalachian Watershed*.

10:10 AM COS 126-7 Porder, S and S Mage, Brown University. *Rock type and topography drive soil phosphorus status in the Luquillo Mountains of Puerto Rico*.

10:30 AM COS 126-8 Beringer, J[1], LB Hutley[2], J Hacker[3], R Leuning[4], S Arndt[5], R Amiri[1], L Bannehr[6], LA Cernusak[2], S Grover[2], C Hensley[1], DJ Hocking[1], PR Isaac[1], H Jamali[5], K Kanniah[7], S Livesley[5], B Neininger[8], KT Paw U[9], WB Sea[4], D Straten[6], NJ Tapper[1], RA Weinmann[2], S Wood[1] and SJ Zegelin[4], (1)Monash University, (2)Charles Darwin University, (3)Flinders University, (4)CSIRO, (5) University of Melbourne, (6)Hochschule Anhalt, (7) University Technology Malaysia, (8)Zurich University of Applied Sciences, (9)University of California. *Special - The Savanna Patterns of Energy and Carbon Integrated Across the Landscape Campaign*.

10:50 AM COS 126-9 McConaghie, JB, W Zhou and ML Cadenasso, University of California, Davis. *Land cover interacts with hydrologic variability to determine N export from urban watersheds of metropolitan Sacramento, CA*.

11:10 AM COS 126-10 Baas, P[1], JE Mohan[1], D Markewitz[2] and JD Knoepp[3], (1)University of Georgia, (2)The University of Georgia, (3)USDA Forest Service Southern Research Station. *Nitrogen cycling "hotspots": An approach for watershed scale assessments*.

COS 127 - Climate Change: Communities II

F151, Oregon Convention Center

8:00 AM COS 127-1 Sorte, CJB[1], D Blumenthal[2], I Ibanez[3], C D'Antonio[4], JM Diez[3], JS Dukes[5], ED Grosholz[6], SJ Jones[7], LP Miller[8], N Molinari[4] and J Olden[9], (1) University of Massachusetts - Boston, (2)USDA-ARS, (3) University of Michigan, (4)University of California Santa Barbara, (5)Purdue University, (6)University of California, (7)University of South Carolina, (8)Stanford University, (9)University of Washington. *Poised to prosper: Do demographic outcomes favor non-native species in a changing climate?*.

8:20 AM COS 127-2 Stuble, KL[1], C Patterson[1], SL Pelini[2], MA Rodriguez-Cabal[1], R Dunn[3] and NJ Sanders[1], (1) University of Tennessee, (2)Harvard University, (3)NCSU. *Foraging behavior and seed dispersal mutualisms in a warmed world: The effects of experimental warming on ant assemblages and the processes they mediate*.

8:40 AM COS 127-3 Andrew, CJ[1] and EA Lilleskov[2], (1) Northeastern Illinois University, (2)US Forest Service, Northern Research Station. *Soil nutrient legacies surpass the effects of CO_2 and O_3 concentration on mycorrhizal fungal communities*.

9:00 AM COS 127-4 Tomaszewski, T, BR Johnson, L Pfeifer-Meister, ME Goklany, LL Reynolds, HE Wilson and SD Bridgham, University of Oregon. *Site-dependent versus regionally consistent effects of increased temperature and precipitation on plant community composition, productivity, and soil nutrient availability in restored Pacific Northwest prairies*.

9:20 AM COS 127-5 Kandur, AS, University of Chicago. *Climate change, sea level rise, and potential impacts on rocky intertidal populations*.

9:40 AM Break

9:50 AM COS 127-6 Barton, BT[1] and AR Ives[2], (1)University of Wisconsin-Madison, (2)University of Wisconsin. *Experimental warming disrupts an ant-aphid mutualism*.

10:10 AM COS 127-7 O'Connor, MI[1] and JC Stegen[2], (1)University of British Columbia, (2)Pacific Northwest National Laboratory. *Testing the temperature dependence of stocks and fluxes in an aquatic food web*.

10:30 AM COS 127-8 Sylvain, ZA[1], DH Wall[1], KL Cherwin[1], DPC Peters[2], OE Sala[3] and LG Reichmann[3], (1)Colorado State University, (2)USDA Agricultural Research Service, (3)Arizona State University. *Patterns of soil community structure differ by scale and ecosystem type along a large-scale precipitation gradient*.

10:50 AM COS 127-9 Kelly, R[1], M Chipman[1], PE Higuera[2], LB Brubaker[3] and FS Hu[1], (1)University of Illinois, (2) University of Idaho, (3)University of Washington. *Pushing the limits of the boreal-forest fire regime: Recent changes in a 10,000 year context*.

11:10 AM COS 127-10 Avery, L[1], AC McCall[1], M Forister[2] and A Shapiro[3], (1)Denison University, (2)University of Nevada, Reno, (3)University of California, Davis. *Butterfly community dynamics in California over 30 years*.

COS 128 - Community Disturbance And Recovery II

D136, Oregon Convention Center

8:00 AM COS 128-1 Foster, JR[1], AW D'Amato[1] and JB Bradford[2], (1)University of Minnesota, (2)US Geological Survey. *Long-term tree and stand biomass increment patterns derived from tree rings in multiple temperate and sub-boreal forest systems in northeastern Minnesota, USA*.

8:20 AM COS 128-2 Brown, CD[1] and JF Johnstone[2], (1)Université de Sherbrooke, (2)University of Saskatchewan. *Empirically linking fire history to seedbed quality, species establishment, and growth: Predictions for northern boreal forest succession under changing climate and disturbance regimes*.

8:40 AM COS 128-3 Kaczynski, KM and DJ Cooper, Colorado State University. *Interactions between woodpeckers, elk, and drought lead to the collapse of riparian willow communities*.

9:00 AM COS 128-4 Curzon, MT[1], AW D'Amato[1] and BJ Palik[2], (1)University of Minnesota, (2)USDA Forest Service, Northern Research Station. *Harvest-related disturbance effects on species richness and community composition in Lake States aspen-dominated forests*.

9:20 AM COS 128-5 Sandor, ME and RL Chazdon, University of Connecticut. *Effects of remnant trees on secondary*

forest regeneration in the Osa Peninsula, Costa Rica.

9:40 AM Break

9:50 AM COS 128-6 Scott, HN[1], WJ Massman[2], JM Frank[2], BL Miles[1] and MG Ryan[1], (1)USDA Forest Service, (2) Rocky Mountain Research Station, U.S. Forest Service. *Comparing chamber and eddy covariance estimates of ecosystem respiration during bark beetle mortality in a subalpine spruce-fir forest*.

10:10 AM COS 128-7 Nadon, M[1], J Baum[2], R Schroeder[3], J McPherson[4], ID Williams[5], BL Richards[6], BJ Zgliczynski[7] and R Brainard[6], (1)University of Hawaii, (2)University of Victoria, (3)NOAA Fisheries, Hawaii, USA, (4)Dalhousie University, (5)NOAA Pacific Islands Fisheries Science Center, (6)NOAA Fisheries, (7)Scripps Institution of Oceanography. *Relative influences of biotic and abiotic factors on coral reef fish biomass in the Anthropocene*.

10:30 AM COS 128-8 Hollingsworth, TN[1], JF Johnstone[2], FS Chapin[3] and E Bernhardt[4], (1)Pacific Northwest Research Station, (2)University of Saskatchewan, (3)University of Alaska, (4)Forest Inventory and Analysis, PNW Research Station. *Fire severity affects community assemly through filters on regeneration traits in Alaska boreal forests*.

10:50 AM COS 128-9 Burton, PJ, University of Northern British Columbia, Canadian Forest Service. *High mortality levels observed in old-growth spruce stands of west-central British Columbia*.

11:10 AM COS 128-10 Magoulick, DD, USGS, Arkansas Cooperative Fish and Wildlife Research Unit. *Impacts of drying and crayfish invasion on stream ecosystem structure and function* .

COS 129 - Community Pattern And Dynamics VI

D137, Oregon Convention Center

8:00 AM COS 129-1 Calede, JJ, University of Washington. *Functional diversity of early modern mammalian communities 30 to 20 million years ago*.

8:20 AM COS 129-2 Dahlin, KM[1], GP Asner[2] and CB Field[2], (1) Stanford University, (2)Carnegie Institution for Science. *Ecosystem assembly meets geostatistics: Using airborne remote sensing and simultaneous autoregression to understand vegetation patterns in a recently disturbed landscape*.

8:40 AM COS 129-3 Shevtsov, J[1] and K Wickings[2], (1)UCLA, (2) University of New Hampshire. *A gradient analysis of multiple interacting guilds highlights the role of biotic interactions in structuring communities*.

9:00 AM COS 129-4 Beals, SC[1] and T Seastedt[2], (1)University of Colroado, (2)University of Colorado at Boulder. *The effects of prairie dogs (Cynomes spp.) on vegetation dynamics in Boulder, Colorado*.

9:20 AM COS 129-5 Gremer, JR[1], S Kimball[2], KR Keck[1], TE Huxman[1], AL Angert[3] and DL Venable[1], (1)University of Arizona, (2)University of California, Irvine, (3)Colorado State University. *Water availability, functional trait diversity, and competitive interactions in Sonoran Desert winter annuals*.

9:40 AM Break

9:50 AM COS 129-6 Paver, SF and A Kent, University of Illinois at Urbana-Champaign. *Context matters: Effects of phytoplankton on bacterial community composition change across varying temperature and light conditions*.

10:10 AM COS 129-7 Kolasa, J[1], J Kim[1], TN Romanuk[2] and WMA Carscallen[2], (1)McMaster University, (2)Dalhousie University. *Spatial interaction network and species traits predetermine metacommunity structure and its potential dynamics*.

10:30 AM COS 129-8 Spiesman, BJ and BD Inouye, Florida State University. *The effects of habitat loss, fragmentation, and matrix quality on metacommunity structure and ecosystem function*.

10:50 AM COS 129-9 Iles, AC, Oregon State University. *Towards predicting community level effects of climate change: Relative temperature scaling of metabolic and ingestion rates for a suite of rocky intertidal consumers*.

COS 130 - Conservation Planning, Policy, And Theory I

D138, Oregon Convention Center

8:00 AM COS 130-1 Clements, CF[1], NT Worsfold[2], PH Warren[3], N Clark[3], B Collen[4], T Blackburn[4] and OL Petchey[5], (1)The University of Sheffield, (2)University of York, (3)University of Sheffield, (4)Zoological Society of London, (5) University of Zurich. *Experimentally testing an extinction predictor*.

8:20 AM COS 130-2 Joppa, L[1], D Roberts[2], SL Pimm[3] and N Myers[4], (1)Microsoft Research, (2)University of Kent, (3)Duke University, (4)Oxford University. *Biodiversity hotspots house most undiscovered plant species*.

8:40 AM COS 130-3 Hazarika, AK[1] and P Chetry[2], (1)Post Graduate Department of Zoology, (2)Centre for Environment, Education and Economic Development. *Role of stakeholders in conservation of one horned rhinoceros in the world famous Kaziranga National Park: An analysis*.

9:00 AM COS 130-4 Hansen, A, Montana State University - Bozeman. *A framework for conservation based on primary productivity and habitat heterogeneity*.

9:20 AM COS 130-5 Buenau, KE[1] and AJ Tyre[2], (1)Pacific Northwest National Laboratory, (2)University of Nebraska-Lincoln. *Estimating the value of information for habitat restoration: Using population models to prioritize research for the piping plover (Charadrius melodus) on the Missouri River*.

9:40 AM Break

9:50 AM COS 130-6 Foreman, T and G Middendorf, Howard University. *Progressive success of a restored forested wetland two decades after mitigation*.

10:10 AM COS 130-7 Johnson, MF[1], N Kanderian[2], CC Shank[2], H Rahmani[2], D Lawson[2] and PD Smallwood[3], (1) Duke University, (2)Wildlife Conservation Society, (3) University of Richmond. *Setting priorities for protected area planning in a conflict zone: Afghanistan's National Protected Area System Plan*.

10:30 AM COS 130-8 Swab, R[1], HM Regan[1], DA Keith[2], TJ Regan[3] and M Ooi[4], (1)University of California, (2)Department of Environment and Climate Change New South Wales, (3) The University of Melbourne, (4)University of Wollongong. *Niche models tell half the story: How life history traits, fire, and climate change interact*.

10:50 AM COS 130-9 Abelson, ES, Stanford University. *Relative brain size as a predictor for mammalian extinction vulnerability*.

11:10 AM COS 130-10 Davies, TD[1] and JK Baum[2], (1)Dalhousie Univerisity, (2)University of Victoria. *Extinction risk and overfishing: Reconciling conservation and fisheries perspectives on the status of marine fish populations*.

COS 131 - Disease And Epidemiology III

D139, Oregon Convention Center

8:00 AM COS 131-1 Buhnerkempe, MG[1], CT Webb[1] and M Boots[2], (1)Colorado State University, (2)University of Exeter. *Asymmetries in dispersal alter coevolutionary trajectories for host resistance and parasite virulence in a*

metapopulation.

8:20 AM COS 131-2 Keesing, F[1] and RS Ostfeld[2], (1)Bard College, (2)Cary Institute of Ecosystem Studies. *Disease ecology: New conceptual models to facilitate prediction*.

8:40 AM COS 131-3 Preston, DL[1], SA Orlofske[1], JP McLaughlin[2], JP Lambden[1] and PTJ Johnson[1], (1)University of Colorado at Boulder, (2)University of California at Santa Barbara. *Ecological roles of parasites in food web structure, animal biomass and secondary production in pond ecosystems*.

9:00 AM COS 131-4 Searle, CL[1], GY Xie[2] and AR Blaustein[2], (1)Georgia Institute of Technology, (2)Oregon State University. *Maintenance and transmission of the amphibian pathogen, Batrachochytrium dendrobatidis, during metamorphosis*.

9:20 AM COS 131-5 Buller, ID[1], KLD Richgels[1], SA Orlofske[2] and PTJ Johnson[2], (1)University of Colorado, (2)University of Colorado at Boulder. *More hosts, more problems: Factors related to the distribution and abundance of a four-host trematode parasite in the San Francisco Bay Area of California, USA*.

9:40 AM Break

9:50 AM COS 131-6 Rynkiewicz, E and K Clay, Indiana University. *Investigating within-population temporal variation in tick parasitism and immune function among rodent hosts: Why are some hosts consistently more parasitized?*.

10:10 AM COS 131-7 LaFonte, BE and PTJ Johnson, University of Colorado Boulder. *Explaining interspecific variation in host infection and disease: Experimental evidence that immunosuppression increases trematode infection success in amphibian hosts*.

10:30 AM COS 131-8 Hall, SR[1], C Becker[2], RM Penczykowski[3], MA Duffy[3] and CE Cáceres[4], (1)Indiana University, (2) Sweco Environment, (3)Georgia Institute of Technology, (4)University of Illinois. *Resources of hosts elevate disease in a planktonic host-parasite system*.

10:50 AM COS 131-9 Levi, T, University of California, Santa Cruz. *Deer, predators, and the emergence of Lyme disease*.

11:10 AM COS 131- Dobson, A, Princeton Universitty. *The population dynamics of pathogens and social groups*.

COS 132 - Distributions And Range Limits

D135, Oregon Convention Center

8:00 AM COS 132-1 van der Zee, EM[1], T van der Heide[2], S Donadi[2], JS Eklöf[2], BK Eriksson[2], H Olff[2], HW van der Veer[1] and T Piersma[2], (1)Royal Netherlands Institute for Sea Research, (2)University of Groningen. *The importance of ecosystem engineers for the conservation of intertidal soft-sediment ecosystems*.

8:20 AM COS 132-2 Simpson, A, D Masaki and GF Guala, US Geological Survey. *Biodiversity Information Serving Our Nation (BISON): The national unified resource for discovery, linkage and re-use of organismal occurrence data*.

8:40 AM COS 132-3 Tomasovych, A[1], D Jablonski[2], SK Berke[2], AZ Krug[2] and JW Valentine[3], (1)Slovak Academy of Sciences, (2)University of Chicago, (3)University of California. *Identifying the intrinsic spatial scale of mechanisms generating latitudinal diversity gradients in marine bivalves*.

9:00 AM COS 132-4 Sheth, S[1], I Jiménez[2] and AL Angert[1], (1) Colorado State University, (2)Missouri Botanical Garden. *Effects of niche properties on variation in geographic range size among species of western North American monkeyflowers*.

9:20 AM COS 132-5 Warren, DR[1] and JB Dunham[2], (1)Oregon State University, (2)USGS. *Fish out of water: Quantifying the distribution limits for native and nonnative trout in the northern Great Basin*.

9:40 AM Break

9:50 AM COS 132-6 Bell, DM[1], JB Bradford[2] and WK Lauenroth[1], (1)University of Wyoming, (2)US Geological Survey. *Ontogenetic differences in the distribution of conifer tree species in the Interior West, USA*.

10:10 AM COS 132-7 Smith, AB, Missouri Botanical Garden. *The relative influence of moisture and temperature on range contractions and expansions of mammals over the past century*.

10:30 AM COS 132-8 Goslin, M, University of Oregon. *Modeled distribution and biogeography of a riparian sedge, Carex nudata*.

10:50 AM COS 132-9 Liu, H[1], CL Feng[2], X Wang[3], MB Gu[3], Y Luo[4] and ZB Zhang[5], (1)Florida International University and Fairchild Tropical Botanic Garden, (2)Experimental Center of Tropical Forestry, Chinese Academy of Forestry, (3)Research Institute of Tropical Forestry, Chinese Academy of Forestry, (4)Institute of Botany, Chinese Academy of Sciences, (5)Yachang National Orchid Nature Preserve. *Extreme cold events may retard poleward and upward migrations in subtropical China*.

11:10 AM COS 132-10 Sweet, LC[1], FW Davis[2], L Hannah[1], A Shepard[1] and S McKnight[1], (1)University of California, Santa Barbara, (2)University of California Santa Barbara. *Microclimate controls on tree species establishment in mountainous regions*.

COS 133 - Ecosystem Function III

E141, Oregon Convention Center

8:00 AM COS 133-1 Roger, A and IR Sanders, University of Lausanne. *Relatedness of arbuscular mycorrhizal fungi drives plant growth via intra-specific fungal competition and kin recognition*.

8:20 AM COS 133-2 Duursma, RA, University of Western Sydney. *Determinants of whole-plant light interception: Linking physiological function to canopy structure*.

8:40 AM COS 133-3 Chisholm, RA[1], HC Muller-Landau[1], K Abd. Rahman[2], DP Bebber[3], Y Bin[4], SA Bohlman[5], NA Bourg[6], J Brinks[7], N Brokaw[8], S Bunyavejchewin[9], N Butt[10], H Cao[11], M Cao[12], D Cárdenas[13], LW Chang[14], JM Chiang[15], GB Chuyong[16], R Condit[1], HS Dattaraja[17], SJ Davies[18], A Duque[19], C Fletcher[2], CVS Gunatilleke[20], IAUN Gunatilleke[20], Z Hao[21], R Harrison[22], RW Howe[23], CF Hsieh[24], SP Hubbell[25], A Itoh[26], D Kenfack[27], S Kiratiprayoon[28], AJ Larson[29], J Lian[4], D Lin[30], H Liu[30], JA Lutz[31], K Ma[30], Y Malhi[32], S McMahon[1], WJ McShea[6], M Meegaskumbura[33], S Mohd. Razman[34], M Morecroft[10], CJ Nytch[35], A Oliveiro[36], GG Parker[7], S Pulla[17], R Punchi-Manage[37], H Romero[38], W Sang[22], J Schurman[39], S Sheng-Hsin[14], R Sukumar[17], IF Sun[40], HS Suresh[41], S Tan[42], D Thomas[43], SC Thomas[39], J Thompson[44], R Valencia[45], A Vicentini[46], AT Wolf[23], S Yap[47], W Ye[4], Z Yuan[21] and JK Zimmerman[35], (1) Smithsonian Tropical Research Institute, (2)Forest Research Institute Malaysia, (3)Earthwatch Institute, (4) South China Botanical Garden, Chinese Academy of Sciences, China, (5)University of Florida, (6)Smithsonian Institution - National Zoological Park, (7)Smithsonian Environmental Research Center, (8)University of Puerto Rico-Río Piedras, (9)Royal Forest Department, (10) University of Oxford, (11)South China Botanical Garden, CAS, (12)Xishuangbanna Tropical Botanical Garden, CAS, (13)Instituto Amazónico de Investigaciones Científicas SINCHI, (14)Taiwan Forestry Research Institute, (15)Ohio

University, (16)University of Buea, (17)Indian Institute of Science, (18)Center for Tropical Forest Science, (19) Universidad Nacional de Colombia, (20)University of Peradeniya, Faculty of Science, (21)Institute of Applied Ecology, Chinese Academy of Sciences, (22)Chinese Academy of Sciences, (23)University of Wisconsin-Green Bay, (24)National Taiwan University, (25)University of California, Los Angeles, (26)Osaka City University, (27)Smithsonian Center for Tropical Forest Science, (28) Thammasat University, (29)University of Montana, (30) Institute of Botany, the Chinese Academy of Sciences, (31)University of Washington, (32)Oxford University, (33)Faculty of Science, (34)Faculty of Civil Engineering, (35)University of Puerto Rico, (36)Bioscience Institute, (37)Helmholtz Centre for Environmental Research - UFZ, (38)Pontificia Universidad Catolica del Ecuador (PUCE), (39)University of Toronto, (40)Tunghai University, (41)INDIAN INSTITUTE OF SCIENCE, (42)Sarawak Forestry Corporation, (43)Oregon State University, (44) Centre for Ecology and Hydrology (Edinburgh), (45) Pontificia Universidad Católica del Ecuador, (46)Instituto Nacional de pesquisas Amazonicas, (47)University of the Philippines Diliman. *Relationships between species richness and ecosystem function across a global network of forest plots*.

9:00 AM COS 133-4 Wait, DA, Missouri State University. *A plant ecological perspective on prescribed fire for wildlife management in oak/hickory woodlands: Consequences for leaf production, oak regeneration, and heterogeneity in light in the understory*.

9:20 AM COS 133-5 Martin, LM and BJ Wilsey, Iowa State University. *Exotic- and native-dominated grasslands exhibit ecosystem service tradeoffs across a latitudinal gradient*.

9:40 AM Break

9:50 AM COS 133-6 Gherardi, LA and OE Sala, Arizona State University. *Effects of interannual precipitation variability on aboveground net primary production in the Chihuahuan desert*.

10:10 AM COS 133-7 El-Sabaawi, R[1], RD Bassar[2], CD Rakowski[3], MC Marshall[4], T Kohler[5], CM Pringle[4], DN Reznick[6], SA Thomas[5] and AS Flecker[3], (1)University of Victoria, (2)University of California, (3)Cornell University, (4) University of Georgia, (5)University of Nebraska-Lincoln, (6)University of California Riverside. *The effects of phenotypic diversification on ecosystem structure in a heterogeneous world: a case study using guppies (Poecilia reticulata)*.

10:30 AM COS 133-8 Vourlitis, GL, California State University. *Aboveground net primary production response of semi-arid shrublands to chronic experimental dry-season N input*.

10:50 AM COS 133-9 Watts, DL, MJ Cohen and M Carnevale, University of Florida. *Ecosystem CO_2 fluxes and landscape dynamics in response to hydrologic modification in the Everglades ridge-slough mosaic*.

11:10 AM COS 133-10 Slot, M[1], SJ Wright[2] and K Kitajima[1], (1) University of Florida, (2)Smithsonian Tropical Research Institute. *Leaf dark respiration in a tropical forest canopy and its response to temperature*.

COS 134 - Ecosystem Management

E142, Oregon Convention Center

8:00 AM COS 134-1 Hudson, R, University of Saskatchewan. *Introducing the term 'ecosystem'*.

8:20 AM COS 134-2 Hayden, HL and EF Granek, Portland State University. *Abiotic factors impacting seedling regeneration of Rhizophora mangle in Turneffe Atoll, Belize*.

8:40 AM COS 134-3 Berg, J, Biohabitats, Inc.. *Regenerative design: A blend of ecological engineering and restoration design as an approach to restoration of ecosystem services*.

9:00 AM COS 134-4 Sweatman, J, Florida International University. *Biotic and abiotic drivers of landscape-scale distribution of seagrasses and macroalgae in the Florida Keys National Marine Sanctuary*.

9:20 AM COS 134-5 Wuenschel, AE[1], AL Hild[1], GB Paige[1] and MJ Holloran[2], (1)University of Wyoming, (2)Wyoming Wildlife Consultants LLC. *Ecological sites: Another way to look at greater sage-grouse habitat*.

9:40 AM Break

9:50 AM COS 134-6 Stringfellow, WT[1], J Hanlon[1], MS Brunell[1], C Spier[1], C Kendall[2], S Borglin[3] and GM Litton[1], (1) University of the Pacific, (2)U.S. Geological Survey, (3) Berkeley National Laboratory. *Direct measurement of phytoplankton growth rate in a eutrophic river reveals phytoplankton response to altered flow regimes*.

10:10 AM COS 134-7 Machmuller, M[1], KT Cyle[1], M Kramer[2], N Hill[1] and A Thompson[1], (1)University of Georgia, (2) University of California. *Carbon accumulation across a chronosequence of land conversion to grazing dairies*.

10:30 AM COS 134-8 Mika, AM and WS Keeton, University of Vermont. *Factors contributing to carbon fluxes from bioenergy harvests in the U.S. Northeast: An analysis using field data*.

10:50 AM COS 134-9 DeLonge, M, R Ryals and WL Silver, University of California, Berkeley. *Greenhouse gas dynamics of managed grasslands: A life cycle model approach*.

11:10 AM COS 134-10 Howard, K[1], LD Dimov[1], ZH Leggett[2], EB Sucre[2] and LL Weninegar[3], (1)Alabama A&M University, (2)Weyerhaeuser Company, (3)Columbia High School. *Organic matter removal in loblolly pine (Pinus taeda L.) plantations increased ground layer diversity 16 years after treatment*.

COS 135 - Ecosystem Services Assessment II

E143, Oregon Convention Center

8:00 AM COS 135-1 Buma, BJ[1] and CA Wessman[2], (1)University of Colorado, Boulder, (2)University of Colorado. *Ecosystem services may outlast their ecosystems: Regional carbon stocks minimally affected by multiple disturbances and coniferous-to-deciduous regime change*.

8:20 AM COS 135-2 Byers, BA, Bruce Byers Consulting. *Defining ecosystem services and designing mechanisms for their conservation*.

8:40 AM COS 135-3 Ulyshen, MD, USDA Forest Service. *Arthropods, flooding, and wood decay*.

9:00 AM COS 135-4 Fernandes, A[1], D Ford[1], SA Gray[2], N Hunter[1] and MM Younkin[1], (1)University of Hawaii at Manoa, (2) University of Hawaii. *Examining the relationship between ecosystem service characteristics and their management: A case study of Hawaii's watersheds and coasts*.

9:20 AM COS 135-5 Chaplin-Kramer, R[1], G Ziv[1], E Dombeck[2], N Mueller[2], M Mueller[2] and AM Klein[3], (1)Stanford University, (2)University of Minnesota, (3)Leuphana University of Lüneburg. *Mapping nutritional dependence on pollination services*.

9:40 AM Break

9:50 AM COS 135-6 Martin, EA[1], CR Park[2], B Reineking[3] and I Steffan-Dewenter[1], (1)University of Würzburg, (2)Korea Forest Research Institute, (3)University of Bayreuth.

The landscape context of natural enemy interactions in a South Korean agroecosystem: Implications for the effectiveness of biological pest control.

10:10 AM COS 135-7 Jones, HP[1], DG Hole[2], B Nickel[3] and ES Zavaleta[3], (1)University of California, (2)Conservation International, (3)University of California, Santa Cruz. *Harnessing nature to help people adapt to climate change: Identifying global high-priority areas for coastal ecosystem-based adaptation*.

10:30 AM COS 135-8 McDonald, RI, The Nature Conservancy. *Urban growth, climate change, and freshwater ecosystem services*.

10:50 AM COS 135-9 Santiago, L[1] and J Loomis[2], (1)University of Puerto Rico, (2)Colorado State University. *Testing whether marginal values of tropical beach attributes are stable across CVM and choice experiments designs*.

11:10 AM COS 135-10 Yee, SH[1], L Oliver[1], JA Dittmar[1], KB Vache[2] and WS Fisher[1], (1)U.S. Environmental Protection Agency, (2)Oregon State University. *Sustainability of reef ecosystem services under expanded water quality standards in St. Croix, USVI*.

COS 136 - Forest And Rangeland Management

E144, Oregon Convention Center

8:00 AM COS 136-1 Davis, FW[1], CM Tyler[1] and BE Mahall[2], (1) University of California Santa Barbara, (2)University of California. *Comparative demography of two declining oak species in a Mediterranean-climate savanna*.

8:20 AM COS 136-2 Chen, X, Alabama A&M University. *Will increase of human population result in decrease in forest area?*.

8:40 AM COS 136-3 Ruifrok, JL, H Olff and C Smit, University of Groningen. *Can tree saplings survive under bottom-up regulated ungulate densities in productive habitats*.

9:00 AM COS 136-4 Harris, R[1] and WD Bowman[2], (1)University of Colorado, Boulder, (2)University of Colorado. *Effects of lodgepole pine death due to mountain pine beetle and forestry management on understory plant communities*.

9:20 AM COS 136-5 Baker, SC[1], J Balmer[1], TP Baker[1], HC Stephens[1], BS Law[2], AB Hingston[1], NM Fountain-Jones[1], TJ Wardlaw[3], MG Neyland[3] and GJ Jordan[1], (1) University of Tasmania, (2)Industry and Investment NSW, (3)Forestry Tasmania. *Forestry patch retention can assist re-establishment of biodiversity into adjacent harvested areas*.

9:40 AM Break

9:50 AM COS 136-6 Littlefield, CE and WS Keeton, University of Vermont. *Bioenergy harvesting impacts on ecologically important stand structure and habitat characteristics*.

10:10 AM COS 136-7 McGranahan, DA[1], DM Engle[2], S Fuhlendorf[2], S Winter[3], JR Miller[4] and DM Debinski[5], (1)Sewanee: The University of the South, (2)Oklahoma State University, (3)U.S. Fish and Wildlife Service, (4) University of Illinois- Urbana/Champaign, (5)Iowa State University. *Assessing spatial heterogeneity outcomes in five rangelands experimentally managed with pyric-herbivory*.

10:30 AM COS 136-8 Halofsky, JS[1], M Hemstrom[2], S Bisrat[3], T Burcsu[3], T Christopher[3], M Creutzburg[4], J Halofsky[5], EB Henderson[6], AT Morzillo[6] and X Zhou[7], (1)Washington Department of Natural Resources, (2)Pacific Northwest Research Station, USDA Forest Service, (3)Institute for Natural Resources, (4)Portland State University, (5) University of Washington, (6)Oregon State University, (7)USDA Forest Service. *Integrating vegetation growth, natural disturbances, and management in eastern Oregon and Washington dry forests*.

10:50 AM COS 136-9 Knapp, EE[1], M North[1] and BL Estes[2], (1) USDA Forest Service, (2)US Forest Service. *Using historical data to guide forest restoration in the central Sierra Nevada*.

11:10 AM COS 136-10 Yu, MH[1], CD Canham[2] and CM Peters[3], (1)The Graduate Center, City University of New York, (2)Cary Institute of Ecosystem Studies, (3)New York Botanical Garden. *Modeling tree growth in a selectively logged temperate forest*.

COS 137 - Genetics And Molecular Techniques

E145, Oregon Convention Center

8:00 AM COS 137-1 Bisbing, S, DJ Cooper and AL Angert, Colorado State University. *Range-wide patterns of genetic population structure and potential geographical range shifts of Pinus contorta (ssp. latifolia, murrayana, contorta, and bolanderi)*.

8:20 AM COS 137-2 Cushman, SA[1], A Shirk[2] and EL Landguth[3], (1)US Forest Service, (2)University of Washington, (3) University of Montana. *Landscape genetics and limiting factors*.

8:40 AM COS 137-3 Dudaniec, R[1], J Rhodes[1] and J Worthington-Wilmer[2], (1)University of Queensland, (2)Queensland Museum. *Comparative landscape genetics of two co-occurring arboreal mammals in a highly developed Australian landscape*.

9:00 AM COS 137-4 Conley, AK[1] and AR Templeton[2], (1) Washington University in Saint Louis, (2)Washington University. *Using social networks to evaluate the potential of resource distribution as a predictor of population structure in a metapopulation of the Eastern collared lizard in the Missouri Ozarks*.

9:20 AM COS 137-5 Veale, AJ[1], M Clout[1] and D Gleeson[2], (1) University of Auckland, (2)Landcare Research. *Detecting invasion and/or survival post eradication using genetic methods: The stoat on New Zealand´s islands*.

9:40 AM Break

9:50 AM COS 137-6 Harrison, E, JC Trexler and TM Collins, Florida International University. *Determining the source(s) for Cichlasoma urophthalmus (Mayan cichlids) in South Florida*.

10:10 AM COS 137-7 Siddappaji, MH[1], S Clough[2], DR Scholes[3] and KN Paige[1], (1)University of Illinois - Urbana Champaign, (2)USDA Agricultural Research Service, (3)University of Illinois at Urbana-Champaign. *The role of invertase isoforms in overcompensation following mammalian herbivory: Are they functionally redundant?*.

10:30 AM COS 137-8 He, Z[1], Q Tu[1], Y Deng[1], P Zhang[1], H Yu[1], A Zhou[1], Z Lu[1], Y Chen[1], JW Voordeckers[1], K Xue[1], Y Lee[1], JDV Nostrand[1], L Wu[1], TC Hazen[2] and J Zhou[1], (1)University of Oklahoma, (2)Lawrence Berkeley National Laboratory. *GeoChip 4.0 as a high-density comprehensive functional gene array for profiling microbial communities*.

10:50 AM COS 137-9 Malone, KM[1], SD Hull[2] and BJ Swanson[1], (1)Central Michigan University, (2)Wisconsin Department of Natural Resources. *Assessing the need for and impact of translocation as a means of genetic rescue for Wisconsin's sharp-tailed grouse population*.

11:10 AM COS 137-10 Schadt, CW[1], M Shakya[2], N Gottel[3], H Castro[2], Z Yang[1], M Kerley[1], G Bonito[4], J Labbe[1], W Muchero[1], R Vilgalys[4], G Tuskan[1], M Podar[1] and M Doktycz[1], (1)Oak Ridge National Laboratory, (2) University of Tennessee, (3)University of Texas, Austin, (4)Duke University. *Roles of genotype-by-environment interactions in shaping the root-associated microbiome of Populus*.

COS 138 - Grasslands/Steppe

E146, Oregon Convention Center

8:00 AM COS 138-1 Mangla, S[1], M Royall[2] and KN Suding[1], (1) University of California at Berkeley, (2)University of California at Irvine. *Measuring the sustainability and community responses to ten-years of exotic control in Southern California grasslands*.

8:20 AM COS 138-2 Urban, MA[1], DM Nelson[2], D Verschuren[3] and FS Hu[4], (1)University of Illinois Urbana-Champaign, (2)University of Maryland Center for Environmental Science, (3)Ghent University, (4)University of Illinois, Urbana-Champaign. *The effects of fire, climate and pCO_2 on C_4 grass abunadance in equatorial East African grassland communities over the past 25,000 years: An evaluation of the C_4-fire hypothesis*.

8:40 AM COS 138-3 Prechsl, UE[1], A Kahmen[1], A Hammerle[2], S Burri[1], AK Gilgen[3] and N Buchmann[1], (1)ETH Zurich, (2)University of Innsbruck, (3)University of Bern. *The water sourcing strategy of drought affected temperate grasslands*.

9:00 AM COS 138-4 Linden, MP and BA Koerner, Emporia State University. *Annual root productivity and chemical composition responses to shrub encroachment and prescribed fire*.

9:20 AM COS 138-5 Zedler, PH[1] and BM Herrick[2], (1)University of Wisconsin-Madison, (2)University of Wisconsin - Madison. *Response of a prairie remnant to a historically rare growing season flooding event*.

9:40 AM Break

9:50 AM COS 138-6 Hoffman, O[1], B Boeken[2] and H Yitzhaq[1], (1)The Jacob Blaustein Institue for Desert Research, Ben Gurion University of the Negev, (2)Ben-Gurion University of the Negev, Sede Boqer, Israel. *Shrub-grass interactions in semi-arid rangeland, and their combined effects on soil-mound growth and maintenance*.

10:10 AM COS 138-7 Killian, PD, JM Briggs and NM Bello, Kansas State University. *Physiological integration of Cornus drummondii and the mechanisms driving woody encroachment in the tallgrass prairie*.

10:30 AM COS 138-8 Horton, AJ, JL Soong, ML Vandegehuchte, DH Wall and MF Cotrufo, Colorado State University. *Investigating the fate of nitrogen from leaf litter into soil, soil organisms, and plants at a tall grass prairie, by the use of ^{15}N enrichment*.

10:50 AM COS 138-9 Taylor, RV[1], L Arends[1] and WJ Ripple[2], (1) The Nature Conservancy, (2)Oregon State University. *Are wild ungulates eating your conservation lunch? Aspen and shrub recruitment on a remnant Pacific Northwest bunchgrass prairie*.

COS 139 - Herbivory

Portland Blrm 254, Oregon Convention Center

8:00 AM COS 139-1 Nielsen, A, University of Oslo. *Outfield grazing as a way of utilizing and sustaining semi-natural ecosystems*.

8:20 AM COS 139-2 Sonnemann, I and S Wurst, Freie Universitaet Berlin. *Effects of generalist root feeders (Agriotes spp. larvae, Coleoptera: Elateridae) on grassland plant communities*.

8:40 AM COS 139-3 Halpern, SL[1], N Underwood[2] and BD Inouye[2], (1)Pacific University, (2)Florida State University. *Insect herbivore effects on population dynamics of the clonal weed Solanum carolinense*.

9:00 AM COS 139-4 Buchanan, AL, NC Underwood and BD Inouye, Florida State University. *Allocation shifts favor asexual reproduction: Response to damage and pollination in a clonal flowering plant (Eichhornia crassipes)*.

9:20 AM COS 139-5 Hahn, PG and JL Orrock, University of Wisconsin - Madison. *Agricultural land use history and fire suppression strengthen herbivore impacts*.

9:40 AM Break

9:50 AM COS 139-6 Cushman, JH and LE Saunders, Sonoma State University. *Long-term and interactive effects of different mammalian consumers on growth, survival and recruitment of oaks in northern California*.

10:10 AM COS 139-7 Poore, AGB[1], AH Campbell[1], RA Coleman[2], G Edgar[3], V Jormalainen[4], PL Reynolds[5], EE Sotka[6], JJ Stachowicz[7], RB Taylor[8], MA Vanderklift[9] and JE Duffy[10], (1)University of New South Wales, (2)The University of Sydney, (3)University of Tasmania, (4)University of Turku, (5)Virginia Institute of Marine Science, (6)College of Charleston, (7)University of California, Davis, (8) University of Auckland, (9)CSIRO Wealth from Oceans Flagship, (10)The College of William and Mary. *Global patterns in herbivore impact on marine benthic primary producers: A comprehensive meta-analysis*.

10:30 AM COS 139-8 Lenhart, PA, ST Behmer and MD Eubanks, Texas A&M University. *Effects of drought stress on grassland plant traits and insect herbivore communities*.

10:50 AM COS 139-9 Pearse, IS[1] and F Altermatt[2], (1)Cornell University, (2)Swiss Federal Institute of Aquatic Science and Technology (Eawag). *Predicting extinction risk and novel host use in a complete Lepidoptera-plant food network*.

11:10 AM COS 139-10 West, NM and SM Louda, University of Nebraska-Lincoln. *Herbivory and plant density affect the consequences of apical damage*.

COS 140 - Invasion: Community Effects III

Portland Blrm 255, Oregon Convention Center

8:00 AM COS 140-1 Langdon, B[1], A Pauchard[2] and LA Cavieres[2], (1)Bioforest SA, (2)Universidad de Concepción, Instituto de Ecología y Biodiversidad (IEB). *Pinus contorta invasion in Patagonia is influenced by resident vegetation and herbivory*.

8:20 AM COS 140-2 Schat, M[1], JL Schafer[1], EL Mudrak[2], CE Haines[1], HA Parag[1], KA Moloney[2] and C Holzapfel[1], (1)Rutgers University, (2)Iowa State University. *Invasive non-native annuals use novel source-sink strategies in North American deserts*.

8:40 AM COS 140-3 D'Antonio, C[1], S Yelenik[2], F Hughes[3] and N DiManno[4], (1)University of California Santa Barbara, (2)University of California, Santa Barbara, (3)USDA Forest Service, (4)University of California. *Challenges in predicting ecosystem response to invasion: A case study of decline of a dominant invader in Hawaii's seasonally dry woodlands*.

9:00 AM COS 140-4 Magnoli, SM[1], AR Kleinhesselink[2] and JH Cushman[3], (1)Michigan State University, (2)Utah State University, (3)Sonoma State University. *Plant groups varying in geographic origin and life form respond differently to invasion and removal of a dominant plant invader*.

9:20 AM COS 140-5 Dibble, KL and LA Meyerson, University of Rhode Island. *Tidally restricted salt marshes invaded by Phragmites australis reduce habitat quality for resident fish populations*.

9:40 AM Break

9:50 AM COS 140-6 Paudel, S and LL Battaglia, Southern Illinois University. *Resilience of floating aquatic plant communities in coastal bottomlands of the lower Mississippi alluvial valley*.

10:10 AM COS 140-7 Greer, MJ, MA Noland, KR Hickman and

GWT Wilson, Oklahoma State University. *Determining the effects of exotic warm-season grass invasion on small mammal communities of North Central Oklahoma, USA*.

10:30 AM COS 140-8 Diepenbrock, LM and DL Finke, University of Missouri. *Impacts of exotic species invasion and refuge habitats on the persistence of native lady beetle species*.

10:50 AM COS 140-9 Wilson, EE and DS Gruner, University of Maryland. *Effects of omnivorous invaders on arboreal arthropod communities in naturally fragmented Hawaiian forests*.

11:10 AM COS 140-10 Baldridge, AK and DM Lodge, University of Notre Dame. *Short and long-term impacts and recovery potential for aquatic plant and snail communities in lakes impacted by an invasive omnivore*.

COS 141 - Invasion: Species Interactions III

Portland Blrm 257, Oregon Convention Center

8:00 AM COS 141-1 Funk, JL, Chapman University. *Testing the trait-based community framework: Can limiting similarity increase invasion resistance in restored grassland?*.

8:20 AM COS 141-2 Connolly, BM[1], RN Mack[1] and D Pearson[2], (1)Washington State University, (2)USDA Forest Service, Rocky Mountain Research Station. *Biotic resistance to non-native plant establishment in meadow steppe vs. xeric forests on the Columbia Plateau: The role of post-dispersal seed predation*.

8:40 AM COS 141-3 Pagnucco, KS and A Ricciardi, Redpath Museum, McGill University. *In the driver's seat? Disentangling the influence of habitat disturbance and an invasive fish on macroinvertebrate communities in the St. Lawrence River*.

9:00 AM COS 141-4 Phillips, AJ and EA Leger, University of Nevada, Reno. *Root plasticity of Poa secunda in response to nutrient availability and invasion*.

9:20 AM COS 141-5 D'Amico, V III[1], WG Shriver[2] and C Rega[2], (1)USDA Forest Service, (2)University of Delaware. *Multitrophic interactions in Rosa multiflora-invaded urban forests*.

9:40 AM Break

9:50 AM COS 141-6 Reisner, MD[1], PS Doescher[2] and DA Pyke[3], (1)Unversity of Wisconsin at Stevens Point, (2)Oregon State University, (3)U.S. Geological Survey, Forest and Rangeland Ecosystem Science Center. *A test of the stress gradient hypothesis: strikingly different patterns among native and non-native beneficiaries and implications for community stability*.

10:10 AM COS 141-7 Dresser, CM[1], ML Kuhlmann[2] and BJ Swanson[1], (1)Central Michigan University, (2)Hartwick College. *Role of abiotic factors on native crayfish behavioral defense against invasive rusty crayfish (Orconectes rusticus)*.

10:30 AM COS 141-8 Kuebbing, SE[1] and A Classen[2], (1)University of Tennessee, (2)The University of Tennessee. *Plant-soil feedback dynamics among co-occurring invasive plants*.

10:50 AM COS 141-9 Lawrence, DJ[1], JD Olden[1] and CE Torgersen[2], (1)University of Washington, (2)U.S. Geological Survey. *Patterns of smallmouth bass (Micropterus dolomieu) invasions in salmon rearing habitat*.

11:10 AM COS 141-10 Heard, MJ and DF Sax, Brown University. *Trade-offs in biotic interactions facilitate coexistence between native and exotic plants in a historically invaded community*.

COS 142 - Modeling IV

Portland Blrm 258, Oregon Convention Center

8:00 AM COS 142-1 Wick, AA[1], J Spence[1], S Pruss[2] and N Erbilgin[1], (1)University of Alberta, (2)Parks Canada. *Beyond the host plant: Environmental factors that predict habitat suitability for a northern peripheral population of a threatened butterfly (Apodemia mormo) at two spatial scales*.

8:20 AM COS 142-2Linden, D and G Roloff, Michigan State University. *Multistate site occupancy estimation of white–headed woodpeckers (Picoides albolarvatus) in managed forests*.

8:40 AM COS 142-3 Davison, RJ[1], H Jacquemyn[2], F Nicole[3] and S Tuljapurkar[4], (1)Max Planck Institute for Demographic Research, (2)KU Leuven, (3)Université de Saint-Etienne, (4)Stanford University. *Contributions of Covariance: Decomposing the components of stochastic population growth in the endangered Lady's Slipper orchid Cypripedium calceolus*.

9:00 AM COS 142-4 Charney, ND[1] and PS Warren[2], (1)University of Massachusetts Amherst, (2)University of Massachusetts. *Evaluating expert opinion and spatial scale in an amphibian model*.

9:20 AM COS 142-5 Kaufeld, K, University of Northern Colorado. *Spatial-temporal generalized linear modeling of Mountain Pine Beetle outbreaks and other damage causing agents in the Rocky Mountain region*.

9:40 AM Break

9:50 AM COS 142-6 Palamara, GM[1], OL Petchey[1], G Delius[2] and M Smith[3], (1)University of Zurich, (2)University of York, (3) Microsoft Research. *Predation effects on mean time to extinction under demographic stochasticity*.

10:10 AM COS 142-7 Calle, L, DE Gawlik, Z Xie and B Johnson, Florida Atlantic University. *Predicted changes in foraging habitat of the Little Blue Heron (Egretta caerulea) in the Great White Heron National Wildlife Refuge, FL, USA, as a function of sea level rise*.

10:30 AM COS 142-8 Hocking, DJ and KJ Babbitt, University of New Hampshire. *Comparison of models for analyzing seasonal activity from longitudinal count data*.

10:50 AM COS 142-9 Feng, X and M Dietze, University of Illinois. *Effects of plant physiological traits on photosynthetic capacity and parameters are scale-dependent*.

11:10 AM COS 142-10 Sarhad, JJ[1], KE Anderson[2] and RC Carlson[3], (1)University of CA, Riverside, (2)University of California, Riverside, (3)University of Colorado, Colorado Springs. *Modeling the relationship between domain size and population persistence in branching river networks*.

COS 143 - Pollination II

F149, Oregon Convention Center

8:00 AM COS 143-1 Leonard, AS[1], A Dornhaus[2] and DR Papaj[2], (1)University of Nevada, Reno, (2)University of Arizona. *A guide for thwarting robbers? The possible benefits of nectar guides to plants and bees*.

8:20 AM COS 143-2 Hadley, AS, WD Robinson, SJK Frey and MG Betts, Oregon State University. *Bigger is better: Size of tropical forest patches, not total forest cover, is associated with pollination of an understory herb*.

8:40 AM COS 143-3 Stewart, AB and MR Dudash, University of Maryland. *Old World fruit and nectar bats: Comparing the interactions of bat-pollinated plants with facultative versus obligate pollinators*.

9:00 AM COS 143-4 Brosi, BJ[1] and HM Briggs[2], (1)Emory University, (2)University of California, Santa Cruz. *Pollinator diversity and short-term foraging specialization*.

9:20 AM COS 143-5 Avila, L[1], HG Hall[1] and E Herrera González[2], (1)University of Florida, (2)Universidad Nacional de Costa Rica. *Land use supplementation on the colony vigor of a tropical stingless bee*.

9:40 AM Break

9:50 AM COS 143-6 Schaeffer, RN, JS Manson and RE Irwin, Dartmouth College. *Microbial mediation of pollinator foraging behavior*.

10:10 AM COS 143-7 Essenberg, CJ, University of California-Riverside. *Predicting the effects of flower density on pollinator species composition*.

10:30 AM COS 143-8 Roy, BA[1], A Davis[1], T Policha[1], MR Barnadas[2] and BTM Dentinger[3], (1)University of Oregon, (2)Magpie Studio: Fabrication for Art and Science, (3)Jodrell Laboratory Royal Botanic Gardens, Kew. *Perceptual bias in floral mimicry: Visual cues*.

