

Evolution 2017 Program

Session Thu-B113-B114 JoeFest: a symposium to honor Joe Felsenstein

Thursday - 9:00 - 17:00

Room B113-114

Session Executive joint council (ASN/SSB/SSE)

Friday - 8:30 - 12:00

Room B119

Session SSE/BEACON Undergraduate Diversity Program: Professional Development Workshop

Friday - 8:30 - 13:00

Room B115

This is an optional pre-conference event. Pre-registration is required (during conference registration) and is restricted to undergraduates who are attending the meeting.

This workshop will cover topics including networking, mentoring, work/life balance, and alternative careers (8:30-11:15 am), with presentations by Scott Edwards, Lex Flagel, Joanne Kamens, Stacy Farina, and April Wright. It will also feature a keynote speaker (Pamela Yeh) for the annual Undergraduate Futures Lecture followed by lunch and a panel discussion with all the speakers (11:15am-1:00pm).

Session SSB workshop – Species in the age of discordance

Friday - 8:45 - 17:00

Room A109

An optional pre-conference event. Prior registration required (during conference registration).

Topic: Biological lineages move through time, space, and each other. As they do, they diversify, diverge, and grade away from and into one another. One result of this is genealogical discordance, i.e., the lineages of a biological entity may have different histories. We see this on numerous levels, from population-level lineages, to microbial networks, to holobionts. Recent work in systematics, in particular genomics and phylogenomics, is providing an ever more refined view of this (and other sorts of) discordance. The goal of this workshop is to pause to consider how and whether our better understanding of discordance impacts how we think about species. The invited speakers represent a diverse group along several dimensions from multiple career stages, from graduate student to full professor. The workshop will include structured, interactive discussions in addition to panel presentations by invited speakers. The central question will be addressed from a variety of theoretical perspectives, including phylogenetic systematics, population genetics, microbiology, and philosophy of biology. This workshop is a follow-up session to an NSF supported interdisciplinary conference on the same topic. The intention is to use this workshop to help maintain and build on the cross-disciplinary connections made between researchers at that meeting, and to encourage broader disciplinary participation in systematics.

Speakers:

- David Baum (U. Wisconsin, Madison) *Genealogical individuation in the face of discordant gene trees: Does exclusivity still work?*
 - Matt Haber (U. Utah) *The species problem problem and the no solution solution*
 - Ariadna Morales (Ohio State U.) *Species delimitation with gene flow in *Myotis* bats*
 - Leonie Moyle (Indiana University) *Still 'good' species or: How I learned to stop worrying and love the incongruence*
 - Jay Odenbaugh (Lewis & Clark College) *Discordance, explanation, and levels of lineages*
 - Makmiller Pedroso (Towson U.) *Species and the assembly of microbial communities*
 - Nitin Phadnis (U. Utah) *Selfish genetic elements and speciation in *Drosophila**
 - Mike Shapiro (U. Utah) *The pigeon's checkered past: pigment patterning and the hybrid origin of an adaptive trait*
 - Olga Zhaxybayeva (Dartmouth U.) *Of species and clusters: Could we distinguish the observed patterns of bacterial microdiversity from those produced by a neutral process of lineage birth and death?*
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Session ASN Science communication workshop: Effective communication of science and its impacts

Friday - 9:00 - 16:00 **Room B111**

This is an optional pre-conference event. Prior registration required (during conference registration).

Topic: Sure, your work on [fill-in-the-topic-of-your-research-here] is the most exciting and important science out there! But to have an impact, it must be communicated in ways that enable people to understand and compel them to care. And, in order to be funded it must have a well-designed, easily-implemented and assessable broader impacts plan. This workshop will provide strategies and approaches to help you communicate your work effectively to diverse audiences, and provide insight into what the NSF really wants when they ask you to communicate the broader impacts of your work.

Topics covered will include:

- Defining your message, identifying your audience and crafting the perfect elevator pitch
- Ready for Your Close-Up? – Strategies for nailing your media interview
- Social Media – The three W's (What?Why?Will using it take over your entire life?)
- Broader Impacts 101 – What does this have to do with science communication?(Answer: EVERYTHING!)