10:50 AM COS 143-9 Williams, NM[1], E Lonsdorf[2] and J Forrest[1], (1)University of California, Davis, (2)Chicago Botanic Garden. *Life history and resource distributions determine bee sensitivity to landuse change*.

11:10 AM COS 143-10 DeVan, CM and DE Bunker, New Jersey Institute of Technology. *Pollinator species richness is correlated to flowering plant richness: A meta-analysis*.

COS 144 - Species Interactions II

B117, Oregon Convention Center

8:00 AM COS 144-1 Machnicki, NJ, C Adams and J Tewksbury, University of Washington. *Generalist vs. specialist pathogens: Consequences of insect vectoring of fungal pathogens in wild chili peppers*.

8:20 AM COS 144-2 McIntire, EJB[1] and A Fajardo[2], (1)Natural Resources Canada & Laval University, (2)Centro de Investigacion en Ecosistemas de la Patagonia. *Moving facilitation out of its niche: Tree merging, supertrees, and the limits to the stress-gradient hypothesis*.

8:40 AM COS 144-3 Long, EY and DL Finke, University of Missouri. *Predator diversity affects vector abundance and movement: Conflicting implications for pathogen prevalence?*.

9:00 AM COS 144-4 Kortessis, N and CT Lee, Florida State University. *Consumer responses to resource density affect species coexistence in consumer-resource systems*.

9:20 AM COS 144-5 Kartzinel, TR, RP Shefferson and DW Trapnell, University of Georgia. *Phylogeographic structure of the Neotropical epiphytic orchid Epidendrum firmum corresponds to differences in symbiotic fungal communities*.

9:40 AM Break

9:50 AM COS 144-6 Grinath, JB, BD Inouye and NC Underwood, Florida State University. *Cascading effects from bears to plants via a protection-service mutualism*.

10:10 AM COS 144-7 Apple, JL[1], SL Lewandowski[2], SA Dzara[1], DD Kane[1], JL Levine[1] and BE Neary[3], (1)SUNY Geneseo, (2)University of Massachusetts Medical School, (3) University of Rochester Medical Center. *Dynamics of interactions between slavemaking ants and their hosts: Spatial, temporal, and genetic patterns*.

10:30 AM COS 144-8 Clause, J[1], B Richard[1], S Barot[2], T Decaëns[1], M Legras[3] and E Forey[1], (1)Laboratoire ECODIV, Université de Rouen, (2)IRD, Bioemco, (3)BioSol, Esitpa - Ecole d'Ingénieurs en Agriculture. *Seed performances from casts of different earthworm species and different soil types*.

10:50 AM COS 144-9 Brody, AK, JB Gonzalez and GL Clarke, University of Vermont. *Neither floral nor fungal mutualists help to explain the persistence of females in a gynodioecious plant*.

COS 145 - Statistics

C120, Oregon Convention Center

8:00 AM COS 145-1 McCune, B and HT Root, Oregon State University. *Nonparametric constrained ordination*.

8:20 AM COS 145-2 Popescu, VD[1], P de Valpine[2], D Tempel[3] and MZ Peery[4], (1)University of California Berkeley, (2)University of California - Berkeley, (3)University of Minnesota, (4)University of Wisconsin - Madison. *Estimating population impacts via dynamic occupancy analysis of Before-After Control-Impact studies*.

8:40 AM COS 145-3 Forcino, FL and LR Leighton, University of Alberta. *Sample size requirements for detecting change in abundance-based taxonomic composition*.

9:00 AM COS 145-4 Harris, DJ, UC Davis. *Interpretable, accurate predictions of species distributions and community composition: Making the most of prior information*.

9:20 AM COS 145-5 Knape, J, K Scranton and P de Valpine, University of California - Berkeley. *Estimating stage durations from samples of cohorts*.

9:40 AM Break

9:50 AM COS 145-6 Anderson, MJ and DCI Walsh, Massey University. *How does heterogeneity of multivariate dispersions affect ANOSIM, PERMANOVA, and the Mantel test?*.

10:10 AM COS 145-7 Finn, JT[1], ME Mather[1], MK Burak[1], RM Muth[1], J Kim[2] and M Sutherland[1], (1)University of Massachusetts, (2)USDA Forest Service Pacific Northwest Research Station. *Evaluating new approaches to modeling data sets with many zeros: An example using anadromous fish counts*.

10:30 AM COS 145-8 Calabrese, J[1], T Mueller[2], P Leimgruber[1] and WF Fagan[2], (1)Smithsonian Conservation Biology Institute, (2)University of Maryland. *Quantifying movement coordination among simultaneously tracked animals*.

10:50 AM COS 145-9 Hoeksema, JD[1] and JD Bever[2], (1)University of Mississippi, (2)Indiana University. *How should we use meta-analysis to answer complex questions in ecology and evolution?*.

11:10 AM COS 145-10 Cade, BS, U. S. Geological Survey. *Estimating and comparing allometric growth of body mass with length using quantile regression*.

COS 146 - Trophic Dynamics And Interactions II

C123, Oregon Convention Center

8:00 AM COS 146-1 Hanlon, SM[1], J Kerby[2] and M Parris[1], (1) University of Memphis, (2)University of South Dakota. *The pesticide enigma: Varying effects of a fungicide and chytrid fungus on Southern Leopard frogs*.

8:20 AM COS 146-2 Ripple, WJ and R Beschta, Oregon State University. *Large predators and trophic cascades in the American West*.

8:40 AM COS 146-3 de Roos, AM[1], T Schellekens[2] and L Persson[3], (1)University of Amsterdam, (2)Wageningen University Research, (3)Umeå university. *Ontogenetic asymmetry in energetics overturns basic ecological principles*.

9:00 AM COS 146-4 Mitchell, SR[1], N Christensen[1], JR Walters[2], K Palmquist[3], M Bertone[4] and S Cohen[5], (1)Duke University, (2)Virginia Polytechnic Institute and State University, (3)University of North Carolina, (4)North Carolina State University, (5)Marine Corps Base Camp Lejeune. *Soil properties drive differences in taxonomic groups among pine forests of the Atlantic coastal plain*.

9:20 AM COS 146-5 Granados, M[1], S Plourde[2] and GF Fussmann[1], (1)McGill University, (2)Fisheries and Oceans Canada. *Weakness is a strength: An empirical test of the weak interaction hypothesis in a food web with omnivory*.

9:40 AM Break

9:50 AM COS 146-6 Beschta, R and WJ Ripple, Oregon State University. *Loss of apex predators affects river systems in the Western US*.

10:10 AM COS 146-7 Srivastava, DS[1], T Bell[2], BM Starzomski[3], JT Ngai[1], T Atwood[1] and E Hammill[1], (1)University of British Columbia, (2)University of Oxford, (3)University of Victoria. *Top-down effects of a predatory odonate dominate population, community and ecosystem processes in bromeliads*.

10:30 AM COS 146-8 Friesen, OC and JD Roth, University of Manitoba. *Parasite diversity and intensity in sympatric arctic and red fox: Implications of Arctic climate change*.

10:50 AM COS 146-9 Ayal, Y, Ben Gurion University of the Negev. *When the world turned brown: Over browsing, apparent competition and the "Miocene Transformation"*.

11:10 AM COS 146-10 Keim, JL[1], SK Wasser[2], SR Lele[3], PD DeWitt[1] and ML Taper[4], (1)Matrix Solutions Inc., (2)Center for Conservation Biology, (3)University of Alberta, (4) Montana State University. *Bottom-up, trophic mechanism impairs caribou pregnancy in Canada's oil sands*.

11:30 am-1:15 pm

ESA Diversity Luncheon: Generation Z: Past, Present, and Future for ESA's Diversity and Education

Portland Blrm 256, Oregon Convention Center

WK 42 - Arkive.Org: Using Audio-Visuals to Preserve Threatened Life On Earth

D135, Oregon Convention Center

Organized by: L Vitali (liana.vitali@wildscreenusa.org)

After an introduction to ARKive's 90,000+ films and photos of endangered species freely available to formal educators and students, participants, using their own laptops, will participate in a guided tour of the ARKive website. The session will close with an exploration of ARKive's educational activities for the classroom and beyond.

WK 43 - Show Me the Money: How to Write Successful Student Grant Proposals

D136, Oregon Convention Center

Organized by: JM Talbot, SR Holden, HG Wang

This workshop is designed for graduate students to learn techniques for writing successful research grant proposals in the ecological sciences. The workshop will feature a panel that includes a funding agency representative, proposal reviewers, and awardees who will discuss strategies for preparing an innovative, highly competitive, and complete proposal package.

WK 44 - Developing Management Responses to Climate Change: A Workshop for Conservation and Natural Resource Managers (FREE BUT MUST REGISTER)

D137, Oregon Convention Center

Organized by: E Gray (egray@tnc.org), R Beach, L Svancara, S Shafer

This workshop will provide an overview of strategies for interpreting and applying climate change information to conservation and natural resource management questions, followed by an interactive discussion with workshop participants using examples of applying climate change information to management issues in the Pacific Northwest.

WK 45 - Designing a Syllabus: Tips and Tricks to Help You Prepare to Teach Ecology At the College Level

D138, Oregon Convention Center

Organized by: MA Evans, SE Dalrymple

This workshop will help you prepare to teach a college level ecology course. Participants will analyze the purpose and content of a syllabus, craft learning objectives and course format, address the transition from TA to instructor, and discuss how to approach teaching scientifically. Be prepared to share your teaching experiences!

WK 46 - Vision and Change for Ethnobiological Education: The Open Science Network Approach

D139, Oregon Convention Center

Organized by: L Shiels, SL Brosi

The Open Science Network in Ethnobiology (OSN; www.opensciencenetwork.net) will share core competencies in ethnobiology education similar to the AAAS Vision and Change in Undergraduate Biology Education. Faculty members will learn how to engage in the Open Science Network and will take away skills and ideas to utilize in their classrooms.

WK 47 - How to Access Ecological and Evolutionary Datasets in R

F150, Oregon Convention Center

Organized by: K Ram, SA Chamberlain, C Boettiger

In the workshop we will showcase a live demonstration of several of our R packages and also lead a discussion on how you can develop similar tools for other data sources. We encourage you to bring a laptop so you can participate along (wifi permitting).

Speakers:
C Boettiger, UC Davis
SA Chamberlain, Rice University
K Ram, University of California Berkeley

WK 49 - The Farm Bill: Opportunities for Scientists to Engage

E145, Oregon Convention Center

Organized by: R Salvador, A Elles

Workshop participants will walk away with a deeper understanding of the Farm Bill, its impact on scientific advancement in agriculture, and concrete tools for using their expertise to influence the outcome.

1:30 pm-5 pm

SYMP 19 - The National Climate Assessment: Preliminary Findings, Building Assessment Capacity, and Implementing a Sustained Assessment Process

Portland Blrm 251, Oregon Convention Center

Organized by: ET Cloyd (ecloyd@usgcrp.gov), N Grimm

Endorsed by: Biogeosciences, Policy

Moderator: ET Cloyd

This session will present key findings from the draft 2013 National Climate Assessment report; discuss implementing a sustained assessment process, including developing indicators of climate change and impacts; and provide an opportunity to comment on the draft NCA report and ongoing assessment process.

1:30 PM SYMP 19-1 Melillo, JM, Marine Biological Laboratory. *Overview of the National Climate Assessment process*.

1:50 PM SYMP 19-2 Grimm, N[1], FS Chapin[2], SL Carter[3], PM Groffman[4], MD Staudinger[5] and A Staudt[6], (1)National Science Foundation and US Global Change Research

Program, (2)University of Alaska Fairbanks, (3)US Geological Survey, (4)Cary Institute of Ecosystem Studies, (5)US Geological Survey and University of Missouri, (6) National Wildlife Federation. *Current and future impacts of climate and global change on biodiversity and the structure and functioning of ecosystems*.

2:10 PM SYMP 19-3 Davidson, EA, The Woods Hole Research Center, Massachusetts. *The role of nitrogen in climate change and the impacts of nitrogen-climate interactions on terrestrial and aquatic ecosystems, agriculture, and human health in the United States*.

2:30 PM SYMP 19-4 Peterson, DL[1], JM Vose[2] and T Patel-Weynand[3], (1)US Forest Service, Pacific Northwest Research Station, (2)Southern Research Station, (3) National Research and Development Office. *Effects of climatic variability and change on forest ecosystems*.

2:50 PM SYMP 19-5 Walthall, C[1], J Hatfield[1], L Lengnick[2], E Marshall[3], P Backlund[4] and MK Walsh[5], (1)USDA Agricultural Research Service, (2)Warren Wilson College and USDA Agricultural Research Service ONP, (3)USDA Economic Research Service, (4)NCAR, (5)US Department of Agriculture. *Climate change impacts on agricultural systems*.

3:10 PM Break

3:20 PM SYMP 19-6 Hall, JA[1] and M Blair[2], (1)Department of Defense: SERDP/ESTCP, (2)American Cancer Society. *Establishing a sustained assessment process*.

3:40 PM SYMP 19-7 Janetos, A[1], MA Kenney[2], R Chen[3] and D Arndt[4], (1)PNNL/UMD, (2)National Oceanic and Atmospheric Administration and the U.S. Global Change Research Program, (3)Columbia University and NASA Socioeconomic Data Center, (4)National Oceanic and Atmospheric Administration. *Developing a system of National Climate Assessment indicators to track climate change impacts, vulnerabilities, and preparedness*.

4:00 PM SYMP 19-8 Staudt, A[1], P Kareiva[2], M Ruckelshaus[3] and B Stein[1], (1)National Wildlife Federation, (2)The Nature Conservancy, (3)NatureCapital Project. *Climate change and the interface of human and ecological systems: Recent advances in ecosystem services and climate adaptation*.

4:20 PM SYMP 19-9 Cloyd, ET, US Global Change Research Program. *A moderated discussion on the National Climate Assessment*.

THURSDAY

SYMP 20 - Plant-Soil Feedback: The Past, the Present and the Future

Portland Blrm 252, Oregon Convention Center

Organized by: W Van der Putten, J Schweitzer, TM Bezemer, T Fukami

Endorsed by: Soil Ecology Section

Moderator: TFJ van de Voorde

This symposium will provide a synthetic overview of historical perspectives, current knowledge and future research directions on the causes and consequences of plant-soil feedback, the reciprocal influences between plants and the biotic and abioic properties of soil, by integrating multiple scales, approaches, and levels of ecological organization.

1:30 PM SYMP 20-1 Van der Putten, W, Netherlands Institute of Ecology. *Plant-soil feedback: The past, the present and future challenges*.

1:50 PM SYMP 20-2 Reinhart, KO, US Department of Agriculture, Agricultural Research Service. *Plant-soil feedbacks and plant community composition in semiarid grasslands*.

2:10 PM SYMP 20-3 Brandt, AJ[1], H de Kroon[2], HL Reynolds[3] and JH Burns[1], (1)Case Western Reserve University, (2) Radboud University Nijmegen, (3)Indiana University. *Soil heterogeneity generated by plant-soil feedbacks has implications for species coexistence*.

2:30 PM SYMP 20-4 Bezemer, TM[1], O Kostenko[2] and TFJ Van de Voorde[3], (1)Netherlands Institute of Ecology (NIOO-KNAW), (2)Netherlands Institute of Ecology, (3)Wageningen University. *Plant-soil feedback in belowground-aboveground interactions*.

2:50 PM SYMP 20-5 Kardol, P[1], GB De Deyn[2], CV Hawkes[3], E Laliberté[4] and P Mariotte[5], (1)Swedish University of Agricultural Sciences, (2)Wageningen University, (3) University of Texas at Austin, (4)The University of Western Australia, (5)Ecole Polytechnique Fédérale de Lausanne & Federal Research Institute WSL. *Plant-soil feedbacks in a temporally and spatially variable environment*.

3:10 PM Break

3:20 PM SYMP 20-6 Schweitzer, JA[1], TFJ van de Voorde[2], K Clay[3] and JK Bailey[1], (1)University of Tennessee, Knoxville, (2)Netherlands Institute for Ecology - Wageningen University, (3)Indiana University. *Evolutionary consequences of plant-soil feedback*.

3:40 PM SYMP 20-7 Bardgett, R[1], FT de Vries[1], E Morrien[2] and P Manning[3], (1)Lancaster University, (2)2Netherlands Institute for Ecology, (3)Newcastle UNiversity. *Plant-soil feedback and climate change: Plant and soil communities modify ecosystem responses to climate change*.

4:00 PM SYMP 20-8 Bever, JD[1], T Fukami[2], MB Eppinga[3] and KML Mack[1], (1)Indiana University, (2)Stanford University, (3)Utrecht University. *Plant-soil feedback: Conceptual integration and theoretical insights*.

4:20 PM SYMP 20-9 Fukami, T and M Nakajima, Stanford University. *Plant-soil feedback, transient community dynamics, and plant species diversity*.

4:40 PM SYMP 20-10 Suding, KN[1], A Kulmatiski[2], AS MacDougall[3], T Fukami[4] and WH van der Putten[5], (1)University of California at Berkeley, (2)Utah State University, (3)University of Guelph, (4)Stanford University, (5)Netherlands Institute of Ecology. *Plant-soil feedback, invasion, and consequences for community assembly dynamics*.

SYMP 21 - Mechanisms Leading to Drought Mortality: Links Between Hydraulic Failure, Carbon Starvation and Biotic Causes In Experiments, Observational and Modelling Studies

Portland Blrm 253, Oregon Convention Center

Organized by: M Zeppel (Melzeppel@gmail.com), S Sevanto, W Anderegg

Endorsed by: Physiological Ecology

Moderator: JD Lewis

Current evidence, hypotheses and models of mechanisms leading to drought mortality, based on plant functional types from across ecosystems will be presented. Experiments and observational studies of conifers and angiosperms allow a synthesis of mechanisms leading to drought mortality, and linkages between hydraulic failure, carbon starvation and pest and diseases.

1:30 PM Welcoming remarks

1:35 PM SYMP 21-1 McDowell, N, Los Alamos National Laboratory. *Some outstanding questions regarding mechanisms of drought-related vegetation mortality*.

1:55 PM SYMP 21-2 Sala, A, The University of Montana. *Tree carbon reserves and survival to drought: Important knowledge gaps*.

2:15 PM SYMP 21-3 Anderegg, W, Stanford University. *Droughts legacy: Hydraulic deterioration underlies widespread aspen forest die-off and portends increased future risk*.

2:35 PM SYMP 21-4 Hartmann, H, SE Trumbore and W Ziegler, Max Planck Institute for Biogeochemistry. *Killing in the name of science: Changes in tree physiology during induced lethal drought and carbon starvation*.

2:55 PM SYMP 21-5 White, D, CSIRO, Australia. *Towards a mortality function based on hydraulic regulation of Eucalyptus globulus and E. smithii*.

3:15 PM Break

3:25 PM SYMP 21-6 Mencuccini, M[1], J Martínez-Vilalta[2] and T Holtta[3], (1)University of Edinburgh, (2)CREAF / Autonomous University of Barcelona, (3)University of Helsinki. *Structural limitations of water and sugar transport in trees during drought: Model characterization of the relative importance of xylem embolism, carbon starvation, and lack of phloem transport*.

3:45 PM SYMP 21-7 Plaut, J[1], NG McDowell[2], RE Pangle[1] and WT Pockman[1], (1)University of New Mexico, (2)Los Alamos National Laboratory. *Precipitation pulse responses and mortality in a five-year drought experiment*.

4:05 PM SYMP 21-8 Pinkard, L, CSIRO, Australia. *The role of pests in drought mortality, a modelling perspective*.

4:25 PM SYMP 21-9 Zeppel, M, Macquarie University. *Concluding synthesis: Evidence across experiments - which species and conditions lead to hydraulic failure and carbon starvation?*.

4:45 PM Discussion

OOS 43 - Managing for Resilience In Wildfire-Prone Ecosystems: Toward An Ecological Basis

B113, Oregon Convention Center

Organized by: NA Povak

Moderator: PF Hessburg

This session will focus on the concept of ecosystem resilience to recurrent disturbances in fire-prone ecosystems of the western US, and will include discussions on identifying multi-scale spatial controls on fire regimes, quantifying anthropogenically-driven changes to historical vegetation patterns, and incorporating landscape-level management directed toward enhancing system resiliency.

1:30 PM OOS 43-1 Miller, C[1], SL Haire[2], SA Parks[1] and MA Parisien[3], (1)Aldo Leopold Wilderness Research Institute, (2)University of Massachusetts, (3)Natural Resources Canada, Canadian Forest Service. *Spatial controls on fire regimes in three fire-prone regions of the western US*.

1:50 PM OOS 43-2 Littell, JS[1] and D McKenzie[2], (1)University of Washington - Seattle, (2)US Forest Service. *Interactions among climate, fuels, hydrology, and fire in landscapes of the western US*.

2:10 PM OOS 43-3 Raymond, CL[1], DL Peterson[1] and R Rochefort[2], (1)US Forest Service, (2)National Park Service. *Climate change mitigation and adaptation options for increasing resilience of fire-prone ecosystems in the North Cascades*.

2:30 PM OOS 43-4 Spies, TA[1], J Bailey[2], JP Bolte[3], S Duncan[3], D Jacobs[2], C Olsen[3] and RJ Pabst[3], (1)US Forest Service, Pacific Northwest Research Station, (2)Oregon State Univeristy, (3)Oregon State University. *Fire-prone landscapes as coupled human natural systems: An example from the eastern Cascades of Oregon*.

2:50 PM OOS 43-5 Stevens, JT[1], HD Safford[2] and AM Latimer[3], (1)University of California, (2)USDA-Forest Service, Pacific Southwest Region; University of California-Davis, Department of Environmental Science and Policy, (3)University of California Davis. *Fuel treatment impacts on wildfire severity and plant communities in dry mixed conifer forests of California*.

3:10 PM Break

3:20 PM OOS 43-6 Hagmann, K[1], JF Franklin[1] and KN Johnson[2], (1)University of Washington, (2)Oregon State University. *Historical structure and composition of dry forests in south central Oregon*.

3:40 PM OOS 43-7 Collins, B[1], R Everett[2] and S Stephens[2], (1)USDA US Forest Service, (2)University of California, Berkeley. *Impacts of fire exclusion and recent managed fire on forest structure in old growth Sierra Nevada mixed-conifer forests: Resampling of 1911 timber inventories*.

4:00 PM OOS 43-8 Stephens, S, University of California, Berkeley. *Mixed conifer forests in the Sierra San Pedro Martir, Mexico: What makes them so resilient to drought and fire*.

4:20 PM OOS 43-9 Falk, DA[1], AE Thode[2] and R Loehman[3], (1) University of Arizona, (2)Northern Arizona University, (3) USDA Forest Service, Rocky Mountain Research Station. *Rapid ecosystem shifts are triggered by interactions of severe landscape disturbance and climate change in the southwestern US*.

4:40 PM OOS 43-10 Povak, NA[1], PF Hessburg[1] and JF Franklin[2], (1)USDA-FS, Pacific Northwest Research Station, (2) University of Washington. *Environmental settings and spatial contexts of wildfire refugia in early 20th century mixed conifer ecosystems of the eastern Cascades*.

OOS 44 - Impacts of Species Addition and Species Loss on Ecosystem Function in Freshwater Systems

B116, Oregon Convention Center

Organized by: KA Capps (krista.capps@maine.edu), CL Atkinson, A Rugenski

Moderator: KA Capps

This session proposes to present theoretical and applied work focused on understanding the ecosystem-level effects of the addition of species through invasion and the loss of species through extirpation on freshwater ecosystems.

1:30 PM OOS 44-1 Atkinson, CL[1], KA Capps[2] and A Rugenski[3], (1)University of Oklahoma, (2)University of Maine, (3) Southern Illinois University. *The effects of species gain and species loss on nutrient storage and cycling in freshwater ecosystems: Summarizing patterns across ecosystems*.

1:50 PM OOS 44-2 Carey, CC[1], KL Cottingham[2], KC Weathers[3] and NG Hairston Jr.[1], (1)Cornell University, (2)Dartmouth, (3)Cary Institute of Ecosystem Studies. *Trophic state mediates the effect of cyanobacterial blooms on freshwater ecosystems*.

2:10 PM OOS 44-3 Baxter, CV[1], JR Benjamin[1], MM Mineau[1], K Fausch[2], F Lepori[3], AM Marcarelli[4] and GW Minshall[1], (1)Idaho State University, (2)Colorado State University, (3)Université Claude Bernard – Lyon, (4)Michigan Technological University. *Emerging lessons: Invasive species effects that cross habitat boundaries*.

2:30 PM OOS 44-4 McIntyre, PB[1], Y Vadeboncoeur[2], BM Kraemer[3], R Munubi[2] and S Drerup[2], (1)University of Wisconsin, (2)Wright State University, (3)University of Wisconsin-Madison. *Linking fish diversity to primary productivity: Direct and indirect feedback pathways in Lake Tanganyika*.

2:50 PM OOS 44-5 Vaughn, CC[1], CL Atkinson[1], AJ Riggsbee[2] and DE Spooner[3], (1)University of Oklahoma, (2) Riverbank Ecosystems, (3)University of Massachussetts. *Mussels, drought and ecosystem services*.

3:10 PM Break

3:20 PM OOS 44-6 Nowlin, WH[1], C LeBeouf[1], S Scott[1], C Pray[1] and Y Zhang[2], (1)Texas State University, (2)Texas

State University at San Marcos. *Invasion potential and ecosystem-level impacts of non-native fishes in a riverine system*.

3:40 PM OOS 44-7 Moore, JW[1] and JD Olden[2], (1)Simon Fraser University, (2)University of Washington. *Ecosystem-consequences of community disassembly in freshwater ecosystems*.

4:00 PM OOS 44-8 Rugenski, A[1], KA Capps[2] and CL Atkinson[3], (1)Southern Illinois University, (2)University of Maine, (3)University of Oklahoma. *Building a framework for predicting the effects of species addition and species loss on nutrient dynamics in freshwater ecosystems*.

4:20 PM OOS 44-9 Munshaw, RG[1], WJ Palen[1], DM Courcelles[1] and JC Finlay[2], (1)Simon Fraser University, (2)University of Minnesota. *Taxonomically diverse predator assemblages and the consequences for nutrient recycling in California stream ecosystems* .

4:40 PM OOS 44-10 Boersma, KS, MT Bogan and DA Lytle, Oregon State University. *Top predator extinctions in drying streams modify community structure and ecosystem functioning*.

OOS 45 - Iron: A Catalyst for Redox-Driven Biogeochemical Cycling In Terrestrial Ecosystems

C124, Oregon Convention Center

Organized by: W Silver, WH Yang

Moderator: WH Yang

This session highlights novel biotic and abiotic processes that couple iron cycling to the biogeochemical cycling of carbon, nitrogen, and phosphorus as well as explores the mechanisms that may control these interactions in a wide range of ecosystems.

1:30 PM OOS 45-1 Richter, DD and AR Bacon, Duke University. *Rhizogenic C-Fe redox cycling in non-wetland terrestrial ecosystems*.

1:50 PM OOS 45-2 Hall, SJ[1] and W Silver[2], (1)University of California-Berkeley, (2)University of California. *Ferrous iron oxidation: An unexplored mechanism for soil organic matter decomposition*.

2:10 PM OOS 45-3 Chen, C[1], T Tappero[2], JJ Dynes[3], J Wang[3], C Karunakaran[3] and DL Sparks[1], (1)University of Delaware, (2)Brookhaven National Laboratory, (3)Canadian Light Source. *Biogeochemical transformations of Iron-bearing soil minerals along a redox gradient: Implication for C cycling*.

2:30 PM OOS 45-4 Lipson, DA[1], KE Miller[1] and TK Raab[2], (1) San Diego State University, (2)Stanford University. *The role of microbial Fe reduction in regulating CO_2 and CH_4 production in an Arctic ecosystem*.

2:50 PM OOS 45-5 Thompson, A, University of Georgia. *High-amplitude redox fluctuations prime tropical forest soils for rapid iron reduction rates*.

3:10 PM Break

3:20 PM OOS 45-6 Liptzin, D, University of New Hampshire. *Potential Fe reduction: An assay of the role of Fe in soil metabolism*.

3:40 PM OOS 45-7 Weber, KA[1], WH Yang[2] and WL Silver[2], (1)University of Nebraska, (2)University of California, Berkeley. *Rock and the role of nitrogen in the iron cycle*.

4:00 PM OOS 45-8 Yesavage, TA and S Brantley, Pennsylvania State University. *Fe cycling in the Shale Hills Critical Zone Observatory, Pennsylvania: An analysis of microbiology, chemical weathering, and Fe isotope fractionation*.

OOS 46 - From Books to Barcodes: Challenges and Opportunities of Next-Generation Field Guides for Ecologists, Students, and Educators

A106, Oregon Convention Center

Organized by: AM Ellison, EJ Farnsworth

Moderator: AM Ellison

Speakers in this interdisciplinary organized oral session will explore how ecology, molecular biology, computer science, theories of learning and cognition, computing technology, and social-networking can be integrated in creating next-generation field guides and novel tools for identifying organisms from bacteria to big trees.

1:30 PM OOS 46-1 Kress, WJ[1], PN Belhumeur[2] and D Jacobs[3], (1)Smithsonian Institution, (2)Columbia University, (3) University of Maryland. *Leafsnap: Mobile applications for plant identification for ecologists and citizen scientists using image recognition technology*.

1:50 PM OOS 46-2 Farnsworth, EJ, New England Wild Flower Society. *Go Botany! On-line interactive keys using innovative keying algorithms and technologies*.

2:10 PM OOS 46-3 Chu, M, Cornell University. *Merlin: Online bird identification with human learning and machine learning*.

2:30 PM OOS 46-4 Stevenson, RD and RA Morris, University of Massachusetts. *The Electronic Field Guide (EFG) project: Architecture, features and advances toward scalability*.

2:50 PM OOS 46-5 Neill, AK[1], JH Best[1], JP Janovec[2], M Tobler[3] and TF Rehman[1], (1)Botanical Research Institute of Texas, (2)Universidad Nacional Agraria La Molina, (3) San Diego Zoo. *Atrium: Using digitized biocollections to generate customizable field guides*.

3:10 PM Break

3:20 PM OOS 46-6 Andelman, S, Conservation International. *The TEAM Network: Using next-generation field guides in ecology and long-term monitoring*.

3:40 PM OOS 46-7 VanDyk, J and GW Courtney, Iowa State University. *BugGuide: The community behind half a million submitted specimens*.

4:00 PM OOS 46-8 Pickering, J, University of Georgia. *Discover Life:Collecting high-quality data on species using photography and online tools*.

OOS 47 - Universal Senescence? New Theories and Experimental Approaches Across the Tree of Life

A105, Oregon Convention Center

Organized by: R Salguero-Gomez (salguero@demogr.mpg.de), RP Shefferson

Moderator: RP Shefferson

Senescence, or the decrease in survival and reproduction with age, is a widely accepted phenomenon... but should it be? This symposium will introduce new theories and experimental approaches that defy and complement classical evolutionary and ecological theories of senescence and its implications

1:30 PM OOS 47-1 Baudisch, A[1], R Salguero-Gomez[1], F Colchero[1], O Jones[1], T Wrycza[1], O Burger[2], DA Conde Ovando[1], B Kramer[1], M Rebke[1], F Ringelhan[1], R Schaible[1], A Scheuerlein[1] and J Vaupel[1], (1)Max Planck Institute for Demographic Research, (2)University of New Mexico. *When and why senescence evolves*.

1:50 PM OOS 47-2 Tuljapurkar, S[1] and T Coulson[2], (1)Stanford University, (2)Imperial College, London. *Phenotypic dynamics, heterogeneity and the evolution of senescence*.

2:10 PM OOS 47-3 Caswell, H, Woods Hole Oceanographic Institution. *The interaction of age-dependence and*

stage-dependence in shaping the selection gradients on senescence.

2:30 PM OOS 47-4 Pringle, A, Harvard University. *Life and death in a Petersham cemetery: The demography of potentially immortal organisms*.

2:50 PM OOS 47-5 Doak, DF, R Shriver and K Cutler, University of Wyoming. *Looking for senescence in unorthodox organisms: A demographic life history analysis of an epiphytic lichen*.

3:10 PM Break

3:20 PM OOS 47-6 Roach, D, University of Virginia. *What patterns of aging emerge from a long-term, longitudinal, study of a plant population in the wild?*.

3:40 PM OOS 47-7 Jones, OR, R Salguero-Gómez, F Colchero and A Scheuerlein, Max Planck Institute for Demographic Research. *On the variability of senescence trajectories*.

4:00 PM OOS 47-8 Garcia, MB[1], J Dahlgren[2] and J Ehrlén[2], (1)Pyrenean Institute of Ecology (CSIC), (2)Stockholm University. *No senescence in a centenarian relict plant*.

4:20 PM OOS 47-9 Bronikowski, AM and FJ Janzen, Iowa State University. *Senescence in ectothermic vertebrates: Peaks and valleys in the landscape of reptilian aging*.

4:40 PM OOS 47-10 Wensink, MJ and A Baudisch, Max Planck Institute for Demographic Research. *If you want a long life, make sure to senesce*.

OOS 48 - Seedling-Herbivore Interactions: Insights Into Plant Defense and Regeneration Patterns

A107, Oregon Convention Center

Organized by: KE Barton (kbarton@hawaii.edu), M Hanley

Moderator: KE Barton

An examination of how seedling-herbivore interactions and seedling defense can shed new light on the evolution of plant defense and community ecology through a cross-synthesis of functional studies of plant defense and studies focusing the role of seedling herbivory in biodiversity, invasion biology, and regeneration.

1:30 PM OOS 48-1 Orians, CM[1], RS Fritz[2], CG Hochwender[3], BR Albrectsen[4] and ME Czesak[2], (1)Tufts University, (2)Vassar College, (3)University of Evansville, (4)Umea University. *How slug herbivory of hybrid willows alters chemistry, growth, and susceptibility to diverse plant enemies*.

1:50 PM OOS 48-2 Hanley, M, University of Plymouth. *Something in the air: Seedling volatiles and anti-herbivore defence*.

2:10 PM OOS 48-3 Queenborough, SA[1], MR Metz[2] and R Valencia[3], (1)Ohio State University, (2)University of California, Davis, (3)Pontificia Universidad Católica del Ecuador. *Defense varies during leaf development in tropical seedlings, shedding light into herbivory-mediated patterns of biodiversity*.

2:30 PM OOS 48-4 Barlow, SE, GR Port and AJ Close, Newcastle University. *Interactions between seedling herbivory and life history traits affecting restoration of species-rich grasslands*.

2:50 PM OOS 48-5 Green, PT[1] and KE Harms[2], (1)La Trobe University, (2)Louisiana State University. *General hypotheses for why seedling dynamics are so important for determining patterns of abundance and diversity in plant communities*.

3:10 PM Break

3:20 PM OOS 48-6 Lurie, MH and CC Daehler, University of Hawaii Manoa. *Feeding preferences of generalist herbivores on invasive versus non-invasive seedlings in Hawaii*.

3:40 PM OOS 48-7 Maron, JL[1] and D Pearson[2], (1)The University of Montana, (2)USDA Forest Service, Rocky Mountain Research Station. *Impacts of seed limitation, rodent seed predation, and disturbance on native and exotic seedling recruitment: Are there general patterns?*.

4:00 PM OOS 48-8 Zhao, J, Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences. *Interspecific variation in the rapid induced resistance and compensatory regrowth to herbivore in three Ficus saplings*.

4:20 PM OOS 48-9 Rubert-Nason, KF, KM Keefover-Ring and RL Lindroth, University of Wisconsin. *Genotype and environment modulate the response of trembling aspen to simulated ungulate browsing*.

4:40 PM OOS 48-10 Kitajima, K, University of Florida. *Cellulose-based toughness, but not silica- or phenolic-based defense, explains species differences in herbivory and leaf lifespan of tropical tree seedlings*.

OOS 49 - Why Do Birds Matter? Birds' Ecological Functions and Ecosystem Services.

B110, Oregon Convention Center

Organized by: DG Wenny (harrier2@mchsi.com), C Whelan, CH Sekercioglu

Moderator: D Tomback

The goal of this symposium is to bridge the gap between the current work in ecosystem services and the vast amount of data available on avian ecology that could inform the models on ecosystem services thereby fostering interdisciplinary collaborations for future work and promoting biodiversity conservation.

1:30 PM OOS 49-1 Green, AJ, Estacion Biologica de Donana, CSIC. *Seed dispersal by waterfowl*.

1:50 PM OOS 49-2 Wenny, DG, Loras College. *Seed dispersal by terrestrial frugivorous birds*.

2:10 PM OOS 49-3 Rogers, HS[1], J Hille Ris Lambers[2], JJ Tewksbury[2] and R Miller[3], (1)Rice University, (2)University of Washington, (3)University of Guam. *The effect of complete bird loss on the forests of Guam*.

2:30 PM OOS 49-4 Francis, CD[1], NJ Kleist[2], CP Ortega[3] and A Cruz[2], (1)National Evolutionary Synthesis Center, (2)University of Colorado, (3)Fort Lewis College. *Anthropogenic noise alters key ecological services provided by birds*.

2:50 PM OOS 49-5 Aslan, CE, ES Zavaleta, BR Tershy and DA Croll, University of California, Santa Cruz. *Effectiveness of the non-native Japanese white-eye as a novel pollinator of endemic Hawaiian plants*.

3:10 PM Break

3:20 PM OOS 49-6 Sekercioglu, CH, University of Utah. *Conservation of bird functional diversity and ecosystem services in tropical forest, agroforest, and agricultural ecosystems*.

3:40 PM OOS 49-7 Floyd, CH[1] and K Martin[2], (1)University of Wisconsin-Eau Claire, (2)University of British Columbia. *Woodpeckers as ecosystem engineers*.

4:00 PM OOS 49-8 Seavy, NE[1], K McCune[2], A Merril[3], M Keever[3] and J Guisse[4], (1)PRBO Conservation Science, (2)Sustainable Conservation, (3)Stillwater Science, (4)Xerces Society for Invertebrate Conservation. *Incorporating birds into tools for measuring ecosystem services: A case study from Central California*.

4:20 PM OOS 49-9 Turner, WR, RM White, J MacFarland and ML Rosenzweig, University of Arizona. *Reconciliation ecology in urban environments takes advantage of the popularity of birds*.

1:30 pm-5 pm

COS 147 - Behavior I

A103, Oregon Convention Center

1:30 PM COS 147-1 Kauffman, MJ, United States Geological Survey, Wyoming Cooperative Fish and Wildlife Research Unit. *Moose migrations track summer range phenology: Implications for trophic mismatch*.

1:50 PM COS 147-2 De Jager, M[1], A Kölzsch[2] and J Van de Koppel[1], (1)Royal Netherlands Institute for Sea Research (NIOZ), (2)Netherlands Institute of Ecology (NIOO-KNAW). *Darwin or Einstein, who is making them move?*.

2:10 PM COS 147-3 Parker, TH, Whitman College. *A case study of impediments to progress in behavioral ecology*.

2:30 PM COS 147-4 Hull, V[1], J Zhang[1], S Zhou[2], J Huang[2], Z Ouyang[3], H Zhang[2] and J Liu[1], (1)Michigan State University, (2)Wolong Nature Reserve, (3)Chinese Academy of Sciences. *Giant panda behavior across a coupled human and natural system*.

2:50 PM COS 147-5 Shik, JZ[1], AD Kay[2] and J Silverman[3], (1)North Carolina State University, (2)University of St. Thomas, (3)NCSU. *Energy subsidies from aphid mutualists fuel establishment of Argentine ant propagules*.

3:10 PM Break

3:20 PM COS 147-6 Spiegel, O[1], WM Getz[2] and R Nathan[1], (1) The Hebrew University of Jerusalem, (2)University of California at Berkeley. *A comparison of movement ecology and search efficiency between vulture species in Etosha National Park, Namibia*.

3:40 PM COS 147-7 Donaldson-Matasci, MC, S Powell and A Dornhaus, University of Arizona. *Soldier deployment in ants: Do colonies respond optimally to changing defensive needs?*.

4:00 PM COS 147-8 Arner, AJ[1], XE Bernal[1] and RA Page[2], (1) Texas Tech University, (2)Smithsonian Tropical Research Institute. *Behavioral changes as a result of experience: The curious case of the cane toad*.

4:20 PM COS 147-9 McMichael, CC and MD Eubanks, Texas A&M University. *Family ties and fluroescent dyes: Searching for nepotism in Solenopsis invicta*.

4:40 PM COS 147-10 Schuttler, S and LS Eggert, University of Missouri. *Fine-scale genetic structure and inferred sociality in African forest elephants*.

COS 148 - Biodiversity IV

B112, Oregon Convention Center

1:30 PM COS 148-1 Klingbeil, BT[1], KR Burgio[1], LM Cisneros[1], LM Dreiss[1], BD Patterson[2], SJ Presley[1] and MR Willig[1], (1)University of Connecticut, (2)Field Museum of Natural History. *Variation in multiple dimensions of biodiversity along a tropical elevation gradient: Inter-taxon comparisons*.

1:50 PM COS 148-2 Dee, L[1], L Peavey[1], S Miller[1] and S Lester[2], (1)University of California, Santa Barbara, (2)Sustainable Fisheries Group, University of Santa Barbara. *Biodiversity is a poor predictor of fisheries production in large marine ecosystems*.

2:10 PM COS 148-3 Villanueva-Rivera, LJ, B Pijanowski, BK Pekin and J Jung, Purdue University. *Soundscape of a neotropical soundscape: Temporal and spatial patterns*.

2:30 PM COS 148-4 Theobald, EJ, LM Berg, HK Burgess, AK Ettinger, HE Nelson, NR Schmidt, C Wagner, J HilleRisLambers, JJ Tewksbury and J Parrish, University of Washington. *Global change calls for global change: Biodiversity research and citizen science data*.

2:50 PM COS 148-5 Minchin, PR, AS Fritzgerald and JL Laquet, Southern Illinois University Edwardsville. *The effect of changes in the spatial configuration of fragmented temperate deciduous forests on current patterns of biodiversity*.

3:10 PM Break

3:20 PM COS 148-6 Barbour, MA[1], ES Jules[2] and GM Crutsinger[1], (1)University of British Columbia, (2)Humboldt State University. *Plant architecture directly and indirectly influences the abundance and diversity of arthropod predators and parasitoids*.

3:40 PM COS 148-7 Hughes, F[1], GP Asner[2] and D Grossman[3], (1) USDA Forest Service, (2)Carnegie Institution for Science, (3)Conservation Biology Institute. *Recovery of native species diversity and biomass following deforestation of wet forests on Hawaii Island: The hope of native ohia (Metrosideros polymorpha) populations and the curse of alien and/or "novel" forests*.

4:00 PM COS 148-8 Schuler, MS, Washington University in St. Louis. *The importance of interactions between deterministic mechanisms that affect species diversity*.

4:20 PM COS 148-9 Weisser, WW[1], E Allan[2], C Scherber[3], N Eisenhauer[4], N Nitschke[5], ST Meyer[6], A Milcu[7], S Partsch[8], ACW Sabais[8] and S Scheu[9], (1)TUM Munich, (2)University of Bern, (3)Georg August University, (4)University of Minnesota, (5)Institute of Ecology, Friedrich-Schiller-University, (6)TU Munich, (7)Imperial College London, (8)Darmstadt University of Technology, (9)University of Goettingen. *Effects of exclusion of above- and belowground insects along with molluscs in a biodiversity experiment*.

4:40 PM COS 148-10 Stier, A, University of Florida. *Trophic Island Biogeography*.

COS 149 - Biogeochemistry: Biogeo Patterns Along Environmental Gradients II

B114, Oregon Convention Center

1:30 PM COS 149-1 Bettez, ND and PM Groffman, Cary Institute of Ecosystem Studies. *Comparison of denitrification potential in stormwater control measures and riparian areas*.

1:50 PM COS 149-2 Marklein, AR[1] and BZ Houlton[2], (1)University of California - Davis, (2)University of California, Davis. *N:P re-mineralization ratios across forest ecosystems*.

2:10 PM COS 149-3 Smith, LC and RD Jackson, University of Wisconsin-Madison. *N-fertilizer addition and plant community composition affect the nitrogen-use dynamics of two contrasting bioenergy cropping systems*.

2:30 PM COS 149-4 Ontl, TA[1], B Sigmon[1], KS Hofmockel[1], LA Schulte[1] and RK Kolka[2], (1)Iowa State University, (2) USDA Forest Service, Northern Research Station. *Root dynamics of bioenergy crops: Scaling from the field to landscapes*.

2:50 PM COS 149-5 Luo, R[1], D Li[2], E Weese[2] and Y Luo[2], (1) the University of Oklahoma, (2)University of Oklahoma. *Global patterns of fire regime analysis based on fire frequency*.

3:10 PM Break

3:20 PM COS 149-6 Castle, SC[1], DR Nemergut[2], SK Schmidt[2], AS Grandy[3] and CC Cleveland[1], (1)University of Montana, (2)University of Colorado, (3)University of New Hampshire. *Microbial community succession and biogeochemical cycling: A comparison across glacial forelands*.

3:40 PM COS 149-7 Keiser, AD[1], JD Knoepp[2] and MA Bradford[1], (1)Yale University, (2)USDA Forest Service Southern Research Station. *Reconciling potential nitrification rates and site characteristics across the landscape*.

4:00 PM COS 149-8 Holste, EK[1], RK Kobe[1] and TW Baribault[2], (1)Michigan State University, (2)Forest Solutions, Inc.. *Soil resource-based niches in temperate and tropical forests*.

4:20 PM COS 149-9 Weintraub, SA[1], CC Cleveland[2] and AR Townsend[3], (1)University of Colorado, (2)University of Montana, (3)University of Colorado, Boulder. *Topographic controls over nitrogen cycling in a lowland tropical rainforest*.

4:40 PM COS 149-10 Hayes, NM, MJ Vanni and MJ Horgan, Miami University. *Climate and land use interact to determine phytoplankton nutrient limitation*.

COS 150 - Climate Change: Biogeochem Cycles I

B115, Oregon Convention Center

1:30 PM COS 150-1 Suseela, V[1], N Tharayil[2], B Xing[3] and JS Dukes[1], (1)Purdue University, (2)Clemson University, (3) University of Massachusetts Amherst. *Decomposition dynamics of plant litter subjected to warming and altered precipitation in an old-field ecosystem*.

1:50 PM COS 150-2 Reed, DE, BE Ewers, E Pendall, RD Kelly, U Norton and FN Whitehouse, University of Wyoming. *Mountain pine beetle epidemic changes ecosystem flux controls of lodgepole pine*.

2:10 PM COS 150-3 Mauritz, M and DA Lipson, San Diego State University. *Invasion of a semi-arid shrubland by non-native annuals increases soil respiration rates and alters sensitivity to moisture and temperature*.

2:30 PM COS 150-4 Selmants, PC[1], CM Litton[1] and CP Giardina[2], (1)University of Hawaii at Manoa, (2)USDA Forest Service. *Ecosystem carbon storage does not vary across a 5.2°C mean annual temperature gradient in Hawaiian tropical montane wet forests*.

2:50 PM COS 150-5 Ruehr, N[1], BE Law[2], D Quandt[2] and M Williams[3], (1)Institute of Meteorology and Climate Research - Atmospheric Environmental Research (IMK-IFU), Karlsruhe Institute of Technology , (2)Oregon State University, (3)University of Edinburgh. *Impacts of drought and precipitation variability on the C balance of a regenerating semi-arid pine forest*.

3:10 PM Break

3:20 PM COS 150-6 West, WE, JJ Coloso and SE Jones, University of Notre Dame. *Effects of algal carbon on methane production rates and methanogen community structure in temperate lake sediment*.

3:40 PM COS 150-7 Homyak, PM[1], JO Sickman[2] and J Melack[3], (1)University of California, Riverside, (2)UC Riverside, (3) University of California, Santa Barbara. *High-elevation soils and lake sediments as sources of P to aquatic ecosystems of the Sierra Nevada, CA*.

4:00 PM COS 150-8 Hurteau, MD[1], A Westerling[2] and C Wiedinmyer[3], (1)Pennsylvania State University, (2) University of California, Merced, (3)National Center for Atmospheric Research. *Projected effects of climate and development on California fire emissions*.

4:20 PM COS 150-9 Lombardozzi, DL[1], JP Sparks[1] and G Bonan[2], (1)Cornell University, (2)NCAR. *Integrating O_3 influences on terrestrial processes: Photosynthetic and stomatal response data available for large-scale modeling*.

4:40 PM COS 150-10 Reynolds, LL, BR Johnson, L Pfeifer-Meister, TE Tomaszewski and SD Bridgham, University of Oregon. *Response of soil efflux to experimental warming and increased precipitation intensity depends upon latitudinal climate gradient in Pacific Northwest grasslands*.

COS 151 - Climate Change: Communities III

F150, Oregon Convention Center

1:30 PM COS 151-1 Flanagan, N, C Richardson and M Ho, Duke University. *Alteration of riparian plant community structure UNDER climate change scenarios: The effects of temperature and hydroperiod*.

1:50 PM COS 151-2 Singer, A, O Schweiger, I Kühn and K Johst, Helmholtz Centre for Environmental Research—UFZ. *Dispersal limitations determine range expansion of interacting species*.

2:10 PM COS 151-3 McCoy, SJ[1] and R Paine[2], (1)The University of Chicago, (2)University of Washington. *Shifting strengths of species interactions with ocean acidification in a guild of coralline algae*.

2:30 PM COS 151-4 Craine, JM, TW Ocheltree and J Nippert, Kansas State University. *Widespread geographic and phylogenetic diversity of drought tolerance in grasses*.

2:50 PM COS 151-5 Dhungana, N, H Grizzle and JC Zak, Texas Tech University. *Alteration in microbial functionality due to reduced daily temperature variability in the Chihuahuan desert*.

3:10 PM Break

3:20 PM COS 151-6 Northfield, TD and AR Ives, University of Wisconsin. *Coevolution mediates the effects of climate change on interacting species*.

3:40 PM COS 151-7 Balice, RG[1], SC Dugan[2] and BP Oswald[2], (1) Rayo Montano LLC, (2)Stephen F. Austin State University. *Drought mortality in spruce-fir vegetation of the eastern Jemez Mountains, New Mexico*.

4:00 PM COS 151-8 Wieski, K and SC Pennings, University of Houston. *Climate and oceanic driver effects on primary production of Spartina alterniflora saltmarshes of the coast of Georgia*.

4:20 PM COS 151-9 Gravel, D[1], E Harvey[1], T Poisot[2], TE Miller[3], N Mouquet[4] and SM Gray[5], (1)Université du Québec à Rimouski, (2)Université du Québec à RImouski, (3)Florida State University, (4)Université Montpellier 2, CNRS, (5) Univeristé du Québec à Rimouski. *Temperature and trophic structure are more important than species sorting for ecosystem functioning*.

4:40 PM COS 151-10 Marvin, DC[1], K Winter[2], SA Schnitzer[3] and RJ Burnham[1], (1)University of Michigan, (2) Smithsonian Tropical Research Institute, (3)University of Wisconsin - Milwaukee. *Tropical lianas and trees under elevated CO_2: Seasonal drought results in differing growth and physiological responses*.

COS 152 - Community Pattern And Dynamics VII

F151, Oregon Convention Center

1:30 PM COS 152-1 Wesner, JS, EJ Billman and MC Belk, Brigham Young University. *Multiple predators indirectly alter community assembly across ecological boundaries*.

1:50 PM COS 152-2 Holt, GP and P Chesson, University of Arizona. *Quantifying the effect of stream networks on species coexistence*.

2:10 PM COS 152-3 Pinto, SM[1], JL Maron[2] and D Pearson[3], (1) Universtiy of Montana, (2)The University of Montana, (3) USDA Forest Service, Rocky Mountain Research Station. *Seed limitation, seed predation, and competition interact to impact grassland community structure in Montana, USA*.

2:30 PM COS 152-4 Kleinhesselink, AR[1], SM Magnoli[2] and JH Cushman[3], (1)Utah State University, (2)Michigan State University, (3)Sonoma State University. *Testing the stress gradient hypothesis at the community level: Effects of shrub facilitation accross a dune stress gradient*.

THURSDAY

2:50 PM COS 152-5 Goins, SM[1], JI Chapman[1] and RW McEwan[2], (1)University of Dayton, (2)The University of Dayton. *Dynamics and disturbance in an old-growth forest remnant in western Ohio*.

3:10 PM Break

3:20 PM COS 152-6 Resasco, J[1], NP Chacoff[2] and DP Vázquez[2], (1)University of Florida, (2)Centro Científico y Tecnológico Mendoza. *Interannual variation in quantitative plant-pollinator networks*.

3:40 PM COS 152-7 Ferriere, R[1], JC Stegen[2] and BJ Enquist[1], (1)University of Arizona, (2)Pacific Northwest National Laboratory. *How diversity and invasibility co-evolve along temperature gradients: predictions from eco-evolutionary dynamical models*.

4:00 PM COS 152-8 Cadotte, MW[1], SC Walker[2] and CH Albert[3], (1)University of Toronto - Scarborough, (2)Université de Montréal, (3)McGill University. *The ecology of differences: Integrating trait and evolutionary distances*.

4:20 PM COS 152-9 Murray, BD, CR Webster and J Bump, Michigan Technological University. *Ungulate urea-nitrogen deposition and spatial patterning of herbaceous-layer vegetation in a temperate forest ecosystem*.

4:40 PM COS 152-10 Rius, M[1], E Potter[1], D Aguirre[2] and JJ Stachowicz[1], (1)University of California, Davis, (2) University of Queensland. *Shifting mechanisms of biotic resistance across multiple life-history stages reduce the abundance of a non-indigenous marine invertebrate*.

COS 153 - Competition I

D136, Oregon Convention Center

1:30 PM COS 153-1 LI, L and P Chesson, University of Arizona. *The effects of dynamical rates on species coexistence in a variable environment*.

1:50 PM COS 153-2 Best, RJ, NC Caulk and JJ Stachowicz, University of California, Davis. *Competitive outcomes and community composition in marine invertebrates are predicted by diversity in feeding traits and not by phylogenetic relatedness*.

2:10 PM COS 153-3 Cahill, JF Jr.[1], JA Bennett[1], T Bao[1] and EG Lamb[2], (1)University of Alberta, (2)University of Saskatchewan. *Interspecific competition among plants is not associated with patterns of phylogenetic dispersion: Results from the field*.

2:30 PM COS 153-4 Vlautin, CT and MH Ferkin, University of Memphis. *Meadow voles, Microtus pennsylvanicus, display a memory for the what, when, and where of a same-sex dyadic interaction*.

2:50 PM COS 153-5 DeLong, JP and DA Vasseur, Yale University. *Strong coupling of exploitation and interference competition generates multiple regimes of population dynamics*.

3:10 PM Break

3:20 PM COS 153-6 McNickle, GG and JS Brown, University of Illinois at Chicago. *Plant strategies for competition and evolutionary game theory*.

3:40 PM COS 153-7 Bohlman, SA, University of Florida. *Canopy crown dynamics, competition and diameter growth in an old-growth tropical forest*.

4:00 PM COS 153-8 Hintz, WD and JE Garvey, Southern Illinois University. *Coexistence of two morphologically indistinct sturgeon species*.

4:20 PM COS 153-9 Rogers, S and S Eppley, Portland State University. *Testing inter-sexual competition and the influence of mycorrhizal fungi on fitness of a dioecious grass*.

4:40 PM COS 153-10 Marin Jarrin, JR and J Miller, Oregon State University. *Competition for food influences the migratory behavior of juvenile Chinook salmon (Oncorhynchus tshawytscha)*.

COS 154 - Conservation Planning, Policy, And Theory II

D137, Oregon Convention Center

1:30 PM COS 154-1 Seales, L, University of Florida. *Collaborative governance approaches to watershed management in Oregon*.

1:50 PM COS 154-2 Wittmann, ME[1], CL Jerde[1], JG Howeth[2], SP Maher[3], JM Drake[3], WL Chadderton[4], AR Mahon[5], CA Gantz[1], RP Keller[6] and DM Lodge[1], (1)University of Notre Dame, (2)University of Alabama, (3)University of Georgia, (4)The Nature Conservancy, (5)Central Michigan University, (6)Loyola University Chicago. *Reducing uncertainty in the perceived risk of grass carp (Ctenopharyngodon idella) invasion in the Great Lakes: Ploidy, distribution, and ecosystem impact*.

2:10 PM COS 154-3 Cattau, ME, Columbia University. *The Bornean orangutan (Pongo pygmaeus) in a vanishing peatswamp forest: Increasing habitat connectivity in the former Mega Rice Project, Indonesia*.

2:30 PM COS 154-4 Magyera, KH[1] and K D.[2], (1)Wisconsin Wetlands Association, (2)Univeristy of Wisconsin-Madison. *Toward integrated wetland conservation: A diagnostic framework*.

2:50 PM COS 154-5 Kreakie, BJ[1], KC Hychka[1] and HA Walker[2], (1)US Environmental Protection Agency, (2)US EPA. *Internet-based methods to construct a stakeholder network for the sustainability of Narragansett Bay, Rhode Island*.

3:10 PM Break

3:20 PM COS 154-6 Stewart, EM, Metro. *Application of ecological performance measures to a natural area acquisition program in Portland, Oregon*.

3:40 PM COS 154-7 Terando, A[1], C Belyea[1], JK Costanza[2], A McKerrow[3] and S Williams[1], (1)Biodiversity and Spatial Information Center, (2)North Carolina State University, (3)United States Geological Survey. *Urbanization as a barrier to ecosystem resiliency in the face of climate change*.

4:00 PM COS 154-8 Soong, O, M Ikegami, P Roehrdanz and L Hannah, University of California, Santa Barbara. *Conservation priority setting in California under climate change using the network flow approach*.

4:20 PM COS 154-9 McRae, B[1], SA Hall[1], P Beier[2] and DM Theobald[3], (1)The Nature Conservancy, (2)Northern Arizona University, (3)Colorado State University. *The flip side of corridor mapping: Detecting barriers and restoration opportunities using cost-distance and circuit theory methods*.

4:40 PM COS 154-10 Cerveny, LK[1], R McLain[2], K Biedenweg[2] and D Besser[3], (1)USDA Forest Service, (2)Institute for Culture and Ecology, (3)Portland State University. *Mapping landscape values and human-resource interactions on a regional scale: The human ecology mapping project*.

COS 155 - Disease And Epidemiology IV

D138, Oregon Convention Center

1:30 PM COS 155-1 Salkeld, DJ and JH Jones, Stanford University. *Community ecology and emerging infectious disease: idiosyncracies of local biodiversity*.

1:50 PM COS 155-2 Bogich, TL[1], S Ballesteros[1], J Zelner[1], H Quoc Cuong[2], C Simmons[2], TT Hien[2], E Holmes[3], J

Farrar[2], N van Vinh Chau[4], HR van Doorn[2], J Cardosa[5] and BT Grenfell[1], (1)Princeton University, (2)Oxford University Clinical Research Unit, (3)Penn State University, (4)Hospital for Tropical Diseases, (5)Sentinext Therapeutics. *Disentangling the role of herd immunity versus novel strain introduction in outbreaks of an infectious disease*.

2:10 PM COS 155-3 Moore, SM[1], RJ Eisen[2] and A Monaghan[1], (1)National Center for Atmospheric Research, (2) Centers for Disease Control and Prevention. *Improving disease prediction and modeling through the use of meteorological ensembles: Rainfall and human plague cases in Uganda*.

2:30 PM COS 155-4 Perkins, TA[1], DL Smith[2] and T Scott[3], (1) Fogarty International Center, NIH, (2)Johns Hopkins Bloomberg School of Public Health, (3)University of California, Davis. *Sources of heterogeneity and scales of transmission of mosquito-borne pathogens*.

2:50 PM COS 155-5 Mollik, MAH, Practical Academy on Wise Education and Research Foundation. *Children ailments treated with medicinal plants: Results from a cross-sectional survey within Meherpur district, Bangladesh*.

3:10 PM Break

3:20 PM COS 155-6 Ingwell, LL and NA Bosque-Pérez, University of Idaho. *The presence of Barley/Cereal yellow dwarf viruses among grass hosts in habitat fragments within an agricultural matrix in the Pacific Northwest*.

3:40 PM COS 155-7 Kramer, AM, JT Pulliam, SP Maher and JM Drake, University of Georgia. *Simplifying networks: Spread of White-nose syndrome in North America*.

4:00 PM COS 155-8 Civitello, DJ[1], SE Pearsall[1], MA Duffy[2] and SR Hall[1], (1)Indiana University, (2)Georgia Institute of Technology. *Host foraging ecology drives transmission of a fungal parasite of Daphnia*.

4:20 PM COS 155-9 Penczykowski, RM[1], JL Hite[2], MS Shocket[2], SR Hall[2] and MA Duffy[1], (1)Georgia Institute of Technology, (2)Indiana University. *Nutrient enrichment and altered habitat structure increase disease in the plankton*.

4:40 PM COS 155-10 Buck, JC, KI Scholz and AR Blaustein, Oregon State University. *The effects of community structure on host-pathogen dynamics of Batrachochytrium dendrobatidis*.

COS 156 - Ecosystem Services Assessment III

D139, Oregon Convention Center

1:30 PM COS 156-1 Dewsbury, BM, M Bhat and JW Fourqurean, Florida International University. *An 'optimal' solution for the valuation of seagrass ecosystems*.

1:50 PM COS 156-2 Liss, KN, EM Bennett and A Gonzalez, McGill University. *Does configuration matter? Connecting landscape management to ecosystem service provision*.

2:10 PM COS 156-3 Railsback, SF and MD Johnson, Humboldt State University. *Foraging theory for individual-based models of pest control by birds: Tests in a model of coffee borer suppression by warblers in Jamaica*.

2:30 PM COS 156-4 Walsh, SM[1], J Brenner[1], A Guerry[2] and JL Molnar[1], (1)The Nature Conservancy, (2)The Natural Capital Project & Stanford University. *Coastal natural hazard mitigation: Opportunities for businesses to lead investments in local public goods*.

2:50 PM COS 156-5 Liere, H[1], BP Werling[2], TD Meehan[1], DA Landis[2] and C Gratton[1], (1)University of Wisconsin, (2) Michigan State University. *Measuring yield benefits of biocontrol services in bioenergy landscapes*.

3:10 PM Break

3:20 PM COS 156-6 Bernhardt, JR[1], SA Wood[2], A Guerry[3], M Ruckelshaus[4], J Toft[5], KK Arkema[5] and G Guannel[5], (1) University of British Columbia, (2)The Natural Capital Project, Stanford University, (3)The Natural Capital Project & Stanford University, (4)Natural Capital Project, (5)Stanford University. *Counting what matters: Modeling ecosystem services to support marine spatial planning in coastal British Columbia*.

3:40 PM COS 156-7 Swain, H[1], EH Boughton[1], PJ Bohlen[2], JE Fauth[2], DG Jenkins[2], GA Kiker[3], P Quintana-Ascencio[2] and S Shukla[3], (1)Archbold Biological Station, (2) University of Central Florida, (3)University of Florida. *Assessing trade-offs among ecosystem services in a payment-for-water services program on Florida ranchlands*.

4:00 PM COS 156-8 Olmsted, P[1], JC Ingram[2] and S Naeem[3], (1) University of British Columbia, (2)Wildlife Conservation Society, (3)Columbia University. *The science behind payments for ecosystem services programs: A global survey*.

COS 157 - Ecosystem Stability And Resilience I

E141, Oregon Convention Center

1:30 PM COS 157-1 Muthukrishnan, R[1], JO Lloyd-Smith[2] and P Fong[1], (1)UCLA, (2)University of California, Los Angeles. *Empirical evidence from and simulations of a tropical coral reef show positive feedbacks can produce alternate community states*.

1:50 PM COS 157-2 Donohue, I, A Dubois and J García Molinos, Trinity College Dublin. *Resource stability regulates ecosystem multifunctionality*.

2:10 PM COS 157-3 Venail, PA and BJ Cardinale, University of Michigan. *Phylogenetic diversity affects the temporal stability of communities by altering species' functioning and competitive interactions.* .

2:30 PM COS 157-4 Creissen, HE[1], TH Jorgensen[2] and JKM Brown[1], (1)John Innes Centre, (2)University of East Anglia. *Diversity awareness: Using Arabidopsis as a model for crop varietal mixtures*.

2:50 PM COS 157-5 Holmgren, M[1], M Hirota[2], EH van Nes[2] and M Scheffer[2], (1)University of Wageningen, (2)Wageningen University. *Inferring resilience of forest ecosystems from satellite data*.

3:10 PM Break

3:20 PM COS 157-6 Thompson, PL, B Rayfield and A Gonzalez, McGill University. *The spatial insurance hypothesis in spatially explicit networks*.

3:40 PM COS 157-7 Hammond, MP and J Kolasa, McMaster University. *Spatial variation, synchrony, and loss of stability in ecosystem variables*.

4:00 PM COS 157-8 Seekell, DA[1], SR Carpenter[2], TJ Cline[3] and ML Pace[1], (1)University of Virginia, (2)University of Wisconsin - Madison, (3)University of Wisconsin. *Conditional heteroskedasticity warns of impending regime shift in whole-ecosystem experiment*.

4:20 PM COS 157-9 Pace, ML[1], SR Carpenter[2], J Kurtzweil[2] and RA Johnson[1], (1)University of Virginia, (2)University of Wisconsin. *Zooplankton provide early warning of a regime shift in a whole lake manipulation*.

4:40 PM COS 157-10 Dai, L[1], D Vorselen[2], K Korolev[1] and J Gore[1], (1)Massachusetts Institute of Technology, (2) VU University. *Critical slowing down provides advance warning of population collapse* .

COS 158 - Estuarine

E142, Oregon Convention Center

THURSDAY

1:30 PM COS 158-1 Nelson, HE[1], TE Essington[1] and A Beaudreau[2], (1)University of Washington, (2)University of Alaska Fairbanks at Juneau. *Movement patterns and distributional shifts of Dungeness crab (Cancer magister) in response to hypoxia*.

1:50 PM COS 158-2 Ferraro, SP, U.S. Environmental Protection Agency. *Ecological periodic tables for nekton and benthic macrofaunal community usage of estuarine habitats*.

2:10 PM COS 158-3 Power, JH[1], C Folger[1], D Beugli[2] and K Marko[3], (1)U.S. EPA, (2)Dynamac Corporation, (3) Western Ecology Division, Pacific Coastal Ecology Branch. *Pacific Northwest tide channel utilization by fish as an ecosystem service*.

2:30 PM COS 158-4 Cockrell, ML[1], JR Bernhardt[2] and HM Leslie[1], (1)Brown University, (2)University of British Columbia. *Consumer pressure in estuarine rocky shores varies with ecological context*.

2:50 PM COS 158-5 Flitcroft, R, K Burnett and K Christiansen, USDA Forest Service. *Potential effects of sea level rise on salmonid estuarine and freshwater habitat in Oregon, USA*.

3:10 PM Break

3:20 PM COS 158-6 Huber, ER and SM Carlson, University of California, Berkeley. *Fish assemblage shifts track ecosystem states in a Central California intermittent estuary*.

3:40 PM COS 158-7 Miller, AK and CE de Rivera, Portland State University. *Migratory shorebird stop-over sites: Habitat and prey associations in Oregon estuaries*.

4:00 PM COS 158-8 Kicklighter, CE, MK Hearl and HE Locke, Goucher College. *The effects of nutrients and grazing on the estuarine marsh invader, Phragmites australis*.

4:20 PM COS 158-9 Rowell, K[1] and D Dettman[2], (1)University of Washington, (2)University of Arizona. *Today's food chain length – nearly half the size it used to be? Prehistoric skeletal remains document ecosystem change in the upper Gulf of California*.

4:40 PM COS 158-10 Koo, KA, E Davenport and CS Hopkinson, University of Georgia. *Ecosystem considerations about Mya arenaria in urbanizing estuaries*.

COS 159 - Fire

E143, Oregon Convention Center

1:30 PM COS 159-1 Gavin, DG[1] and LB Brubaker[2], (1)University of Oregon, (2)University of Washington. *Postglacial climate and fire-mediated forest diversity on the western Olympic Peninsula, Washington*.

1:50 PM COS 159-2 Emery, NC, University of California Santa Barbara. *Fog and the fire regime in coastal California*.

2:10 PM COS 159-3 Schafer, JL[1], BP Breslow[1], SN Hollingsworth[1], MG Hohmann[2] and WA Hoffmann[1], (1)North Carolina State University, (2)US Army Corps of Engineers ERDC - CERL. *Enhanced water relations during post-fire recovery: The role of plant height and leaf area*.

2:30 PM COS 159-4 Parmenter, RR[1], RW Oertel[1], TS Compton[1], S Kindschuh[1], M Peyton[1], W Meyer[1], C Caldwell[2], GZ Jacobi[3], O Myers[4], M Zeigler[5] and K Yule[6], (1)Valles Caldera Trust, (2)USGS Wildlife Coop Unit, (3)Consultant, (4) University of New Mexico, (5)New Mexico State University, (6)Rice University. *Fire and floods in the Valles Caldera National Preserve, New Mexico: The 2011 Las Conchas Fire impacts on montane species diversity and food webs*.

2:50 PM COS 159-5 Howard, LF, Arcadia University. *The roles of fire and environmental factors in plant community dynamics of high-elevation yellow pine woodlands in northeastern West Virginia*.

3:10 PM Break

3:20 PM COS 159-6 Van Mantgem, PJ[1], JCB Nesmith[2], M Keifer[3] and EE Knapp[4], (1)United States Geological Survey, (2) University of California, (3)National Park Service, (4) USDA Forest Service. *Can climate change increase fire severity independent of fire intensity?*.

3:40 PM COS 159-7 Lybbert, AH and SB St Clair, Brigham Young University. *Reproductive consequences of fire disturbance on Joshua tree in the Mojave Desert*.

4:00 PM COS 159-8 Badik, KJ and PJ Weisberg, University of Nevada, Reno. *A landscape scale assessment of cheatgrass density effects on fire occurrence and severity in central Nevada*.

4:20 PM COS 159-9 Peterson, DW, USDA Forest Service, Pacific Northwest Research Station. *Coarse woody debris dynamics following stand-replacing wildfires in dry coniferous forests of the interior Pacific Northwest*.

4:40 PM COS 159-10 Halofsky, J[1], SK Hart[1], MC Johnson[2], JS Halofsky[3] and M Hemstrom[4], (1)University of Washington, (2)Pacific Northwest Research Station, (3) Washington Department of Natural Resources, (4)Pacific Northwest Research Station, USDA Forest Service. *Simulating fire hazard across forested landscapes in Oregon and Washington through integration of the Vegetation Dynamics Development Tool (VDDT) and the Fuel Characteristic Classification System (FCCS)*.

COS 160 - Fisheries Management And Models I

E144, Oregon Convention Center

1:30 PM COS 160-1 Francis, TB and P Levin, NOAA-Fisheries. *Qualitative food-web modeling to support ecosystem-based management: A case study of California current groundfish*.

1:50 PM COS 160-2 Osterback, AMK[1], DM Frechette[2], SA Hayes[2], MH Bond[3], SA Shaffer[4] and JW Moore[5], (1) University of California Santa Cruz, (2)NOAA Southwest Fisheries Science Center, (3)University of Washington, (4)San Jose State University, (5)Simon Fraser University. *Subsidized predation on imperiled species: Gulls, landfills, and salmonids*.

2:10 PM COS 160-3 Claisse, JT[1], JP Williams[1], T Ford[2], DJ Pondella[1], B Meux[3] and L Protopapadakis[2], (1)Occidental College, (2)Santa Monica Bay Restoration Foundation, (3) Santa Monica Baykeeper. *The potential impact of kelp forest habitat restoration on the gonad production of a sea urchin fished commercially*.

2:30 PM COS 160-4 Polivka, KM, LM Friedli and JL Novak, PNW Research Station USDA Forest Service. *Microhabitat-scale numerical and behavioral responses by juvenile salmonids to instream habitat restoration*.

2:50 PM COS 160-5 Satterthwaite, WH[1] and SM Carlson[2], (1) University of California Santa Cruz, (2)University of California, Berkeley. *Temporal trends in portfolio effects and stability of a salmon population complex*.

3:10 PM Break

3:20 PM COS 160-6 Rassweiler, A[1], C Costello[1] and DA Siegel[2], (1)University of California, Santa Barbara, (2)University of California Santa Barbara. *Marine Protected Area network design and the value of spatial fisheries management*.

3:40 PM COS 160-7 Biedenweg, K[1], K Akyuz[2] and R Skeele[3], (1)Institute for Culture and Ecology, (2)King County Rivers and Floodplain Management, (3)CNMI. *Balancing riparian management and river recreation: Methods for incorporating recreation data in wood management decisions*.

4:00 PM COS 160-8 Shelton, AO, Center for Stock Assessment

Research. *Maternal age, fecundity, egg quality, and recruitment: linking stock structure to recruitment and population recovery using an age-structured Ricker model*.

4:20 PM COS 160-9 Avery-Gomm, S, University of British Columbia. *Assessing the impacts of habitat type and low instream flow on growth of an endangered stream-dwelling fish, Nooksack Dace (Rhinichthys cataractae)*.

4:40 PM COS 160-10 Lemasson, BH[1], RA Goodwin[2], H Moritz[3] and D Smith[4], (1)U.S. Army Engineer R & D Center, (2) U. S. Army Engineer R&D Center, (3)U.S. Army Corps of Engineers, (4)U.S. Army Engineer R&D Center. *Linking local drift-feeding behavior to regional habitat envelopes using dynamic energetic gradients along a migratory corridor*.

COS 161 - Forest Habitats I

E145, Oregon Convention Center

1:30 PM COS 161-1 Elwood, KK and M Kummel, Colorado College. *Spatial patterns and typology changes of an advancing treeline on Pikes Peak, CO*.

1:50 PM COS 161-2 Santhanam, A and K Fisher, California State University, Los Angeles. *Bryophyte reproductive response to long-term elevated CO_2 flux on Horseshoe Lake at Mammoth Mountain, CA*.

2:10 PM COS 161-3 Gonzalez-Torres, LR, National Botanic Garden, University of Havana. *Cuban serpentine thicket shifts to less diverse and more flammable stage becuase of fires*.

2:30 PM COS 161-4 Strauch, AM[1], CP Giardina[2], R MacKenzie[3] and G Bruland[4], (1)University of Hawaii at Manoa, (2) USDA Forest Service, (3)USDA Forest Service,, (4) University of Hawaii Manoa. *Modeling the effects of climate change and invasive species cover on stream flow in tropical island watersheds using the distributed hydrology-soil-vegetation model*.

2:50 PM COS 161-5 D'Angelo, H[1], KL McGuire[2], N Yang[3], P Mansor[4], BL Turner[5] and N Fierer[6], (1)Columbia University, (2)Barnard College, Columbia University, (3)Barnard College of Columbia University, (4)Forest Research Institute Malaysia, (5)Smithsonian Tropical Research Institute, (6)University of Colorado-Boulder. *Evaluating the impact of oil palm agriculture on soil microbial communities*.

3:10 PM Break

3:20 PM COS 161-6 Nicolás, A[1] and DS Srivastava[2], (1)Univeristy of British Columbia, (2)University of British Columbia. *Community composition changes as a result of habitat fragmentation: A study on tropical treeholes*.

3:40 PM COS 161-7 Lagendijk, G and R Slotow, University of KwaZulu-Natal. *Seasonal tree recruitment and herbivory in Sand Forest, South Africa*.

4:00 PM COS 161-8 Tango, LKK[1], F Hughes[2], K Hiraoka[1], M Murphy[1] and A Cantan[1], (1)The Research Corporation of the University of Hawaii, (2)USDA Forest Service. *Recruitment of dominant native Hawaiian tree, Metrosideros polymorpha, limited by alien invaders*.

4:20 PM COS 161-9 Johnson, CA[1], J Duffe[1], ED Seed[1], J Pasher[1] and FKA Schmiegelow[2], (1)Environment Canada, (2) University of Alberta. *Boreal caribou: Science to inform critical habitat idenfication in Canada*.

4:40 PM COS 161-10 Baltzer, JL, WL Quinton and L Chasmer, Wilfrid Laurier University. *Permafrost thaw as a mechanism for widespread boreal forest loss*.

COS 162 - Habitat Structure, Fragmentation, Connectivity I

E146, Oregon Convention Center

1:30 PM COS 162-1 Mitchell, MGE, EM Bennett and A Gonzalez, McGill University. *The effects of forest fragments and biodiversity on the provision of multiple ecosystem services*.

1:50 PM COS 162-2 Brudvig, LA[1], EI Damschen[2], NM Haddad[3], DJ Levey[4] and JJ Tewksbury[5], (1)Michigan State University, (2)University of Wisconsin-Madison, (3) North Carolina State University, (4)National Science Foundation, (5)University of Washington. *Habitat fragmentation and corridor connectivity impact plant populations through complex influences on plant-animal interactions*.

2:10 PM COS 162-3 Jackson, D, University of Michigan. *The evolution of imperfect prudence*.

2:30 PM COS 162-4 Garmendia, A and V Arroyo-Rodríguez, Universidad Nacional Autónoma de México. *Landscape attributes impacting terrestrial mammal assemblages in the Lacandona Rainforest, Mexico*.

2:50 PM COS 162-5 Rodgers, E[1], BH Letcher[2] and T Dubreuil[2], (1)Conte Fish Research Center, (2)US Geological Survey, Conte Fish Research Centre. *Movers and stayers: Effects of fragmentation on brook trout movement dynamics*.

3:10 PM Break

3:20 PM COS 162-6 Thompson, PG[1] and VL Sork[2], (1)UCLA, (2)University of California, Los Angeles. *Impact of surrounding landscape on nectarivorous bat abundance and pollen movement along riparian corridors in a Mexican tropical dry forest*.

3:40 PM COS 162-7 Garbach, K[1], N Estrada-Carmona[2], A Martínez-Salinas[3] and F DeClerck[4], (1)University of California, Davis, (2)University of Idaho, Moscow, (3) CATIE, (4)Bioversity International. *Connectivity by design: Enhancing functional connectivity for forest-dependent birds in tropical agroecosystems*.

4:00 PM COS 162-8 Collinge, SK[1] and C Ray[2], (1)University of Colorado, (2)University of Colorado-Boulder. *Habitat quality versus connectivity: Pool depth rivals isolation in determining the presence and cover of a dispersal-limited flora endemic to vernal pools*.

4:20 PM COS 162-9 Tarsi, K[1], KF Davies[2], S Sarre[3] and J Meyers[4], (1)University of Colorado at Boulder, (2) University of Colorado, (3)University of Canberra, (4) CSIRO. *Divided we stand: Exploring the positive effects of habitat fragmentation*.

4:40 PM COS 162-10 Zambrano, J, University of Illinois at Chicago. *Demographic study of Poulsenia armata to evaluate the effects of forest fragmentation on an animal dispersed tree*.

COS 163 - Invasion

Portland Blrm 254, Oregon Convention Center

1:30 PM COS 163-1 Grosholz, ED[1], DL Kimbro[2] and BS Cheng[3], (1)University of California, (2)Florida State University, (3)University of California, Davis. *Evidence for biotic resistance and enemy release in coastal ecosystems*.

1:50 PM COS 163-2 Eschtruth, AK[1] and JJ Battles[2], (1) University of California, Berkeley, (2)University of California, Berkeley. *Pulse disturbances in forest invasion: The importance of interactions between propagule pressure and disturbance characteristics*.

2:10 PM COS 163-3 Caplan, JS, JC Grabosky and JG Ehrenfeld, Rutgers University. *Soil exploration by invasive and non-*

invasive forest shrubs: Inferences from root architecture.

2:30 PM COS 163-4 Stohlgren, TJ, USGS Fort Collins Science Center. *Species invasions in the United States National Parks: Is the Park Service achieving its mission?*.

2:50 PM COS 163-5 Meyerson, LA[1], P Pyšek[2], J Suda[3], C Lambertini[4], H Brix[4], JT Cronin[5] and M Luřanová[3], (1)The University of Rhode Island, (2)Institute of Botany, Academy of Sciences, Pruhonice, Czech Republic, (3)Charles University in Prague, (4)Aarhus University, (5)Louisiana State University. *The hidden side of plant invasions: The role of genome-wide processes in plant success*.

3:10 PM Break

3:20 PM COS 163-6 Shields, JM, MA Jenkins, MR Saunders, H Zhang, LH Jenkins and AM Parks, Purdue University. *Spatial characteristics of an Amur honeysuckle (Lonicera maackii (Rupr.) Herder) invasion in an Indiana mixed-hardwoods forest*.

3:40 PM COS 163-7 Weaver, JE, T Conway and MJ Fortin, University of Toronto. *Predicting invasive species' range expansion using models built in the native range*.

4:00 PM COS 163-8 Cameron, EK, EM Bayne, HC Proctor and JF Cahill Jr., University of Alberta. *Effects of an exotic ecosystem engineer on microarthropod dispersal and root growth*.

4:20 PM COS 163-9 Davidson, TM[1], CE de Rivera[1] and JT Carlton[2], (1)Portland State University, (2)Williams College. *Seawater temperature mediates biological erosion by a non-native burrowing crustacean*.

4:40 PM COS 163-10 Tamburello, N[1] and IM Côté[2], (1)Simon Fraser University, (2)Simon Fraser University/Vancouver Island University. *The seascape ecology of invasion: A test with indo-Pacific lionfish on Caribbean coral reefs*.

COS 164 - Invasion: Invasibility, Stability, And Diversity

Portland Blrm 255, Oregon Convention Center

1:30 PM COS 164-1 Fonseca da Silva, J, 1.USDA, Forest Service International Institute of Tropical Forestry; 2.Center for Applied Tropical Ecology and Conservation, PR. *Comparative study of ecophysiological traits of introduced and native species in tropical novel forests*.

1:50 PM COS 164-2 Hicks, JJ, University of Colorado at Boulder. *Invasion success of the exotic weevil (Rhinocyllus conicus) at high elevations in the Rocky Mountains of Colorado*.

2:10 PM COS 164-3 Milbau, A[1], A Shevtsova[2] and BJ Graae[3], (1) Umeå University, (2)University of Antwerp, (3)Norwegian University of Science and Technology. *Community invasibility along environmental harshness gradients in a subarctic ecosystem*.

2:30 PM COS 164-4 Whitfeld, TJS, A Lodge, A Roth and PB Reich, University of Minnesota. *Effects of plant community phylogenetic diversity and site characteristics on the success of invasive species: Evidence from Minnesota's deciduous forest*.

2:50 PM COS 164-5 West, RR and GWT Wilson, Oklahoma State University. *Bud bank density of warm-season grasses as regulators of grassland invasibility*.

3:10 PM Break

3:20 PM COS 164-6 Fox, JW, University of Calgary. *Demographic stochasticity, invasion rates, and higher order interactions: Detecting the signal of 'emergent' community dynamics in an intrinsically noisy world*.

3:40 PM COS 164-7 Thompson, BM and DS Gruner, University of Maryland. *The role of diversity in Sirex noctilio invasion of North American pine ecosystems*.

4:00 PM COS 164-8 Hausch, SJ, JW Fox and SM Vamosi, University of Calgary. *Diversity, coexistence, and competitive ability: The effect of intraspecific diversity on invasibility and invadability in bruchid beetles*.

4:20 PM COS 164-9 Schulz, BK[1] and A Gray[2], (1)USDA Forest Service, (2)USDA Forest Service Pacific Northwest Research Station. *Assessing the occupancy of introduced plant species in the forests of the United States*.

4:40 PM COS 164-10 Evans, JA and RE Irwin, Dartmouth College. *Diversity-invasibility relationships reverse along productivity and diversity gradients at multiple spatial scales*.

COS 165 - Modeling: Communities, Disturbance, Succession

Portland Blrm 257, Oregon Convention Center

1:30 PM COS 165-1 Barabás, G and AM Ostling, University of Michigan. *Robustness analysis of communities of structured populations*.

1:50 PM COS 165-2 Medvigy, DM[1], KV Schafer[2], KL Clark[3] and N Skowronski[3], (1)Princeton University, (2)Rutgers University Newark, (3)USDA Forest Service. *Defining plant functional types for xeric habitats with disturbance regimes*.

2:10 PM COS 165-3 Baiser, B[1], HL Buckley[2], NJ Gotelli[3] and AM Ellison[4], (1)Harvard Forest, (2)Lincoln University, (3)University of Vermont, (4)Harvard Forest (Harvard University). *Predicting food-web structure with metacommunity models*.

2:30 PM COS 165-4 Snedden, GA and GD Steyer, U.S. Geological Survey. *Predictive occurrence models for coastal wetland plant communities: Delineating hydrologic response surfaces with multinomial logistic regression*.

2:50 PM COS 165-5 Baskett, ML[1], NS Fabina[1] and K Gross[2], (1) University of California, Davis, (2)North Carolina State University. *Resilience as a community-level property in coral reefs*.

3:10 PM Break

3:20 PM COS 165-6 Costanza, JK[1], A Terando[2], TS Earnhardt[2] and A McKerrow[3], (1)North Carolina State University, (2) Biodiversity and Spatial Information Center, (3)USGS. *Simulating future climate and management effects on fire and vegetation to inform conservation*.

3:40 PM COS 165-7 DeSantis, RD[1] and WK Moser[2], (1)University of Missouri Department of Forestry and USDA Forest Service Northern Research Station, (2)USDA Forest Service. *Effects of gypsy moth on forest composition and structure in the Midwest United States*.

4:00 PM COS 165-8 Peterson, CJ and LJ Snyder, University of Georgia. *Estimated biomass and carbon committed to decomposition in a north Georgia 2011 tornado swath*.

4:20 PM COS 165-9 Powell, T[1], D Galbraith[2], BJ Christoffersen[3], A Harper[4], H Imbuzeiro[5], L Rowland[6], PM Brando[7], A da Costa[8], MH Costa[5], NM Levine[1], Y Malhi[9], SR Saleska[3], M Williams[6], P Meir[6] and PR Moorcroft[1], (1) Harvard University, (2)University of Leeds, (3)University of Arizona, (4)Colorado State University, (5)Universidade Federal de Viçosa, (6)University of Edinburgh, (7) Instituto de Pesquisa Ambiental da Amazônia, (8)Federal University of Para, (9)Oxford University. *Evaluating model predictions of carbon fluxes for Amazonian rainforests under chronic and severe drought*.

4:40 PM COS 165-10 Zhang, T and J Lichstein, University of Florida. *Modeling forest dynamics across diverse ecoprovinces in the eastern U.S*.

COS 166 - Niche Relationships And Theory

Portland Blrm 258, Oregon Convention Center

1:30 PM COS 166-1 Crowder, D[1], J Gable[1], TD Northfield[2], SA

Steffan[3] and WE Snyder[1], (1)Washington State University, (2) University of Wisconsin, (3)University of Wisconsin, USDA. *Niche engineering reveals complementary resource use*.

1:50 PM COS 166-2 Kershaw, F[1], T Waller[2], R Pearson[3] and M Mendez[4], (1)Columbia University, (2)Fundación Biodiversidad, (3)American Museum of Natural History, (4)Wildlife Conservation Society. *The value of expert-driven niche models and historical records in informing the sustainable harvest of yellow anaconda in northern Argentina*.

2:10 PM COS 166-3 Li, Y and P Chesson, University of Arizona. *Quantifying the strength of a species coexistence mechanism in spatially variable environments between invasive and native desert winter annual plants*.

2:30 PM COS 166-4 Sullivan, L and WS Harpole, Iowa State University. *Dispersal as a deterministic or stochastic process: The influence of nutrient additions on dispersal traits*.

2:50 PM COS 166-5 Olsson, A, Northern Arizona University. *Adjusted AUC: A new method for evaluating ecological niche models for non-equilibrium species distributions*.

3:10 PM Break

3:20 PM COS 166-6 Edwards, KF[1], E Litchman[2] and C Klausmeier[2], (1)W. K. Kellogg Biological Station, Michigan State University, (2)Michigan State University. *Functional traits predict phytoplankton community structure and successional pattern in a marine ecosystem*.

3:40 PM COS 166-7 Capitán, JA[1], S Cuenda[2], JA Cuesta[3] and D Alonso[4], (1)Centro de Astrobiología, INTA-CSIC, (2)Universidad Autónoma de Madrid, (3) Grupo Interdisciplinar de Sistemas Complejos (GISC), Universidad Carlos III, (4)Consejo Superior de Investigaciones Cientificas, CEAB-CSIC. *The stochastic nature of the competitive exclusion principle*.

4:00 PM COS 166-8 Whiteman, WSB, MA Balk, MI Pardi, NA Wright and FA Smith, University of New Mexico. *The niche in a changing world: Improving niche modeling to plan for the future*.

4:20 PM COS 166-9 Narwani, A and BJ Cardinale, University of Michigan. *Can evolutionary history help explain coexistence and the mechanisms behind it?*.

COS 167 - Paleoecology

B117, Oregon Convention Center

1:30 PM COS 167-1 Drew, JA, Field Museum of Natural History. *The use of anthropology holdings to reconstruct historical apex predator communities*.

1:50 PM COS 167-2 Baker, AG[1], P Cornelissen[2], SA Bhagwat[1] and KJ Willis[1], (1)University of Oxford, (2)Ministry of Infrastructure and the Environment. *A methodological step forward to quantify past population size of large herbivores and the impact of their disturbance regime*.

2:10 PM COS 167-3 Stegner, MA and M Holmes, University of California, Berkeley. *Long-term stasis in mammalian community structure: The fossil record as a tool for conservation planning*.

2:30 PM COS 167-4 Barrett, CM[1] and FS Hu[2], (1)University of Illinois at Urbana-Champaign, (2)University of Illinois, Urbana-Champaign. *How many lake-sediment cores do we need to characterize regional fire-regime changes using macro-charcoal records?*.

2:50 PM COS 167-5 Ewing, HA[1], KL Cottingham[2], KC Weathers[3], PR Leavitt[4], AU Fiorillo[1], JE MacKenzie[1], BP Quarrier[1], CC Carey[5] and E Rydin[6], (1)Bates College, (2)Dartmouth, (3)Cary Institute of Ecosystem Studies, (4)University of Regina, (5)Cornell University, (6)Uppsala University. *Retrospective analysis of the role of Gloeotrichia echinulata in mediating early lake eutrophication*.

3:10 PM Break

3:20 PM COS 167-6 Punyasena, SW[1], DK Tcheng[2] and DS Haselhorst[1], (1)University of Illinois, (2)University of Illinois/National Center for Supercomputing Applications. *Automating tropical pollen analysis using layered machine learning*.

3:40 PM COS 167-7 Gill, JL[1], KK McLauchlan[2] and JW Williams[3], (1)University of Wisconsin-Madison, (2)Kansas State University, (3)University of Wisconsin, Madison. *Bison grazing intensity predicts the abundance of the dung fungus proxy Sporormiella at Konza Prairie: Implications for the Holocene paleoecology of the Great Plains*.

4:00 PM COS 167-8 Orcutt, JD and SSB Hopkins, University of Oregon. *Body size in the fourth dimension: A paleoecological test of Bergmann's Rule*.

4:20 PM COS 167-9 Robinson, GS and MG Egan, Fordham College at Lincoln Center. *Before the Younger Dryas and after Columbus: Further studies of Sporormiella records from New York and New Jersey*.

4:40 PM COS 167-10 Voelker, SL[1], FC Meinzer[2], B Lachenbruch[3], JR Brooks[4], MC Stambaugh[5] and RP Guyette[5], (1)Southern Oregon University, (2)USDA Forest Service, (3)Department of Forest Ecosystems & Society, (4)US EPA, Western Ecology Division, NHEERL, (5)University of Missouri. *Colder springs and warmer, wetter summers during the late glacial climate of central North America: inferences from stable isotopes δD and $\delta^{13}C$ and wood anatomy of sub-fossil oak wood*.

COS 168 - Predation And Predator-Prey Interactions I

C120, Oregon Convention Center

1:30 PM COS 168-1 Mensink, PJ[1], RG Cole[2] and JS Shima[1], (1) Victoria University of Wellington, (2)National Institute of Water and Atmospheric Science. *Intercohort interactions and settler mortality in a New Zealand reef fish*.

1:50 PM COS 168-2 Schauber, EM[1], BJ Goodwin[2], CG Jones[3] and RS Ostfeld[3], (1)Southern Illinois University Carbondale, (2) University of North Dakota, (3)Cary Institute of Ecosystem Studies. *Prey persistence with spatially heterogeneous and seasonally fluctuating predation risk: Refuge inheritance vs. developmental stagger*.

2:10 PM COS 168-3 Vonesh, JR[1], M McCoy[2] and KM Warkentin[3], (1)Virginia Commonwealth University, (2)Virginia Commonwealth Univeristy and University of Florida, (3) Boston University. *Consequences of prey size-, density-, and dose-dependent responses to predator cues for prey population size structure*.

2:30 PM COS 168-4 Faulkner, JR, WD Muir and SG Smith, Northwest Fisheries Science Center. *Evidence for density-dependent avian predation on migrating juvenile salmon*.

2:50 PM COS 168-5 Meadows, AJ, JP Owen and WE Snyder, Washington State University. *Complex predator effects on larval mosquitoes*.

3:10 PM Break

3:20 PM COS 168-6 de Rivera, CE[1], AA Larson[1], G Ruiz[2] and ED Grosholz[3], (1)Portland State University, (2)Smithsonian Environmental Research Center, (3)University of California. *Rebound of a native prey species following management of an invasive crab*.

3:40 PM COS 168-7 Tinus, CA, Oregon State University. *Substitutes, compliments, edge effects, and decoupled consumption of transient and resident prey*.

4:00 PM COS 168-8 Bourdeau, PE[1], KL Pangle[2] and SD Peacor[1],

(1)Michigan State University, (2)The Ohio State University. *Predicting non-consumptive predator effects on multiple prey in a complex natural system*.

4:20 PM COS 168-9 Stafford, ES[1], N Chojnacki[1], CL Tyler[2], CL Schneider[1] and LR Leighton[1], (1)University of Alberta, (2) Virginia Polytechnic Institute and State University. *Crushing predation and shell fragmentation on marine mollusks*.

4:40 PM COS 168-10 Middleton, AD[1], MJ Kauffman[2], DE McWhirter[3], MD Jimenez[4], RC Cook[5], JG Cook[5], H Sawyer[6] and SE Albeke[1], (1)University of Wyoming, (2) United States Geological Survey, Wyoming Cooperative Fish and Wildlife Research Unit, (3)Wyoming Game and Fish Department, (4)U.S. Fish and Wildlife Service, (5)National Council for Air and Stream Improvement, Forestry and Range Sciences Laboratory, (6)WEST, Inc.. *Spatial and temporal context limit the effect of wolves on elk behavior and physiology*.

COS 169 - Rhizophere And Root Function

C123, Oregon Convention Center

1:30 PM COS 169-1 O'Donnell, FC[1], KK Caylor[1], P D'Odorico[2], GS Okin[3], A Bhattachan[2] and K Dintwe[3], (1)Princeton University, (2)University of Virginia, (3)UCLA. *Inter-annual rainfall variability supports coexistence of savanna tree and shrub species with dimorphic rooting strategies*.

1:50 PM COS 169-2 York, LM and JP Lynch, The Pennsylvania State University. *Nodal root growth angle influences nitrogen acquisition and competition in maize (Zea mays)*.

2:10 PM COS 169-3 Jarvi, MP and AJ Burton, Michigan Technological University. *Response of ecosystem fine root respiration to soil warming in a sugar maple forest*.

2:30 PM COS 169-4 Hu, F and PP Mou, Beijing Normal University. *Threshold nutrient levels for the birth and die of rootlets*.

2:50 PM COS 169-5 Ming, N, J Bell, S Raut and E Pendall, University of Wyoming. *Responses of root morphology and function to elevated CO_2 in terrestrial ecosystems: a meta-analysis* .

3:10 PM Break

3:20 PM COS 169-6 Kirsch, JL, The University of Washington. *Relationships between belowground plant carbon and canopy structure in a temperate forest ecosystem*.

3:40 PM COS 169-7 Tharayil, N, Clemson University. *Evaluating the pattern and composition of root exudation using improved sampling and analytical techniques*.

4:00 PM COS 169-8 Hobbie, JE and M Campbell, Marine Biological Laboratory. *Amino acids from soil do enter roots but are not important for trees in nature*.

COS 170 - Urban Ecology I

D135, Oregon Convention Center

1:30 PM COS 170-1 Broshot, NE, Linfield College. *A decade of change in avian abundance and richness in an urban forest, Forest Park in Portland, Oregon*.

1:50 PM COS 170-2 Hochuli, DF, The University of Sydney. *Elevated levels of herbivory on an urban-rural gradient reveal species-specific signals of landscape degradation in novel ecosystems*.

2:10 PM COS 170-3 Hale, RL[1], L Turnbull[1], S Earl[1] and N Grimm[2], (1)Arizona State University, (2)Arizona State University, and US Global Change Research Program. *Effects of urban stormwater infrastructure on dissolved nutrient export from semi-arid, urban watersheds*.

2:30 PM COS 170-4 Sushinsky, JR, J Rhodes, HP Possingham, TK Gill and RA Fuller, University of Queensland. *Minimising the ecological impact of urban growth*.

2:50 PM COS 170-5 Roman, LA, UC Berkeley. *Urban tree mortality rates: applying concepts from demography and monitoring in Oakland, CA*.

3:10 PM Break

3:20 PM COS 170-6 Record, S[1], JL Jennings[2] and KA Stinson[3], (1)Harvard Forest, Harvard University, (2)Mount Holyoke College, (3)Harvard University. *Variation in the vital rates of an allergenic plant, common ragweed (Ambrosia artemisiifolia L.), across an urban to rural and temperature gradient*.