This will be a "hands-on" workshop, so come prepared to practice your skills with your colleagues!

This workshop will be co-facilitated by Jory Weintraub, PhD and Briana Pobiner, PhD. Jory is the Science Communication Director for the Duke Initiative for Science & Society, and Director of the Duke Broader Impacts Resource Center, and serves on the Steering Committee of the National Alliance for Broader Impacts (NABI). He has over 20 years of experience in science education, outreach and communication, including 10+ years leading the education and outreach efforts at NESCent (the National Evolutionary Synthesis Center). Briana is a paleoanthropologist and educator at the Smithsonian's National Museum of Natural History (NMNH). While she continues to conduct research on human evolution, her primary responsibilities since she joined the NMNH's Human Origins Program in 2005 focus on onsite and online education, outreach, and public programming. She has led several science communication training workshops for NMNH staff, postdocs, and volunteers.

Session SSE Education Committee workshop: Professional Development for Undergraduate Educators

Friday - 9:00 - 17:00 **Room B112**

This is an optional pre-conference event. Prior registration required (during conference registration).

Topic: National reports such as [Vision and Change](#) call for engaging students in authentic scientific experiences, such as using models and working with real data. Teaching with data and models can deepen students understanding of key biological concepts, develop a greater appreciation of the process of science, and engage students in quantitative and computational thinking. In this workshop, we will explore some of the challenges and successful approaches to using models and data in the classroom.

More information including a workshop schedule can be found [here](#).

Session ASN Executive council opening meeting

Friday - 13:00 - 17:00 **Room C126**

Session SSB Executive council opening meeting

Friday - 13:00 - 17:00 **Room B110**

Session SSE Executive council opening meeting

Friday - 13:00 - 17:00 **Room B119**

Session SSE Diverse careers committee workshop

Friday - 13:00 - 17:15 **Room B116**

This is an optional pre-conference event. Prior registration required (during conference registration).

Topic: The key goals of the workshop are to guide students and postdocs through the first steps of personal career exploration (academic and non-academic) and necessary actions for active planning of post-graduate school or post-postdoctoral stages. In addition to small-group conversations with professionals from various careers, there will be presentations on how to market/ brand oneself, networking, informational interviews, etc. Based on our past workshop, we expect that attendees will leave the workshop with more confidence regarding career options, and with actionable items and strategies for successive efforts.

Session SSB workshop – Trees, traits and functions: semantics for comparative biology

Friday - 13:30 - 17:00

Room B114

An optional pre-conference event. Prior registration required (during conference registration).

Topic: A rich set of comparative phylogenetic methods has been developed in recent decades for the analysis of traits, functions, and other macroevolutionary patterns. A similarly rich set of tools, such as ontologies, data annotation models, and machine reasoners, have also recently been introduced allowing researchers to represent the semantics of phenotypes, traits, functions, and environmental properties in such a way that computers can access what had previously been the implicit knowledge of biological experts. Although these two efforts have remained largely separate from each other, a few studies at their intersection have shown that their synthesis has the potential to enable new classes of comparative analyses and provide an interdisciplinary bridge between different phylogenetics user communities. This symposium brings together research at the nexus of comparative phylogenetics and computable semantics of biological knowledge. The aim is to stimulate discussion and awareness of the opportunities that are emerging for the comparative biology community.

Speakers:

- Carrine Blank (U. Montana) *Use of natural language processing algorithms, ontologies, and phylogenomic trees to automate and accelerate phenotypic trait evolutionary studies for prokaryotes*
- Paula Mabee (U. South Dakota) *Progress in comparative biology can be accelerated through semantic annotation*
- Paul Thomas (U. Southern California) *Modeling the evolution of gene function using phylogenies and the Gene Ontology*
- Martin Ramirez (Museo Argentino de Ciencias Naturales) *Tracing the evolution of complex traits: the integration of atomized morphological data on phylogenies*
- Sergei Tarasov (NIMBioS, U. Tennessee, Knoxville) *Anatomy Ontology, Bayesian Networks and Evo-Devo suggest a new framework for modeling discrete morphological characters*
- Josef Uyeda (Virginia Tech U.) *Can ontologies help understand trait evolution (and vice versa)?*