3:40 PM COS 170-7 Tringali, A[1] and R Bowman[2], (1)University of Central Florida, (2)Archbold Biological Station. *The effects of urbanization on body condition and plumage condition in nestling and juvenile Florida scrub-jays*.

4:00 PM COS 170-8 Vogt, JM, SK Mincey and BC Fischer, Indiana University. *Evaluating the biophysical and social results of Keep Indianapolis Beautiful's urban tree plantings as a social-ecological system*.

4:20 PM COS 170-9 Camilo, GR, P Wang and O Sandoval, Saint Louis University. *Natural and social processes in the shrinking city*.

COS 171 - Wetlands

F149, Oregon Convention Center

1:30 PM COS 171-1 Ducey, TF, JO Miller and PG Hunt, Agricultural Research Service, USDA. *The biogeography of Mid-Atlantic CEAP wetlands*.

1:50 PM COS 171-2 Crawford, JT, AG Stone and BM Kraemer, University of Wisconsin-Madison. *Relationships between soil properties and Spartina alterniflora dieback patchiness in an Atlantic salt marsh*.

2:10 PM COS 171-3 Malone, S[1], G Starr[1], CL Staudhammer[1], SF Oberbauer[2] and MG Ryan[3], (1)University of Alabama, (2) Florida International University, (3)USDA Forest Service. *Effects of simulated drought on physiological activity of Everglades short-hydroperiod marsh*.

2:30 PM COS 171-4 Turnbull, L, DL Childers, NA Weller, J Ramos Jr., B Warner, CA Sanchez, E Chapman, A Evert, L Wilson and O Epshtein, Arizona State University. *Hydrology versus ecology: The effectiveness of constructed wetlands for improving wastewater quality in an arid climate*.

2:50 PM COS 171-5 Leyda, JD, Leyda Consulting, Inc.. *Expert ecology: How to write scientific literature to be most effective in the courtroom*.

3:10 PM Break

3:20 PM COS 171-6 Corman, SS[1], M Ivens-Duran[1], MD Bertness[1], LA Deegan[2] and HM Leslie[1], (1)Brown University, (2)Marine Biological Laboratory. *Local to latitudinal variation in flowering phenology in the salt marsh foundation species Spartina alterniflora*.

3:40 PM COS 171-7 Kandalepas, D[1], AE Arnold[2], GP Shaffer[3] and WJ Platt III[4], (1)Wetland Resources LLC, (2)University of Arizona, (3)Southeastern Louisiana University, (4) Lousiana State University. *Hurricane effects on cryptic fungi in wetland plants*.

4:00 PM COS 171-8 Christman, MA, NF McCarten and R Rosas, Institute for Ecohydrology Research. *A five year study of hardpan vernal pools at Mather Field, CA: Responses of vernal pool plant species to variability in hydroperiod*.

4:20 PM COS 171-9 Plenzler, MA and HJ Michaels, Bowling Green State University. *The effects of canopy cover and leaf litter species on macroinvertebrate diversity in vernal pools*.

4:40 PM COS 171-10 Halabisky, MA and LM Moskal, University of Washington. *Using LiDAR and object-based image analysis to map wetlands in Mt. Rainier National Park*.

4 pm-5 pm

ESA SEEDS Closing

Broadway, Doubletree Hotel

4:30 pm-6:30 pm

PS 65 - Biogeochemistry: Aboveground-Belowground Interactions

Exhibit Hall DE, Oregon Convention Center

PS 65-1 Laungani, R1, JMH Knops2 and CE Brassil2, (1)Doane College, (2)University of Nebraska. Feedback on plant productivity can be constrained by SOM in N-limited grasslands.

PS 65-2 Abramoff, RZ, Boston University. Phenology of belowground carbon allocation in a mid-latitude forest.

PS 65-3 Esch, E1, DL Hernandez1, J Pasari2, R Kantor3 and PC Selmants4, (1)Carleton College, (2)University of California, Davis, (3)University of California, Berkeley, (4)University of Hawaii at Manoa. Response of soil enzyme activity to grazing, nitrogen deposition, and exotic cover in a serpentine grassland.

PS 65-4 Jacobs, AE1 and JA Harrison2, (1)Washington State University - Vancouver, (2)Washington State University Vancouver. The effect of floating vegetation on denitrification and greenhouse gas production in wetlands.

PS 65-5 Bowles, TM, PA Raab and LE Jackson, University of California, Davis. Rapid changes in root gene expression in response to nitrogen availability: Linking molecular biology, plant physiology, and soil biogeochemical processes.

PS 65-6 An, JY, BB Park and JH Sung, Korea Forest Research Institute. Study of fine root production and litterfall in deciduous and coniferous forests in Korea.

PS 65-7 Wilson, BJ1, B Mortazavi1, G Starr2 and RP Kiene3, (1) University of Alabama and Dauphin Island Sea Lab, (2) University of Alabama, (3)University of South Alabama and Dauphin Island Sea Lab. Coupled methane and carbon dioxide fluxes in coastal marshes along a salinity gradient.

PS 65-8 Mambelli, S1, SD Burton2, K McFarlane3, RC Porras4, T Dawson1 and MS Torn4, (1)University of California, (2)Pacific Northwest National Laboratory, (3)Lawrence Livermore National Laboratory, (4)Lawrence Berkeley National Laboratory. Convergence of soil organic matter chemical composition under contrasting vegetation types.

PS 65-9 Peterson, BL, U Norton and J Krall, University of Wyoming. Water pulse sampling of irrigated and dryland alfalfa/grass perennial plots for carbon and nitrogen dynamics and greenhouse gas fluxes in the high plains.

PS 66 - Biogeochemistry: Biogeo Patterns Along Environmental Gradients

Exhibit Hall DE, Oregon Convention Center

PS 66-10 Lu, HS, S Mage and S Porder, Brown University. Geological and biological influence on soil and foliar ř15N in the Luquillo Mountains of Puerto Rico.

PS 66-11 Behnke, LD, Auburn University. Fine root productivity and dynamics across a topographical sequence in Congaree National Park, SC.

PS 66-12 Ricker, MC and G Lockaby, Auburn University. Woody debris decomposition and nutrient dynamics in an old-growth bottomland hardwood forest.

PS 66-13 De Jager, NR1 and JN Houser2, (1)USGS, Upper Midwest Environmental Sciences Center, (2)USGS Upper Midwest Environmental Sciences Center. Variation in water mediated connectivity influences patch distributions of total nitrogen (TN), total phosphorous (TP) and TN:TP ratios in the Upper Mississippi River, USA.

PS 66-14 Livingston, LA, Vassar College. Soil trophic effects: Do nitrogen cycling rates respond to nematode abundance.

PS 66-15 Brigham, BA1, JA Bird2 and GD O'Mullan3, (1)Queens College, City University of New York, (2)Queens College, (3)Queens College, CUNY. Examination of carbon and nitrogen cycling in a laboratory nutrient addition experiment with wetland soils from Piermont Marsh, New York.

PS 66-16 Knowles, JF and TM Legg, University of Colorado. Linking trace gas fluxes and microbial community characteristics along an alpine soil moisture gradient.

PS 66-17 Mack, MC1, J DeMarco2, JR Mayor3 and JL Schafer4, (1) University of Florida, (2)New Mexico State University, (3) Smithsonian Tropical Research Institute, (4)North Carolina State University. Nitrogen versus phosphorus limitation of plant productivity over post-fire succession in Alaskan boreal forest.

PS 66-18 Goodwin, KE1, JE Compton2 and DJ Sobota3, (1) Independent contractor based at US EPA, (2)US EPA, NHEERL, Western Ecology Division, (3)National Research Council Postdoctoral Fellow. Seasonal nitrate uptake and denitrification potential in small headwater streams in the Willamette Valley, Oregon.

PS 66-19 Cucco, A, Fordham University. Microbial extracellular enzyme function and nutrient cycling along the New York City urban-to-rural gradient.

PS 67 - Biogeochemistry: C And N Cycling In Response To Global Change

Exhibit Hall DE, Oregon Convention Center

PS 67-20 Ruan, L, K Kahmark and GP Robertson, Michigan State University. The impacts of changes in snowfall on wintertime soil greenhouse gas emissions using an automated chamber system.

PS 67-21 Laney, C, A Jaimes, A Kassin, RP Cody and CE Tweedie, University of Texas at El Paso. A novel cyberinfrastructure to support research of land-atmosphere fluxes of carbon, water, and energy in a Chihuahuan Desert ecosystem.

PS 67-22 Walter, CA, MB Burnham, AE Hessl and WT Peterjohn, West Virginia University. Using tree rings to better understand the role of biological demand in the inter-annual variability of stream nitrate concentrations at the Fernow Experimental Forest, West Virginia.

PS 67-23 Qin, Z, Q Zhuang, M Chen and Y He, Purdue University. Thermal acclimation impacts on global carbon dynamics.

PS 67-24 Xu, W and E Bai, Institute of Applied Ecology, Chinese Academy of Sciences. Soil carbon stability and temperature sensitivity of carbon decomposition along an elevation gradient in the Changbai Mountain, China.

PS 67-25 Deemer, BR, JA Harrison and MT Glavin, Washington State University Vancouver. Water level drawdown boosts greenhouse gas production in a small eutrophic reservoir.

PS 67-26 Tokuchi, N1, W Hidaka1, K Fujii2, N Osada1, L Koyama1 and R Fujimaki3, (1)Kyoto University, (2)Forestry and Forest Products Research Institute, (3)Shimane University. Respiration costs associated with nitrate reduction as estimated 14CO2 pulse labeling and nitrate redactase activity of evergreen oak.

PS 67-27 Glavin, MT, BR Deemer and JA Harrison, Washington State University Vancouver. Water level drawdown is a hot moment for methane ebullition in a small eutrophic reservoir, Lacamas Lake, Washington.

PS 67-28 Carruthers, KM, Michigan Technological University. Effects of water level on specific root respiration and biomass of Chamaedaphne calyculta, Larix laricina, and Picea mariana in a poor fen peatland.

PS 67-29 Lee, JK1 and DF Cusack2, (1)UCLA, (2)UC - Los Angeles. Soil respiration across an urban-rural tropical gradient: Variability among forest and invasive grass sites.

PS 67-30 Fultz, L, V Allen and J Moore-Kucera, Texas Tech University. Increases in soil organic carbon in semi-arid integrated crop-livestock systems.

PS 67-31 Isupov, T and RA Gill, Brigham Young University. Seasonal variation in N availability and nitrification rates due to precipitation variability and elevation.

PS 67-32 Smith, JG1, DJ Eldridge2 and HL Throop1, (1)New Mexico State University, (2)University of New South Wales. Landform and vegetation patch type moderate the effects of grazing-induced disturbance on carbon and nitrogen pools in a semi-arid woodland.

PS 67-33 Carey, CJ1, SC Hart2, VT Eviner3 and JC Blankinship2, (1) University of California Merced, (2)University of California,

Merced, (3)University of California Davis. Interactive effects of multiple global change factors on soil nitrogen transformations in a California annual grassland.

PS 67-34 Gutiérrez del Arroyo, O1, TE Wood2 and AE Lugo2, (1) University of Puerto Rico, (2)International Institute of Tropical Forestry. Strong seasonal and diel variation of soil CO2 efflux in a moist subtropical forest in Puerto Rico.

PS 67-35 Hagerty, SB1, JA Langley1, LR Aoki2, TJ Mozdzer3 and JP Megonigal4, (1)Villanova University, (2)Cornell University, (3)Smithsonian Institution, (4)Smithsonian Environmental Research Center. Methane production and emissions from a tidal wetland under multifactored global change.

PS 67-36 Eberwein, JR1, PA Oikawa2 and GD Jenerette2, (1)University of California Riverside, (2)University of California, Riverside. Influence of nitrogen availability on soil respiration kinetics.

PS 67-37 Sadowsky, JJ, LTA van Diepen and SD Frey, University of New Hampshire. Contributions of ectomycorrhizal fungi to organic matter formation and decomposition in response to chronic N deposition.

PS 67-38 Fowler, ZK1, MB Adams2 and WT Peterjohn1, (1)West Virginia University, (2)USDA Forest Service. Will elevated N inputs from acid rain stimulate C storage in an aggrading appalachian temperate deciduous forest?.

PS 67-39 Smith, KR1, T Davidson2 and RB Thomas1, (1)West Virginia University, (2)University of Massachusetts Amherst. Contribution of fine root respiration to total soil respiration in high-elevation red spruce forests along a nitrogen availability gradient.

PS 68 - Biogeochemistry: Linking Community Structure And Ecosystem Function

Exhibit Hall DE, Oregon Convention Center

PS 68-40 Gallardo, MB, CA Perez, MC Nuñez and JJ Armesto, Institute of Ecology and Biodiversity. Evolution of nutrient limitation along a 60,000 yr forest soil chronosequence in Llaima Volcano, Chile.

PS 68-41 Gan, H, MD Hunter and DR Zak, University of Michigan. Atmospheric nitrogen deposition and soil fauna: The effect on litter decay process.

PS 68-42 Woods, K, Bennington College. Biomass and CWD pools show complex multi-decade dynamics in old-growth northern hardwood forests.

PS 68-43 Nippert, JB1, TW Ocheltree1, Z Ratajczak1, GL Orozco1 and N Brunsell2, (1)Kansas State University, (2)University of Kansas. Changes in site ecohydrology following the conversion of mesic grassland to shrubland.

PS 68-44 Dettweiler-Robinson, E1, RL Pendleton2, DJ Krofcheck1 and ME Litvak1, (1)University of New Mexico, (2)USDA Forest Service Rocky Mountain Research Station. Change in ecosystem structure due to widespread conifer mortality in Piñon-Juniper woodlands leads to rapid change in understory abundance detected using both field plots and remotely-sensed data.

PS 68-45 Close, SL1, F Chan1, KJ Nielsen2, SD Hacker1 and BA Menge1, (1)Oregon State University, (2)Sonoma State University. Nutrient content of rocky intertidal macrophytes and its relation to environmental variability across a large biogeographic region.

PS 68-46 Eisen, KE, Amherst College. Forty years of forest measurements support the continuation of the Northeastern carbon sink.

PS 68-47 Cochran-Stafira, DL and T Tatum Parker, Saint Xavier University. Analysis of Phosphoglucose Isomerase (PGI) within and among Habrotrocha rosa metapopulations.

PS 68-48 O'Mullan, GD1, S Lax1, S Young1 and B Song2, (1) Queens College, CUNY, (2)University of North Carolina at Wilmington. Patterns of ammonia and nitrite oxidizing microbial diversity along the salinity gradient of the Cape Fear Estuary.

PS 69 - Dendrochronology

Exhibit Hall DE, Oregon Convention Center

PS 69-49 Burnham, MB, CA Walter, BE McNeil, AE Hessl and WT Peterjohn, West Virginia University. The utility of tree ring ř15N as an indicator of past nitrogen cycle dynamics.

PS 69-50 Sahara, EA1, DA Sarr2 and ES Jules1, (1)Humboldt State University, (2)Klamath Network-National Park Service. An assessment of tree encroachment into a serpentine pine savanna using remote sensing and dendroecological techniques.

PS 69-51 Simonson, SE1, TJ Stohlgren2, S Fassnacht3, E Greene4 and S Toepfer4, (1)Natural Resource Ecology Laboratory, (2)USGS Fort Collins Science Center, (3)Watershed Science Program, (4)Colorado Avalanche Information Center. Rapid assessment of large magnitude snow avalanche events in Colorado.

PS 69-52 Kidd, KR and C Copenheaver, Virginia Tech. Dendroecological analysis of frost ring occurrence in jack pine (Pinus banksiana) across northern lower Michigan.

PS 69-53 Sakulich, J1, JL Hart2, SL van de Gevel3 and HD Grissino-Mayer4, (1)Regis University, (2)University of Alabama, (3) Appalachian State University, (4)University of Tennessee. Spatial modeling of climate-growth relationships of eastern North American trees.

PS 69-54 Chapman, ME1, MP Weand1 and E Dickerson2, (1) Southern Polytechnic State University, (2)Piedmont Park Conservancy. Is urban old-growth affected by air pollution?.

PS 69-55 Hudson, CL1, E Pendall1, AH Lloyd2 and D Mann3, (1) University of Wyoming, (2)Middlebury College, (3)University of Alaska Fairbanks. Tree-ring stable isotope relationships to climate across hill-slope positions in boreal Alaska.

PS 69-56 Dymond, S1, P Bolstad1 and RK Kolka2, (1)University of Minnesota, (2)USDA Forest Service, Northern Research Station. The relationship between soil moisture and forest productivity at the Marcell Experimental Forest: A pilot study.

PS 70 - Forest And Rangeland Management

Exhibit Hall DE, Oregon Convention Center

PS 70-57 Brandt, L1, CW Swanston2, FR Thompson III3, L Iverson4, HS He5, A Prasad4, SN Matthews6 and M Peters4, (1) USDA Forest Service, (2)US Forest Service, Northern Research Station, (3)University of Missouri-Columbia, (4)Northern Research Station, USDA Forest Service, (5) University of Missouri, (6)The Ohio State University. Applying a framework for climate change adaptation in the Central Hardwoods region.

PS 70-58 Heiderman, R1, JL Stape1, ZH Leggett2, EB Sucre2 and R Gehl1, (1)North Carolina State University, (2)Weyerhaeuser Company. Intercropping giant miscanthus (Miscanthus × giganteus) with loblolly pine (Pinus taeda) for bioenergy feedstock production in Southeastern United States: Effects of shading on biomass yield.

PS 70-59 Caterina, GL, RE Will, DJ Turton and CB Zou, Oklahoma State University. Water use of individual Juniperus virginiana trees; How much, how variable, and what factors affect it.

PS 70-60 Mattox, A1 and JB West2, (1)Texas A&M University, (2) Texas A&M University - College Station. Soil moisture varies across soil type in response to woody vegetation removal in a south Texas shrubland.

PS 71 - Forest Habitats

Exhibit Hall DE, Oregon Convention Center

PS 71-61 Stone, MM, BB Casper, AF Plante, A Johnson and FN Scatena, University of Pennsylvania. Plant-soil feedbacks and nutrient availability mediate microbial decomposition in a nutrient-poor tropical forest.

PS 71-62 Fernandez, DS1, E Meléndez2 and J Rojas3, (1)University of Puerto Rico at Humacao, (2)University of Puerto Rico, (3)University of Puerto Rico at Rio Piedras. Revising classification of focal vegetation communities of Mona Island Reserve, a Caribbean subtropical dry forest ecosystem.

PS 71-63 McAlpine, J1, T Policha1, BTM Dentinger2 and BA Roy1, (1) University of Oregon, (2)Royal Botanic Gardens, Kew. Floral yeasts driving pollinator recruitment in a Neotropical orchid.

PS 71-64 Greer, B, University of California, Santa Barbara. Climatic niche plasticity in Populus tremuloides.

PS 71-65 Ackermann, K, DL Jones and TH DeLuca, Bangor

University. The role of feather mosses in N cycling in boreal forest ecosystems.

PS 71-66 Bansal, S1, T Jochum2, D Wardle3 and MC Nilsson2, (1) United States Department of Agriculture, (2)Swedish University of Agricultural Sciences, (3)Department of Forest Ecology and Management, Swedish University of Agricultural Sciences. Interactive effects of burn severity and canopy cover on ecophysiology of tree seedlings in boreal forests.

PS 71-67 Perzley, JA1, D Brickley2 and PS Petraitis2, (1)Rutgers University, (2)University of Pennsylvania. Characterization and comparison of forest and steppe ecotones on north- and south-facing slopes in northern Mongolia.

PS 72 - Forest Habitats: Temperate

Exhibit Hall DE, Oregon Convention Center

PS 72-68 Guzmán Colón, DK1, NT Reif2, WB Mattingly3 and JL Orrock4, (1)Michigan State University, (2)University of Vermont, (3)University of Wisconsin-Madison, (4)University of Wisconsin - Madison. Historic land use affects ground-dwelling ant community structure in longleaf pine savannas.

PS 72-69 Kilanowski, A, St. Lawrence University. Third and fourth order habitat selection of North American porcupines (Erethizon dorsatum) differs in winter and non-winter seasons.

PS 72-70 Maenza-Gmelch, T and S Gilly, Barnard College, Columbia University. Habitat-based bird monitoring in Black Rock Forest, Hudson Highlands, southeastern NY: Long-term trends and seasonal inventories, 2011.

PS 72-71 Merschel, A1 and TA Spies2, (1)Oregon State University, (2)US Forest Service, Pacific Northwest Research Station. Climatic and topographic drivers of stand structure and composition in old-growth mixed-conifer forests.

PS 72-72 Halperin, A1 and GG Parker2, (1)Oberlin College, Oberlin, OH, (2)Smithsonian Environmental Research Center. Predicting vertical PAR profiles from canopy structure in eastern forests.

PS 72-73 Ribbons, RR1, NJ Sanders2, AM Ellison3 and AT Classen2, (1)University of Tennessee-Knoxville, (2)University of Tennessee, (3)Harvard Forest (Harvard University). Community and ecosystem responses to experimental ant and forest manipulations.

PS 72-74 Peterjohn, WT1, ZK Fowler1, C Cummins1, T Holliday1, C Kennedy1, A Lloyd1, KA Maier2, FS Gilliam3 and MB Adams4, (1)West Virginia University, (2)St. Olaf College, (3) Marshall University, (4)USDA Forest Service. Are greater nitrate losses following ammonium additions to a forest due to higher rates of nitrate production - or to something else?.

PS 72-75 Rogers, TR and FL Russell, Wichita State University. Oak expansion in the Chautauqua Hills, Kansas: A regional assessment of historic change.

PS 72-76 Shea, EL1, LA Schulte1 and BJ Palik2, (1)Iowa State University, (2)USDA Forest Service, Northern Research Station. Variable retention harvesting to enhance stand complexity: Songbird community response in a red pine (Pinus resinosa) forest.

PS 72-77 Kim, HJ, H Yi, JW Nam and J Seong, Seoul Women's University, Seoul, Korea. A study of the community structures of dead wood dwelling arthropods.

PS 72-78 Boyd, JP1, CL Staudhammer1, G Starr1, JL Hart1 and R Mitchell2, (1)University of Alabama, (2)Joseph W. Jones Ecological Research Center. Quantifying the drivers of longleaf pine regeneration.

PS 72-79 Lowney, CA1, MA Jenkins1, MA Spetich2, SR Shifley3 and BD Graham1, (1)Purdue University, (2)USDA Forest Service, (3)Forest Service Northern Research Station. Two decades of change in the composition and structure of old-growth hardwood forests throughout Indiana, USA.

PS 72-80 Ippi, S1, D Salinas1, JL Celis-Diez1, MF Willson2 and JJ Armesto1, (1)Institute of Ecology and Biodiversity, (2) Fundacion Senda Darwin. Habitat partitioning by a rural bird assemblage in northern Chiloé Island (42°S), Chile.

PS 72-81 Yavitt, JB and TJ Fahey, Cornell University. Earthworm effects on stabilization of litter C and N in a sugar maple forest.

PS 72-82 Kush, JS, JC Gilbert and RJ Barlow, Auburn University. What kills longleaf pine (Pinus palustris)? 45 years of data says not much.

PS 72-83 Zastrow, S, JH Sullivan and MC Neel, University of Maryland. Forest response to a tornado on the campus of the Univesrity of Maryland.

PS 72-84 Greaves, D1, CF Tejo1, K Mafune1, D Zabowski1 and N Nadkarni2, (1)University of Washington, (2)University of Utah. Epiphytic litterfall in an old-growth temperate forest at Olympic National Park, Washington.

PS 72-85 Wolf, AT1, RW Howe1 and NG Swenson2, (1)University of Wisconsin-Green Bay, (2)Michigan State University. Diversity patterns of bird assemblages in a post-glacial landscape of northern Wisconsin, USA.

PS 73 - Forest Habitats: Tropical

Exhibit Hall DE, Oregon Convention Center

PS 73-86 Becklund, KK, LL Kinkel and JS Powers, University of Minnesota. Landscape variation in the abundance of pathogen-suppressive Streptomyces in secondary tropical dry forests of Costa Rica.

PS 73-87 Whitman, M1 and JD Ackerman2, (1)University of Nebraska-Lincoln, (2)University of Puerto Rico, Rio Piedras Campus. Habitat suitability for terrestrial orchids in a tropical forest: best sites for survival differ from those for reproduction.

PS 73-88 Chang, LW1, ST Chiu2 and CF Hsieh1, (1)National Taiwan University, (2)National Museum of Natural Science. Partitioning spatial diversities of pioneer and non-pioneer saplings in an evergreen broad-leaved forest of Taiwan.

PS 73-89 May, LN and I Ibanez, University of Michigan. Assessment of forest regeneration across land tenure regimes in southeastern Tanzania.

PS 73-90 Silva, RR1 and CRF Brandão2, (1)Museu de Zoologida da Universidade de Sao Paulo, (2)Museu de Zoologia da Universidade de Sao Paulo. Functional structure in ant communities along a latitudinal gradient in the Brazilian Atlantic Forest hotspot.

PS 73-91 Barriga, PA and CL Sagers, University of Arkansas. Community structure and ecological specialization in plant-ant interactions.

PS 73-92 Hulshof, CM1, JC Stegen2, N Swenson3, CAF Enquist4 and BJ Enquist1, (1)University of Arizona, (2)Pacific Northwest National Laboratory, (3)Michigan State University, (4)USA National Phenology Network. Interannual variability of growth and reproduction in Bursera simaruba: The role of allometry and resource variability.

PS 74 - Climate Change

Exhibit Hall DE, Oregon Convention Center

PS 74-93 Slabaugh, K, M Clark and BA Bancroft, Southern Utah University. The effects of water fluctuation and temperature change on amphibian larvae.

PS 74-94 Sorokin, Y1, E Pendall1, A Brennan1, DG Williams1, JA Morgan2 and JL Heisler-White3, (1)University of Wyoming, (2)USDA-ARS, (3)TriHydro, Inc. Responses of evapotranspiration to experimental warming and elevated CO2 in a semi-arid grassland.

PS 74-95 Ryan, SF, University of Notre Dame. Recent climatic warming may be leading to discordant shifts in wing morphology in a butterfly hybrid zone.

PS 74-96 Mildenberger, KL and J Brookshire, Montana State University. Internal versus external inputs of phosphorus in a snow driven subalpine grassland ecosystem in southwest Montana.

PS 74-97 Guerrini, A1, JE Dugan2, A Howkins3 and G Rumore4, (1)Oregon State University, (2)University of California, (3) Colorado State University, (4)University of Minnesota. Putting the "long term" in the LTERs: Historical work at two LTER sites.

PS 74-98 Motew, MM and CJ Kucharik, University of Wisconsin-Madison. Climate induced changes in biome distribution, NPP, and hydrology for potential vegetation of the Upper Midwest US.

PS 74-99 Holsinger, J, J Brookshire and T Weaver, Montana State University. Using remote sensing vegetation indices

to assess moisture stress and long-term responses of subalpine grasslands to climate change.

PS 74-100 Dalton, M and WB Hughes, USGS. The U.S. Geological Survey's Southeast Climate Science Center: A coordinated efort to sustain natural and cultural resources in the face of climate change.

PS 74-101 Taylor, AR1, P Burton1, M Lorente1, S Gauthier1, L De Grandpré1, EH Hogg1, I Aubin1, LL Kremsater2, C Ste-Marie1 and EA Nelson1, (1)Natural Resources Canada, (2)Consultant. Climate change indicators for forests and forestry in Canada.

PS 74-102 Pangle, RE1, J Plaut1, EA Yepez2, JM Limousin1, N Gehres1, PJ Hudson3, AL Boutz1, JP Hill1, NG McDowell4 and W Pockman1, (1)University of New Mexico, (2)Instituto Tecnológico de Sonora, (3)University of New Mexico-Albuquerque, (4)Los Alamos National Laboratory. Woody canopy transpiration in a piñon-juniper woodland: Variation due to experimentally imposed drought and mortality.

PS 75 - Climate Change: Communities

Exhibit Hall DE, Oregon Convention Center

PS 75-103 Inouye, DW1, AM McKinney2, A Miller-Rushing3, LA Burkle4 and EB Johnston2, (1)University of Maryland, (2)Rocky Mountain Biological Laboratory, (3)National Park Service, (4)Montana State University. Divergent phenological responses to climate cues in a 20-year record of syrphid flies and flowers.

PS 75-104 Clark, HE and LM Christenson, Vassar College. Changes in invertebrate communities along a natural elevational climate gradient at the Hubbard Brook Experimental Forest, New Hampshire, USA.

PS 75-105 King, DA1, DM Bachelet2 and A Symstad3, (1)Oregon State University, (2)Conservation Biology Institute, (3) USGS Northern Prairie Wildlife Research Center. Modeling climate change effects on the ecotone between forest and grassland at Wind Cave National Park, South Dakota.

PS 75-106 King, GA1, EH Lee2, M Bollman2, JR Reichman2, BM Smith2 and L Watrud2, (1)Dynamac Corporation, (2)US Environmental Protection Agency/NHEERL. Multi-year effects of feral Sorghum spp. grown under ambient and global change conditions in sunlit mesocoms.

PS 75-107 Cooper, HF1, C O'Brien2, K Paxton3 and TG Whitham1, (1)Northern Arizona University, (2)University of Arizona, (3)Univeristy of Southern Mississippi. Severe drought restructures the plant community in three major vegetation zones in Northern Arizona.

PS 75-108 Cleland, E1, C Kopp2 and AC Ashbacher2, (1)University of California – San Diego, (2)University of California, San Diego. Non-linear responses of native shrubs to invasion and altered rainfall regimes.

PS 75-109 Burt, MA1, RR Dunn2, LM Nichols2 and NJ Sanders1, (1) University of Tennessee, (2)NCSU. The interactive effects of herbivory and rising temperatures on Quercus alba seedling demography: An experimental and observational test.

PS 76 - Climate Change: Plants

Exhibit Hall DE, Oregon Convention Center

PS 76-110 Wang, T1, J Wu2, P Mou1 and J Ge1, (1)Beijing Normal University, (2)Arizona State University. Shift in agricultural phenophases and its implications for soil erosion in the Loess Plateau of China.

PS 76-111 Crimmins, TM, J Weltzin and JL Kellerman, USA National Phenology Network. Anomalous warm spring of 2010 advances deciduous forest leaf-out: Application of the Nature's Notebook dataset and visualization analysis tool.

PS 76-112 Adlparvar, F, MI Shuldman, AB Roddy and TE Dawson, UC Berkeley. Physiological responses of Heteromeles arbutifolia seedlings, a California native perennial shrub, during artificial heat waves.

PS 76-113 Peterman, WL, Oregon State University. Soil Properties affect pinyon pine – juniper response to drought.

PS 76-114 McDonough MacKenzie, C1, A Miller-Rushing2, RB Primack1 and C Davis3, (1)Boston University, (2)National Park Service, (3)Harvard. Climate Change in Acadia National Park and beyond: Long-term trends in flowering phenology and floral abundance.

PS 76-115 Clark, JE II, S Bartkowiak and LJ Samuelson, Auburn University. Impact of rainfall manipulation and fertilization on light and water use efficiency in 6-year-old loblolly pine.

PS 76-116 Adams, H1, GA Barron-Gafford2, LM Marasco2, RL Minor2, AL Wiede2, AA Gardea3, LP Bentley2, DJ Law2, DD Breshears1 and TE Huxman2, (1)The University of Arizona, (2)University of Arizona, (3)Centro De Investigacion en Alimetacion y Desarollo. Temperature increases progressively hasten drought-induced mortality and influence carbon metabolism of Pinus seedlings differentially.

PS 76-117 Potter, RS, SL Smidt, H Lindquist and PH Wyckoff, University of Minnesota, Morris. Impact of climate on growth of Acer saccharum (sugar maple) at the prairie-forest border in western Minnesota.

PS 76-118 Winkler, DE, University of California, Merced. Plant cover responses to simulated climate change in alpine plant species.

PS 76-119 Ueda, MU and K Hikosaka, Tohoku University. Does elevated CO2 act as a selective agent? Results of common garden experiments using Plantago asiatica from CO2 spring.

PS 76-120 Chandler, JL1, JB McGraw1, N Fetcher2, JB Turner1, CC Bennington3, GR Shaver4 and MC Vavrek5, (1)West Virginia University, (2)Wilkes University, (3)Stetson University, (4) Marine Biological Laboratory, (5)Glenville State College. Evaluating the ecotypic response of Eriophorum vaginatum L. to shifts in high latitude climate patterns using a Leslie matrix model of tiller populations.

PS 76-121 Karlinsey, SM and RA Gill, Brigham Young University. The effect of precipitation frequency and magnitude on Engelmann Spruce (Picea engelmannii) physiology.

PS 76-122 Loik, ME, University of California. Integrating multiple temporal scales of snowfall, soil, and plant processes at the Great Basin Desert – Sierra Nevada ecotone.

PS 76-123 Qu, M1 and JA Bunce2, (1)Shenyang Agricultural University, (2)US Department of Agriculture - Agricultural Research Service. Effects of elevated CO2 on maize responses to short-term heat stress.

PS 76-124 Albertine, JM1, AC Granjon2, L Hancock3, KA Stinson4 and CA Rogers5, (1)University of Massachusetts, (2)Ludwig Maximilian University, (3)Christopher Newport University, (4)Harvard University, (5)University of Massachusetts-Amherst. Predicting population-level changes in ragweed (Ambrosia artemisiifolia L.) response to elevated carbon dioxide.

PS 76-125 Cavieres, LA, A Sierra-Almeida and GA Valencia, Universidad de Concepcion, IEB. Contrasting warming effects on facilitative interactions in high-Andes: Cushion plants, native and non-native plants.

PS 76-126 Marchin, RM1, RR Dunn2 and WA Hoffmann1, (1)North Carolina State University, (2)NCSU. Some like it hot? Growth responses to warming in a wintergreen understory orchid, Tipularia discolor.

PS 76-127 Baguskas, SA1, CJ Still2 and JY King3, (1)University of California-Santa Barbara, (2)University of California, (3) University of California, Santa Barbara. Fog and its influence on the water relations of a California coastal pine forest.

PS 77 - Climate Change: Ranges And Phenology

Exhibit Hall DE, Oregon Convention Center

PS 77-128 Fuccillo, K1, TM Crimmins2 and TS Elder1, (1)Portland State University, (2)USA National Phenology Network. Patterns in forest plant phenology: Can citizen scientists accurately assess phenological changes?.

PS 77-129 Rosemartin, A1, TM Crimmins2, CAF Enquist3, EG Denny2 and J Weltzin2, (1)USA National Phenological Network & University of Arizona, (2)USA National Phenology Network, (3)The Wildlife Society & USA National Phenology Network. Answer questions at multiple scales with data provided by the USA National Phenology Network.

PS 77-130 Butler, EE, AR Stine and PJ Huybers, Harvard University. Has climate change shifted US maize planting times?.

PS 77-131 Liang, CT, Pacific Southwest Research Station, USDA

Forest Service. Climatic effects on a non-native amphibian in Hawaii Island: Survivorship along an elevational gradient.

PS 77-132 Katz, DW and I Ibanez, University of Michigan. Plant range expansion and biotic interactions: An experimental approach.

PS 77-133 Miller-Struttmann, N, JD Franklin and C Galen, University of Missouri. Does history repeat itself? Tracking change in resource use by alpine bumblebees with global warming.

PS 77-134 Stine, AW1, C Salk2 and JS Clark1, (1)Duke University, (2)University of Colorado. Don't judge a leaf by its color: Warming is not delaying end-of-season processes in some deciduous tree species.

PS 77-135 Theobald, EJ and J HilleRisLambers, University of Washington. Life at the limit: Pollen limitation of an early flowering lily (Erythronium montanum).

PS 77-136 Garcia, CL and K Williams, California State University, San Bernardino. Phenological shifts in flowering in southern California under El Niño conditions (1976).

PS 77-137 Enquist, CAF1, SL Young2 and J Weltzin3, (1)USA National Phenology Network & The Wildlife Society, (2)U.S. Geological Society, (3)USA National Phenology Network. Observed changes in phenology across the US: A regional review for the National Climate Assessment.

PS 77-138 Putnam, RC and PB Reich, University of Minnesota. Understanding range limits: Climate, competition, and patterns of survival for three sugar maple populations experimentally planted from Arkansas to Ontario.

PS 77-139 Bailey, CM and DJ Grisé, Texas A&M-Corpus Christi. The effects of climate and land use patterns on species presence and abundance for the Flour Bluff, TX Christmas Bird Count.

PS 77-140 Saltré, F1, SL Shafer2 and PJ Bartlein3, (1)Oregon State University, (2)U.S. Geological Survey, (3)University of Oregon. Simulated vegetation responses to potential future climate change in western North America.

PS 77-141 Channell, R and GY Jacquez, Fort Hays State University. Climate change: Implications for montane mammals of the Great Basin.

PS 77-142 Polgar, C1, RB Primack1, EH Williams2, C Hitchcock3 and S Stichter4, (1)Boston University, (2)Hamilton College, (3) Boston College, (4)Massachusetts Butterfly Club. The effect of temperature and precipitation on the timing of the adult flight period of Lycenid butterflies in Massachusetts.

PS 78 - Climate Modeling

Exhibit Hall DE, Oregon Convention Center

PS 78-143 Schuur, EAG1, AD McGuire2, J Canadell3, JW Harden4, P Kuhry5, V Romanovsky6, MR Turetsky7 and C Schaedel1, (1)University of Florida, (2)University of Alaska Fairbanks, (3)CSIRO Marine and Atmospheric Research, (4)United States Geological Survey, (5)Stockholm University, (6) University of Alaska, (7)University of Guelph. Vulnerability of permafrost carbon: Results from a research coordination network survey.

PS 78-144 Koncki, NG and MFJ Aronson, Hofstra University. Increased invasion risk in a warmer world: Modeling the range expansion of three of the most problematic aquatic invasive plants in the United States with climate change using MaxEnt.

PS 78-145 Phillips, DL1, RJM Boumans2, TD Fontaine1, CA Burdick1 and W Victery1, (1)U.S. Environmental Protection Agency, (2)AFORDable Futures LLC. Developing a model for effects of climate change on human health and health-environment interactions: Heat stress in Austin, Texas.

PS 78-146 Todd-Brown, KE1, JT Randerson1, WM Post2 and SD Allison3, (1)University of California, Irvine, (2)Oak Ridge National Laboratory, (3)University of California. Evaluating soil carbon in Earth system models: How good are the models and what drives model variability?.

PS 79 - Agroecology

Exhibit Hall DE, Oregon Convention Center

PS 79-147 Larsen, EM, North Carolina State University. Effect of long-term agroecosystems on soil biological properties and carbon losses.

PS 79-148 Ghersa, CM1, SL Poggio1, GA Molina1, V Le Féon2 and F Weyland3, (1)IFEVA/CONICET, Facultad de Agronomía, Universidad de Buenos Aires, Argentina., (2)IFEVA/CONICET, Facultad de Agronomía, Universidad de Buenos Aires, Argentina. INRA Avignon, France, (3)Facultad de Agronomía, UNMDP. Agricultural mosaics: Novel ecosystems in the Rolling Pampas of Argentina.

PS 79-149 Maczko, K1, JA Tanaka1, J Ritten1, JA Morgan2, N Chhetri3, LA Hidinger3, MC Reeves4 and JE Mitchell5, (1)University of Wyoming, (2)USDA-ARS, (3)Arizona State University, (4) USFS Rocky Mountain Research Station – LANDFIRE, (5) USDA Forest Service, Rocky Mountain Research Station. Sustainable rangelands: Assessing contributions to food security and ecosystem services.

PS 79-150 Gibson, DJ1, KL Gage1, JL Matthews1, BG Young1, MDK Owen2, RG Wilson3, SC Weller4, DR Shaw5 and DL Jordan6, (1)Southern Illinois University, (2)Iowa State University, (3)University of Nebraska, (4)Purdue University, (5)Mississippi State University, (6)North Carolina State University. The effect of weed management practices on weed species communities over 5 years in Glyphosate-resistant cropping systems.

PS 79-151 Paradise, CJ, M Madden, L Hedley, R Clemente and J Kim, Davidson College. Assessment of beetle and bug diversity in low input cattle farms of varying cattle density and surrounding land use.

PS 79-152 Dugarjav, D and ST Gower, University of Wisconsin. Aboveground net primary productivity and carbon allocation of poplar plantation on well-drained glacial drumlin soil.

PS 79-153 Brym, ZT, Utah State University. Developing an agroecological approach to biomass scaling and branching architecture using orchard trees.

PS 79-154 Begley, DR, Wright State University. White-tailed deer and their vigorous appetite: An empirical study of monetary losses in soybeans.

PS 79-155 Smith, RG and LW Atwood, University of New Hampshire. Is "relatedness" a good predictor of suppression of weeds by cover crop mixtures?.

PS 79-156 Dietsch, TV1, MW Chandler1, SC Tanzi2, N Ureña3 and LV Navarro1, (1)Earthwatch Institute, (2)University of Vermont, (3)Earthwatch Institute, Costa Rica. Engaging a coffee farmer community in the Los Santos region of Costa Rica: Developing tools for farmers to encourage sustainable farming practices.

PS 79-157 Numbers, EM, SM Philpott and MN Weintraub, University of Toledo. Correlations between soil quality and arthropod communities in organically managed farms in NW Ohio.

PS 79-158 Rousseau, L1, SJ Fonte2, O Téllez2, R van der Hoek2 and P Lavelle2, (1)Insitut de Recherche pour le developpement (IRD), (2)International Center for Tropical Agriculture. Biological indicators of soil quality and impacts of land use management in agricultural landscapes of northern Nicaragua.

PS 79-159 Brown, MI, J Grossman, W Shi and SC Reberg-Horton, North Carolina State University. Evaluating termination methods of leguminous cover crops for optimizing nitrogen synchrony.

PS 79-160 Quinn, JE1 and TN Awada2, (1)University of Nebraska-Lincoln, (2)University of Nebraska - Lincoln. Predicting avian population trends in high intensity agroecoregions.

PS 79-161 Franco, JG, Texas A&M University. Evaluating functional diversity in an organic intercropping system.

PS 79-162 Schroeder-Moreno, M1, J Grossman2 and K Niewonly3, (1)North Carolina State University, (2)NCSU, (3)Virginia Tech. The Sustainable Agriculture Education Association: Promoting best teaching and learning practices in agroecology.

PS 80 - Arctic, Alpine, Antarctic Systems

Exhibit Hall DE, Oregon Convention Center

PS 80-163 Saurey, SD, BJ Adams and ZT Aanderud, Brigham Young University. Exploring C substrate and soil moisture effects on bacterial diversity through 13C- and 18O-DNA stable isotope probing in polar deserts.

PS 80-164 Walters, CE and WK Smith, Wake Forest University. Lateral

growth and vegetative reproduction in krummholz mats and tree islands in high elevation spruce-fir forests of southeastern Wyoming, USA.

PS 80-165 Kleier, C1 and W Stenzel2, (1)Regis University, (2)State of Colorado Attorney General Office. Azorella compacta conservation and demography in Parque Nacional Lauca, Chile.

PS 80-166 Formica, AF1, EC Farrer2 and KN Suding3, (1)Columbia University, (2)University of California, Berkeley, (3)University of California at Berkeley. Salix shrub expansion over the past 62 years in rocky mountain alpine tundra.

PS 80-167 Bergweiler, C, PP Systems Inc. and University of Massachusetts Environmental Sciences Program. Sustained high elevation ozone in the northeastern US: Physiological indicators in red spruce-dominated forests.

PS 81 - Arid and Semi-Arid Systems

Exhibit Hall DE, Oregon Convention Center

PS 81-168 Katz, O1, S Lev-Yadun2 and P Bar (Kutiel)1, (1)Ben-Gurion University of the Negev, (2)University of Haifa – Oranim. Plasticity in phytolith production in Asteraceae species along a rainfall gradient in Israel.

PS 81-169 Wiseman, GH, J Johnson and VL Lougheed, University of Texas at El Paso. Comparing avian diversity between perennial and ephemeral water sources located within a Chihuahuan Desert ecosystem.

PS 81-170 Allington, GRH and TJ Valone, Saint Louis University. Islands of fertility: Are they an artifact of grazing?.

PS 81-171 Santillán-Caravantes, P and I Pisanty, Facultad de Ciencias, Universidad Nacional Autónoma de México. Nurse effect in the clonal establishment of Sedum oxypetalum in disturbed environments.

PS 81-172 Schiebout, MH1 and SB Franklin2, (1)Union University, (2)University of Northern Colorado. Response of riparian areas of the shortgrass steppe to release from cattle grazing using exclosures: Comparison at different spatial and temporal scales .

PS 81-173 Godinez-Alvarez, H, I Cabral, M Hernandez, R Lira, F Lopez, D Muñoz and L Rios-Casanova, Universidad Nacional Autonoma de Mexico. Land degradation in a Mexican tropical dryland: An assessment using soil, vegetation, and human disturbance indicators.

PS 81-174 Nieto, BC1, H Lee2, DB Hewins1, PW Barnes3, NG McDowell4, WT Pockman5, T Rahn4 and HL Throop1, (1)New Mexico State University, (2)National Center for Atmospheric Research, (3)Loyola University, (4)Los Alamos National Laboratory, (5)University of New Mexico. The effects of UV radiation, litter chemistry, and drought on desert litter decomposition.

PS 81-175 Suazo, AA1, A San2, RK Tsutsui2 and SR Abella2, (1) University of Idaho, (2)University of Nevada Las Vegas. Desert seed consumers as predators and dispersers of a non-native invasive plant.

PS 81-176 Tran, HE1, WT Pockman2 and LM Ladwig2, (1)University of Tennessee, Knoxville, (2)University of New Mexico. Recovery of Larrea tridentata following extreme cold across a shrub-grassland ecotone.

PS 81-177 Veblen, KE, Utah State University. Alternative pathways for development of meso-scale wildlife hotspots in an East African savanna.

PS 81-178 Pisanty, I1, C Pérez y Sosa1, M Ródríguez-Sánchez1, MC Mandujano2 and C Peralta1, (1)Facultad de Ciencias, Universidad Nacional Autónoma de México, (2)Instituto de Ecología, Universidad Nacional Autónoma de México. Sinkhole formation, dynamics, and colonization in the Churince System, a disturbed desert wetland in Cuatrociénegas, Coahuila, Mexico.

PS 82 - Grasslands/Steppe

Exhibit Hall DE, Oregon Convention Center

PS 82-179 Maltz, MR1, K Treseder2 and A Swanson3, (1)University of California, Irvine, (2)University of California Irvine, (3) University of California, Riverside. Mycorrhizal associations in restored invaded grasslands.

PS 82-180 Zou, CB, RE Will, B Acharya, V Guidotti and M Olenscki, Oklahoma State University. Redistribution and potential loss of soil carbon at watershed after redcedar encroachment in a mesic grassland.

PS 82-181 Koziol, E and JD Bever, Indiana University. Early successional prairie plants are less mycotrophic and have greater specific root length than late successional prairie plants.

PS 82-182 Knight, EC1, NA Mahony2 and DJ Green1, (1)Simon Fraser University, (2)Environment Canada. Grassland songbird productivity: Does the edge effect on nest predation vary between agricultural types?.

PS 83 - Paleoecology

Exhibit Hall DE, Oregon Convention Center

PS 83-183 Hill, CL, Boise State University. Long-term patterns of biodiversity in the Northern Rocky Mountains: Landscape dynamics, conservation paleobiology, and historical ecology.

PS 83-184 Ireland, AW and RK Booth, Lehigh University. Upland deforestation triggered an ecosystem state-shift in a kettle peatland.

PS 83-185 Jones, RA and ST Jackson, University of Wyoming. Did Native American fires maintain the longleaf pine ecosystem? A paleoecological approach.

PS 83-186 Jackson, ST1, JJ Andersen1, RA Jones1, Y Liu1 and JW Williams2, (1)University of Wyoming, (2)University of Wisconsin-Madison. Vegetation south of the ice margin in eastern North America during the last glacial maximum and deglaciation.

PS 83-187 Hotchkiss, SC1, EA Lynch2, R Calcote3 and MA Tweiten4, (1)University of Wisconsin, (2)Luther College, (3)University of Minnesota, (4)University of Wisconsin - Madison. Using modern and presettlement pollen analogs to develop transition matrices for northern Wisconsin forests.

PS 83-188 Dunnette, PV and PE Higuera, University of Idaho. Long-term interactions among climate, fire, and biogeochemical cycling in a Rocky Mountain subalpine watershed.

PS 83-189 Miller, DM and DM Miller, University of Wyoming, Laramie, WY 82071. Morphometric analysis of fossil conifer cones collected from a high-elevation, Late Pleistocene, deposit near Snowmass Village, Colorado.

PS 84 - Urban Ecosystems

Exhibit Hall DE, Oregon Convention Center

PS 84-190 Colahan, C, E Weinbender and NE Broshot, Linfield College. Seedling growth and survival of western red cedar (Thuja plicata), six years later.

PS 84-191 Morzillo, AT, Oregon State University. Interactions between urban residents and ecosystems across multiple scales in the Portland-Vancouver metropolitan area.

PS 84-192 Melendez-Ackerman, E1, R Santiago1, L Santiago-Acevedo1, CP Vila2, DC Garcia-Montiel3, L Lastra2, C Figuerola2, JC Verdejo1, H Manrique1 and E Hernandez-Calo4, (1)University of Puerto Rico, Rio Piedras, (2) University of Puerto Rico, Rio Piedras Campus, (3) University of Puerto Rico, (4)University of Puerto Rico, Cayey Campus. Plant species diversity and abundance in the Río Piedras watershed: Associations with physical and socioeconomic factors.

PS 84-193 Garcia-Montiel, DC1, R Santiago-Bartolomei2, E Melendez-Ackerman2 and L Santiago1, (1)University of Puerto Rico, (2)University of Puerto Rico, Rio Piedras. Consumption and waste disposal patterns of household in a tropical urban watershed. .

PS 84-194 Vila, CP1, E Meléndez-Ackerman2, D Garcia-Montier3, R Santiago-Bartolomei1, H Manriquez1, E Hernandez-Calo4, L Lastra1 and C Figuerola1, (1)University of Puerto Rico, Rio Piedras Campus, (2)University of Puerto Rico, Rio Piedras, (3)Institute for Tropical Ecosystem Studies, (4)University of Puerto Rico, Humacao Campus. Plant diversity of Residential yards across the Río Piedras watershed.

PS 84-195 Lee, BR, SA Montgomery, AK Ettinger and J Hille Ris Lambers, University of Washington. A lost generation of trees: Investigating the causes of low tree recruitment in urban coniferous forests.

PS 84-196 Dyson, KL, University of Washington. Using community gathered data to detect differences in bird community composition across the urban gradient in the Seattle area.

PS 84-197 Montgomery, SA, BR Lee, AK Ettinger and J HilleRisLambers, University of Washington. Conifer regeneration in Seattle's urban forests: Influences of seed availability, microsite conditions, and ivy competition on germination.

PS 84-198 Nidzgorski, DA and SE Hobbie, University of Minnesota. Can urban trees help protect our lakes and streams? Species effects on nitrogen and phosphorus leaching.

PS 84-199 Somers, KA1, ES Bernhardt1, K Bigsby2 and D Urban1, (1) Duke University, (2)North Carolina State University. Effects of development configuration and subsurface connectivity on urban streams.

PS 84-200 Huynh, CK, SR Poquette and WL Whitlow, Seattle University. Critical creek health assessment in the Duwamish River urban watershed.

PS 84-201 Poquette, SR, CK Huynh and WL Whitlow, Seattle University. Pyrethroid pesticide effects on invertebrate behavioral responses to danger cues.

PS 84-202 Hamilton, RS, Portland State University. The Community Watershed Stewardship Program: Partnering to enhance Portland's neighborhoods and ecological health.

PS 84-203 Craig, SC and W Zhu, State University of New York - Binghamton. Deicing salt inputs affected soil chemistry and microbial respiration.

PS 84-204 Hironaka, Y and F Koike, Yokohama National University. Guild structure in food web of grassland arthropod community along urban-rural landscape gradient in Japan.

PS 84-205 Loyd, KAT1, SM Hernandez1, KJ Abernathy2, B Foster2, JP Carroll1, MJ Yabsley1 and GJ Marshall2, (1)University of Georgia, (2)National Geographic Remote Imaging. KittyCams: A new look at suburban free-roaming cat predation.

PS 85 - Woody Plants

Exhibit Hall DE, Oregon Convention Center

PS 85-206 Luedtke, CM, DP Aubrey, MA McGuire and RO Teskey, University of Georgia. Dissolved [CO2] in xylem sap of C3 annuals, shrubs, vines, and bamboo.

PS 85-207 Wang, L1, H Wang1, L Bao2, X Guo1 and J Ge2, (1)State Key Laboratory of Earth Surface Processes and Resource Ecology & College of Life Sciences, Beijing Normal University, (2)Beijing Normal University. Two mountain areas share most haplotypes but not all: A phylogeography study of Pinus koraiensi.

PS 85-208 Shaffer, JD, SK Gleeson, JJ Cox and JM Lhotka, University of Kentucky. The influence of grass competition and herbivory on native hardwood seedling establishment in the Inner Bluegrass of Kentucky.

PS 85-209 Brandt, A, MH Schiebout and SB Franklin, University of Northern Colorado. Relationships of autecology and synecology on the shortgrass steppe.

PS 86 - Modeling

Exhibit Hall DE, Oregon Convention Center

PS 86-210 Burkhalter, JC and JL Lockwood, Rutgers University. Modeling habitat selection of actively dispersing organisms using statistical decision theory and its implications for species conservation.

PS 86-211 Robinson, NS, University of Colorado. Understanding the influence of habitat fragmentation on butterfly occurrence patterns: Developing and testing models across global ecosystems.

PS 86-212 Ohmann, JL1, MJ Gregory2, EB Henderson2 and HM Roberts2, (1)Pacific Northwest Research Station, USDA Forest Service, (2)Oregon State University. Nearest neighbors mapping of vegetation gradients for landscape analysis and conservation planning.

PS 86-213 Martin, KJ1, VR Osterberg2, JR Reichman3, PT Rygiewicz3, RB McKane4 and GA King2, (1)William Paterson University, (2)Dynamac Corporation, (3)US Environmental Protection Agency/NHEERL, (4)Western Ecology Division, US Environmental Protection Agency/NHEERL. Identification of coniferous fine roots to species using ribosomal PCR products of pooled root samples obtained from soil cores.

PS 86-214 Muldavin, EH1, P Arbetan2, EB Henderson3 and M Creutzburg4, (1)Natural Heritage New Mexico, (2)Univ. of New Mexico, (3)Oregon State University, (4)Portland State University. Modeling vegetation dynamics among Chihuahuan Semi-desert Grassland ecological groups as part of the Integrated Landscape Assessment Project (ILAP).

PS 86-215 Scarpino, R1, G Newman2, M Mueller3, A Masching4 and LP Erb5, (1)Natural Resource Ecology Laborary, Colorado State University, Fort Collins, CO, (2)Colorado State University, (3)Rocky Mountain Wild, (4)Denver Zoological Foundation, (5)University of Colorado at Boulder. Integrating citizen science and professional data to model habitat suitability for the American pika.

PS 86-216 Hutchinson, RA, LP Liu and TG Dietterich, Oregon State University. Site occupancy models with regression trees (OD-BRT): A comparison with standard site occupancy models (OD) and boosted regression trees (BRT).

PS 86-217 He, Y1, Q Zhuang1, M Jones2, Z Yu3, BS Felzer4, E Mason3 and C Bochicchio3, (1)Purdue University, (2)University of Alaska Faribanks, (3)Lehigh University, (4)Marine Biological Laboratory. Impacts of enhanced climate seasonality on productivity and CH4 emissions of Alaskan ecosystems during the HTM.

PS 86-218 Ruan, X, Universtiy of Alberta. Power-law – A glistening guardian for warning ecosystem degeneration caused by disturbance?.

PS 86-219 Hobbs, FC and K Clay, Indiana University. A field study supports the existence of many suitable, unoccupied habitat patches predicted by local-scale species distribution models of eastern hemlock (Tsuga canadensis).

PS 86-220 Wang, Y, University of Georgia. Sensitivity analysis of 3-PG model for Pinus taeda (Loblolly Pine).

PS 86-221 Chernoff, B, H Poulos and ML Tipton, Wesleyan University. The importance of landscape rearrangement on historical environmental niche modeling: The contribution of past hydrological landscapes to potential species' distributions.

PS 86-222 Kim, JB1 and JR Wells2, (1)USDA Forest Service Pacific Northwest Research Station, (2)Oregon State University. Sensitivity of a dynamic global vegetation model to input soil data: Trends, mechanisms and needs for better data.

PS 86-223 DeVisser, MH and JP Messina, Michigan State Univeristy. Tsetse fly distributions in a changing world: The possible impacts of climate change on Glossina subgenus Morsitans in Kenya.

PS 86-224 Bentley, AL, JD Holbrook, A Suazo and R Niemeyer, University of Idaho. A conceptual framework for researching the sagebrush-steppe: A social-ecological approach.

PS 86-225 Osborne-Gowey, JD1, DM Bachelet1, GS Mauger2, ES Garcia3, CL Tague3 and K Ferschweiler1, (1)Conservation Biology Institute, (2)Joint Institute for the Study of the Atmosphere and Ocean (JISAO), (3)University of California, Santa Barbara. Assessing the skill of hydrology models at simulaing the water cycle in the HJ Andrews LTER: Assumptions, strengths, and weaknesses.

5 pm-6:30 pm

Musicians Central

Ginkoberry Concourse, Oregon Convention Center

7 pm-9 pm

ESA Closing Social Event: Portland Taiko Drums and Portland Beer Tasting

Oregon Square Courtyard, Doubletree Hotel

Friday Sessions

8 am-9:30 am

Governing Board Meeting

Mt. Bachelor, Doubletree Hotel

8 am-11:30 am

SYMP 22 - Conservation In a Globalizing World

Portland Blrm 251, Oregon Convention Center

Organized by: MA Davis (davis@macalester.edu)

Endorsed by: Human Ecology

Moderator: MA Davis

The purpose of this symposium is to describe how globalization (both biotic and cultural) is presenting conservation with new challenges and opportunities and to highlight perspectives and management practices that may best assist us in achieving our conservation goals.

8:00 AM SYMP 22-1 Chew, MK, Arizona State University. *Changing conservation goals and strategies: A succession of failed metaphors?*.

8:25 AM SYMP 22-2 Rosenzweig, ML, University of Arizona. *Patterns and theory of the globe's terrestrial diversity: Does conservation matter?*.

8:50 AM SYMP 22-3 Swan, CM[1] and STA Pickett[2], (1)University of Maryland, Baltimore County, (2)Cary Institute of Ecosystem Studies. *The role of urban centers in 21st century conservation*.

9:15 AM SYMP 22-4 Sanjayan, M[1], C Leisher[2], C Lukania Oluchina[2] and T Boucher[2], (1)Lead Scientist, The Nature Conservancy, (2)The Nature Conservancy. *Conservation and globalization: A perspective from Africa*.

9:40 AM Break

9:50 AM SYMP 22-5 Carroll, SP, Institute for Contemporary Evolution & UC Davis. *Conciliation biology: A new approach to conservation for the 21st century*.

10:15 AM SYMP 22-6 Hobbs, RJ, University of Western Australia. *Intervention ecology: A new strategic approach for conservation*.

10:40 AM SYMP 22-7 Mascaro, J, Carnegie Institution for Science. *Novel ecosystems and the role of non-native species in providing ecosystem services*.

11:05 AM SYMP 22-8 Wallach, A, James Cook University. *Restoration of permanently invaded ecosystems: The key role of large predators*.

SYMP 23 - Commodifying Nature: The Scientific Basis for Ecosystem Services Valuation In Environmental Decision Making

Portland Blrm 252, Oregon Convention Center

Organized by: ES Bernhardt, JE Compton

Moderator: JE Compton

The idea of commodifying nature to improve ecosystem management is as exciting to some as it is frightening to others. The goal of the session is to explore the scientific basis for ecosystem service quantification in order to move the science forward.

8:00 AM SYMP 23-1 Costanza, R, Portland State University. *The promise and pitfalls of ecosystem service valuation*.

8:25 AM SYMP 23-2 Gergel, SE[1], S Tomscha[1], B Chamberlain[1], A Berthin[1], K Kirby[2], J Morgan[1] and C Ankerson[1], (1) University of British Columbia, (2)University of Toronto. *Heterogeneity and historic patterns of ecosystem services: Ecological, economic and cultural implications*.

8:50 AM SYMP 23-3 Morse, JL, Cary Institute of Ecosystem Studies. *Quantifying multiple ecosystem services and their underlying ecosystem functions in North Carolina's largest wetlands mitigation bank*.

9:15 AM SYMP 23-4 Cochran, B, Willamette Partnership. *The Willamette Partnership - Developing a market for trading ecosystem services*.

9:40 AM Break

9:50 AM SYMP 23-5 Neale, A and M Mehaffey, US EPA. *The National Atlas for Sustainability: Mapping indicators and indices of ecosystem services*.

10:15 AM SYMP 23-6 Robertson, M[1], R Lave[2] and MW Doyle[3], (1)University of Kentucky, (2)Indiana University, (3)Duke University. *To bundle or to stack? The challenges in marketing multiple ecosystem services*.

10:40 AM SYMP 23-7 Ziv, G[1] and R Chaplin-Kramer[2], (1)Natural Capital Project, (2)Stanford University. *Looking ahead: How can we use market tools to sustain ecosystems?*.

11:05 AM Discussion

SYMP 24 - The Evolving Role of Environmental Scientists In Informing Sustainable Ecosystem Policy and Management

Portland Blrm 253, Oregon Convention Center

Organized by: A Sutton-Grier (ariana.suttongrier@gmail.com), M Kenney

Endorsed by: Policy Section, Public Affairs Committee

Moderator: A Sutton-Grier

This session will discuss the role of science in policies and management, specifically how scientists can communicate to policymakers, how to translate science to inform decisions, and how environmental science research can address pressing societal challenges including how to sustainably manage ecosystems.

8:00 AM SYMP 24-1 Kenney, MA, National Oceanic and Atmospheric Administration and the U.S. Global Change Research Program. *The role of science in policymaking and ecosystem management*.

8:20 AM SYMP 24-2 Pouyat, RV[1], R Haeuber[2] and K Weathers[3], (1)USFS, (2)US Environmental Protection Agency, (3) Cary Institute of Ecosystem Studies. *Scientific input and the policy process: The case of atmospheric pollution*.

8:40 AM SYMP 24-3 Kimberling, D, Oregon Department of Agriculture. *Pest Risk Analysis: The interface of invasive species biology, international trade policies, and federal/state perspectives*.

9:00 AM SYMP 24-4 Johnson, MVV, USDA-NRCS. *Scientists, policy makers can't hear you! How to improve your chances of being heard*.

9:20 AM SYMP 24-5 Fallon, S, Natural Resources Defense Council. *Are you a lawyer? The role of science and advocacy in shaping U.S. wildlife protection policies*.

9:40 AM Break

9:50 AM SYMP 24-6 Gurwick, N, Union of Concerned Scientists. *Science and advocacy for sustainable agriculture at an NGO*.

10:10 AM SYMP 24-7 Petes, L, National Oceanic and Atmospheric Administration. *From dipping my toes to diving in head-first: Experiences communicating science to inform ocean and climate policy*.

10:30 AM SYMP 24-8 Quinn, C, National Oceanic and Atmospheric Administration. *From the field to the policy arena: Linking science to action*.

10:50 AM Discussion

OOS 50 - Carbon or Sinks: The Causes of Tree Growth Limitation

A105, Oregon Convention Center

Organized by: ET Wiley, S Asao

Moderator: DL Hoover

This session addresses the debate over carbon versus sink limitation to tree growth, with discussions covering specific cases of carbon or sink limitation, the validity of evidence used to distinguish between the types of limitation, and the relevance of carbon and sink limitation to ecosystem processes.

8:00 AM OOS 50-1 Van Pelt, R[1], SC Sillett[1] and WA Kruse[2], (1)Humboldt State University, (2)Kruse Imaging. *Old-growth redwood forests II: Accurately quantifying the endpoint of above-ground carbon accumulation*.

8:20 AM OOS 50-2 Aubrey, DP[1], RO Teskey[1] and RJ Mitchell[2], (1)University of Georgia, (2)Joseph W. Jones Ecological Research Center. *Is root maintenance limited by carbon availability?*.

8:40 AM OOS 50-3 Woodruff, DR[1], FC Meinzer[1] and KR Falk[2], (1)USDA Forest Service, (2)Oregon State University. *Water stress and the transport of carbohydrates: Phloem sap and sieve cell characteristics along a height and water stress gradient in a tall conifer*.

9:00 AM OOS 50-4 Körner, C[1] and G Hoch[2], (1)University of Basel, (2)Institute of Botany, University of Basel. *The biology of alpine treelines in a carbon source-sink context*.

9:20 AM OOS 50-5 Lewis, JD, Fordham University. *Rising CO_2 shifts the balance between carbon and nutrient limitation of growth*.

9:40 AM Break

9:50 AM OOS 50-6 Smith, NG and JS Dukes, Purdue University. *The carbon use efficiency of five deciduous tree seedlings in response to warming and altered precipitation in a northeastern old-field ecosystem*.

10:10 AM OOS 50-7 Ryan, MG[1] and M Mencuccini[2], (1)USDA Forest Service, (2)University of Edinburgh. *What do nonstructural carbohydrate concentrations of trees indicate about plant carbon balance?*.

10:30 AM OOS 50-8 Wiley, ET, BB Casper and B Helliker, University of Pennsylvania. *Experimental defoliation in black oak: Can storage allocation increase in response to carbon limitation?*.

10:50 AM OOS 50-9 Mantooth, JA[1] and MC Dietze[2], (1)University of Illinois Urbana-Champaign, (2)University of Illinois. *Cross-site analysis of tree carbon reserves in Eastern US forests*.

11:10 AM OOS 50-10 Asao, S[1], MG Ryan[2] and WJ Parton[1], (1) Colorado State University, (2)USDA Forest Service. *Incorporating sink and source dynamics to improve the performance of a forest ecosystem model*.

OOS 51 - Biological Soil Crusts: Their Diversity, Functional Ecology and Management

A107, Oregon Convention Center

Organized by: B Weber (weberb@rhrk.uni-kl.de), J Belnap

Moderator: J Belnap

Biological soil crusts are a critical component of dryland ecosystems, contributing to the diversity, functionality and nutrient cycling of these regions worldwide. This symposium will address the variety of ecosystem services provided by biological soil crusts, which are essential for the preservation, utilization and sustainable management of ecosystems.

8:00 AM OOS 51-1 Beraldi-Campesi, H, Institute of Geology. *Biological soil crusts beyond the Phanerozoic*.

8:20 AM OOS 51-2 Meadow, JF and CA Zabinski, Montana State University. *Analysis of combined prokaryotic and eukaryotic microbial communities in a geothermal biological soil crust through bar-coded pyrosequencing*.

8:40 AM OOS 51-3 Hernandez, RR[1] and K Knudsen[2], (1) Carnegie Institution for Science, (2)University of California, Riverside. *Late-successional biological soil crusts in a biodiversity hotspot: An example of congruency in species richness*.

9:00 AM OOS 51-4 Buedel, B[1], OL Lange[2], C Colesie[1] and WJ Williams[3], (1)University of Kaiserslautern, (2)University of Würzburg, (3)University of Queensland. *Diversity levels of biological soil crusts: The structural-, photoautotrophic species-, and the photosynthetic type-level*.

9:20 AM OOS 51-5 Pietrasiak, N[1], JR Johansen[2], RE Drenovsky[2] and RC Graham[3], (1)University of California, (2)John Carroll University, (3)University of California, Riverside. *The effects of geomorphology and associated soil properties on biological soil crust abundance and distribution*.

9:40 AM Break

9:50 AM OOS 51-6 Zhang, Y, Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences. *The effects of well-developed biological soil crusts on vascular plants in a temperate desert of Northwestern China: Negative or positive?*.

10:10 AM OOS 51-7 Peterson, EB, California Lichen Society. *Soil crusts versus invasive annual grasses*.

10:30 AM OOS 51-8 Zhao, Y[1] and M Xu[2], (1)Institute of Soil and Water Conservation, Northwest A&F University, (2) Northwest A&F University . *Using mosses to restore ecosystem function to the Loess Plateau, China*.

10:50 AM OOS 51-9 Weber, B, University of Kaiserslautern. *Biological crusts: A forgotten component of the global carbon and nitrogen cycle?*.

11:10 AM OOS 51-10 Bowker, MA[1], FT Maestre[2], AP Castillo-Monroy[2] and DJ Eldridge[3], (1)US Geological Survey, (2)Universidad Rey Juan Carlos, (3)University of New South Wales. *Biological soil crusts as a model system in community and landscape ecology*.

OOS 52 - Underlying Mechanisms of Woody Plant Encroachment

B110, Oregon Convention Center

Organized by: SN Bissett (bissettsn@vcu.edu)

Moderator: SN Bissett

This OOS will provide an opportunity for both established scientists and graduate researchers to present cutting edge research that focuses on the variety of ecological processes that facilitate expansion for both native and exotic woody species.

8:00 AM OOS 52-1 Young, DR, Virginia Commonwealth University. *From seedling establishment to thicketization* .

8:20 AM OOS 52-2 Zinnert, JC, US Army Corps of Engineers. *Light use efficiency and response to environmental stress: Invasion of shrubs into different communities*.

8:40 AM OOS 52-3 Fruchter, J[1] and LL Battaglia[2], (1)Southern Illinois University at Carbondale, (2)Southern Illinois University. *Changing disturbance regimes and woody species dynamics in coastal wetlands*.

9:00 AM OOS 52-4 Beard, KH[1], A Kulmatiski[1] and M Mazzacavallo[2], (1)Utah State University, (2)University of Alaska Anchorage. *The two-layer hypothesis is dead: Long live the two-layer hypothesis*.

9:20 AM OOS 52-5 Ratajczak, Z, J Nippert and TW Ocheltree, Kansas State University. *Bi-stability, compromised resilience, and state-shift indicators: Abrupt shift of tallgrass prairie to degraded shrubland*.

9:40 AM Break

9:50 AM OOS 52-6 Shiflett, SA[1], JC Zinnert[2] and DR Young[1], (1) Virginia Commonwealth University, (2)US Army Corps of Engineers. *Linking hydraulic properties, canopy structure, and light use to shrub expansion*.

10:10 AM OOS 52-7 Gabler, CA and E Siemann, Rice University. *How ontogenetic niche shifts in the moisture tolerances of an exotic tree influence its invasion dynamics*.

10:30 AM OOS 52-8 D'Odorico, P[1], Y He[1], S DeWekker[1], J Fuentes[2], SL Collins[3], WT Pockman[3] and ME Litvak[3], (1)University of Virginia, (2)Pennsylvania State University, (3)University of New Mexico. *Alternative stable states of grassland and woodland introduced by positive feedbacks between vegetation and microclimate*.

10:50 AM OOS 52-9 Holdo, RM, University of Missouri. *Revisiting the two-layer hypothesis: theoretical insights on the coexistence of alternative functional rooting strategies across rainfall and edaphic gradients*.

11:10 AM OOS 52-10 Williams, JR, Alabama A&M University. *Effect of high-intensity directed fire in different seasons on survival and sprouting of three invasive species: Lonicera spp. (bush honeysuckle), Paulownia tomentosa (Royal paulownia), and ligustrum sinense (Chinese privet)*.

OOS 53 - Global Browning of Inland Waters: Implications of Changing Terrestrial Dissolved Organic Carbon Concentrations for Aquatic Ecosystems

B113, Oregon Convention Center

Organized by: CT Solomon, BC Weidel, SE Jones

Moderator: SE Jones

This session will focus on how the direct and indirect influences of terrestrial carbon will combine to regulate aquatic ecosystem services, including carbon balances and fisheries, under elevated terrestrial carbon supply.

8:00 AM OOS 53-1 Lennon, JT, Indiana University. *Browning of freshwater ecosystems: culprits and consequences of global change*.

8:20 AM OOS 53-2 Buffam, I[1], PC Hanson[2], MG Turner[2] and SR Carpenter[3], (1)University of Cincinnati, (2)University of Wisconsin, (3)University of Wisconsin - Madison. *Why are small lakes brown? A framework for assessing watershed carbon loading and in-lake processing for a northern lake district*.

8:40 AM OOS 53-3 Larsen, S, University of Oslo. *Predicted terrestrial carbon loads to lakes under future climate scenarios*.

9:00 AM OOS 53-4 Read, JS[1], KC Rose[2] and PC Hanson[3], (1)University of Wisconsin-Madison, (2)Smithsonian Environmental Research Center, Edgewater, MD USA, (3) University of Wisconsin. *Controls of lake water color on stratification, mixing, and seasonal water temperatures in small temperate lakes*.

9:20 AM OOS 53-5 Saros, JE[1], CE Williamson[2], CEH Kissman[2] and KC Rose[3], (1)University of Maine, (2)Miami University, (3)Smithsonian Environmental Research Center, Edgewater, MD USA. *Dissolved organic material as a resource subsidy for phytoplankton in lake ecosystems*.

9:40 AM Break

9:50 AM OOS 53-6 Fork, ML[1] and J Heffernan[2], (1)Florida International University, (2)Duke University. *Direct and indirect effects of organic matter sources on denitrification in Florida rivers*.

10:10 AM OOS 53-7 Sadro, S and CE Nelson, University of California, Santa Barbara. *Dissolved organic matter dynamics in high-elevation lakes: Effects on bacterial ecology and ecosystem metabolism*.

10:30 AM OOS 53-8 Karlsson, J, AK Bergström, P Byström, C Gudasz and C Hein, Umeå University. *Implications of changing terrestrial organic carbon export on lake productivity: Merging process and habitat specific responses to an integrated ecosystem level understanding*.

10:50 AM OOS 53-9 Weidel, BC[1], J Zwart[2], SE Jones[3] and CT Solomon[4], (1)US Geological Survey, (2)Calvin College, (3)University of Notre Dame, (4)McGill University. *Implications of dissolved organic carbon on fish feeding and predator prey interactions*.

11:10 AM OOS 53-10 Solomon, CT[1], SE Jones[2], BC Weidel[3] and PT Kelly[2], (1)McGill University, (2)University of Notre Dame, (3)US Geological Survey. *Subsidy or subtraction? Whole-lake experiments, surveys, and models to test the effects of terrestrial DOC on aquatic food webs*.

OOS 54 - Community Context of Species' Range Expansions: Novel Community Associations In Response to Biological Invasions and Climate Change

B116, Oregon Convention Center

Organized by: KM Prior (k.prior@utoronto.ca), TD Marsico

Moderator: KM Prior

Biodiversity is being altered as novel community associations form in response to the reshuffling of species around the globe. This session presents research on the influence of novel community associations on range-expanding species and the effect of these novel species on their recipient communities.

8:00 AM OOS 54-1 terHorst, CP and JA Lau, Michigan State University. *Genetic variation in response to the biotic community influences invasion success*.

8:20 AM OOS 54-2 Desurmont, G, University of Neuchatel. *Conquering a defense-free space: History and ecological context of viburnum leaf beetle invasion in North America*.

8:40 AM OOS 54-3 Marczak, L, The University of Montana. *Range expansion, sudden declines and unknown food web interactions of an aquatic invader*.

9:00 AM OOS 54-4 Gandhi, KJK, University of Georgia. *Response of native arthropods to ash tree decline and mortality due to the exotic emerald ash borer*.

9:20 AM OOS 54-5 Engelkes, T[1] and NJ Mills[2], (1)University of California Berkeley, (2)University of California - Berkeley. *Food plant legacy and tri-trophic interactions in the context of novel invasive species associations*.

9:40 AM Break

9:50 AM OOS 54-6 Marsico, TD and AM Woodard, Arkansas State University. *Do recent invasion frameworks downplay the community context of species invasions?*.

10:10 AM OOS 54-7 Bishop, JG, Washington State University. *Do novel community associations confer instability? Insights from plant-insect interactions during primary succession at Mount St. Helens*.

10:30 AM OOS 54-8 Fey, SB[1] and CM Herren[2], (1)Dartmouth College, (2)Dartmouth. *Predicting the impact of climate change on the establishment success of non-native species*.

10:50 AM OOS 54-9 Zarnetske, PL[1], MC Urban[2] and DK Skelly[1], (1)Yale University, (2)University of Connecticut. *Climate change effects on community composition and species distributions: The relative influence of species interactions*.

11:10 AM OOS 54-10 Erfmeier, A, S Klein, E Welk and H Bruelheide, Martin Luther University Halle-Wittenberg. *The role of climatic niche shifts and study type for phenotypic differentiation – A meta-analysis on native and invasive plant performances in common environment studies*.

OOS 55 - Effect Sizes of Global Change Impacts Across Spatiotemporal Scales and Organizational Levels

A106, Oregon Convention Center

Organized by: ES Gornish (egornish@bio.fsu.edu), S Leuzinger

Moderator: S Leuzinger

Many global change studies have demonstrated changes in effect size or even a sign reversal as experiments continue over many years, or span multiple levels of organization. This symposium offers broad perspectives on global change research, dealing with effect sizes across ecosystems, temporal and spatial scales, and organizational levels.

8:00 AM OOS 55-1 Bachelet, DM, D Conklin and K Ferschweiler, Conservation Biology Institute. *Simulating climate change effects at various scales: can usable guidance emerge from an ensemble of outcomes?*.

8:20 AM OOS 55-2 Buckley, LB and JG Kingsolver, University of North Carolina at Chapel Hill. *Impacts of shifts in climate means and extremes on alpine butterfly demography*.

8:40 AM OOS 55-3 Ibanez, I[1], JM Diez[1], CJB Sorte[2], D Blumenthal[3], LP Miller[2], N Molinari[4], ED Grosholz[5], CM DAntonio[4], SJ Jones[6] and J Olden[7], (1)University of Michigan, (2) University of Massachusetts - Boston, (3)USDA-ARS, (4) University of California Santa Barbara, (5)UC Davis, (6) University of South Carolina, (7)University of Washington. *Will invasive species outperform native competitors under global change? Using effect size to assess invasive and native species sensitivity to future conditions*.

9:00 AM OOS 55-4 Gornish, ES, Florida State University. *Interactive effects of global change and invasion on biotic response across organizational levels in an old-field plant community*.

9:20 AM OOS 55-5 Hellmann, JJ[1], KR Hall[2] and NV Chawla[1], (1) University of Notre Dame, (2)The Nature Conservancy. *Online collaboration to enable research and planning in climate change biology and adaptation science*.

9:40 AM Break

9:50 AM OOS 55-6 Niu, S, R Sherry, X Zhou and Y Luo, University of Oklahoma. *Ecosystem water fluxes in response to climate warming and biofuel harvest in a tallgrass prairie*.

10:10 AM OOS 55-7 Levy, O[1], LB Buckley[2], TH Keitt[3] and MJ Angilletta[1], (1)Arizona State University, (2)University of North Carolina at Chapel Hill, (3)The University of Texas at Austin. *The costs of uncertainty: How the resolution of environmental data affect the predictions of mechanistic models*.

10:30 AM OOS 55-8 Schymanski, SJ, ETH Zurich. *Elevated CO_2, vegetation and the hydrologic cycle – the role of observations and models*.

10:50 AM OOS 55-9 Conlisk, EE[1], AD Syphard[2], J Franklin[3], L Flint[4], A Flint[4] and HM Regan[5], (1)University of California, Riverside, (2)Conservation Biology Institute, (3)Arizona State University, (4)USGS California Water Science Center, (5)University of California. *A sensitivity analysis of spatially dynamic population models of global change*.

COS 172 - Abundance And Rarity

A103, Oregon Convention Center

8:00 AM COS 172-1 Oswalt, CM[1] and HW Brooks[2], (1)USDA Forest Service - Southern Research Station, (2)USDA Forest Service. *The shrinking footprint of longleaf pine (Pinus palustris) in the southeastern United States*.

8:20 AM COS 172-2 Southworth, D and JL Frank, Southern Oregon University. *Rarity in sequestrate fungi (truffles): A function of niche width or productivity*.

8:40 AM COS 172-3 Reusser, D[1], H Lee II[2] and E Saarinen[3], (1)USGS, (2)U.S. Environmental Protection Agency, (3)University of Michigan-Dearborn. *Hierarchical frameworks for distributional and life history data: Implementation of a new ecoinformatics tool*.

9:00 AM COS 172-4 Paul, JR and AL Angert, Colorado State University. *The historical demography of geographic range limits*.

9:20 AM COS 172-5 Cobbold, C and T Leinster, University of Glasgow. *Measuring biodiversity: The importance of species similarity*.

9:40 AM Break

9:50 AM COS 172-6 Kroiss, SJ and TM Knight, Washington University in St. Louis. *Dispersal limits rare species establishment in restored habitats more than competition or stress*.

10:10 AM COS 172-7 Yenni, GM, Utah State University. *Strong self-limitation for rare species across environments and taxa*.

10:30 AM COS 172-8 Neel, MC[1] and JP Che-Castaldo[2], (1) University of Maryland, (2)University of Maryland, College Park. *Predicting endangered species recovery objectives using biological traits and patterns of decline*.

10:50 AM COS 172-9 Kulmatiski, A, KH Beard and J Heavilin, Utah State University. *Plant-soil feedbacks provide an additional explanation for diversity-productivity relationships*.

COS 173 - Aquatic Ecology: Lakes And Ponds

B112, Oregon Convention Center

8:00 AM COS 173-1 Twining, CW[1], DM Post[1], DC West[1] and CE Geiss[2], (1)Yale University, (2)Trinity College. *Past ecosystem dynamics in Connecticut's coastal freshwaters: Linking paleoecology and nutrient loading models*.

8:20 AM COS 173-2 Parsons, M[1], MC Thoms[1] and J Flotemersch[2], (1)University of New England, (2)U.S. Environmental Protection Agency. *Fundamental concepts for river management futures*.

8:40 AM COS 173-3 Showalter, AM, MJ Vanni and MJ Gonzalez, Miami University. *Diet shifts and developmental requirements contribute to ontogenetic changes in the ecological stoichiometry of bluegill sunfish (Lepomis macrochirus)*.

9:00 AM COS 173-4 McCabe, SK and LA Molot, York University. *Vertical migration by filamentous cyanobacteria (Aphanizomenon spp.) and the implications for algal blooms in Lake 227, Experimental Lakes Area, Ontario, Canada*.

9:20 AM COS 173-5 Weeber, RC[1], L Leston[2] and N Koper[2], (1) Environment Canada, (2)University of Manitoba. *Status and trends of breeding waterbirds in boreal Ontario lakes (1983-2010)*.

9:40 AM Break

9:50 AM COS 173-6 Kelly, PT[1], KA Baglini[1], CT Solomon[2], BC Weidel[3] and SE Jones[1], (1)University of Notre Dame, (2)McGill University, (3)US Geological Survey. *Does terrestrial carbon affect zooplankton production? A survey of north temperate lakes*.

10:10 AM COS 173-7 Gillette, JP, KL Schulz and MA Teece, State University of New York College of Environmental Science and Forestry. *You are what you eat (or produce): Using stable carbon isotope analysis to quantify mixotrophic feeding in three freshwater Chrysophyte algae*.

10:30 AM COS 173-8 Dinger, E[1] and DA Sarr[2], (1)Klamath Network, (2)Klamath Network-National Park Service. *Constructing a multi-metric model of ecological integrity for the lakes and ponds of Lassen Volcanic National Park, CA, USA*.

10:50 AM COS 173-9 Richardson, DC[1], JL Klug[2], HA Ewing[3], BR Hargreaves[4], NR Samal[5], D Vachon[6], DC Pierson[5], AE Lindsey[7], D O'Donnell[8], SW Effler[8] and KC Weathers[7], (1)SUNY New Paltz, (2)Fairfield College, (3)Bates College, (4)Lehigh University, (5)NYC Department of Environmental Protection, (6)Université du Québec à Montréal, (7)Cary Institute of Ecosystem Studies, (8) Upstate Freshwater Institute. *A regional analysis of the physical and biological effects of Tropical Cyclone Irene on lake ecosystems across northeastern United States and eastern Canada*.

COS 174 - Arid And Semi-Arid Systems

B114, Oregon Convention Center

8:00 AM COS 174-1 Sandquist, DR[1], DR Bedford[2], M Macias[1], DM Miller[2], AR Newlander[1], KS Perkins[2] and S Schwinning[3], (1)California State University, Fullerton, (2)U. S. Geological Survey, (3)Texas State University. *Ecohydrologic functions of small washes on a Mojave Desert bajada and some impacts of their disturbance*.

8:20 AM COS 174-2 Keeley, JE[1], T McGinnis[1] and KN Keeley[2], (1)U.S. Geological Survey, (2)University of Califoria. *A subregional analysis of climate / fire interactions in California*.

8:40 AM COS 174-3 Browning, DM[1] and C Steele[2], (1)USDA Agriculture Research Service, (2)New Mexico State University, Las Cruces, NM, 88003. *Evaluating plant community responses to rainfall extremes in southwest U.S. ecosystems using radiometric change detection*.

9:00 AM COS 174-4 Mudrak, EL[1], JL Schafer[2], A Fuentes Ramirez[1], C Holzapfel[2] and KA Moloney[1], (1)Iowa State University, (2)Rutgers University. *Predictive modeling of spatial patterns of soil nutrients associated with fertility islands in the Mojave and Sonoran deserts*.

9:20 AM COS 174-5 Levi, EM[1], SR Archer[1], HL Throop[2], K Predick[1], PW Barnes[3] and MA Tobler[3], (1)University of Arizona, (2)New Mexico State University, (3)Loyola University. *Soil deposition and UV radiation influence litter decomposition in a shrub-invaded dryland ecosystem*.

9:40 AM Break

9:50 AM COS 174-6 Jiménez, MA[1], JJ Armesto[2], A Gaxiola[3], M Carmona[4] and FM Jaksic[5], (1)Universidad Católica de Chile, IEB, CASEB, IRECA, (2)Institute of Ecology and Biodiversity, (3)IEB, Universidad de Chile, CASEB, P. Universidad Catolica de Chile, (4)Institute of Ecology and Biodiversity and CASEB, Pontificia Universidad Católica de Chile, (5)Departamento de Ecología PUC, CASEB. *Changes in limiting resources in semiarid ecosystems enhance invasibility and composition of ephemeral plants*.

10:10 AM COS 174-7 St. Clair, SB[1], KJ Horn[2] and B McMillan[1], (1) Brigham Young University, (2)Brigham Young Univiersity. *Fire alters top-down effects of small mammal granivores on Mojave Desert plant communities*.

10:30 AM COS 174-8 Bates, JD, USDA - Agricultural Research Service. *Woodland successional phase effects vegetation recovery after prescribed fire*.

10:50 AM COS 174-9 Nettles, RM[1], KJ Horn[2] and S St.Clair[1], (1) Brigham Young University, (2)Brigham Young Univiersity. *The effects of temperature and water availability on the germination of Bromus rubens*.

11:10 AM COS 174-10 Herrmann, JD[1], MH Schmidt[2] and Y Lubin[3], (1)University of Washington, (2)University Koblenz-Landau, (3)Ben-Gurion University. *The effects of habitat age in the surrounding landscape on spider communities in Eucalyptus plantations in the Northern Negev, Israel*.

COS 175 - Behavior II

B115, Oregon Convention Center

8:00 AM COS 175-1 Morris, DW[1], A Dupuch[2] and WD Halliday[1], (1)Lakehead University, (2)Université Laval. *Global warming, habitat change, and the future of lemming habitat selection*.

8:20 AM COS 175-2 McRae, TR, University of Miami. *Predator-specificity of eastern gray squirrel alarm signals differs across sensory modalities*.

8:40 AM COS 175-3 Li, B[1], P Bednekoff[2], A Belasen[3] and F Johannes[3], (1)University of MIchigan, (2)Eastern Michigan University, (3)University of Michigan. *Effects of feral cats on the evolution of antipredator behaviors in the Aegean island lizard Podarcis erhardii*.

9:00 AM COS 175-4 Hua, F[1], RJ Fletcher Jr.[1], KE Sieving[1] and RM Dorazio[2], (1)University of Florida, (2)U.S. Geological Survey. *Too scared to settle: Predation risk shapes breeding bird community in ways predictable from functional traits*.

9:20 AM COS 175-5 Mosser, AA[1], T Avgar[1], GS Brown[2] and J Fryxell[1], (1)University of Guelph, (2)Ontario Ministry of Natural Resources. *Towards an energetic landscape: Broad-scale accelerometry in woodland caribou*.

9:40 AM Break

9:50 AM COS 175-6 Warchola, N[1], EE Crone[1] and CB Schultz[2], (1)Harvard University, (2)Washington State University Vancouver. *The effects of fire on the behavior of an endangered butterfly: A study of Fender's blue in Oregon's Willamette Valley*.

10:10 AM COS 175-7 Emery, VJ, University of California, Berkeley. *Parallel recognition systems in parabiotic nests: no evidence for interspecific gestalt or interspecific nestmate reocognition*.

10:30 AM COS 175-8 Mitchell, WA and SL Lima, Indiana State University. *Adaptive dynamics of multiple behaviors along a shy-bold continuum*.

10:50 AM COS 175-9 Dobson, HEM[1], JH Cane[2], BM Boyer[1] and R Helms[1], (1)Whitman College, (2)USDA Agricultural Research Service. *Adult solitary bees actively consume pollen throughout their life span*.

11:10 AM COS 175-10 Gobush, KS, NOAA Fisheries. *Significant covariates of non-invasive measures of glucocorticoids and thyroid hormone in free-ranging Hawaiian monk seals (Monachus schauinslandi)*.

COS 176 - Biodiversity V

C123, Oregon Convention Center

8:00 AM COS 176-1 Cavanaugh, KC[1], SL Davis[1], JS Gosnell[2], J Ahumada[3] and S Andelman[3], (1)University of California Santa Barbara, (2)University of California, Santa Barbara, (3)Conservation International. *Interactions among climate, biodiversity, and ecosystem services in tropical forest ecosystems*.

8:20 AM COS 176-2 Dawson, TE[1], A West[2], TL Aston[3], WJ Bond[2], G Midgley[4] and E February[2], (1)UC Berkeley,

(2)University of Cape Town, (3)University of Wyoming, (4)South African National Biodiversity Institute. *Plant functional responses to drought in the Fynbos of South Africa*.

8:40 AM COS 176-3 McDaniel, MD and AS Grandy, University of New Hampshire. *Cropping biodiversity effects on soil organic matter dynamics and microbial function*.

9:00 AM COS 176-4 Gilbert, B[1], JM Levine[2] and J Hille Ris Lambers[3], (1)University of Toronto, (2)ETH Zurich, (3) University of Washington. *Quantifying ecological drift in annual plant communities*.

9:20 AM COS 176-5 Daly, RA, DW Armitage, JB Emerson, D Goltsman, H Salim, AP Yelton, J Kerekes, MK Firestone and MD Potts, University of California, Berkeley. *Comparing the incomparable: Reconciling dimensions of biodiversity across microbial domains*.

9:40 AM Break

9:50 AM COS 176-6 Enquist, BJ[1], B Boyle[1], JC Donoghue II[1], B Thiers[2], P Jorgensen[3], BJ McGill[4], JC Svenning[5], R Condit[6], N Morueta-Holme[5], LL Sloat[1] and T BIEN Working Group[7], (1)University of Arizona, (2)The New York Botanical Garden, (3)Missouri Botanical Garden, (4) McGill University, (5)Aarhus University, (6)Smithsonian Tropical Research Institute, (7)National Center for Ecological Analysis and Synthesis. *The commonness and distribution of rarity: Quantifying the botanical diversity of all plant species in the Americas*.

10:10 AM COS 176-7 Fitzpatrick, MC[1], NJ Sanders[2], S Normand[3], JC Svenning[4], S Ferrier[5], AD Gove[6] and RR Dunn[7], (1) University of Maryland Center for Environmental Science, (2)University of Tennessee, (3)Swiss Federal Research Institute WSL, (4)Aarhus University, (5)CSIRO Ecosystem Services, (6)Curtin University, (7)NCSU. *Climatic history, seed dispersal, and patterns of δdiversity in the floras of southwest Australia and northern Europe*.

10:30 AM COS 176-8 Blarquez, O[1], C Carcaillet[2] and Y Bergeron[3], (1)Université du Québec à Montréal, (2)Université de Montpellier 2, (3)University of Quebec in Abitibi-Temiscamingue. *Intermediate level of environmental changes promotes higher community richness since 15,500 years*.

10:50 AM COS 176-9 Uno, H[1], K Kitayama[2] and D Dudgeon[3], (1) University of California, Berkeley, (2)Kyoto University, (3) The University of Hong Kong. *The hierarchical spatial structure of the river network supports high biodiversity in headwater streams*.

11:10 AM COS 176-10 Gonthier, DJ[1], KK Ennis[2], SA Farinas[3], HY Hsieh[1], A Iverson[3], BJ Cardinale[1] and I Perfecto[1], (1)University of Michigan, (2)University of Toledo, (3) University of Mchigan. *The influence of local and landscape level agricultural factors on within farm biodiversity*.

COS 177 - Biogeochemistry: Scaling Processes From Genes To Ecosystems

F150, Oregon Convention Center

8:00 AM COS 177-1 Cleveland, CC[1], SC Reed[2] and BZ Houlton[3], (1)University of Montana, (2)USGS, (3)University of California, Davis. *Have we greatly overestimated nitrogen (N) inputs via biological N fixation in tropical forests?*.

8:20 AM COS 177-2 Mendola, ML[1], SG Baer[1] and L Johnson[2], (1) Southern Illinois University, (2)Kansas State University. *Ecotypic variation in a dominant prairie grass affects belowground biomass and ecosystem processes*.

8:40 AM COS 177-3 Sobota, DJ[1], JE Compton[2] and JA Harrison[3], (1)National Research Council Postdoctoral Associate, (2)US EPA, NHEERL, Western Ecology Division, (3) Washington State University Vancouver. *Regional and national significance of biological nitrogen fixation by crops in the United States*.

9:00 AM COS 177-4 Lintz, HE[1], A Kruger[2], D Wagner[2] and I Tenney[2], (1)Oregon Climate Change Research Institute, (2)University of Iowa. *Small automated sensor of plant flowering and vegetative bud break*.

9:20 AM COS 177-5 Goad, RK[1], SG Baer[2], B Klubek[2] and DJ Gibson[2], (1)Southern Illinois University Carbondale, (2) Southern Illinois University. *A test of local adaptation to soil microbial communities in tallgrass prairie plant assemblages*.

9:40 AM Break

9:50 AM COS 177-6 Buckley, TN[1], TL Turnbull[2] and MA Adams[2], (1)Sonoma State University, (2)University of Sydney. *Testing simple new conductance models that are derived from a process model and can be parameterised by gas exchange*.

10:10 AM COS 177-7 Harrison, JA[1], P Frings[2], A Beusen[3], D Conley[2] and M McCrackin[4], (1)Washington State University Vancouver, (2)Lund University, (3)Netherlands Environmental Assessment Agency, (4)Washington State University, Vancovuer. *Regional and global controls and potential significance of dissolved silica retention in lakes and reservoirs*.

10:30 AM COS 177-8 McCormack, ML[1], EA Crisfield[1], B Raczka[1], SG Pritchard[2], DM Eissenstat[3] and EAH Smithwick[1], (1)The Pennsylvania State University, (2)College of Charleston, (3)Pennsylvania State University. *Fine root lifespan and turnover at ecosystem and landscape scales: Sensitivity of four ecological models and new strategies for model incorporation*.

10:50 AM COS 177-9 Tang, J and T Savas, Marine Biological Laboratory. *Stem respiration and its linkage with soil respiration*.

11:10 AM COS 177-10 West, J[1], D Moore[1], A Hyodo[1], G Bowen[2], C Miller[2], T Zhang[2] and L Zhao[2], (1)Texas A&M University, (2)Purdue University. *Understanding human withdrawals through tap water stable isotope comparison with meteoric water isoscapes*.

COS 178 - Biogeography And Macroecology

F151, Oregon Convention Center

8:00 AM COS 178-1 Van der Hoek, Y[1], R Renfrew[2] and LL Manne[1], (1)City University of New York, (2)The Vermont Center for Ecostudies. *Variation in long-term threshold responses to habitat availability*.

8:20 AM COS 178-2 Hart, SJ[1], KS Eisenhart[2], D Jarvis[3], D Kulakowski[3] and TT Veblen[1], (1)University of Colorado, (2)Edinboro University of Pennsylvania, (3)Clark University. *Climate variability and historical spruce beetle outbreaks across northwestern Colorado*.

8:40 AM COS 178-3 O'Donnell, JL, University of California Santa Cruz. *Data collected from user-uploaded photo websites improves estimation of habitat area and range size in the anemonefishes*.

9:00 AM COS 178-4 Kitzes, JA[1], M Wilber[1], DJ McGlinn[2] and J Harte[1], (1)University of California, Berkeley, (2) University of North Carolina, Chapel Hill. *Patterns in species aggregation across spatial scales and species abundances*.

9:20 AM COS 178-5 Veech, JA, Texas State University - San Marcos. *A probability-based reanalysis of a classic dataset from biogeography and community ecology*.

9:40 AM Break

9:50 AM COS 178-6 Trebilco, R[1], JK Baum[2], AK Salomon[1] and NK Dulvy[1], (1)Simon Fraser University, (2)University of Victoria. *Understanding Eltonian biomass pyramids with size-based ecological theory*.

10:10 AM COS 178-7 Morueta-Holme, N[1], BJ Enquist[2], BJ McGill[3] and JC Svenning[1], (1)Aarhus University, (2)University of Arizona, (3)University of Maine. *Patterns and processes behind the range size distributions of the New World plants*.

10:30 AM COS 178-8 Morales-Castilla, I[1], M Olalla-Tárraga[1], A Purvis[2], B Hawkins[3] and M Rodríguez[1], (1)Universidad de Alcalá, (2)Imperial College London, (3)University of California-Irvine. *Cenozoic migrations, extinctions and the latitudinal gradient in body size of New World mammals*.

10:50 AM COS 178-9 Avery, JD[1], D Fonseca[1], P Cassey[2] and JL Lockwood[1], (1)Rutgers University, (2)University of Adelaide. *Cryptic invasion and the interpretation of island biodiversity*.

11:10 AM COS 178-10 Jetz, W[1] and RP Freckleton[2], (1)Yale University, (2)University of Sheffield. *Predicting species extinction risk from phylogenetic, spatial and remotely sensed environmental information*.

COS 179 - Climate Change: Biogeochem Cycles II

D135, Oregon Convention Center

8:00 AM COS 179-1 McCrackin, M[1], JA Harrison[2] and JE Compton[3], (1)Washington State University, (2) Washington State University Vancouver, (3)US EPA, NHEERL, Western Ecology Division. *Factors influencing export of dissolved inorganic nitrogen by major rivers: A new seasonal, spatially explicit, global model*.

8:20 AM COS 179-2 Wood, TE[1], D Matthews[2], KL Vandecar[2] and D Lawrence[2], (1)USDA Forest Service, (2)University of Virginia. *Controls on diurnal variation in labile soil phosphorus of two wet tropical forests*.

8:40 AM COS 179-3 Alexander, HD[1], M Mack[1], L Boby-Sabatinelli[1], TN Hollingsworth[2], S Goetz[3] and PSA Beck[3], (1)University of Florida, (2)Boreal Ecology Cooperative Research Unit & PNW Research Station USDA Forest Service, (3)Woods Hole Research Center. *From flames to forests: Carbon dynamics during post-fire succession in Alaskan boreal forests*.

9:00 AM COS 179-4 Lichstein, JW[1], N Golaz[2], S Malyshev[2], E Shevliakova[2], R Birdsey[3] and SW Pacala[2], (1)University of Florida, (2)Princeton University, (3)Forest Service. *Constraining terrestrial biosphere models with forest inventory data*.

9:20 AM COS 179-5 Stoy, PC[1], FA Rains[1], C Welch[1] and JG Evans[2], (1)Montana State University, (2)Centre for Ecology and Hydrology. *Cold season ecosystem respiration: The roles of snow and atmosphere in controlling carbon flux*.

9:40 AM Break

9:50 AM COS 179-6 Hicks Pries, CE[1], EF Pegoraro[1], EAG Schuur[1], MC Mack[1] and J DeMarco[2], (1)University of Florida, (2)New Mexico State University. *The effects of permafrost thaw and climate on decomposition in subarctic tundra*.

10:10 AM COS 179-7 Gray, AN[1], TR Whittier[2] and DL Azuma[1], (1) USDA Forest Service PNW Research Station, (2)Oregon State University. *Improving forest carbon flux estimates with gain-loss measurements from regional inventories in Oregon*.

10:30 AM COS 179-8 Buckeridge, KM[1], A Baron[2], EAG Schuur[3], M Mack[3] and JP Schimel[1], (1)University of California, Santa Barbara, (2)Univeristy of Florida, (3)University of Florida. *Soil nutrient cycling response to thermokarst in northern Alaska*.

10:50 AM COS 179-9 Sanchez, Y[1], W Oechel[1], D Lipson[1] and E Troyo Dieguez[2], (1)San Diego State University, (2)Centro de Investigaciones Biologicas del Noroeste. *Zonal and tidal effects on trace gas flux in a mangrove ecosystem in B.C.S, Mexico*.

11:10 AM COS 179-10 Black, CK[1], SC Davis[1], CJ Bernacchi[2] and EH DeLucia[1], (1)University of Illinois at Urbana-Champaign, (2)University of Illinois/USDA-ARS. *Elevated temperature and carbon dioxide prime soil-specific increases in heterotrophic respiration*.

COS 180 - Community Pattern And Dynamics VIII

D136, Oregon Convention Center

8:00 AM COS 180-1 Miyazono, S and C Taylor, Texas Tech University. *Spatiotemporal metacommunity dynamics in a desert river system*.

8:20 AM COS 180-2 Wondzell, SM[1], EH Muldavin[2] and JA Ludwig[3], (1)US Forest Service, (2)University of New Mexico, (3)CSIRO Ecosystems Science. *Long-term demographics of dominant shrubs in semi-arid grasslands of the Chihuahuan desert region*.

8:40 AM COS 180-3 Pu, Z and L Jiang, Georgia Institute of Technology. *Species colonization history and environmental heterogeneity interact to drive metacommunity assembly*.

9:00 AM COS 180-4 Bennett, JA and JF Cahill Jr., University of Alberta. *Linking pollination and plant community ecology: Decoupled vegetative and reproductive responses*.

9:20 AM COS 180-5 Olson, D, KL Metlen and D Borgias, The Nature Conservancy in Oregon. *Gap size through the lens of understory light environment and shade intolerant species regeneration: Historic and current tree spatial patterns in southwestern Oregon mixed conifer/hardwood forests*.

9:40 AM Break

9:50 AM COS 180-6 Lake, JK[1], DG Campbell[2], KM Friend[1], JDL Ferenczi[1], VC Ocampo-Raeder[3], JB Walker[4], J Drury[5] and SP Hubbell[6], (1)Adrian College, (2)Grinnell College, (3)University of Maine, (4)Oklahoma State University, (5)University of California-Los Angeles, (6)University of California, Los Angeles. *Distribution of functional traits in Belize forests of varying successional stages*.

10:10 AM COS 180-7 van der Plas, F[1], TM Anderson[2] and H Olff[1], (1)University of Groningen, (2)Wake Forest University. *Trait-based community assembly from a multitrophic perspective: Bottom-up or top-down regulation?*.

10:30 AM COS 180-8 Chesson, P, University of Arizona. *Nonstationary community theory: Rising to the challenge of long-term environmental change*.

10:50 AM COS 180-9 Johnson, AL[1], E Tauzer[2] and CM Swan[3], (1)University of Maryland Baltimore County, (2)State University of New York, College of Environmental Science and Forestry, (3)University of Maryland, Baltimore County. *A metacommunity approach to urban plant community assembly*.

11:10 AM COS 180-10 Muller-Landau, HC[1] and FR Adler[2], (1) Smithsonian Tropical Research Institution, (2)University of Utah. *How the spatial scales of interactions with natural enemies influence both their contributions to diversity maintenance and our ability to measure these contributions – and implications for the interpretation of Janzen-Connell studies*.

COS 181 - Competition II

C124, Oregon Convention Center

8:00 AM COS 181-1 Abrams, PA, University of Toronto. *The population-level consequences of evolutionary*

responses to competition: Predictions of consumer-resource models.

8:20 AM COS 181-2 Queijeiro-Bolaños, ME, C Martorell and Z Cano-Santana, Universidad Nacional Autónoma de México. *The effects of interspecific interactions among dwarf mistletoe species on their population dynamics*.

8:40 AM COS 181-3 Wright, AJ[1], SA Schnitzer[1] and PB Reich[2], (1)University of Wisconsin - Milwaukee, (2)University of Minnesota. *Plant facilitation: The importance of diversity and seedling ontogeny*.

9:00 AM COS 181-4 Godoy, O[1], N Gonzalez-Muñoz[2] and JM Levine[1], (1)University of California, Santa Barbara, (2) University of Alcalá. *The role of phenotypic plasticity for species coexistence*.

9:20 AM COS 181-5 Yeung, ACY and D Dudgeon, The University of Hong Kong. *Are snail-insect interactions important in tropical streams?*.

9:40 AM Break

9:50 AM COS 181-6 Brewer, JS[1] and JB Cannon[2], (1)University of Mississippi, (2)University of Georgia. *Can disturbances increase plant competition?*.

10:10 AM COS 181-7 Huss, M[1], AM de Roos[2], A Van Leeuwen[2], M Casini[1] and A Gårdmark[1], (1)Swedish University of Agricultural Sciences, (2)University of Amsterdam. *Cohort dynamics give rise to alternative stable community states*.

10:30 AM COS 181-8 Dybzinski, R, CE Farrior and SW Pacala, Princeton University. *Untangling intraspecific and interspecific changes in leaf nitrogen across nitrogen availability gradients in forests*.

10:50 AM COS 181-9 Yee, DA and J Skiff, University of Southern Mississippi. *Welcome to the club? Assessing the competitive ability of a new mosquito invader, Culex coronator, across diverse resource environments*.

11:10 AM COS 181-10 Eppley, S, S Rogers and C Mercer, Portland State University. *Kin recognition and inter-sexual competition in a dioecious grass*.

COS 182 - Conservation Planning, Policy, And Theory III

D138, Oregon Convention Center

8:00 AM COS 182-1 Robinson, GR and JB Davis, State University of New York at Albany. *A geographic model to assess and limit cumulative ecological degradation from Marcellus Shale exploitation in NY State*.

8:20 AM COS 182-2 Ramage, B, E Marshalek, JA Kitzes and MD Potts, University of California. *A new strategy for species conservation in production forest landscapes*.

8:40 AM COS 182-3 Craig, CL[1] and M Ratsimbazafy[2], (1) Conservation through Poverty Alleviation, International and Harvard University, (2)Conservation through Poverty Alleviation, International. *Working under the radar: Conservation through economic development in Madagascar*.

9:00 AM COS 182-4 Vukomanovic, J[1], S Doumas[1], WR Osterkamp[2] and BJ Orr[1], (1)University of Arizona, (2)U. S. Geological Survey, WRD. *The effects of houses and road networks on ecological processes in a southwestern grassland*.

9:20 AM COS 182-5 Villarreal, ML[1], LM Norman[1], KG Boykin[2] and CSA Wallace[1], (1)U.S. Geological Survey, (2)New Mexico State University. *Assessing outcomes of urban growth and conservation scenarios on biodiversity in the U.S./Mexico borderlands*.

9:40 AM Break

9:50 AM COS 182-6 Armsworth, PR[1], S Acs[2], M Dallimer[3], KJ Gaston[4], N Hanley[5] and P Wilson[6], (1)University of Tennessee, (2)European Commission, (3)University of Copenhagen, (4)University of Exeter, (5)University of Stirling, (6)University of Nottingham. *Designing cost effective conservation payment programs*.

10:10 AM COS 182-7 Johnson, BR[1], JP Bolte[2], SD Bridgham[1], DW Hulse[1], RP Neilson[3], RG Ribe[1], AA Ager[4], M Nielsen-Pincus[1], T Sheehan[5], GI Yospin[6], JA Kertis[4], CA Harrington[7] and PJ Gould[7], (1)University of Oregon, (2)Oregon State University, (3)Oregon State University (Courtesy), (4) USDA Forest Service, (5)Conservation Biology Institute, (6) Montana State University, (7)USDA Forest Service, Pacific Northwest Research Station. *Addressing uncertainties in climate change adaptation planning by using an integrated suite of mechanistic simulation models within an alternative futures planning framework*.

10:30 AM COS 182-8 Lawler, JJ[1], M Case[1], MA Halabisky[1], AK Hevener[1], J Langdon[1], CJ Penberthy[1], MH Schoellhamer[1], S Torrubia[1], B McRae[2] and SA Hall[2], (1) University of Washington, (2)The Nature Conservancy. *Restoring areas for connectivity: Balancing cost, threat, and effectiveness*.

10:50 AM COS 182-9 Gosnell, JS[1], KL Roth[1], SH Diaz[1], AJ MacDonald[1], BE Kendall[2], C Wilmers[3], JW Duffield[4] and PJ Seddon[5], (1)University of California, Santa Barbara, (2)University of California Santa Barbara, (3)University of California, Santa Cruz, (4)University of Montana, (5) University of Otago. *Where motivations, metrics, and milestones meet: A comprehensive framework for assessing and planning reintroductions*.

11:10 AM COS 182-10 Feeley, KJ and E Rehm, Department of Biological Sciences. *Amazon's vulnerability to climate change heightened by deforestation and man-made dispersal barriers*.

COS 183 - Disease And Epidemiology V

D139, Oregon Convention Center

8:00 AM COS 183-1 Grear, DA[1], L Luong[1] and PJ Hudson[2], (1) Pennsylvania State University, (2)Penn State University. *Foraging networks influence the parasite community of the eastern chipmunk (Tamias striatus)*.

8:20 AM COS 183-2 Johnson, BJ[1] and MVK Sukhdeo[2], (1) Rutgers, The State University, (2)Rutgers University. *Drought-induced amplification of West Nile virus transmission in the northeastern United States*.

8:40 AM COS 183-3 Roy, M[1], MJ Bouma[2], EL Ionides[3], R Dhiman[4] and M Pascual[1], (1)University of Michigan AND Howard Hughes Medical Institute, (2)London School of Hygiene and Tropical Medicine, University of London, (3)University of Michigan, (4)National Institute of Malaria Research. *A population-dynamics approach to evaluate the impact of anti-relapse treatment on epidemic Plasmodium vivax malaria*.

9:00 AM COS 183-4 Bharti, N[1], A Tatem[2], M Ferrari[3] and BT Grenfell[1], (1)Princeton University, (2)University of Florida, (3)Penn State University. *Estimating changes in population density and distribution to improve human health*.

9:20 AM COS 183-5 Strutz, S, University of Texas at Austin. *Species distribution and circuit-based dispersal models of vector-borne disease: Is cutaneous leishmaniasis expanding due to environmental change in the southern United States*.

9:40 AM Break

9:50 AM COS 183-6 Ferrari, MJ[1], K Shea[1], C Fonnesbeck[2], M Runge[3] and M Tildesley[4], (1)The Pennsylvania State University, (2)Vanderbilt University, (3)USGS-Pautxent Wildlife Research Center, (4)University of Warwick. *An adaptive management framework for optimal response to Foot and Mouth outbreaks*.

10:10 AM COS 183-7 Husebye, DS and S Eigenbrode, University of Idaho. *Pea aphids Acyrthosiphon pisum, pulse crops, and plant viruses: Using disease mapping methods to optimize virus disease management strategies*.

10:30 AM COS 183-8 Cronin, JP[1], MG Dekkers[1], ME Welsh[1], MA Rúa[2] and CE Mitchell[3], (1)University of North Carolina at Chapel Hill, (2)University of North Carolina, Chapel Hill, (3)University of North Carolina. *Effects of host functional traits on pathogen load and host tolerance of infectious disease: An experimental test*.

10:50 AM COS 183-9 O'Regan, SM, K Magori, JT Pulliam, MA Zokan, RB Kaul, HD Barton and JM Drake, University of Georgia. *Stochastic fade-out in space: Will microscale disease-induced mortality along geographic corridors inhibit the macroscale spread of White-nose Syndrome?*.

11:10 AM COS 183-10 Baeza, A[1], EB Baskerville[1], A Livne[2], RC Reiner Jr.[3], MJ Bouma[4] and M Pascual[5], (1)University of Michigan, (2)Howard Hughes Medical Insititute, (3) University of California, Davis, (4)London School of Hygiene and Tropical Medicine, University of London, (5)University of Michigan AND Howard Hughes Medical Institute. *Rainfall-driven desert malaria under land-use change: Identifying regions with similar spatio-temporal dynamics*.

COS 184 - Dispersal And Colonization

E141, Oregon Convention Center

8:00 AM COS 184-1 Gaddis, KD[1] and VL Sork[2], (1)UCLA, (2) University of California, Los Angeles. *Connectivity of a patchy Mojave Desert shrub: Examining landscape genetics at multiple spatial and temporal scales*.

8:20 AM COS 184-2 Stover, JP[1], BE Kendall[2] and RM Nisbet[3], (1) University of California, (2)University of California Santa Barbara, (3)University of California, Santa Barbara. *Heterogeneity in dispersal and the spread of populations*.

8:40 AM COS 184-3 Bitume, EV[1], I Olivieri[2], O Ronce[3], D Bonte[4] and C Nieberding[1], (1)Universite catholique Louvain-la-Neuve, (2)Universite Montpellier II, (3)Institut des Sciences de l'Evolution, (4)Ghent University. *Plasticity in dispersal: Increases in density and relatedness increase dispersal distance in the two-spotted spider mite*.

9:00 AM COS 184-4 Simonis, JL[1] and J Ellis[2], (1)Cornell University, (2)Tufts University. *Boisterous bathing birds bias –diversity: Frequent dispersal by gulls homogenizes invertebrate taxa in a rock-pool metacommunity*.

9:20 AM COS 184-5 Birchfield, MK[1] and JG Bishop[2], (1) Washington State University - Vancouver, (2)Washington State University, Vancouver. *Thirty years of conifer establishment in volcanic primary succession at Mount St. Helens: Patterns and factors affecting establishment*.

9:40 AM Break

9:50 AM COS 184-6 Pedersen, EJ and F Guichard, McGill University. *Spatial interactions and population dynamics under clustered settlement*.

10:10 AM COS 184-7 Anderson, KE[1], LR Harrison[2], RM Nisbet[2] and A Kolpas[3], (1)University of California, Riverside, (2) University of California, Santa Barbara, (3)West Chester University. *Representing macroinvertebrate dynamics for instream flow assessments*.

10:30 AM COS 184-8 Sakrejda, K[1] and BH Letcher[2], (1)University of Massachusetts, (2)US Geological Survey, Conte Fish Research Centre. *Understanding movement from mark-recapture data*.

10:50 AM COS 184-9 Schaible, R[1], F Colchero[1], H Gruber[2], A Scheuerlein[1] and EER Philipp[2], (1)Max Planck Institute for Demographic Research, (2)Institute of Clinical Molecular Biology. *Colonization of marginal habitats, demographic responds of the long-lived ocean quahog Arctica islandica*.

11:10 AM COS 184-10 Kaproth, MA and J Molofsky, University of Vermont. *Variation in explosive seed dispersal: Comparing introduced populations to their native counterparts under competition*.

COS 185 - Diversity Estimation

E142, Oregon Convention Center

8:00 AM COS 185-1 He, F[1], X Yang[2] and SP Hubbell[3], (1)Sun Yat-sen University & University of Alberta, (2)Sun Yat-sen University, (3)University of California, Los Angeles. *Estimating species extinction rates: Spatial distribution of species and geometry of habitat destruction*.

8:20 AM COS 185-2 Harris, CJ, University of Hawaii at Manoa. *Measuring the distribution of marine cryptofauna in the Mariana Archipelago using Autonomous Reef Monitoring Structures (ARMS)*.

8:40 AM COS 185-3 Wohlgemuth, T[1], P Bachmann[1], A Keel[2], M Kessler[3], MP Nobis[1], R Nyffeler[3], JH Spillmann[3] and GS Wyss[4], (1)Swiss Federal Research Institute for Forest, Snow and Landscape Research WSL, (2)Fachstelle Naturschutz, (3)Institute of Systematic Botany, (4) Sukkulenten-Sammlung. *Citizen science to map the flora of the Zurich region, Switzerland*.

9:00 AM COS 185-4 Basnet, TB[1], OW Jacobsen[2] and K Basnet[1], (1)Tribhuvan University, (2)Bergen University College. *Bird distribution: Breeding birds distribution pattern in different land use in mountainous hills in Nepal*.

9:20 AM COS 185-5 Henderson, EB[1], J Ohmann[2], M Gregory[1] and HM Roberts[1], (1)Oregon State University, (2)Pacific Northwest Research Station, USDA Forest Service. *All for one or one for all? Mapping many species individually vs. simultaneously with random forest*.

9:40 AM Break

9:50 AM COS 185-6 Monaghan, KA and A Soares, University of Aveiro. *Calling the odds in the gamble of bioassessment: The importance of quantifying taxonomic sufficiency*.

10:10 AM COS 185-7 Casanovas, PV[1], HJ Lynch[2] and WF Fagan[1], (1)University of Maryland, (2)SUNY Stony Brook. *Understanding lichen diversity on remote areas using parataxonomic units as a surrogate for species richness*.

10:30 AM COS 185-8 Cobbold, SM and JA MacMahon, Utah State University. *Fine-scale topography shapes spider community structure along an elevational gradient: Links between guild identity, temperature, and habitat structure*.

10:50 AM COS 185-9 Ojha, SK[1] and L Dimov[2], (1)Alabama A&M University, (2)Alabama A & M University. *Relationships between tree diversity and aboveground biomass in some hardwood forests of Alabama*.

COS 186 - Ecosystem Stability And Resilience II

E143, Oregon Convention Center

8:00 AM COS 186-1 Yelenik, SG[1], CM D'Antonio[2], MC Mack[3] and N DiManno[1], (1)University of California, (2)University of California Santa Barbara, (3)University of Florida. *Long-term ecosystem impacts of invasions and implications for community dynamics: Exotic grasses and soil N cycling in Hawai'i*.

8:20 AM COS 186-2 Pillsbury, FC[1], D Peters[1], DM Browning[2] and MC Duniway[3], (1)USDA Agricultural Research Service, (2)USDA Agriculture Research Service, (3)USGS. *Cross-scale interactions drive ecosystem responses to precipitation in the Chihuahuan Desert*.

8:40 AM COS 186-3 Ewing, ME, University of Colorado. *Linking decision-making processes to land use patterns on the Great Plains*.

9:00 AM COS 186-4 Ennis, KK[1], L Cline[2], DJ Gonthier[2], DW Katz[2], B Li[2], L MacDonald[2], TWY Ong[2], YJ Su[3], I Perfecto[2] and BJ Cardinale[2], (1)University of Toledo, (2)University of Michigan, (3)Dimensions of Biodiversity Distributed Graduate Research Seminar. *Diversity buffers agricultural yield under variable environmental conditions*.

9:20 AM COS 186-5 Boettiger, C[1] and A Hastings[2], (1)UC Davis, (2)University of California, Davis. *Unknown unknowns: Management strategies under uncertainty and alternate stable states*.

9:40 AM Break

9:50 AM COS 186-6 Lawrence, PG, J Barroso, B Maxwell, A Bekkerman, C Jones and LJ Rew, Montana State University. *Effects of agroecological optimization and decision-making on threshold behavior*.

10:10 AM COS 186-7 Martin, KL and PC Goebel, The Ohio State University. *Quantifying the transition in composition and function in eastern hemlock forests impacted by hemlock woolly adelgid*.

10:30 AM COS 186-8 Carlson, SM[1], ER Huber[1] and WH Satterthwaite[2], (1)University of California, Berkeley, (2) University of California Santa Cruz. *Human-induced trait change in a recently collapsed salmon population complex*.

10:50 AM COS 186-9 Prihodko, L[1], NP Hanan[1], A Kaptue[1], R McKeown[2], M Karembé[3], F Dembélé[4], D Boubacar[3], F Traore[3] and F Diarra[3], (1)South Dakota State University, (2)Colorado State University, (3)Université de Bamako, (4)Institut Polytechnique Rurale. *Ecology, hydrology and alternate stable states in Sahelian grazing systems*.

11:10 AM COS 186-10 Germino, M[1], JB Sankey[2], AN Hoover[3] and NF Glenn[3], (1)US Geological Survey, (2)USGS, (3) Idaho State University. *Ecological biogeomorphology: Metaanalysis of post-fire wind erosion in sagebrush steppe*.

COS 187 - Fire Management

E144, Oregon Convention Center

8:00 AM COS 187-1 Werner, PA, Australian National University. *The fate of sub-adult trees trapped in the demographic bottleneck of mesic savannas: Interaction of size, fire season, and grassy understorey determine tree survival, growth, and transition to canopy and ultimately savanna physiognomy*.

8:20 AM COS 187-2 Kennedy, MC[1] and D McKenzie[2], (1) University of Washington, (2)US Forest Service. *Exogenously constrained dynamic percolation shows a phase transition in landscape controls of low-severity fire regimes*.

8:40 AM COS 187-3 Fontaine, JB[1], NJ Enright[2], V Westcott[3], J Lade[3] and BP Miller[4], (1)Murdoch University, (2) Murdoch University, Perth, (3)University of Melbourne, (4)Botanical Parks and Garden Authority of Western Australia. *Fire interval effects on persistence of woody plants in Mediterranean shrublands of Western Australia*.

9:00 AM COS 187-4 Hmielowski, TL[1], K Robertson[2] and WJ Platt III[3], (1)Louisiana State University, (2)Tall Timber Research Station, (3)Lousiana State University. *Type and seasonal timing of damage influence numbers of resprouting stems and biomass of juvenile Quercus nigra (water oak)*.

9:20 AM COS 187-5 Stevens-Rumann, CS[1], KL Shive[2], PZ Fulé[2] and CH Sieg[3], (1)University of Idaho, (2)Northern Arizona University, (3)U.S. Forest Service. *Pre-fire fuel treatments impact fuel loadings 9 years after a large wildfire*.

9:40 AM Break

9:50 AM COS 187-6 Johnson, NG and R Edmonds, University of Washington. *Influence of Armillaria root disease on potential fire behavior in an eastern Washington ponderosa pine forest*.

10:10 AM COS 187-7 Meigs, GW and RE Kennedy, Oregon State University. *One if by stem, two if by leaf: Bark beetle and defoliator impacts on tree mortality and surface fuels in Pacific Northwest forests*.

10:30 AM COS 187-8 Kelly, LT[1], AF Bennett[2], MF Clarke[3] and MA McCarthy[1], (1)The University of Melbourne, (2)Deakin University, (3)La Trobe University. *Optimal fire histories for conserving biodiversity*.

10:50 AM COS 187-9 Johnson, MC[1], MC Kennedy[2] and D Peterson[3], (1)Pacific Northwest Research Station, (2) University of Washington, (3)US Forest Service, Pacific Northwest Research Station. *Evaluating fuel treatment efficacy on Arizona's largest wildfire*.

11:10 AM COS 187-10 Pavlovic, NB[1], SA Leicht-Young[1] and R Grundel[2], (1)U.S. Geological Survey, (2)US Geological Survey. *Fire effects on the resprouting and total nonstructural carbohydrates of the highly invasive oriental bittersweet*.

COS 188 - Fisheries Management And Models II

E145, Oregon Convention Center

8:00 AM COS 188-1 Ciannelli, L[1], JAD Fisher[2], M Skern-Mauritzen[3], ME Hunsicker[1], M Hidalgo[4], K Frank[5] and KM Bailey[6], (1)Oregon State University, (2)Memorial University of Newfoundland, (3)Institute of Marine Research, (4)Spanish Institute of Oceanography, (5) Department of Fisheries and Oceans, (6)National Oceanic and Atmospheric Administration. *Eroding the population spatial structure of harvested marine fishes: Theory, consequences, and evidence*.

8:20 AM COS 188-2 Favaro, B[1], SD Duff[2] and IM Côté[3], (1) Simon Fraser University/Vancouver Island University, (2) Vancouver Island University, (3)Simon Fraser University. *A trap with a twist: Evaluating a bycatch reduction device to prevent rockfish capture in crustacean traps*.

8:40 AM COS 188-3 Downing, AS[1], EH van Nes[1], K van de Wolfshaar[2], M Scheffer[1] and WM Mooij[3], (1)Wageningen University, (2)Wageningen UR, (3)Netherlands Institute of Ecology (NIOO-KNAW). *Unravelling the responses of Nile perch population dynamics to changes in Lake Victoria*.

9:00 AM COS 188-4 Fulford, RS[1], W Wu[2], MS Peterson[2] and PO Grammer[2], (1)US Environmental Protection Agency, (2) University of Southern Mississippi. *Life in the mosaic: Predicting changes in estuarine nursery production for juvenile fishes in response to sea-level rise with a landscape-based habitat production model*.

9:20 AM COS 188-5 Gaichas, SK, MJ Fogarty, L Col, G Fay, R Gamble, S Large, JS Link, S Lucey and TJ Miller, NOAA NMFS Northeast Fisheries Science Center. *Developing a multispecies model for ecosystem based management on the Northeast U.S. continental shelf*.

9:40 AM Break

9:50 AM COS 188-6 Shugart-Schmidt, KLP[1] and J Berkson[2], (1)Virginia Tech, (2)National Marine Fisheries Service, Southeast Fisheries Science Center. *Estimation of management uncertainty for marine fisheries in the southeastern United States*.

10:10 AM COS 188-7 Ben-Horin, T, University of California, Santa Barbara. *Can an abalone in the bag save two in the bush? Impacts of fishing on the transmission of withering syndrome*.

10:30 AM COS 188-8 White, JW[1], LW Botsford[2], A Hastings[2], ML Baskett[2] and DM Kaplan[3], (1)University of North Carolina Wilmington, (2)University of California, Davis, (3)Centre de Recherche Halieutique Mediterraneenne et Tropicale. *Transient responses of exploited populations to establishment of no-take reserves*.

10:50 AM COS 188-9 Trzcinski, MK[1], E Devred[2], T Platt[3] and S Sathyendranath[4], (1)Fisheries and Oceans Canada, (2) Dalhousie Univsersity, (3)Bedford Institute of Oceanography, (4)Plymouth Marine Laboratory. *Variation in ocean colour helps predict cod and haddock recruitment*.

11:10 AM COS 188-10 Gao, Y[1] and J Shen[2], (1)Makah Fisheries Management, (2)Huazhong Agricultural University. *Otolith isotopic signatures in identification of natal sources and stock differences of Chinese silver carp*.

COS 189 - Forest Habitats II

E146, Oregon Convention Center

8:00 AM COS 189-1 Lacourse, T[1], JM Delepine[1], EH Hoffman[1] and RW Mathewes[2], (1)University of Victoria, (2)Simon Fraser University. *Fossil pollen and conifer stomata reveal 14,000 years of vegetation dynamics on a hypermaritime island on the outer Pacific coast of Canada*.

8:20 AM COS 189-2 Boucher, Y, P Grondin and I Auger, Ministère des Ressources naturelles et de la Faune du Québec. *Historical and physiographical determinants of tree species distribution in human-dominated boreal landscapes*.

8:40 AM COS 189-3 Haselhorst, DS[1], JE Moreno[2] and SW Punyasena[1], (1)University of Illinois, (2)Smithsonian Tropical Research Institute. *Variability within the 10-year seasonal Neotropical pollen rain and its implications for paleoenvironmental reconstructions*.

9:00 AM COS 189-4 Bravo, CH[1] and KJ Feeley[2], (1)Florida International University, (2)Department of Biological Sciences. *Examining biomass allocation in tree seedlings along a tropical elevational gradient in the Andes*.

9:20 AM COS 189-5 Haynes, KJ[1], ON Bjornstad[2], AJ Allstadt[1] and AM Liebhold[3], (1)University of Virginia, (2)Penn State University, (3)USDA Forest Service. *Geographical variation in spatial synchrony of forest-insect outbreaks: Isolating the drivers of synchrony*.

9:40 AM Break

9:50 AM COS 189-6 Dietze, M[1], SP Serbin[2], D LeBauer[1], R Kooper[1], K McHenry[1] and AR Desai[3], (1)University of Illinois, (2)University of Wisconsin - Madison, (3) University of Wisconsin. *Reconciling inventory, tower, and remotely-sensed carbon estimates across northern Wisconsin through model-data fusion*.

10:10 AM COS 189-7 Chiu, ST[1], TKC Tang[2] and KC Yang[3], (1) National Museum of Natural Science, (2)National Taiwan University, (3)Providence University. *Species composition and community structure of vines along the transaction of habitats at the Nanhsi forest dynamics plot in Yushan National Park of the Central Taiwan*.

10:30 AM COS 189-8 Paschke, MW[1], ZM Miller[2], CC Rhoades[3], JL Jonas[1] and B Wolk[1], (1)Colorado State University, (2) Bureau of Land Management, (3)USDA Forest Service Research. *Nitrogen fixation by russet buffaloberry in Colorado conifer forests*.

10:50 AM COS 189-9 Alvarado-Barrientos, MS[1], F Holwerda[2], H Asbjornsen[1] and TE Dawson[3], (1)University of New Hampshire, (2)Universidad Nacional Autónoma de México, (3)UC Berkeley. *Linking fog climatology and the impact of cloud immersion on transpiration of Pinus patula within a seasonal tropical montane cloud forest environment*.

11:10 AM COS 189-10 Becknell, JM and JS Powers, University of Minnesota. *Aboveground net primary productivity in Costa Rican secondary tropical dry forest over 3 years*.

COS 190 - Habitat Structure, Fragmentation, Connectivity II

Portland Blrm 254, Oregon Convention Center

8:00 AM COS 190-1 Griffiths, JR, DE Schindler and LW Seeb, University of Washington. *How stock of origin affects performance of individuals across a meta-ecosystem: An example from sockeye salmon*.

8:20 AM COS 190-2 Carrara, F[1], A Giometto[1], A Rinaldo[1] and F Altermatt[2], (1)Ecole Polytechnique Fédérale de Lausanne, (2)Swiss Federal Institute of Aquatic Science and Technology (Eawag). *Microcosms metacommunities in river networks: Niche effects and biodiversity*.

8:40 AM COS 190-3 Ridley, CE, LC Alexander and K Schofield, US EPA, National Center for Environmental Assessment. *Science informs policy: How life history, dispersal, and population genetic structure provide evidence of "biological connectivity" under the Clean Water Act*.

9:00 AM COS 190-4 Jager, H[1], R Efroymson[1] and J Opperman[2], (1)Oak Ridge National Laboratory, (2)The Nature Conservancy. *Getting the most out of rivers: Sustainable hydropower development*.

9:20 AM COS 190-5 Damschen, EI[1], DV Baker[2], G Bohrer[3], JR Turner[4], LA Brudvig[5], NM Haddad[6], DJ Levey[7], R Nathan[8], JL Orrock[9] and JJ Tewksbury[10], (1)University of Wisconsin-Madison, (2)Campbell Scientific, Inc, (3) Ohio State University, (4)Washington University in St. Louis, (5)Michigan State University, (6)North Carolina State University, (7)National Science Foundation, (8) The Hebrew University of Jerusalem, (9)University of Wisconsin - Madison, (10)University of Washington. *Predicting and understanding wind-driven seed dispersal in fragmented landscapes with corridors*.

9:40 AM Break

9:50 AM COS 190-6 Wilkerson, ML, University of California Davis. *A conceptual model and framework for addressing the unaddressed issue of invasive plants in conservation linkages*.

10:10 AM COS 190-7 Kennedy, CM[1], E Lonsdorf[2], MC Neel[3], NM Williams[4] and C Kremen[5], (1)The Nature Conservancy, (2)Chicago Botanic Garden, (3)University of Maryland, (4) University of California, Davis, (5)University of California, Berkeley. *A global synthesis of local and landscape effects on native bee pollinators across heterogeneous agricultural systems*.

10:30 AM COS 190-8 Hodgson, JA[1], CD Thomas[1], C Dytham[1], JMJ Travis[2] and SJ Cornell[3], (1)University of York, (2) University of Aberdeen, (3)University of Leeds. *How spatial arrangement of habitat affects the speed of range shifting in a fragmented landscape*.

10:50 AM COS 190-9 Floyd, KW and CS Lieb, University of Texas at El Paso. *Population demography in two lizard species living near roads in the Northern Chihuahuan Desert*.

COS 191 - Invasion: Models

Portland Blrm 255, Oregon Convention Center

8:00 AM COS 191-1 Maher, SP[1], JM Drake[1], ME Wittmann[2], R de Triquet[2], WL Chadderton[3] and DM Lodge[2], (1)University of Georgia, (2)University of Notre Dame, (3)The Nature Conservancy c/o Center for Aquatic Conservation. *Forecasting the distribution of two species of Asian carp using native and non-native range information*.

8:20 AM COS 191-2 Bradley, BA, University of Massachusetts, Amherst. *Models of plant invasion risk over-estimate impact*.

8:40 AM COS 191-3 Walter, JA[1], O Bjornstad[2], PC Tobin[3] and KJ Haynes[1], (1)University of Virginia, (2)Pennsylvania

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State University, (3)Forest Service, U.S. Department of Agriculture. *Estimation and analysis of variability in the invasion rate of the gypsy moth*.

9:00 AM COS 191-4 Larson, ER[1] and J Olden[2], (1)University of Tennessee, (2)University of Washington. *Generalized "avatar" niche shifts for modeling the potential distributions of emerging data-poor invasive species*.

9:20 AM COS 191-5 Clark, AT and GD Tilman, University of Minnesota. *Priority effects in modeled community assembly suggest that exotic species have ecologically distinct impacts on native communities*.

9:40 AM Break

9:50 AM COS 191-6 Shanafelt, DW, EP Fenichel and TJ Richards, Arizona State University. *The rate of invasive species spread and adaptive human behavior*.

10:10 AM COS 191-7 Suppo, C[1], P Derouault[1] and J Casas[2], (1) CNRS - Université François Rabelais, (2)Centre National de la Recherche Scientifique - University of Tours. *Invasive herbivores can lead to the exclusion of other herbivores in a host-parasitoid web through apparent competition*.

10:30 AM COS 191-8 Tekiela, D[1], E Dollete[1], B Tomasek[2] and JN Barney[3], (1)Virginia Tech, (2)University of Illinois, (3)Virginia Polytechnic Institute and State University. *Change you can believe in: A novel empirical model to integrate invasive species impacts*.

10:50 AM COS 191-9 Jarnevich, C[1], TR Holcombe[2], E Bella[3], ML Carlson[4], G Graziano[5], S Seefeldt[6], M Lamb[7] and JT Morisette[2], (1)United States Geological Survey, (2)U.S. Geological Survey, (3)U.S. Fish and Wildlife Service, (4) University of Alaska Anchorage, (5)University of Alaska Fairbanks Cooperative Extension Service, (6)USDA Agricultural Research Service, (7)US Forest Service. *A hierarchical approach to assess plant invasions in a region of rapid climate change*.

11:10 AM COS 191-10 Kumar, S[1] and TJ Stohlgren[2], (1) Colorado State University, (2)US Geological Survey, Fort Collins Science Center and Natural Resource Ecology Laboratory. *Novel methods to improve predictions of alien plant species richness*.

COS 192 - Life History Theory And Evolution

Portland Blrm 256, Oregon Convention Center

8:00 AM COS 192-1 Shaw, AK and SA Levin, Princeton University. *The evolution of intermittent breeding*.

8:20 AM COS 192-2 Hodgson, DJ[1], IM Stott[1], C Coles[1] and S Townley[2], (1)University of Exeter, Cornwall Campus, (2)University of Exeter. *Transient dynamics and the evolution of stage-structured life histories*.

8:40 AM COS 192-3 Aragón, CF[1], IM Parker[2] and M Mangel[3], (1)University of California Santa Cruz, (2)University of California, Santa Cruz, (3)University of California at Santa Cruz. *A stochastic dynamic programming approach to predict life history evolution in invasive plants*.

9:00 AM COS 192-4 Adler, PB[1], A Compagnoni[1], J Hsu[2], R Salguero-Gomez[3], J Mukherjee[1] and AR Kleinhesselink[1], (1)Utah State University, (2)University of California, Berkeley, (3)Max Planck Institute for Demographic Research. *Can functional traits explain variation in plant life history strategies?*.

9:20 AM COS 192-5 Morris, WF[1], J Altmann[2], DK Brockman[3], M Cords[4], LM Fedigan[5], AE Pusey[6], TS Stoinski[7], AM Bronikowski[8], SC Alberts[1] and KB Strier[9], (1) Duke University, (2)Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ, (3)Department of Anthropology, University of North Carolina-Charlotte, Charlotte, NC, (4)Department of Ecology, Evolution and Environmental Biology, Columbia University, New York, NY, (5)Department of Anthropology, University of Calgary, Calgary, Alberta, (6)Department of Evolutionary Anthropology, Duke University, Durham, NC, (7)The Dian Fossey Gorilla Fund International and Zoo Atlanta, Atlanta, GA, (8)Iowa State University, (9) Department of Anthropology, University of Wisconsin-Madison, Madison, WI. *Low demographic variability in wild primate populations: Fitness impacts of variation, covariation, and serial correlation in vital rates*.

9:40 AM Break

9:50 AM COS 192-6 Williams, JL[1], TEX Miller[2], E Jongejans[3], R Brys[4] and H Jacquemyn[4], (1)ETH Zurich, (2)Rice University, (3)Radboud University Nijmegen, (4)KU Leuven. *Influence of non-lethal costs of reproduction on life history evolution in a long-lived orchid*.

10:10 AM COS 192-7 Snyder, RE[1], PB Adler[2] and SP Ellner[3], (1) Case Western Reserve University, (2)Utah State University, (3)Cornell University. *Selective pressure for increased demographic variability in a perennial plant community*.

10:30 AM COS 192-8 Braun, D[1], DA Patterson[2] and J Reynolds[1], (1) Simon Fraser Univeristy, (2)Fisheries and Oceans Canada. *Effects of maternal size, reproductive investment and habitat conditions on juvenile life history in Pacific salmon*.

10:50 AM COS 192-9 Martínez-Peralta, C[1], F Molina-Freaner[2], J Golubov Sr.[3] and MC Mandujano[4], (1)Instituto de Ecología, Universidad Nacional Autónoma de México, (2)Estación Regional del Noroeste, Instituto de Ecología, Universidad Nacional Autónoma de México, (3) Universidad Autónoma Metropolitana, (4)Instituto de Ecología. Universidad Nacional Atónoma de México. *Comparative study of the reproductive systems in a cactus genus from the Chihuahuan Desert*.

COS 193 - Phenology

Portland Blrm 257, Oregon Convention Center

8:00 AM COS 193-1 Sanchez, A[1], NM Hughes[2] and WK Smith[1], (1)Wake Forest University, (2)High Point University. *Autumn leaf senescence coincides with declining water use efficiency in five deciduous tree species, North Carolina piedmont, USA*.

8:20 AM COS 193-2 Forrest, J, University of California, Davis. *Sexual selection in the evolution of flowering phenology*.

8:40 AM COS 193-3 Moore, LM, WK Lauenroth and DM Bell, University of Wyoming. *Soil water and temperature explain canopy phenology in the shortgrass steppe*.

9:00 AM COS 193-4 Matthews, ER[1], SJ Mazer[1], A Evenden[2], KL Gerst[3], CA Brigham[4], J Coles[5], S Fritzke[6], BP Haggerty[1], S Haultain[7], JD Hoines[8], S Samuels[9], KA Thomas[10], F Villalba[6] and JF Weltzin[3], (1)University of California, Santa Barbara, (2)National Park Service, Pacific West Region, San Francisco, (3)USA National Phenology Network, National Coordinating Office, (4)National Park Service, Santa Monica Mountains National Recreation Area, (5)National Park Service, Lassen Volcanic National Park, (6)National Park Service, (7)National Park Service, Sequoia and Kings Canyon National Parks, (8) National Park Service, Joshua Tree National Park, (9) National Park Service, Redwood National Park, (10)US Geological Survey, Pacific Northwest Aquatic Monitoring Partnership. *Building a phenological monitoring network in California as a model for the nation*.

9:20 AM COS 193-5 Gerst, KL[1], ER Matthews[2], SJ Mazer[3], A Evenden[4], CA Brigham[5], J Coles[6], S Fritzke[7], BP Haggerty[3], S Haultain[8], JD Hoines[9], S Samuels[10], F Villalba[7] and JF Weltzin[11], (1)National Coordinating Office, (2)University of California Santa Barbara, (3)

University of California, Santa Barbara, (4)National Park Service, Pacific West Region, San Francisco, (5) National Park Service, Santa Monica Mountains National Recreation Area, (6)National Park Service, Lassen Volcanic National Park, (7)National Park Service, (8) National Park Service, Sequoia and Kings Canyon National Parks, (9)National Park Service, Joshua Tree National Park, (10)National Park Service, Redwood National Park, (11)USA National Phenology Network, National Coordinating Office. *Implementing a regional phenology network: The California Phenology Project*.

9:40 AM Break

9:50 AM COS 193-6 McKinney, AM and DW Inouye, University of Maryland. *Long-term shifts in flowering phenology and floral abundance in a sub-alpine plant community*.

10:10 AM COS 193-7 Walters, AW[1], MA González Sagrario[2] and DE Schindler[3], (1)USGS Wyoming Cooperative Fish and Wildlife Research Unit, (2)CONICET-Universidad Nacional de Mar del Plata, (3)University of Washington. *When is spring green-up? Interaction of species phenology and community composition*.

10:30 AM COS 193-8 Truszczynski, AM[1], JH Burns[2] and SY Strauss[1], (1)University of California, Davis, (2)Case Western Reserve University. *Coexistence among relatives at Bodega Marine Reserve: Correlations between flowering phenology, and phylogenetic distance*.

10:50 AM COS 193-9 Caño, L[1] and SY Strauss[2], (1)University of California Davis, (2)University of California, Davis. *Post-invasion changes in reproductive and dispersal traits, and their correlations, in three invasive mustards*.

11:10 AM COS 193-10 Tuff, T[1] and BA Melbourne[2], (1)University of Colorado, (2)University of Colorado at Boulder. *A revolutionary migration: Full account of energy niche predicts stationary animal migrants and mechanistic phenology*.

COS 194 - Predation And Predator-Prey Interactions II

Portland Blrm 258, Oregon Convention Center

8:00 AM COS 194-1 Barreiro, A[1], NG Hairston Jr.[2] and M Febrero-Bande[3], (1)CIIMAR, (2)Cornell University, (3)University of Santiago. *Contrasting effects of different nitrogen to phosphorus stoichiometry in consumer–resource dynamics*.

8:20 AM COS 194-2 Wirsing, A[1] and MR Heithaus[2], (1)School of Environmental and Forest Sciences, University of Washington, (2)Florida International University. *Behavioral transition probabilities in dugongs change with habitat and predator presence*.

8:40 AM COS 194-3 Preisser, EL[1] and JL Orrock[2], (1)University of Rhode Island, (2)University of Wisconsin - Madison. *The allometrics of fear: Interspecific relationships between body size and response to predation risk*.

9:00 AM COS 194-4 Orlofske, SA, RC Jadin and PTJ Johnson, University of Colorado Boulder. *Predation on parasites: Effects of predator type, parasite species, and environmental conditions*.

9:20 AM COS 194-5 Tyburczy, W, University of Chicago. *Variation in basic life history across a predator's geographic range*.

9:40 AM Break

9:50 AM COS 194-6 Cortez, M, Georgia Institute of Technology. *Comparing the eco-coevolutionary dynamics and the eco-evolutionary dynamics of predator-prey systems using fast-slow dynamical systems theory*.

10:10 AM COS 194-7 Prescott, KK and DA Andow, University of Minnesota. *Predation risk and diet expansion in a native arthropod predator*.

10:30 AM COS 194-8 Ringelman, KM[1], JM Eadie[1] and JT Ackerman[2], (1)University of California - Davis, (2)United States Geological Survey. *Dearest neighbors: Adaptive nest clustering and density-dependent nest survival in dabbling ducks*.

10:50 AM COS 194-9 Rasmussen, NL and VHW Rudolf, Rice University. *The role of arrival phenology and size-mediated priority effects for species interactions in simple food webs*.

11:10 AM COS 194-10 Kimbro, DL, Florida State University. *Tidal regime dictates the cascading consumptive and nonconsumptive effects of multiple predators on salt marshes*.

COS 195 - Seed Production, Dispersal, And Predation

B117, Oregon Convention Center

8:00 AM COS 195-1 Peters, VS and MS Gelderman, The King's University College. *Masting facilitates seed predator escape in white pine blister rust-infected landscapes*.

8:20 AM COS 195-2 Dimitri, L[1] and WS Longland[2], (1)University of Nevada, Reno, (2)USDA, Agricultural Research Service. *Seed-caching by heteromyid rodents enhances seedling survival of a desert grass, Indian ricegrass (Achnatherum hymenoides)*.

8:40 AM COS 195-3 Niederhauser, EC and GR Matlack, Ohio University. *The contribution of vertebrates to the dispersal of mayapple (Podophyllum peltatum)*.

9:00 AM COS 195-4 Redmond, MD[1], F Forcella[2] and NN Barger[1], (1)University of Colorado, (2)USDA. *Declines in Pinyon Pine cone production associated with regional warming*.

9:20 AM COS 195-5 Henn, JH[1], C Vaughan[2] and M McCoy[2], (1) St. Olaf College, (2)Associated Colleges of the Midwest. *Beach almond (Terminalia catappa) seed resource size and resource partitioning between the seed predators scarlet macaw (Ara macao) and variegated squirrel (Sciurus variegatoides)*.

9:40 AM Break

9:50 AM COS 195-6 Zwolak, R[1] and EE Crone[2], (1)Adam Mickiewicz University, (2)Harvard University. *The outcome of plant-scatterhoarder interactions changes with masting and environmental conditions*.

10:10 AM COS 195-7 Rapp, JM and EE Crone, Harvard University. *Pollination limitation, sex allocation, and masting in whitebark pine*.

10:30 AM COS 195-8 Renard, SM[1], EJB McIntire[2] and A Fajardo[3], (1)Laval University, (2)Natural Resources Canada & Laval University, (3)Centro de Investigacioxn en Ecosistemas de la Patagonia. *Facilitation and reproduction: Improving cone production thanks to conspecific tree neighbors in the alpine treeline*.

10:50 AM COS 195-9 Minor, DM and RK Kobe, Michigan State University. *Soil nutrient and neighborhood competition influences on northern hardwood reproduction*.

11:10 AM COS 195-10 Seltzer, CE[1], CT Kremer[2], HJ Ndangalasi[3] and NJ Cordeiro[4], (1)University of Illinois at Chicago, (2)Michigan State University, (3)University of Dar es Salaam, (4)Roosevelt University. *In search of sustainable seed harvest: Seed removal and establishment of an endemic African rainforest tree*.

COS 196 - Urban Ecology II

C120, Oregon Convention Center

8:00 AM COS 196-1 Mincey, SK, M Schmitt-Harsh, M Patterson, BC Fischer and T Evans, Indiana University. *Analysis of private residential urban forest structure and management*

in Bloomington, Indiana: A social-ecological systems (SES) perspective.

8:20 AM COS 196-2 Wilson, C[1], R van der Ree[1], L Lumsden[2], F Caryl[1] and B Wintle[3], (1)Australian Research Centre for Urban Ecology, (2)Arthur Rylah Institute of Environmental Research, (3)Applied Environmental Decision Analysis Research Facility. *The effects of urbanisation on the diversity and abundance of nocturnal insects: Implications for microbat conservation*.

8:40 AM COS 196-3 Schmitt-Harsh, M, SK Mincey, M Patterson, T Evans and BC Fischer, Indiana University. *Carbon storage and ecosystem services of urban trees in Bloomington, IN as a function of development age*.

9:00 AM COS 196-4 Swadek, RK and MB Byerley, Botanical Research Institute of Texas. *Prairie glades and barrens as ecological models for living roof systems: A case study*.

9:20 AM COS 196-5 Gruenewald, DL, LL Merchant and GR Camilo, Saint Louis University. *Green space biodiversity in the shrinking city*.

9:40 AM Break

9:50 AM COS 196-6 Byrne, LB, Roger Williams University. *Urban landscape ecology and management for conservation biological control in lawns and gardens*.

10:10 AM COS 196-7 Connor Barrie, BT and I Ibanez, University of Michigan. *The impact of land uses on the recruitment dynamics of tree species*.

10:30 AM COS 196-8 Fischer, JD and JR Miller, University of Illinois- Urbana/Champaign. *The impact of urbanization on daily feeding activity of songbirds: a test of foraging theory*.

10:50 AM COS 196-9 Shandas, V, Portland State University. *Urban stormwater management and ecosystem services: An socio-ecological assessment of innovative approaches in the Portland metropolitian region*.

8:30 am-10:30 am

PS 87 - Latebreaking: Aquatic Ecology

Exhibit Hall DE, Oregon Convention Center

PS 87-1 Casatti, L1, MAP Mayorga1, FB Teresa2, FR Carvalho1, ID Costa3 and GL Brejão1, (1)Sao Paulo State University, (2) Goiás State University, (3)Federal University of Rondônia. Spatial variation of stream fish composition explained by mainstem distance and environmental variables in the Madeira River basin, Amazon.

PS 87-2 Peoples, BK, Virginia Tech. The strength of Nocomis nest association contributes to patterns of rarity and commonness among New River, Virginia cyprinids.

PS 87-3 McLaughlin, C1 and LA Kaplan2, (1)University of Pennsylvania, (2)Stroud Water Research Center. Linkages between denitrification in stream sediments and biodegradable dissolved organic carbon (BDOC).

PS 87-4 Zhang, Q1, X Cheng2 and C Ye1, (1)Wuhan Botanical Garden, the Chinese Academy of Sciences, (2)Key Laboratory of Aquatic Botany and Watershed Ecology, Wuhan Botanical Garden,CAS, Wuhan 430074, P. Soil nitrogen dynamics following short-term revegetation in the water level fluctuation zone of the Three Gorges Reservoir, China.

PS 87-5 Argerich, A1, SL Johnson2, SD Sebestyen2, CC Rhoades2, E Greathouse1, PM Wohlgemuth2, FN Scatena3, WH McDowell4, GE Likens5, JD Knoepp6, JB Jones7, G Ice8, JL Campbell9, DM Amatya2 and MB Adams9, (1)Oregon State University, (2)USDA Forest Service Research, (3)University of Pennsylvania, (4)University of New Hampshire, (5)Cary Institute of Ecosystem Studies, (6)USDA Forest Service Southern Research Station, (7)University of Alaska Fairbanks, (8)NCASI, (9)USDA Forest Service. Effects of forests disturbances on stream nitrate concentrations and fluxes.

PS 87-6 Ding, S Sr.1, Y Zhang Sr.2 and W Meng1, (1)Chinese Research Academy of Environmental Sciences, (2)Zhangyuan@Craes.Org.Cn. Comparison of fish community with different human disturbance: A case study of Taizi River catchment, China.

PS 87-7 Ferrareze, M1, R Angelini2 and L Casatti3, (1)UNESP, (2) Universidade Federal do Rio Grande do Norte, (3)Sao Paulo State University. Comparative analysis of trophic structure and functioning of lateral lagoons in a sub-tropical river with a cascade of reservoirs.

PS 87-8 Ceneviva-Bastos, M, AR Manzotti and L Casatti, Sao Paulo State University. Effects of increasing structural complexity in a tropical degraded stream on macroinvertebrate assemblage structure, trophic guilds and biomass.

PS 87-9 Orlofske, JM1 and DJ Baird2, (1)University of New Brunswick & Canadian Rivers Institute, (2)Environment Canada @ Canadian Rivers Institute & University of New Brunswick. Variability in aquatic insect traits: Implications for traits-based biomonitoring.

PS 87-10 Krystyniak, JJ, Eastern Michigan University. Amphibian diversity and phenolic concentration across a canopy cover gradient.

PS 87-11 Rollwagen-Bollens, GC, SM Bollens, J Boyer, T Lee, J Zimmerman and JE Emerson, Washington State University Vancouver. Assessing the role of zooplankton grazing on the development and decline of cyanobacteria blooms in Vancouver Lake, WA, USA.

PS 87-12 Ortiz, GL1 and A Garcia2, (1)Universidad Metropolitana, (2)University of Vermont. Comparing the overall width and water quality of the riparian habitat between sites.

PS 88 - Latebreaking: Arid And Semi-Arid Systems

Exhibit Hall DE, Oregon Convention Center

PS 88-13 McMillan, BR, JE Lucero, ED Freeman and EJ Billman, Brigham Young University. Apparent competition in the Great Basin Desert: A test of small mammal facilitation of invasion by cheatgrass.

PS 88-14 Kong, W1, X Jia1, OJ Sun2 and Y Zhang1, (1)Chinese Research Academy of Environmental Sciences, (2)Beijing Forestry University. Patch-level based vegetation change and environmental drivers in Tarim River drainage area, West China.

PS 88-15 Ramirez, B, Y Marusenko and SJ Hall, Arizona State University. Ammonia oxidation rates in soil are higher under legumes than under long-term, experimentally fertilized non-legume shrubs in the Sonoran Desert.

PS 88-16 Gliksman, D, Hebrew university. The effect of air humidity on decomposition in the dry season.

PS 88-17 Rudnick, D1, L Williams1, J Ortega2, M Aldea1 and A Nicholson3, (1)Integral Consulting Inc., (2)Newmont Mining Corporation, (3)Integral Consulting Inc. Using spatially explicit data, geochemistry and modeling to inform ecological risk assessment for a proposed pit mine expansion.

PS 88-18 Feng, X1 and B Fu2, (1)Chinese Academy of Sciences, (2) Chinese Academy of Science. Tradeoff between carbon sequestration and water resource in semiarid Loess Plateau.

PS 89 - Latebreaking: Behavior

Exhibit Hall DE, Oregon Convention Center

PS 89-19 O'Connor, DA, University of Michigan. Comparative foraging ecology of reticulated giraffe and domestic camels in Laikipia, Kenya.

PS 89-20 Kamler, JF1, A Johnson2, C Vongkhamheng3 and A Bousa3, (1)University of Oxford, (2)Wildlife Conservation Society, (3) Wildlife Conservation Society-Lao PDR Program. The diet, prey selection, and activity of dholes (Cuon alpinus) in northern Laos.

PS 89-21 Garcia, TS, LL Thurman, JC Rowe and SM Selego, Oregon State University. Antipredator behavior of American bullfrogs (Lithobates catesbeianus) in a novel environment.

PS 89-22 Tao, Y, University of California, Davis. Transient home range dynamics: Emergent periodicity in animal movement pattern with links to ecological processes.

PS 89-23 Jasny, L, University of California Davis. Conversation dynamics and belief change: Adaptive rangeland management by diverse stakeholder groups.

PS 89-24 Swierk, L and TL Langkilde, Penn State University. The effect of sex ratio on male mating tactics and female fitness in Rana sylvatica breeding aggregations.

PS 89-25 Tennessen, JB1, SE Parks2 and TL Langkilde1, (1)Penn State University, (2)Syracuse University. Breeding season blues: Noise disrupts female wood frog attraction to a male chorus.

PS 89-26 Jedlicka, JA, University of California Berkeley. Molecular tools reveal diets of insectivorous birds from predator fecal matter.

PS 89-27 Weiss, SL and RM Brower, University of Puget Sound. The effect of wildfire on stress and ornament expression in female lizards.

PS 89-28 Somo, DA, KE McCluney and JL Sabo, Arizona State University. Foraging for water: The influence of forage water content on consumption in a riparian arthropod in the field.

PS 89-29 Hancock, ER, University of Illinois at Chicago. Predation risk driven by microhabitat structure restricts the habitat of small rodents in the Soutpansberg Mountains of South Africa.

PS 89-30 Cable, RN, University of Michigan. Characterizing interactions between humans and geladas in the Simien Mountains National Park, Ethiopia.

PS 89-31 Joshi, NK1, DJ Biddinger2, EG Rajotte1, NO Halbrendt2, C Pulig2, K Naithani3 and M Vaughan4, (1)Penn State University, (2)Penn State Fruit Research & Extension Center, (3)The Pennsylvania State University, (4)Xerces Society for Invertebrate Conservation. Use of immunomarking to determine foraging patterns of Osmia cornifrons (Radoszkowski) in a cherry orchard.

PS 89-32 Hedrick-Hopper, TL and SL Diamond, Texas Tech University. The effects of triclosan on reflex responses and anti-predator behavior in an estuarine fish.

PS 89-33 Guimarães, M1, PF Doherty Jr.1, HB Cavalheri2, DT Corrêa3, MP Gaiarsa2, TA Oliveira4, S Serrano-Filho4 and RJ Sawaya5, (1)Colorado State University, (2)Universidade de São Paulo, (3)Universidade Estadual de Campinas, (4) Universidade Estadual Paulista, (5)Universidade Federal de São Paulo. Armed and well dressed: The role of jaw size and ornamentation on survival probability of the Whiptail lizard, Cnemidophorus occelifer.

PS 89-34 Rosier, RL1 and TL Langkilde2, (1)The Pennsylvania State University, (2)Penn State University. Presence of potential competitors increases boldness behavior over time in a lizard.

PS 89-35 Abbey-Lee, R, JC Trexler and E Gaiser, Florida International University. Relative role of dispersal dynamics and niche partitioning in among-individual variation in diet.

PS 89-36 Belinsky, KL1, MM Skrip2 and KA Schmidt3, (1)Arcadia University, (2)University of Rhode Island, (3)Texas Tech University. Surprising variation in singing behavior, breeding territory and home range size and shape in a cryptic migratory thrush.

PS 90 - Latebreaking: Biodiversity

Exhibit Hall DE, Oregon Convention Center

PS 90-37 Gorman, CE and DL Estes, Austin Peay State University. Taxonomic, ecologic, and biogeographic studies in Polymnia (Asteraceae).

PS 90-38 Robinson, CM1, SS Saatchi2, DB Clark3, GA Fricker1, JA Wolf1, CM Rovzar1, TW Gillespie1, SP Hubbell1 and S Andelman4, (1)University of California, Los Angeles, (2)Jet Propulsion Laboratory, (3)University of Missouri-St. Louis & University of Virginia, (4)Conservation International. Abiotic drivers of taxonomic and functional diversity along an altitudinal gradient in tropical montane forest of Costa Rica.

PS 90-39 Mori, AS1, T Shiono1, D Koide1, R Kitagawa1, A Ota1 and E Mizumachi2, (1)Yokohama National University, (2) Kyoto University. Deterministic and stochastic processes of biodiversity change with altitude in northern forests of Japan.

PS 90-40 Lind, BM1, L Gigliotti1, R Allen2, A McHenry3 and A Gardiner4, (1)Colby College, (2)Skidmore College, (3) Occidental College, (4)Southern African Wildlife College. Diversity and distribution of termite genera along a catenal gradient in Southern Kruger National Park.

PS 90-41 Wolf, A1, W Anderegg2, PE Busby2, N Zimmerman2 and J Christensen2, (1)Princeton University, (2)Stanford University. Widespread plant movement in response to 20th century warming disproportionately affects endemic species.

PS 90-42 Pavuk, DM, Bowling Green State University. Longhorned beetle (Coleoptera: Cerambycidae) species diversity and community structure in a fragmented temperate forest landscape.

PS 90-43 Bradley, DE, AD Ridlon and R Gentry, University of California, Santa Barbara. Effectiveness of management regime better predicts fisheries production and sustainability than biodiversity at the EEZ scale.

PS 90-44 Edwards, A, Whittier College. Patterns of dung beetle diversity in a biodiversity hotspot in eastern Kenya.

PS 90-45 Concilio, AL and ME Loik, University of California. Elevated nitrogen effects on Bromus tectorum dominance and native plant diversity in an arid, montane ecosystem.

PS 91 - Latebreaking: Biogeochemistry

Exhibit Hall DE, Oregon Convention Center

PS 91-46 Xu, X, PE Thornton and WM Post, Oak Ridge National Laboratory. A global analysis of soil microbial biomass carbon, nitrogen and phosphorus in terrestrial ecosystems: Magnitude, stoichiometry, and pool size.

PS 91-47 Ramos, J Jr.1, JR Corman1, V Souza2, DL Childers1 and JJ Elser1, (1)Arizona State University, (2)Universidad Nacional Autonoma de México, Instituto de Ecología. Landscape level characterization of the aquatic biogeochemistry and terrestrial landcover of Cuatro Ciénegas, Coahuila, México.

PS 91-48 Ganong, CN1, JH Duff2 and CM Pringle1, (1)University of Georgia, (2)U.S. Geological Survey. Carbon dioxide as a contributor to seasonal pH shifts in Neotropical rainforest streams.

PS 91-49 Rhea-Fournier, DJ1 and G González2, (1)University of Puerto Rico - Río Piedras, (2)USDA Forest Service. Earthworms effects on soil respiration in a sub-tropical wet forest in Puerto Rico.

PS 91-50 Radtke, TM, Western Ag Innovations. PRS™ soil supply rates of nitrate and ammonium in grasslands, temperate forests and boreal forests.

PS 91-51 Moulton, OM and CA Pfister, University of Chicago. Interactions between intertidal macroalgae and ammonium-oxidizing microbes in the presence of ammonium, a shared resource.

PS 91-52 Daly, AB, K Wickings and AS Grandy, University of New Hampshire. Enzyme activities of mesofaunal endosymbionts across host species and ecosystem.

PS 91-53 Talhelm, A1, CE Campany1, ME Kubiske2, DR Zak3 and KS Pregitzer1, (1)University of Idaho, (2)USDA Forest Service, Northern Research Station, (3)University of Michigan. The impacts of elevated CO2 and O3 on stand development processes in northern temperate forests.

PS 91-54 Yigit Avdan, Z1, WT Stringfellow1, J Hanlon1 and P Swarzenski2, (1)University of the Pacific, (2)USGS. Differences in carbon storage between seasonal and permanent wetland in agricultural ecosystems.

PS 91-55 Reid, JP, University of Minnesota - Twin Cities. Predicting stream nitrogen fluxes with patterns of watershed soil moisture.

PS 92 - Latebreaking: Climate Change

Exhibit Hall DE, Oregon Convention Center

PS 92-56 Kovach, KE and K Donohue, Duke University. Life on the surface: How environment, genotype, and life history affect germination and dormancy in the field.

PS 92-57 Bauerle, WL1, R Oren2, DA Way3, SS Qian4, PC Stoy5, PE Thornton6, JD Bowden1, FM Hoffman6 and RF Reynolds7, (1)Colorado State University, (2)Duke University, (3)University of Western Ontario, (4)The University of Toledo, (5)Montana State University, (6)Oak Ridge National Laboratory, (7) Clemson University. Seasonal patterns of photosynthetic capacity: Photoperiodic control and its carbon cycling implications.

PS 92-58 Grainger, TN and R Turkington, University of British Columbia. Winners and losers in a nitrogen-enriched boreal forest understory.

PS 92-59 Browning, DM1 and MM Mattocks2, (1)USDA Agriculture

Research Service, (2)USDA Agricultural Research Service. Comparing phenology of Chihuahuan desert perennial grasses and shrubs between normal and below-average precipitation years.

PS 92-60 Pires, APF1, VF Farjalla1 and DS Srivastava2, (1)University Federal of Rio de Janeiro, (2)University of British Columbia. Detritus diversity increases decomposition rates under several precipitation scenarios.

PS 92-61 Wilson, EA, UCSB. Anuran tadpole tolerance to stream velocity.

PS 92-62 Finch, JH and J Bellemare, Smith College. Range disequilibrium in an ant-dispersed forest herb: An experimental test of abiotic, biotic, and dispersal limits on the distribution of Jeffersonia diphylla (Berberidaceae).

PS 92-63 Hesselink, RM and JS McLachlan, University of Notre Dame. Pre-industrial CO2 levels cause variation in growth response of Schoenoplectus americanus.

PS 92-64 White, KM and JA Pontius, University of Vermont. Remote sensing of spring phenology: Method development and temporal trends for northeastern forests.

PS 92-65 Riordan, EC and PW Rundel, University of California, Los Angeles. An uncertain future for California sage scrub: Implications of land use and climate change for a threatened plant community.

PS 92-66 Wilczek, A1, MD Cooper2, T Korves2 and J Schmitt2, (1)Deep Springs College, (2)Brown University. Lagging adaptation to warming climate in Arabidopsis thaliana.

PS 92-67 Vazquez, S, University of Texas Pan-American. Future distribution of the prickly pear cacti Opuntia ficus-indica in the United States and Mexico.

PS 92-68 Dickman, LT1, SA Sevanto1, NG McDowell1 and WT Pockman2, (1)Los Alamos National Laboratory, (2)University of New Mexico. The role of non-structural carbohydrates in tree mortality.

PS 92-69 Komatsu, N1, H Kobori1, W Kitamura2 and RB Primack3, (1) Tokyo City University, (2)Central Research Institute of Electric Power Industry, (3)Boston University. Traditional calendar reveals the effects of climate change on phenology in the last 300 years in Japan.

PS 92-70 Freedman, ZB and DR Zak, University of Michigan. Suppression of N cycle functional genes in response to chronic atmospheric N deposition.

PS 92-71 Barcelo, C1, RD Brodeur2 and L Ciannelli1, (1)Oregon State University, (2)National Marine Fisheries Service. Changes in pelagic nekton diversity, ranges and community composition in the Northern California Current from 1998-2011.

PS 92-72 Feria, TP1 and C Hong-Wa2, (1)The University of Texas-Pan American, (2)University of Missouri–St. Louis,. Future distributions of Madagascar's endemic plant species.

PS 92-73 McLaughlin, BC, University of California at Santa Cruz. Microrefugia, life-stage analysis, climate change and new distribution of an endemic California oak.

PS 92-74 Wong, VL1, C Schwebach1, AE Arnold2, JM U'Ren2, RA Montgomery1, PB Reich1, SE Hobbie1, A Stefanski1, R Rich1 and G May1, (1)University of Minnesota, (2)University of Arizona. Effects of climate warming on the occurrence of endophytic fungi in boreal Picea and Populus.

PS 92-75 Maier, CA, USDA Forest Service. Foliar elemental composition of loblolly pine (Pinus taeda, L.) forest after long-term exposure to elevated CO2 and nitrogen fertilization.

PS 92-76 Collins, AC1, NG McDowell1 and MG Ryan2, (1)Los Alamos National Laboratory, (2)USDA Forest Service. The response of pinon pine leaf respiration to different dark acclimation pre-treatments.

PS 92-77 Carter, JM and JK Ward, University of Kansas. Patterns of Fraxinus phenology are unique in the abnormally warm year of 2012.

PS 92-78 Walker, SM II, University of Kansas. CO2 and temperature interactions buffer flowering time changes over the last century.

PS 93 - Latebreaking: Community Disturbance And Recovery

Exhibit Hall DE, Oregon Convention Center

PS 93-79 Zermeño-Hernández, IE, J Benitez-Malvido, CD Siebe-Grabach and M Martinez-Ramos, Universidad Nacional Autónoma de México. Assessing different agricultural land uses and ecological disturbances on tropical rainforest regeneration.

PS 93-80 Halpern, CB1, J Halaj2, SA Evans1 and M Dovciak3, (1) University of Washington, (2)Allevia Health, Inc., (3)State University of New York. Level and pattern of overstory retention interact to shape long-term responses of understories to timber harvest.

PS 93-81 Urgenson, LS1, CB Halpern1 and PD Anderson2, (1) University of Washington, (2)USDA Forest Service, Pacific Northwest Research Station. Responses of planted and naturally regenerating conifers in a variable-retention experiment in the Pacific Northwest.

PS 93-82 Nagendra, UJ and CJ Peterson, University of Georgia. Potential alteration of plant-soil feedbacks following severe tornado damage in southern Appalachian forests.

PS 93-83 Barrett, ME, JB Cannon, SI Khan and CJ Peterson, University of Georgia. Windfirmness of Southeastern Piedmont oak and pine trees, tested by static winching.

PS 93-84 Elzein, TM1, D Arseneault1, L Sirois1 and Y Boucher2, (1)Université du Québec à Rimouski, (2)Ministère des Ressources naturelles et de la Faune du Québec. Impact of logging on the structure of preindustrial forests in south-eastern Canada.

PS 93-85 Nytch, CJ1, JK Zimmerman1, J Thompson2 and M Uriarte3, (1)University of Puerto Rico, (2)Centre for Ecology and Hydrology (Edinburgh), (3)Columbia University. Twenty years of change in the Luquillo Forest Dynamics Plot, Puerto Rico.

PS 93-86 Gressard, SC1, CJ Rochester2 and E Cleland3, (1)UCSD, (2) US Geological Survey - BRD, (3)University of California – San Diego. Performance of native and exotic species following fire in San Diegan coastal sage scrub communities.

PS 94 - Latebreaking: Community Pattern And Dynamics

Exhibit Hall DE, Oregon Convention Center

PS 94-87 Silva, FR1 and DC Rossa-Feres2, (1)Universidade Federal de São Carlos, (2)State University of São Paulo. Multi-taxa distribution patterns in a fragmented landscape of Semideciduous Atlantic forest.

PS 94-88 Chappell, JC1, SL Whitmire1, GA Martinez1, D Sotomayor2 and C Santos1, (1)University of Puerto Rico, Mayaguez, (2) Univeristy of Puerto Rico, Mayaguez. Identification of the environmental variables which determine phytoplankton community structure in two distinct reservoirs.

PS 94-89 Arnold, SG1, TM Anderson2 and RM Holdo1, (1)University of Missouri, (2)Wake Forest University. Grazing lawns in the African landscape: A comparison between South African and Tanzanian systems.

PS 94-90 Mahoney, B, University of California, Santa Cruz. Temporal and spatial variability in algal-invertebrate associations in benthic red algal communities, Monterey Bay, CA.

PS 94-91 Pastore, AI, Florida State University. Changes in community phylogenetic structure across an old field-deciduous forest chronosequence.

PS 94-92 Strigul, N1 and I Florescu2, (1)Washington State University Vancouver, (2)Stevens Institute of Technology. Statistical characteristics of forest succession.

PS 94-93 Souza, CD, VDS Batista and NN Fabre, Universidade Federal de Alagoas. Seasonal dynamics and yield in a tropical coastal fishery in northeast Brazil.

PS 94-94 Lauck, M, D Owen and EM Frazier, Florida Atlantic University. An analysis of the vegetation within the FAU Preserve as a basis for management of scrub habitat for Gopherus polyphemus .

PS 94-95 Driver, LJ and DJ Hoeinghaus, University of North Texas. Local and regional dynamics of fish metacommunities in intermittent, drought prone streams.

PS 94-96 Grupe, BM1, LA Levin1, VJ Orphan2, GW Rouse1, GF Mendoza1 and AR Thurber3, (1)Scripps Institution of Oceanography, (2)California Institute of Technology, (3) Oregon State University. Colonization, diversity, and trophic patterns of macrofauna on hard substrates reflect environmental heterogeneity in deep-sea Pacific methane seep communities.

PS 94-97 Hall, LS1, KM Kinney2, JR Kellner2, S Cordell3, GP Asner4, JM Thaxton5, EJ Questad3, DE Knapp4 and T Kennedy-Bowdoin4, (1)University of Hawaiñ at Hilo, (2)University of Maryland, (3)USDA Forest Service, (4)Carnegie Institution for Science, (5)University of Puerto Rico. Detecting a prehistoric fire regime in a Hawaiian sub –alpine dry forest.

PS 94-98 Fuller, C1, SA Entrekin1 and MA Evans-White2, (1)University of Central Arkansas, (2)University of Arkansas. Increased chironomid growth with increasing food quality.

PS 95 - Latebreaking: Conservation Management

Exhibit Hall DE, Oregon Convention Center

PS 95-99 Freyman, WA1, S Packard2 and J Pepper2, (1)Northeastern Illinois University, (2)National Audubon Society. Restoration Map: a web-based tool for spatially explicit planning of ecological restoration projects.

PS 95-100 Gao, H, Research center for eco-environmental sciences, Chinese Academy of sciences.. Roles of culturally protected forests in biodiversity conservation in southeast China.

PS 95-101 Davies, RJ1, DA Mackay2 and MA Whalen2, (1)Outback Ecology, (2)Flinders University. Reproductive biology of the endangered artesian spring endemic forb Eriocaulon carsonii (Eriocaulaceae) in arid south Australia.

PS 95-102 Cutts, BB1, M Lubell2, M Hamilton2, LM Roche3, JD Derner4, MR George5, VT Eviner2 and KW Tate6, (1) University of Illinois, (2)University of California Davis, (3) University of California, Davis, (4)USDA ARS, High Plains Grasslands Research Station, (5)University of California, (6) University of California-Davis. Branding cattle ranchers: A latent class analysis approach to characterizing patterns in rancher decision-making that alter rangeland ecosystems in California.

PS 95-103 Tomiya, S, University of California. Body size and supraspecific extinction risk in terrestrial mammals: A paleontological perspective.

PS 95-104 May, E, JK Tuell, K Mason, A Leach and R Isaacs, Michigan State University. Developing regionally-specific wildflower mixes for pollinator habitat restoration in farmland: Lessons from Michigan.

PS 95-105 Case, EJ and RL Olliff, University of California, Davis. The effects of litter depth on germination rates in the serpentine endemic Boechera constancei.

PS 95-106 Rijal, R1 and R Rozzi2, (1)University of North Texas, (2) University of North Texas and University of Magallanes - Institute of Ecology and Biodiversity, Chile. Community forestry for livelihood enhancement of blacksmiths of Nepal sustainable forest management for charcoal production based on different mid-hill tree types.

PS 95-107 Moberg, EA and MG Neubert, Woods Hole Oceanographic Institution. The cost of protecting biodiversity in harvested metacommunities.

PS 95-108 Barrett, K1, N Nibbelink2 and JC Maerz3, (1)Clemson University, (2)University of Georgia, (3)The University of Georgia. Identifying long-term climatic refugia for amphibians in a global hotspot of diversity.

PS 95-109 St. Clair, CC1, RA Ronconi2, T Habib1, S Loots1, J Ball1 and C McCallum1, (1)University of Alberta, (2)Acadia University. Many birds land but few appear to die in the tailings ponds of Alberta's Oil Sands.

PS 95-110 Benka, V, University of Michigan. Wildlife, livestock, and disease in Laikipia, Kenya: Pastoralist observations.

PS 95-111 Bartlett, MK1, C Scoffoni2, Y Zhang3, R Ardy2, S Sun3, K Cao3 and L Sack1, (1)UCLA, (2)University of California Los Angeles, (3)Xishuangbanna Tropical Botanical Gardens. Rapid determination of comparative drought tolerance traits: Using an osmometer to predict turgor loss point.

PS 95-112 Harrison, T, Rutgers University. Biotic homogenization in bee communities.

PS 95-113 Boser, CL1, KR Faulkner2, C Cory1, LA Vermeer1, JM Randall1 and SA Morrison1, (1)The Nature Conservancy, (2) National Park Service. Program to eradicate populations of invasive Argentine ants in ecologically sensitive areas.

PS 95-114 Ratay, SE and PW Rundel, University of California, Los Angeles. Patterns of plant endangerment on California's Channel Islands.

PS 96 - Latebreaking: Disease And Epidemiology

Exhibit Hall DE, Oregon Convention Center

PS 96-115 Springer, JC, MT Chansler and AM Jarosz, Michigan State University. Hyperparasite influence on pathogen population structure: Mycoviruses and the chestnut blight pathogen, cryphonectria parasitica.

PS 96-116 Moore, CT, JC Springer and AM Jarosz, Michigan State University. Diversity of vegetative incompatibility (vic) genotypes for chestnut blight at seven sites in Michigan: A comparison of pathogen populations where mycovirus hyperparasites are present or absent.

PS 96-117 Kyle, CH and G Dwyer, University of Chicago. Mechanistic models to forecast the response of an insect fungal pathogen to global climate change.

PS 96-118 Alexander, JD, M Jordan and JL Bartholomew, Oregon State University. Influence of environmental features on polychaete host morphology: Implications for salmonid risk of ceratomyxosis.

PS 96-119 Wyllie-Echeverria, S1, G Crawbuck2, A Jarrell1, C Curtin1 and J Gaydos3, (1)University of Washington, (2)Spring Street International High School, (3)SeaDocs Society. Hindcasting the cause of seagrass decline: A case study in the San Juan Archipelago region of the Salish Sea.

PS 97 - Latebreaking: Dispersal And Colonization

Exhibit Hall DE, Oregon Convention Center

PS 97-120 Smith, RJ, University of Nevada Las Vegas. Mining for mosses: Metacommunity dynamics following wildfires at Red Rock Canyon, Nevada (Mojave Desert).

PS 97-121 Waters, E, Indiana University. Microflora volatiles as drivers of nutrient foraging in clonal plants.

PS 97-122 Peterson, BJ and WR Graves, Iowa State University. Phylogeography of eastern leatherwood examined with chloroplast sequencing.

PS 97-123 Crandall, SG, University of California, Santa Cruz. Airborne fungal spore dispersal and trait diversity in coastal mixed-evergreen forests in California.

PS 97-124 McCarthy, LC and DR Chalcraft, East Carolina University. How do temporal and spatial dispersal interact to form zooplankton communities.

PS 98 - Latebreaking: Ecosystem Function

Exhibit Hall DE, Oregon Convention Center

PS 98-125 Sapijanskas, J1, A Paquette2, C Potvin3, N Kunert4 and M Loreau3, (1)AgroParisTech ENGREF, (2)Université du Québec à Montréal, (3)McGill University, (4)Max Planck Institute for Biogeochemistry. Tropical tree diversity enhances light capture through overyielding, plastic architectural changes, and temporal niche differences.

PS 98-126 Nesbitt, HK and JW Moore, Simon Fraser University. Dendritic biodiversity in a large watershed and portfolio effects in First Nation fisheries.

PS 98-127 Weverka, AS and JA Pontius, University of Vermont. Remote sensing of forest productivity in Northeastern forests.

PS 98-128 Chalcraft, DR, East Carolina University. An initial assessment of how variation in the susceptibility of species to local extinction alters the effect of predator biodiversity on prey suppression.

PS 98-129 Flagg, CB1, JC Neff2, RL Reynolds3 and J Belnap4, (1) University of Colorado - Boulder, (2)University of Colorado, (3)U.S. Geological Survey, (4)USGS. Spatial and temporal variability of rural dust flux from Colorado Plateau landscapes, southeastern Utah, USA.

PS 99 - Latebreaking: Ecosystem Management

Exhibit Hall DE, Oregon Convention Center

PS 99-130 Hoffmann, S, Utah State University. Road dust emission and suppression, and effects of road dust on vegetation in Arches National Park, UT.

PS 99-131 Whitall, DR, LJ Bauer, AL Mason, AS Pait and C Caldow, NOAA. A baseline environmental assessment to support watershed restoration activities in Guanica Bay, Puerto Rico.

PS 99-132 Sharma, A1, KK Bohn1 and S Jose2, (1)University of Florida, (2)University of Missouri. Conversion of even-aged slash pine to uneven-aged stands: Evaluation of harvest regimes and uneven-aged management using simulation modeling.

PS 99-133 Lopez, D1 and AD Barnosky2, (1)University of California, Berkeley, (2)University of California Berkeley. Linking paleo- and modern species-area assessments as a tool for understanding biodiversity response to global change in the western USA.

PS 99-134 Zagarola, JPA1 and CB Anderson2, (1)University of North Texas, (2)The Omora Sub-Antarctic Research Alliance (OSARA). A socio-ecological assessment of watershed ecosystem services in southern Patagonia.

PS 99-135 Smith, M, M Grow and GM Casady, Whitworth University. Evaluating LAI estimation using time-lapse game camera images.

PS 99-136 Holomuzki, JR1, CL Back2, DM Klarer3 and RS Whyte4, (1) Ohio State University, (2)The McGraw-Hill Company, (3)Ohio Department of Natural Resources, (4)California University of Pennsylvania. Herbiciding invasive reed: Indirect effects on habitat conditions and snail–algal assemblages one year post-application.

PS 99-137 Thom, MD, J Colburn and JC Daniels, University of Florida. Heat pulse tolerance of butterfly pupae: A model for conditions experienced during fire.

PS 99-138 Coleman, HM1, EJ Gregr2 and NS Serra-Sogas1, (1) PacMARA, (2)University of British Columbia. The roadmap to sustainable prosperity: An implementation tool for marine ecosystem-based management.

PS 100 - Latebreaking: Education

Exhibit Hall DE, Oregon Convention Center

PS 100-139 Tallas, S, Northern Arizona University. Public achievement: Native American youth addressing regional climate issues one project at a time.

PS 100-140 Perryman, D and A Ho, San Jose State University. Linking university students to a sustainable future for san jose.

PS 100-141 Poole, AK, Center for Environmental Philosophy, Institute of Applied Science, University of North Texas. Presenting cultural landscapes in the Anthropocene: Evaluating educational textbooks as a driver of biocultural homogenization.

PS 100-142 Wang, Y, University of California at Santa Cruz. Teaching people to 'like' science: Using Facebook to promote scientific discovery and exploration.

PS 100-143 Heinz, CA, Benedictine University. Mixing "old tech" and "new tech" to engage students.

PS 100-144 Pufal, G1, H von Wehrden1 and AM Klein2, (1)Leuphana University, (2)Leuphana University of Lüneburg. Publications of environmental education programs reveal interdisciplinary boundaries.

PS 100-145 Kim, J, Seoul National University. An ecosystem approach in agricultural and forest meteorology.

PS 100-146 Dauer, JM1, JH Doherty1, BA Covitt2, D Gallagher3 and CW Anderson1, (1)Michigan State University, (2)University of Montana, (3)Seattle Public Schools. Carbon TIME Project: Inquiry activities and learning progression.

PS 100-147 Eyster-Smith, NM, Bentley University. Assessing undergraduate students' understanding of carbon and oxygen in their world.

PS 100-148 Darby, KJ, K Wilson, T Eatmon and E Pallant, Allegheny College. Green building renovations as a teaching tool: Case studies in applied environmental science and ecology pedagogy.

PS 100-149 Pool, RF1, GD Turner2 and SA Boettger1, (1)West Chester University, (2)West Chester University of Pennsylvania. Importance of ecology coverage in introductory biology courses for biology majors at the university level.

PS 100-150 Boersma, KS1, MT Kavanaugh1, LM Ganio1, LA Hooven1, SL Close1 and B Lachenbruch2, (1)Oregon State University, (2)Department of Forest Ecosystems & Society. Advancing toward professorship in biology, ecology, and earth systems sciences: Perceptions of confidence in early career scientists.

PS 100-151 Bulick, SM1, EAH Smithwick1, C Frazier Barthel2 and RG Crane3, (1)The Pennsylvania State University, (2)Wilson College, (3)The Pennsylvania State Univesity. Scientific engagement within informal and transformative learning environments in a global context.

PS 100-152 Kostelnik, KM, D Ebert-May, J Dauer and T Long, Michigan State University. Reforming early undergraduate instruction influences long-term retention and attrition in STEM majors.

PS 100-153 Rollwagen-Bollens, GC1, T Nelson1, A Kennedy2, B Lock3, M Graves4, SM Bollens1 and B Tissot1, (1)Washington State University Vancouver, (2)Educational Service District 112, (3)La Center, WA, School District, (4)Gaiser Middle School. Partners in Discovery of the Columbia River Watershed GK-12 project at WSU Vancouver: Building scientist-teacher collaborations to support student learning and inquiry skills.

PS 100-154 Eggleston, JFG, H Gaff and GS Watson, Old Dominion University. Modeling and analysis of biological content to enhance mathematics.

PS 100-155 Skinner, GJ, GJSSEC. NUMBERS From Nature - A History of Field Ecology.

PS 101 - Latebreaking: Environmental Gradients

Exhibit Hall DE, Oregon Convention Center

PS 101-156 QU, L, Ecology, Research center for Eco-Environmental Sciences, Chinese Academy of Sciences. Responses of soil microbial community to an altitudinal gradient of Quercus liaotungensis forest.

PS 101-157 Dib, V, APF Pires and VF Farjalla, University Federal of Rio de Janeiro. Salinity increases zooplanktonic grazing rates through metabolism adjustments.

PS 101-158 Byrnes, JM1, JA Steets1, N Takebayashi2 and DE Wolf2, (1)Oklahoma State University, (2)University of Alaska Fairbanks. Ecological niche modeling of trichome variation in Arabidopsis kamchatica.

PS 101-159 Balasubramaniam, P and JT Rotenberry, University of California, Riverside. Patterns of avian life history variation across an elevational gradient.

PS 101-160 Thomas, MK1, MR Gould2 and E Litchman1, (1)Michigan State University, (2)University of Connecticut. Phytoplankton fitness landscapes across gradients in temperature and nutrient concentration.

PS 102 - Latebreaking: Evolution

Exhibit Hall DE, Oregon Convention Center

PS 102-161 Rüger, N1, C Wirth1, SJ Wright2 and R Condit2, (1)University of Leipzig, (2)Smithsonian Tropical Research Institute. Functional traits explain plasticity of growth rates in tropical tree species.

PS 102-162 Merwin, LA and J Bergelson, University of Chicago. Coastal stressors and Arabidopsis thaliana: Fitness impacts of drought stress.

PS 102-163 O'Donnell, KL, Columbia University/Barnard College. Examining the role phenotypic plasticity in plant invasions: a study of invasive Japanese knotweed (Fallopia japonica) and native woodland knotweed (Persicaria virginiana).

PS 102-164 Love Stowell, SM, University of Colorado at Boulder. Genetic connectivity of pupfish populations in a highly modified desert springs system.

PS 102-165 Svanbäck, R1, E Nonaka2 and Brännström3, (1)Uppsala University, (2)Umeå University, (3)Umeå Universitet. Weak assortative mating and strong habitat coupling promote the evolution of habitat generalists with a high degree of phenotypic plasticity.

PS 102-166 Brossman, KH1, BE Carlson1, AN Stokes2 and TL Langkilde1, (1)The Pennsylvania State University, (2)Utah State University. Predator-induced morphological and chemical defenses in newt (Notophthalmus v. viridescens) larvae.

PS 102-167 Aalto, EA, University of California, Davis. Effect of rapid evolution on multi-species interactions in fisheries under size-selective harvest.

PS 102-168 Kagawa, K, Toho University. Why are rewardless flowers diverse? A simulation study.

PS 103 - Latebreaking: Food Webs

Exhibit Hall DE, Oregon Convention Center

PS 103-169 O'Neill, BJ1, JH Thorp1 and DC Rogers2, (1)University of Kansas, (2)Kansas Biological Survey. Community structure and food web dynamics in endangered, ephemeral wetlands

of the high plains.

PS 103-170 Takimoto, G1 and DM Post2, (1)Toho University, (2)Yale University. Environmental determinants of food-chain length: A meta-analysis.

PS 103-171 Gibert, JP, University of Nebraska-Lincoln. Are spatially informed food web models better than non-spatial ones?.

PS 103-172 Hsieh, HY1 and I Perfecto2, (1)University of Michigan, Ann Arbor, (2)University of Michigan. Phorid-ant interactions affect beetle and scale densities and stability in the field: A study of cascading effect of trait-mediated interactions.

PS 103-173 Marcelo-Serván, CA and W Cabrera-Febola, Universidad Nacional Mayor de San Marcos. Temporal variability on the Peruvian Sea pelagic food web: Comparing El Niño vs. non El Niño years.

PS 104 - Latebreaking: Forest Habitats

Exhibit Hall DE, Oregon Convention Center

PS 104-174 Huusko, K1, O Tarvainen2, K Saravesi3, T Pennanen4, H Fritze4, A Markkola3, S Aikio3, AL Ruotsalainen3 and E Kubin2, (1)University of Oulu and Finnish Forest Research Institute, (2)Finnish Forest Research Institute, Oulu Unit, (3)University of Oulu, (4)Finnish Forest Research Institute, Vantaa Unit. Fungal diversity in Norway spruce (Picea abies) sapling roots in relation to forest regeneration and energy wood harvesting practices.

PS 104-175 Sandrow, CA1 and L Hernández2, (1)State University of New York at Oswego, (2)SUNY Oswego. Snow tracking and GIS: Taking advantage of new technology to evaluate habitat selection in coyotes in RCFS.

PS 104-176 Rhodes, A, JR Buck and S St.Clair, Brigham Young University. Aspen facilitates subalpine fir regeneration by increasing germination success.

PS 104-177 Pau, S1, EM Wolkovich2, BI Cook3, CJ Nytch4, J Regetz5, SJ Wright6 and JK Zimmerman4, (1)National Center for Ecological Analysis and Synthesis, (2)University of British Columbia, (3)Lamont-Doherty Earth Observatory, (4) University of Puerto Rico, (5)National Center for Ecological Analysis and Synthesis, University of California - Santa Barbara, (6)Smithsonian Tropical Research Institute. The seasonal and interannual influence of clouds on tropical forest phenology.

PS 104-178 Cannon, JB, J Hepinstall-Cymerman, LJ Snyder and CJ Peterson, University of Georgia. Patch characteristics of forest tornado damage in rugged terrain.

PS 104-179 Inman-Narahari, F1, R Ostertag2, CP Giardina3, S Cordell3, SP Hubbell1 and L Sack4, (1)University of California, Los Angeles, (2)University of Hawaii at Hilo, (3)USDA Forest Service, (4)UCLA. Density-dependent seedling mortality varies with light availability and species abundance in wet and dry tropical forests.

PS 104-180 McGee, K1, KL McGuire2 and B Eaton1, (1)Kean University, (2)Barnard College, Columbia University. Land management effects on soil nutrients, biomass, and fauna and fungal communities in Costa Rica.

PS 104-181 Méndez-Toribio, M Sr., T Terrazas, D Grego and G Ibarra-Manríquez Sr., Universidad Nacional Autónoma de México. Functional variation and resource-usage strategies of seven tropical dry forest tree species: Wood and foliar traits.

PS 104-182 Styring-Lamont, A1, FH Sheldon2, E Cannizzaro1 and J Unggang3, (1)The Evergreen State College, (2)Louisiana State University, (3)Sarawak Planted Forests. Avian detectability and community structure in a Bornean rainforest canopy: Comparing simultaneous ground- and canopy-based surveys.

PS 104-183 Schmitz, JE1 and SC Hotchkiss2, (1)University of Wisconsin - Madison, (2)University of Wisconsin. Effects of synergistic disturbance upon phytoplankton communities and organic carbon accumulation in Sparkling Lake, northern Wisconsin.

PS 104-184 Durow, MC1, JE Schmitz1 and SC Hotchkiss2, (1)University of Wisconsin - Madison, (2)University of Wisconsin. Impact of logging on forest fire: Circle Lily Lake, northern Wisconsin.

PS 104-185 Eskelson, BNI1 and VJ Monleon2, (1)Oregon State University, (2)USDA Forest Service. A region-wide assessment of forest wildfire effects on forest attributes in the US Pacific coast states.

PS 104-186 Davis, SL and DF Cipollini, Wright State University. Interactions between Pierid butterflies: A new threat to the West Virginia White butterfly?.

PS 104-187 Desai, NS, Northwestern University. Mycorrhizal community composition of Quercus oleoides as a function of stand maturity in the regenerating dry tropical forest.

PS 104-188 Williams-Guillén, K1 and I Perfecto2, (1)University of Washington Bothel, (2)University of Michigan. Diets of foliage-gleaning insectivorous bats in Mexican shade coffee plantations.

PS 104-189 Kitagawa, R1, M Mimura2, AS Mori1 and A Sakai1, (1) Yokohama National University, (2)Kyusyu University. Phylogenetic structure of warm-temperate forest communities in a steep mountain in Japan.

PS 104-190 Lumibao, CY, K Flood, M Gaskill and J McLachlan, University of Notre Dame. Comparative genetic structure of two forest tree species resulting from historic human land-use.

PS 104-191 Baraloto, C1 and PVA Fine2, (1)UMR EcoFoG, (2)University of California, Berkeley. Unprecedented beta-diversity in Amazonian trees.

PS 104-192 Fricker, GA1, JA Wolf1, SS Saatchi2, SP Hubbell1, TW Gillespie1, V Meyer3, CM Robinson1 and CM Rovzar1, (1) University of California, Los Angeles, (2)Jet Propulsion Laboratory, (3)California Institute of Technology. Coupling forest structure and sub-canopy topography to Alpha diversity across spatial scales in the 50 ha plot Barro Colorado Island, Panama.

PS 104-193 Hitch, A1, A Achmadi2, S Wiantoro2, H Kurniati2, M Irham2, T Haryoko2, WT Laksono2, H Ashari2, E Widjaja2, R Ubaidillah2 and A Engilis Jr.3, (1)University of California at Davis, Museum of Wildlife and Fish Biology, (2)Indonesian Institute of Sciences, (3)University of California at Davis. Estimating vertebrate diversity using comprehensive multi-method surveys in the Masembo watershed of the Mekongga Mountains region in Southeast Sulawesi, Indonesia.

PS 104-194 Miesel, JR1, PM Nelson1, PC Goebel1, RG Corace III2 and DM Kashian3, (1)The Ohio State University, (2)USDI Fish and Wildlife Service, (3)Wayne State University. Forest fuels and vegetation in wildfire-regenerated jack pine (Pinus banksiana Lamb.) forests: Informing ecological forestry in the Lake States region.

PS 104-195 Fei, S1 and L Liang2, (1)Purdue University, (2)University of Kentucky. Biogeography for world chestnut (Castanea) species.

PS 104-196 Mack, KA and TM James, Yale School of Forestry and Environmental Studies. Topography mediates forest distribution and productivity at the sub-boreal ecotone, Mongolia.

PS 104-197 Skeets, B, RESESS internship at UNAVCO. Transpiration source water and geomorphological potential of root growth in the Boulder Creek Critical Zone Observatory, Colorado.

PS 105 - Latebreaking: Genetics And Molecular Techniques

Exhibit Hall DE, Oregon Convention Center

PS 105-198 Moore, AC1, JB Burch1 and D Hopper2, (1)University of Michigan, (2)US Fish and Wildlife Service. Evaluation of a potentially highly restricted freshwater gastropod species: Implications for conservation.

PS 105-199 Wu, CCC1, MR Liles2, K Kakirde2, R Ye1, M Wagner1, A Krerowicz1, M Staley2, S Jasinovica1, C Drinkwater1, R Godiska1 and DA Mead1, (1)Lucigen Corporation, (2)Auburn University. Next-generation functional and structural soil metagenomics.

PS 105-200 Heneghan, AF1, NA Hasan1, DPC Peters2 and CD Bailey1, (1)New Mexico State University, (2)USDA Agricultural Research Service. Molecular markers for addressing the genetic consequences of fragmentation on black grama (Bouteloua eriopoda) grasslands.

PS 105-201 Trujillo, JD1, T Pilger1, MR Douglas2, ME Douglas2 and TF Turner1, (1)University of New Mexico, (2)University of Arkansas. Microsatellite markers for longfin dace, Agosia chrysogaster, a sentinel fish species in imperiled arid-land rivers of the Sonora Desert.

PS 105-202 Lee, T, GC Rollwagen-Bollens and SM Bollens, Washington State University Vancouver. The use of qPCR to monitor changes of toxin and non-toxin producing cyanobacteria

populations in Vancovuer Lake, WA in response to water quality variables.

PS 106 - Latebreaking: Grasslands/Steppe

Exhibit Hall DE, Oregon Convention Center

PS 106-203 Matson, E1 and D Bart2, (1)University of Wisconsin-Madison, (2)University of Wisconsin. Interactions between past grazing pressure and topography predict patchy shrub encroachment in Páramo grasslands.

PS 106-204 Rico, Y1, R Holderegger2, JH Boehmer3 and HH Wagner1, (1)University of Toronto, (2)Swiss Federal Research Institute, (3)Interdisciplinary Latin America Center (ILZ). Seed dispersal along sheep herding routes influences genetic connectivity at the landscape scale.

PS 106-205 McMinn, RL, WE Jensen and BA Koerner, Emporia State University. Edge effects on the tallgrass prairie plant community.

PS 106-206 Kimuyu, DM1, LK Mureu2, A Awiti3 and G Wahungu1, (1) Karatina University College, (2)Chuka University College, (3)The Aga Khan University, Faculty of Arts and Sciences (East Africa). Effect of fire on habitat functional diversity and herbivore diversity in Ol Pejeta Conservancy, Kenya.

PS 107 - Latebreaking: Invasion

Exhibit Hall DE, Oregon Convention Center

PS 107-207 Poulos, L1, BA Roy1, B Thomas2 and J Lippert3, (1)University of Oregon, (2)McKenzie River Ranger District, (3)US Forest Service. Invasion and fire: A look at the interactions between prescribed fire and the invasive grass, Brachypodium sylvaticum, in the Willamette National Forest, OR.

PS 107-208 Soltis, NE1, S Gomez2, GG Leisk1, EL Preisser2 and CM Orians1, (1)Tufts University, (2)University of Rhode Island. Mechanics of herbivory: Exotic insect increases branch brittleness of a native tree host.

PS 107-209 Ingwell, LL1, MR Miller-Pierce2, RT Trotter III3 and EL Preisser4, (1)University of Idaho, (2)Washington State University, (3)USDA Forest Service, (4)University of Rhode Island. Vegetation and invertebrate community response to Eastern hemlock decline in southern New England.

PS 107-210 Hanson, SL and EAH Smithwick, The Pennsylvania State University. Psidium guajava: Spatial distribution of invasive guava along roadways and trail ways within the Dwesa-Cwebe Nature Reserve.

PS 107-211 Matzek, V and J Covino, Santa Clara University. California plant invasions: quantifying the knowing-doing gap.

PS 107-212 Ursell, T1, RJ Warren II1, AD Keiser1, JS Norman2, JE Barrett2 and MA Bradford1, (1)Yale University, (2)Virginia Tech. Ecosystem impacts of Microstegium vimineum vary across a regional gradient.

PS 107-213 Olynyk, AJ, BJ Hann and GK Davoren, University of Manitoba. Seasonality of diet selectivity of an invasive population of rainbow smelt (Osmerus mordax) in Lake Winnipeg, Manitoba, Canada.

PS 107-214 Turner, BC and CE de Rivera, Portland State University. Overcompensation and the European green crab, Carcinus maenas.

PS 107-215 Longo, MG1, SB Perelman1, PM Tognetti1, J Pérez2 and EJ Chaneton1, (1)IFEVA - Facultad de Agronomía, Universidad de Buenos Aires, (2)Facultad de Agronomía. Functional group composition and disturbance intensity regulate invasion resistance and exotic plant impact in grassland microcosms.

PS 107-216 Sheppard, KT, GK Davoren and BJ Hann, University of Manitoba. Food web related spatial variation in growth of commercially important walleye (Sander vitreus) and sauger (Sander canadensis) in Lake Winnipeg, Manitoba: The impact of an invasive species, rainbow smelt (Osmerus Mordax).

PS 107-217 Matakis, SE and RD Overath, Texas A&M University - Corpus Christi. Population structure and origins of invasive King Ranch Bluestem (Bothriochloa ischaemum var. songarica).

PS 107-218 Brantley, S, CR Ford, KJ Elliott, SN Laseter and J Vose, USDA Forest Service Southern Research Station. Hemlock woolly adelgid mediated mortality of eastern hemlock influences timing and magnitude of streamflow from headwater catchments in the southern Appalachians.

PS 107-219 Henry, MC, DL Gorchov and PA Frank, Miami University. Effects of local site characteristics on abundance of Lonicera maackii in Southwest Ohio.

PS 107-220 Downing, JL, H Liu and W Lin, Florida International University and Fairchild Tropical Botanic Garden. Impacts of introduced species on specialized mutualisms: A case study on the oil reward pollination network in southern Florida.

PS 107-221 Moroney, JR and PW Rundel, University of California, Los Angeles. A comparison of life history traits of an invasive Mediterranean forb in its native range versus two invasive ranges.

PS 107-222 De Jong, GL and NL Fowler, University of Texas at Austin. Landscaping plants as invasive species in central Texas: Positive correlations with development proximity and age, but limited by aridity?.

PS 107-223 Tyson, CW, The College of William and Mary. A species distribution model for the shade-tolerant, invasive plant Japanese stiltgrass.

PS 107-224 Bieger, A1, JL Williams2 and JM Levine2, (1)ETH Zürich, (2) ETH Zurich. The role of density dependence in populations spreading through patchy landscapes.

PS 107-225 Kuhman, TR, Edgewood College. The role of leaf litter and edaphic conditions related to land-use history in facilitating invasion of the forest understory by Oriental bittersweet (Celastrus orbiculatus).

PS 107-226 Averill, KM1 and DA Mortensen2, (1)Pennsylvania State University, (2)The Pennsylvania State University. Exploring the role of deer browsing preference in plant invasion.

PS 108 - Latebreaking: Life History Theory And Evolution

Exhibit Hall DE, Oregon Convention Center

PS 108-227 Liess, A1, O Rowe1, J Guo1, G Thomsson1 and MI Lind2, (1) Umeå University, (2)University of Sheffield. Latitude of origin determines life history, nutrient demand and stoichiometric response to temperature in Rana temporaria tadpoles – combining ecology with evolution.

PS 108-228 Segura, ML1, PJ Meyers1, MC Belk1 and C Creighton2, (1) Brigham Young University, (2)Purdue University, Calumet. Effects of male age and experience on bi-parental reproductive output and allocation in a burying beetle.

PS 108-229 Burghardt, LT1, A Wilczek2, J Metcalf3, SE Meyer4, K Donohue1 and J Schmitt5, (1)Duke University, (2)Deep Springs College, (3)Oxford University, (4)USDA Forest Service, Rocky Mountain Research Station, (5)Brown University. Coordinating flowering and germination across seasonal environments: linked process-based models predict genotype and environment specific life history expression.

PS 108-230 Corrêa, DT1, DC Rossa–Feres2 and RJ Sawaya3, (1) Universidade Estadual de Campinas, (2)Universidade Estadual Paulista, IBILCE, (3)Universidade Federal de São Paulo. Does habitat structure affect phylogenetic and trait diversification in larval and adult anurans differently?.

PS 108-231 Nguyen, LH, MC Belk and CT Laidlaw, Brigham Young University. Variation in allocation toward growth in burying beetles with size determined competitive interactions.

PS 108-232 McConnaha, W, JDM Schwartz and LE McMullen, ICF International. Predicting freshwater fish life history tactics: Filtering potential life history diversity via habitat scenarios using Ecosystem Diagnosis and Treatment.

PS 109 - Latebreaking: Marine And Estuarine Systems

Exhibit Hall DE, Oregon Convention Center

PS 109-233 Bhatti, L, Florida International University. Indirect consequences of Marine Protected Areas (MPAs) as revealed through stable isotope analysis of coral reef fishes.

PS 109-234 Moeller, HV1 and MG Neubert2, (1)Stanford University, (2) Woods Hole Oceanographic Institution. Habitat damage and the economic optimality of marine reserves.

PS 109-235 Moreland, KC and C Kleier, Regis University. Observational flooding effects on Rhizophora mangle.

PS 109-236 Dorman, WA, Winthrop University. Egg characteristics in relation to nesting microenvironment in captive Southern Rockhopper Penguins, Eudyptes chrysocome.

PS 109-237 D'Aguillo, MC1, AS Harold1, WA Roumillat2, DM Wyanski2 and TL Darden2, (1)College of Charleston Grice Marine Laboratory, (2)South Carolina Department of Natural Resources. Detection of an ontogenetic diet shift in the naked goby, Gobiosoma bosc.

PS 109-238 Faulkes, Z and TP Feria, The University of Texas-Pan American. Size differences in sand crabs living in the Gulf of Mexico and the Atlantic Ocean.

PS 109-239 Bollens, SM1, JK Breckenridge1, GC Rollwagen-Bollens1, JR Cordell2 and O Kalata2, (1)Washington State University Vancouver, (2)University of Washington. Non-indigenous copepods and plankton dynamics of the lower Columbia River Estuary.

PS 109-240 Epps, EBC and R Jude, University of Georgia. Symbiosis and stress in a thermally tolerant coral.

PS 109-241 Nelson, JL and ES Zavaleta, University of California, Santa Cruz. Salt marsh as a coastal filter: An estuary-wide observational study.

PS 110 - Latebreaking: Microbial Ecology

Exhibit Hall DE, Oregon Convention Center

PS 110-242 Raizen, NL1 and NJ Grunwald2, (1)Oregon State University, (2)USDA ARS Horticultural Crops Research Laboratory. Metagenomic diversity of foliar fungal endophyte communities in Rhododendron.

PS 110-243 Heneghan, DA, IA Hansen, WJ Boecklen and AC James, New Mexico State University. Evidence against the presence of Wolbachia in the crayfish species, Orconectes virilis and Procambarus clarkii.

PS 110-244 Looby, C1, KL McGuire2 and B Eaton1, (1)Kean University, (2)Barnard College, Columbia University. Effects of Bromelia pinguin (Bromeliaceae) on soil ecosystem function in primary forests of Costa Rica.

PS 110-245 Lange, RK, G Rocap and MC Horner-Devine, University of Washington. Living in the dead zone: Patterns of bacterial communities in Hood Canal, WA, USA.

PS 110-246 Atkinson, SD and JL Bartholomew, Oregon State University. Estimating species richness of myxozoan parasites (Phylum Myxozoa) in the Pacific Northwest.

PS 110-247 Kirk, JK, JR Goldberger, KE Judd, SN Francoeur and DL Clemans, Eastern Michigan University. Effect of invasion and control of Phragmites australis on soil microbial community composition and abundance in Great Lakes coastal wetlands.

PS 110-248 Zlamal, JE, DN Goria and DA Lipson, San Diego State University. The interaction of iron and humic substances in the Arctic environment.

PS 110-249 Weisenhorn, P, University of Minnesota. Relationship between phylogenetic distance and growth rates of soil bacterial isolates in culture.

PS 111 - Latebreaking: Modeling

Exhibit Hall DE, Oregon Convention Center

PS 111-250 Aycrigg, JL1, J Lonneker1, M Rubino2, N Tarr2, KG Boykin3, A McKerrow4, GP Beauvais5, T Gotthardt6 and WA Gould7, (1)University of Idaho, (2)Biodiversity and Spatial Information Center, (3)New Mexico State University, (4)United States Geological Survey, (5)University of Wyoming, (6)Alaska Natural Heritage Program, (7)International Institute of Tropical Forestry. Modeling vertebrate species in the US: Species modeling efforts of the Gap Analysis Program.

PS 111-251 Brito, I and E Alm, Massachusetts Institute of Technology. Tracking microbes within communities.

PS 111-252 Phillips, AJ and M Kot, University of Washington. Estimating population persistence in a warming world: Incorporating 2D space into mathematical models.

PS 111-253 Renton, M, N Shackelford and RJ Standish, University of Western Australia. Dynamic modelling to predict the likelihood of plant species persistence under climate change.

PS 111-254 Hayduk, E1, J Cushing1, J Walley1 and K Winters2, (1) The Evergreen State College, (2)Oregon State University. How ecologists "visualize" research results in publications: VISTAS Project ecology journal survey.

PS 111-255 Gounand, I1, N Mouquet1, E Canard2, C Hauzy3, F Guichard4 and D Gravel5, (1)Université Montpellier 2, CNRS, (2)Institut des Sciences de l'Evolution de Montpellier, (3) Université Pierre et Marie Curie (Paris 6), (4)McGill University, (5)Université du Québec à Rimouski. The paradox of enrichment in metaecosystems.

PS 111-256 Harsch, MA, Y Zhou and M Kot, University of Washington. The most critical part of a plant's life cycle for persisting in a warming climate.

PS 111-257 Kirk, AK and R Isaacs, Michigan State University. Modeling the pollination of highbush blueberry (Vaccinium corymbosum) to explore varying pollination strategies.

PS 111-258 Naithani, K1, EAH Smithwick1, KJ Davis1, K Keller1, RE Kennedy2 and JG Masek3, (1)The Pennsylvania State University, (2)Oregon State University, (3)NASA. Incorporation of disturbance and seasonality in terrestrial carbon flux upscaling.

PS 111-259 Timilsina, N1, F Escobedo1, CL Staudhammer2, T Brandeis3 and W Zipperer3, (1)University of Florida, (2)University of Alabama, (3)USDA Forest Service. Identifying drivers of carbon using structural equation modeling in a subtropical urban forest.

PS 111-260 Romero, TS, The University of Texas PanAmerican. Present and future distribution of Neotoma micropus, reservoir of Chagas and leishmaniasis diseases, in North America.

PS 111-261 Butler, CA1, CP McGowan2, JB Grand3 and DR Smith4, (1)Auburn University, (2)U.S. Geological Survey, Alabama Cooperative Fish and Wildlife Research Unit, (3)USGS Alabama Cooperative Fisheries and Wildlife Research Unit, (4)United States Geological Survey, Leetown Science Center. Estimating tag loss of the Atlantic Horseshoe crab, Limulus polyphemus, using a multi-state model.

PS 111-262 Tuckfield, RC1, MC Belk2 and JS Wesner2, (1)ECOSTATys LLC, (2)Brigham Young University. Right-wing and leftist views of modeling community complexity.

PS 112 - Latebreaking: Physiology

Exhibit Hall DE, Oregon Convention Center

PS 112-263 Rosenthal, DM1, RA Slattery2, RE Miller3, TA Cavagnaro3, RM Gleadow3, AK Grennan2, CM Fauquet4 and DR Ort5, (1)USDA-ARS, (2)University of Illinois, (3)Monash University, (4)Donald Danforth Plant Science Center, (5)USDA-ARS and University of Illinois. Cassava about-FACE: Greater than expected yield stimulation of cassava (Manihot esculenta) by future CO2 levels.

PS 112-264 Savage, JA, NM Holbrook and M Zwieniecki, Harvard University. The dynamic nature of phloem transport in seedlings: Growth, phenology and environmental stimuli.

PS 112-265 Fincher, RM, GL Gentry and RL Hunsinger, Samford University. Cooling in a fungal- Cecidomyiid gall on the undererstory shrub Symplocos tinctoria.

PS 112-266 White, RSA1, CN Glover1, PA McHugh2 and AR McIntosh1, (1)University of Canterbury, (2)Washington Department of Fish & Wildlife. Powerful fish in poor environments: Metabolic scaling of fish across a wetland-floodplain.

PS 112-267 Hughes, NM, CN Miller and S Keidel, High Point University. Photosynthetic costs and benefits of adaxial/abaxial leaf reddening in understory plants.

PS 112-268 Melnychenko, AN, Portland State University. Bamboo and BVOCs: Exploring the interplay between isoprene emission and physiology.

PS 112-269 Sack, L1, C Scoffoni2 and GP John3, (1)UCLA, (2)University of California Los Angeles, (3)University of California, Los Angeles. The anatomical basis of leaf water relations across diverse species.

PS 112-270 Walker, JKM, H Cohen, LM Higgins and PG Kennedy, Lewis & Clark College. Does the physiology of fungal symbionts drive specificity in Alnus-ectomycorrhizal assemblages.

PS 112-271 Reid, CD1, CR Howell1, A Weisenberger2, S Lee2, C Zorn2, A Crowell1, G Bonito1, M Smith3, J McKisson2, J McKisson2 and W Xi2, (1)Duke University, (2)Thomas Jefferson National Accelerator Facility, (3)University of Maryland. Using PhytoPET imaging to elucidate trade-offs in plant-fungal symbiont interactions.

PS 112-272 Anderson, S1, S Wyllie-Echeverria2 and AP Summers2, (1) Friday Harbor High School, (2)University of Washington. Location of seed coat split prior to germination: An SEM investigation of Zostera marina seed.

PS 113 - Latebreaking: Plant-Insect Interactions

Exhibit Hall DE, Oregon Convention Center

PS 113-273 Keating, RA, T Nuttle and EH Yerger, Indiana University of Pennsylvania. Distributions of phytophagous larvae in mid-successional Allegheny hardwoods: impacts of bird exclusion.

PS 113-274 Skuhrovec, J1, S Koprdová1 and Z Münzbergová2, (1)Crop Research Institute, (2)Charles University in Prague. Different strategies of pre-dispersal seed predators in flower heads of Carduoidea species.

PS 113-275 Münzbergová, Z1, M ŠUrinová2 and J Skuhrovec3, (1) Charles University in Prague, (2)Institute of Botany, (3)Crop Research Institute. Predicting plant-herbivore interactions using plant traits: Step to successful biological control.

PS 113-276 Rice, KB1 and DA Herms2, (1)The Ohio State University/ OARDC, (2)The Ohio State University / OARDC. Cascading ecological impacts of emerald ash borer: Tritrophic interactions between prickly ash, giant swallowtail butterfly larvae, and larval predators.

PS 113-277 Calderon-Ayala, J1 and E de la Peña2, (1)Universidad Metropolitana, (2)Ghent University. Interaction between the dune aphid Schizaphis rufula and its host-plant Ammophila arenaria: a comparison of insect multiplication on different host-plant populations.

PS 113-278 Bookstein, HA, AF Howard and EM Barrows, Georgetown University. Floral visitor diversity and pollinium acquisition in three pollinator taxa of Asclepias syriaca, Common Milkweed (Apocynaceae).

PS 114 - Latebreaking: Population Ecology

Exhibit Hall DE, Oregon Convention Center

PS 114-279 Meisner, M, University of California - Davis. Higher temperatures amplify long-term population cycles in a parasitoid-host system.

PS 114-280 Tye, MR1, P Quintana-Ascencio1, CW Weekley2, ES Menges2 and R Salguero3, (1)University of Central Florida, (2)Archbold Biological Station, (3)Max Planck Institute for Demographic Research. Assessing factors influencing demographic structure in the federally listed herb Liatris ohlingerae.

PS 114-281 Vieira-Neto, EHM and FM Mundim, University of Florida. Density-dependence effects on the spatial dynamics of a Neotropical herbivore.

PS 114-282 Palow, DT and K Kitajima, University of Florida. Resource transfer dynamics during early seedling development of 23 species in a species-rich tribe, Ingeae (Fabaceae), from two Neotropical forests.

PS 115 - Latebreaking: Restoration Ecology

Exhibit Hall DE, Oregon Convention Center

PS 115-283 Waugh, WJ1 and EP Glenn2, (1)S. M. Stoller Corporation, (2) University of Arizona. Land-farm phytoremediation: Irrigating native desert shrubs with nitrate-contaminated ground water at a former uranium mill near Monument Valley, Arizona.

PS 115-284 Chambers, J1, K Keeley2, S Rodriguez Celiz3, JC Tello-Alvarado4, KP Vela5 and S Shanee1, (1)Neotropical Primate Conservation, (2)University of Wisconsin, (3)Universidad Alas Peruanas, (4)Proyecto Mono Tocon, (5)Asociacion Amazonicos por la Amazonia. Population density and community-based conservation of the Andean Titi Monkey (Callicebus oenanthe) in a secondary forest fragment in northern Peru.

PS 115-285 Davies, RJ1, MA Whalen2 and DA Mackay2, (1)Outback Ecology, (2)Flinders University. Does soil seed bank diversity limit post-fire regeneration in fragmented native vegetation?.

PS 115-286 Gomezdelcampo, E and KE Coode, Bowling Green State University. Hydrologic effects of a wet prairie restoration.

PS 115-287 Payne, CA, SC Hartzell and DR Bowne, Elizabethtown College. Restoration stream data for amphibian populations at Big Spring Run, Lancaster County, PA.

PS 115-288 Palmer, CE1, SC Richardson1, EL Middleton2, JD Bever2, PA Schultz2, DM Wachtel3, KD Jones4 and Z Yermakov5, (1) DePaul University, (2)Indiana University, (3)ARAMARK, (4)V3 Companies, (5)Chicago Parks Department. Fungi can save the prairie: Revealing the benefits of arbuscular mycorrhizal fungi additions to an urban prairie installation.

PS 115-289 Rayburn, AP, H Spaulding, AT O'Geen, MR George and EA Laca, University of California-Davis. Spatial methods for low-cost restoration of rangeland ecosystem services.

PS 115-290 Suronen, EF and BA Newingham, University of Idaho. Evaluating prescribed fire as habitat restoration for an endemic threatened species. .

PS 115-291 Zarnstorff, NA1 and KL Heck Jr.2, (1)Emporia State University, (2)Dauphin Island Sea Lab. Restoring seagrass in northern Gulf of Mexico waters: A test of the birdstake method.

PS 115-292 Knight, SJ, Walt Disney World. Coral restoration in The Abacos, The Bahamas: An ecosystem approach.

PS 116 - Latebreaking: Soil Ecology

Exhibit Hall DE, Oregon Convention Center

PS 116-293 Taylor, BN, SG Pritchard, AE Strand and ER Cooper, College of Charleston. Using species accumulation curves to ensure adequate sampling effort in root studies.

PS 116-294 Laine, M1, T Rütting2 and R Strömmer1, (1)University of Helsinki, (2)University of Gothenburg. Experimental study on the gross N dynamics in the agricultural fields of different land use history.

PS 116-295 Vance, JM, D Zabowski, W Gibble, S Reichard, R Edmonds and M Khorasani, University of Washington. Hackelia venusta: An investigation into the site characteristics of Washington State's rarest plant.

PS 116-296 Norris, WF, RL McMinn, R Davis and BA Koerner, Emporia State University. Soil property changes following restoration in a tallgrass prairie ecosystem.

PS 116-297 Godin, AM, University of British Columbia Okanagan. Fine-scale phosphatase activities are associated with carbon and nitrogen-rich microsites in soils of a mixed Douglas fir and paper birch stand.

PS 116-298 Nicholson, BA and MD Jones, University of British Columbia, Okanagan Campus. A comparison of the physiologies of ectomycorrhizal fungal communities from clearcuts and mature forests.

PS 116-299 Johnson, T, University of Nebraska-Lincoln. The effect of charcoal on decomposition in tallgrass prairies.

PS 117 - Latebreaking: Species Interactions

Exhibit Hall DE, Oregon Convention Center

PS 117-300 López, I, University of Puerto Rico-Rio Piedras. Potyvirus associated to Momordica charantia in Puerto Rico.

PS 117-301 Good, AP, Stanford University. Floral nectar proteobacteria: Neutral or cardinal byproduct of honey bee pollination activity?.

PS 117-302 Alvarez-Yepiz, JC1, A Burquez2 and M Dovciak1, (1)State University of New York, (2)Instituto de Ecologia, Universidad Nacional Autonoma de Mexico. Coexistence mediated by ontogenetic shifts in plant-plant interactions: Insights from a rare cycad within angiosperm communities.

PS 117-303 Aránguiz-Acuña, A, CENMA. Diapauses driven by crowding promotes plankton coexistence: An experimental assessment.

PS 117-304 Maher, CT, University of Montana. Herbivore and shelter effects on seedlings of Great Basin bristlecone pine (Pinus longaeva D.K. Bailey).

PS 117-305 Bubriski, RS1 and PG Kennedy2, (1)Lewis and Clark College, (2)Lewis & Clark College. Investigating the context dependence of ectomycorrhizal fungal species interactions: Competition or facilitation?.

PS 118 - Latebreaking: Sustainability

Exhibit Hall DE, Oregon Convention Center

PS 118-306 Wieber, EN, California State University Fullerton. Xylem embolism repair in Valencia Orange.

PS 118-307 Noland, MA1, GWT Wilson1, RM Miller2 and NC Johnson3, (1)Oklahoma State University, (2)Argonne National Laboratory, (3)Northern Arizona University. Evaluating plant-soil-microbial interactions in low-input high-diversity biofuels: Enhancing aboveground ecosystem services while increasing carbon sequestration.

PS 118-308 Cecala, JM1 and JM Leong2, (1)California State Polytechnic University Pomona, (2)California Polytechnic University, Pomona. Measuring the pollinator performance of honey bees on seedless watermelon.

PS 118-309 Del Grosso, SJ and M Cavigelli, USDA-ARS. Climate stabilization wedges revisited: can agricultural production and greenhouse gas reduction goals be accomplished?.

PS 118-310 Berryman, S1, J Straker1, A Garibaldi1, B Stelfox2 and J Nishi2, (1)Integral Ecology Group Ltd., (2)ALCES Landscape and Land-Use Ltd.. A community-led approach for landscape planning.

PS 118-311 Fuller, JD and SJ Leisz, Colorado State University. Deforestation rates in Papua New Guinea: How much does subsistence agriculture contribute?.

PS 119 - Latebreaking: Urban Ecosystems

Exhibit Hall DE, Oregon Convention Center

PS 119-312 Lagrosa, JJ IV1, MH Friedman1, WC Zipperer2, MG Andreu1 and RJ Northrop1, (1)University of Florida, (2)USDA Forest Service. Effect of legacy on hydric forest structure in a subtropical urban watershed.

PS 119-313 Steele, MK and J Heffernan, Duke University. Urbanization driven convergence of surface water quantity and distribution.

PS 119-314 Lothamer, KM1, SP Brown1, JD Mattox2 and A Jumpponen1, (1)Kansas State University, (2)City of Manhattan. Composition, diversity, and resilience of fungal communities colonizing the roots of native and exotic hosts in an urban environment.

PS 119-315 Yeakley, JA1, S Duncan2, SM Bollens3, CP Ozawa1, V Shandas1, H Chang1, M Dresner1, S Gordon2, JA Harrison3, J Kline4, AT Morzillo2, N Netusil5, GC Rollwagen-Bollens3, M Stephan3 and P Thiers3, (1)Portland State University, (2) Oregon State University, (3)Washington State University Vancouver, (4)USDA Forest Service, (5)Reed College. Portland-Vancouver ULTRA-Ex: Evaluating relationships between governance and environmental quality in urban ecosystems.

PS 119-316 Dolan, RW, Butler University. Plant community dynamics in a peri-urban central Indiana flatwoods between 1996 and 2007.

PS 119-317 von Behren, C, A Dietrich and JA Yeakley, Portland State University. Watershed urban development and riparian vegetation community composition in the Portland-Vancouver metro area.

PS 119-318 Ansaldi, BH and SJ Franks, Fordham University. Gene flow and pollen limitation on experimental green roofs.

PS 119-319 Scholl, JP and EM Frazier, Florida Atlantic University. Analyzing gopher tortoise habitat use and distribution in an urban context using GIS and R.

PS 119-320 Lilly, PJ1, JC Jenkins2 and MJ Carroll3, (1)University of Vermont, (2)US Environmental Protection Agency, (3) University of Maryland. Large intra-annual N fluxes between soil and plant pools in a turfgrass lawn.

PS 119-321 Ambrose, MJ, North Carolina State University. How urban forest tree species composition compares with that of the natural forest.

PS 119-322 Belknap, KA, CL Butcher, JM Dannenhoffer and BJ Swanson, Central Michigan University. Green roofs as urban habitat: Plant species colonization on green roofs in Michigan.

PS 119-323 Payne, SG1, KL McGuire2, SM Gedallovich1, JM Discenza1, CM Gillikin1, MI Palmer3 and N Fierer4, (1)Barnard College of Columbia University, (2)Barnard College, Columbia University, (3)Columbia University, (4)University of Colorado. Spatial and temporal variation of the airborne microbial community across New York City green roofs.

PS 120 - Latebreaking: Wetlands

Exhibit Hall DE, Oregon Convention Center

PS 120-324 Werner, BA1, WC Johnson1, GR Guntenspergen2, RA Voldseth3 and B Millett1, (1)South Dakota State University, (2)US Geological Survey, (3)North Dakota State University. Evidence for climate warming and wetland drying in the North American Prairie Pothole Region.

PS 120-325 Stevens, LE1, JD Ledbetter2 and AE Springer3, (1)Museum of Northern Arizona and Grand Canyon Wildlands Council, (2)Springs Stewardship Institute, (3)Northern Arizona University. The demise of springs ecosystems: A global ecological crisis.

PS 120-326 Zero, VH and MA Murphy, University of Wyoming. Effects of beaver on amphibian spatial distributions.

PS 120-327 López-Figueroa, NB1, RJ Colón-Rivera2, RA Feagin2 and JB West2, (1)University of Puerto Rico at Humacao, (2)Texas A&M University. Using isotope hydrology to understand the impacts of climate change to tropical coastal wetlands.

PS 120-328 Saunders, LE1, MB Koontz2 and SR Pezeshki1, (1)University of Memphis, (2)The University of Memphis. Two agricultural ditch plant species are negatively affected by root-zone glyphosate exposure.

PS 120-329 Bowen, CA1, MB Koontz2, LE Saunders3 and SC Pierce4, (1) Christian Brothers University, (2)The University of Memphis, (3)University of Memphis, (4)Mississippi State University. Flooding and wetland plants: Localized versus whole-plant response.

11 am-12:30 pm

Musicians Central

Ginkoberry Concourse, Oregon Convention Center

11:30 am-1:15 pm

ESA Braun Student Award Committee Meeting

Mt. Hood, Doubletree Hotel

Program Participant Index

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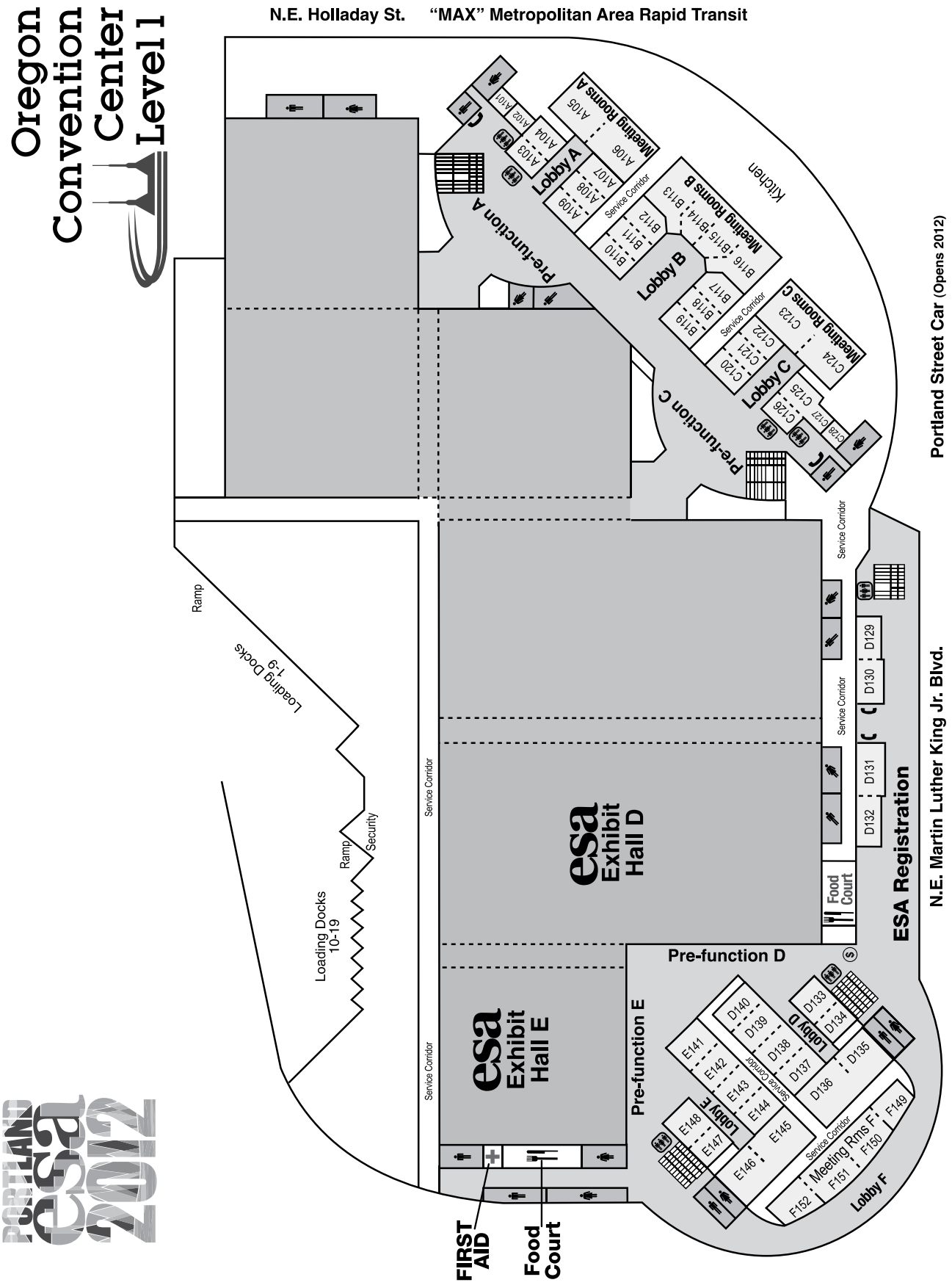
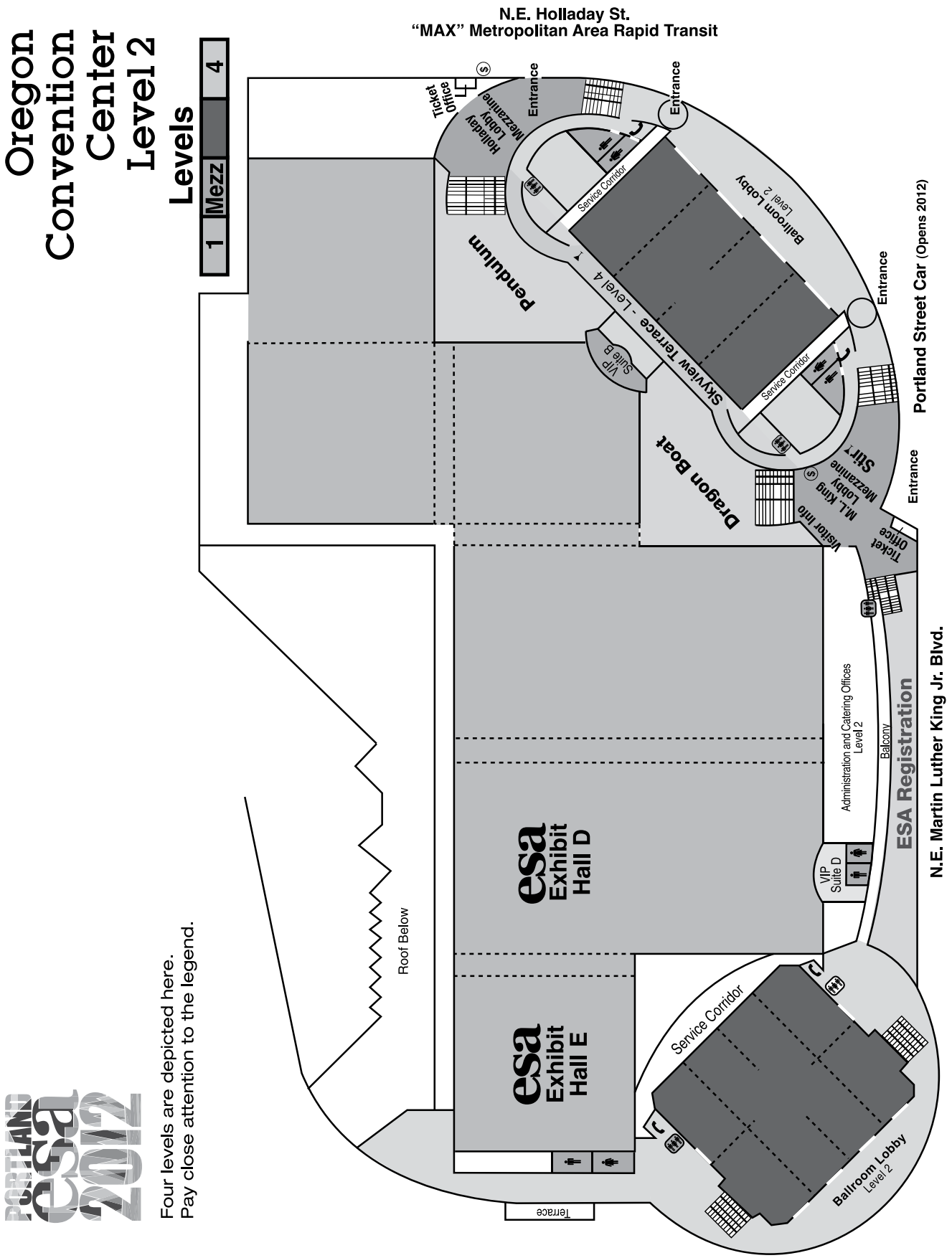
Floorplans

Oregon Convention Center, Level 1



Floorplans

Oregon Convention Center, Level 2



Four levels are depicted here.
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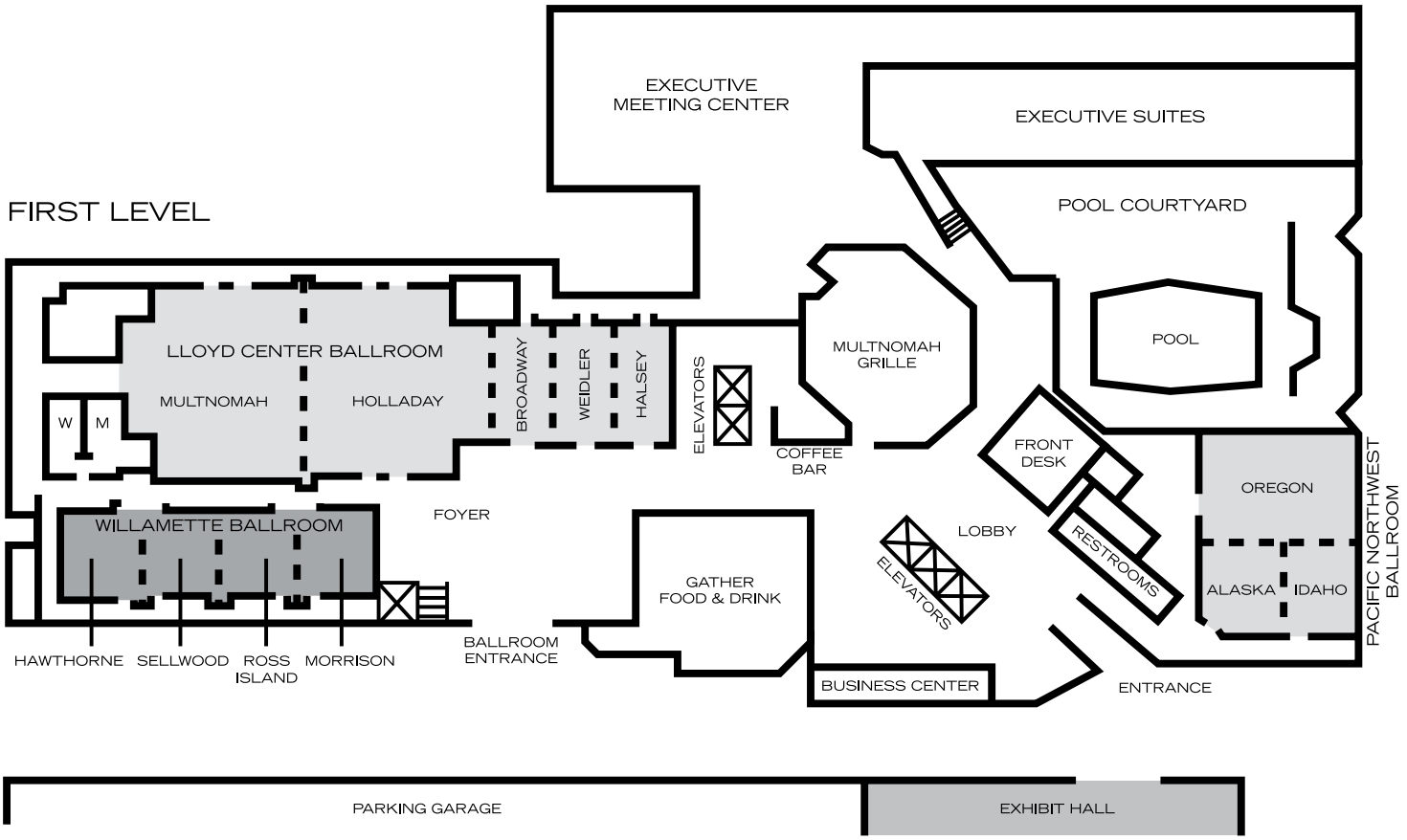
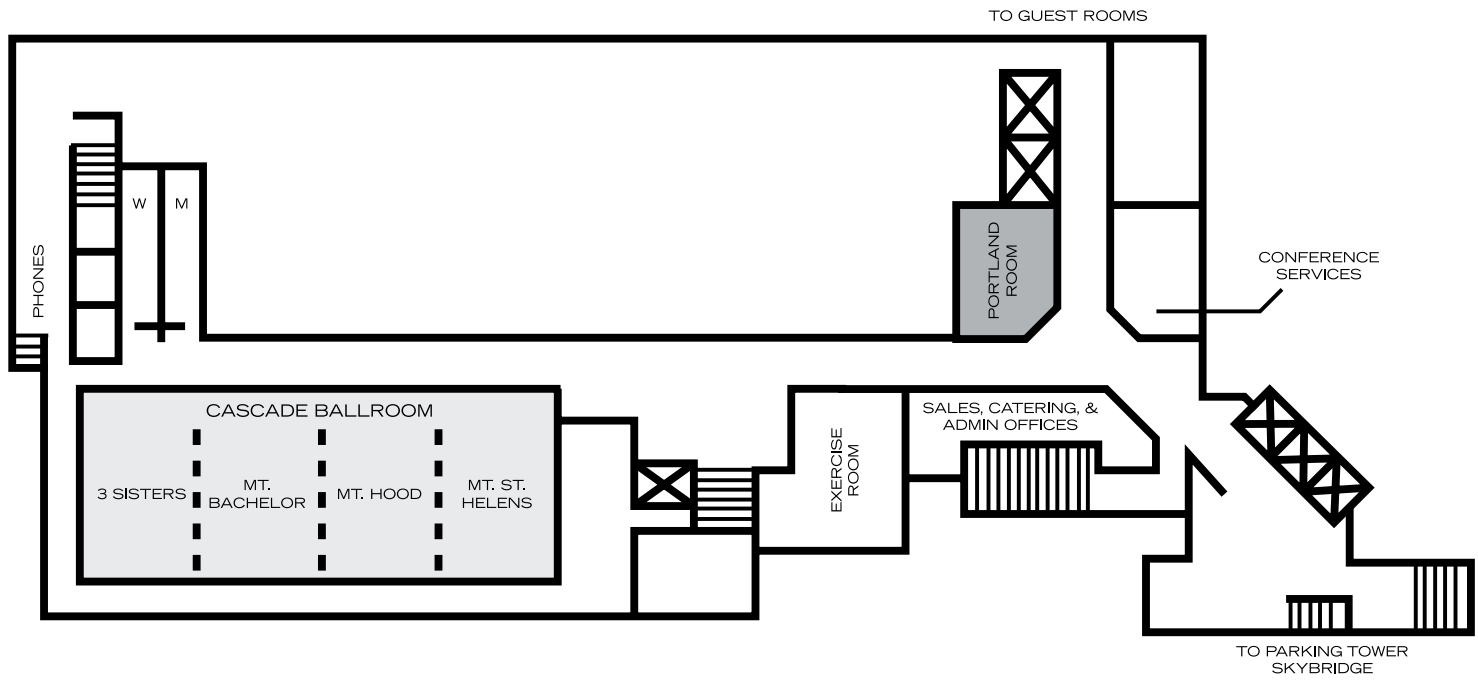
Floorplans

Doubletree by Hilton, Portland





Greening the Meeting

ESA continually strives for a “greener meeting”. Recognizing that our Annual Meeting will generate a great deal of recyclable materials, we are committed to diverting as much unwanted recyclable material as possible from the local landfill. OCC management and staff share ESA’s commitment to preserving the environment. The center offers a comprehensive sustainability program, incorporating a broad range of practices that promote energy efficiency, water conservation, waste reduction, habitat protection, sustainable catering, responsible purchasing, and education and outreach. The facility manages an extensive recycling program that includes food and yard waste, cardboard, mixed paper, cans, plastics, glass bottles, wood pallets, vinyl, metal, and electronics. Recycling bins for mixed paper, aluminum cans, and plastic and glass bottles are conveniently located throughout the facility. Of the approximately 552 tons of waste the center generated in fiscal year 2009-2010, more than 315 tons of materials were diverted from landfilling through recycling, composting, and donating.

ESA asks that you join our efforts to make the meeting as eco-friendly as possible by following the environmental practices we support. When attending our show, please save and reuse shipping containers used for in-bound freight to return any materials you are shipping after our event. Please save, reuse, or donate your leftover giveaway items to prevent them from being sent to a landfill. For those hosting food functions in conjunction with the ESA Annual Meeting, please also adhere to the guidelines below.

- ♻ Provide drinking water in pitchers rather than individual bottles.
- ♻ Do not allow use of Styrofoam t or Polystyrene #6 plastic food or beverage containers.
- ♻ Provide collection bins for the recycling of glass, aluminum, steel cans, plastic bottles, table coverings, pallets, paper (i.e., newspaper, cardboard, and other office paper), and grease.
- ♻ Request paper supplies with a minimum of 35% post-consumer recycled content.
- ♻ Request china service or biodegradable/compostable disposable service, dishware, and linens.
- ♻ Host events within walking distance to the OCC.
- ♻ Serve condiments in bulk, not packaged for individual servings.
- ♻ Use cloth napkins or post-consumer recycled paper napkins.
- ♻ Donate leftover food to a local food bank.
- ♻ Request that table scraps be composted.
- ♻ Use sustainable food (locally grown and organic).

ESA Mentors

The Ecological Society of America sincerely thanks the Section Chairs and Members listed below for their time and efforts dedicated to our Networking for Students and Early Career Professionals event launched at this year's Annual Meeting. Thank you for helping to mentor the next generation of ecologists.

Agroecology
Richard G. Smith
Mari-Vaughn Johnson

Applied Ecology
Daniel H. Slone
Colin Orians

Aquatic Ecology
Tessa Francis
Brad Cardinale
Jennifer Rehage

Asian Ecology
Hanqin Tian
Lingli Liu
Bin Zhu
Hua Chen

Biogeosciences
Jill Baron
Becky Ball

Education
Jeff Corney
Wendy Gram
Robin Sears
Chris Jensen

Environmental Justice
George Middendorf
Michael Huston
Leanne Jablonski
Charlie Nilon

Human Ecology
Robert Dyball
Rich Borden
Lee Cerveny

Long-term Studies
Michael J. Vanni
Scott Collins
Lesley Knoll

Microbial Ecology
Tony Yannarell
Angela Kent

Natural History
Terry Wheeler
Karen Reagan
Noelle Machnicki

Paleoecology
Paul Henne
Jacquelyn Gill

Physiological Ecology
Melanie Zeppel
Jason West
Will Pockman

Plant Population Ecology
Sam Scheiner
Andy McCall
Amy Faivre

Policy
Emilie Stander
Melissa A. Kenney

Rangeland Ecology and Management
Kari E. Veblen
Cynthia "Cini" Brown

Researchers at Primarily Undergraduate Institutions
Erin Lindquist
Carmen Cid
Laura Altfeld

Soil Ecology
Becky Ostertag

Statistical Ecology
Eric Lamb
Sam Scheiner

Student Section
Jorge Ramos
Joey Bernhardt
Dayani Pieri

Theoretical Ecology
Elizabeth Crone
Colin Kremer

Traditional Ecological Knowledge
Mimi Elizabeth Lam

Urban Ecosystem Ecology
John C. Whitley
Jacoby Carter
Wayne C. Zipperer

Vegetation
Richard Boyce
Mary Santelmann

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SAVE THE DATE: 8.4.13 – 8.9.13

Minneapolis Convention Center, Minneapolis, MN

Sustainable pathways:

learning from the past and shaping the future

Future Annual Meetings

98th ANNUAL MEETING 2013

Sunday, August 4 – Friday, August 9, 2013

Minneapolis Convention Center

Minneapolis, MN

99th ANNUAL MEETING 2014

Sunday, August 10 – Friday, August 15, 2014

Sacramento Convention Center

Sacramento, California

100th ANNUAL MEETING 2015

Sunday, August 9 – Friday, August 14, 2015

Baltimore Convention Center

Baltimore, MD

101st ANNUAL MEETING 2016

Sunday, August 7 – Friday, August 12, 2016

Greater Fort Lauderdale • Broward County Convention Center

Ft. Lauderdale, FL