Session Opening reception

Friday - 18:30 - 22:00

Room Exhibit Hall A

Session SSE Public Outreach Lecture

Friday - 19:30 - 20:30

Room Oregon ballroom 202-204

Speaker: Ann Reid, Executive Director of the National Center for Science Education **Abstract:** Surveys consistently show that about 40% of American adults believe that humans were created in their current form in the last 10,000 years. One-third of American adults do not believe that human activities are changing Earth's climate. Lack of societal consensus around topics that are scientifically well-established echoes in our nation's science classrooms, where at least half of middle and high school science teachers report that they equivocate when they teach evolution and climate change. Ann Reid, Executive Director of the National Center for Science Education (NCSE), will discuss the more-timely-than-ever phenomenon of science denial and why she finds that label neither accurate nor particularly helpful. She will also share tools and lessons for communicating effectively about topics that are societally, but not scientifically, controversial.

Session Sat1-A105 Computational biology

Saturday - 8:30 - 9:45

Room A105

8:30 Predicting the phenotypic fate of mutations in transgenes across genotypic and environmental contexts
Brandon Ogbunu

- 8:45 The Effect of Evolution and Spatial Structure on Diversity in Biological Reserves**
Michael Wiser, Charles Ofria, Emily Dolson
- 9:00 Effects of Novel P Transposable Element Invasion in Drosophila yakuba**
Antonio Serrato, Stephanie Zhang, Daniel Matute
- 9:15 Phylogenetic inference of tumor progression via copy number variation**
Russell Schwartz
- 9:30 Defining, understanding and exploiting eco-evolutionary dynamics in bone cancer**
David Basanta

Session Sat1-A106 Phylogeography / molecular ecology

Saturday - 8:30 - 9:45 **Room A106**

- 8:30 Genetics and evolutionary relationships of Hemphillia slug populations**
Andrew Rankin, Anahí Espíndola, Michael Lucid, Jack Sullivan
- 8:45 Cryptic divergence on Florida's sand ridges: a new trap-jaw ant species**
Daniela Magdalena Sorger, Warren Booth, Adrian Smith, Robert Dunn
- 9:00 Evolution of a Subterranean Lifestyle in an Arboreal Frog Lineage Limits Dispersal and Enhances Genetic Diversification**
Jacobo Reyes Velasco, Joseph Manthey, Stephane Boissinot, Xenia Freilich
- 9:15 Severed connections and isolation of relictual Amazonian savannas inferred from genomic data**
Luciana C. Resende-Moreira, Andréa Thomaz, Joyce Prado, Andrea P. Souto, José P. Lemos-Filho, Maria Bernadete Lovato, L. Lacey Knowles
- 9:30 Geographic variation in the genetic structure of a mussel hybrid zone**
David Innes, Norah Saarman, Raymond Thompson

Session Sat1-A107-109 Species delimitation / systematics

Saturday - 8:30 - 9:45 **Room A107-109**

- 8:30 Revisiting species delimitation in the Lampropeltis triangulum complex**
E. Anne Chambers, Harry Greene, David Hillis
- 8:45 Genomic divergence in a widespread sea anemone complex: Implications for species delimitation**
Carlos Spano, Vreni Häussermann, Fabián Acuña, Charles Griffiths, Lisa Seeb, Daniel Gomez-Uchida
- 9:00 Species Delimitation in a recent and rapid radiation**
Sarah Jacobs, David Tank
- 9:15 Elucidating the evolutionary history of Mexican whiptail lizards**
Anthony Barley, Robert Thomson
- 9:30 Quantifying discordance in single locus species delimitation methods in horned lizards (Phrynosomatidae: Phrynosoma)**
Christopher Blair, Robert Bryson

Session Sat1-B111-112 Phenotypic plasticity / GxE 1

Saturday - 8:30 - 9:45 **Room B111-112**

- 8:30 The persistence of temperature effects through multi-generations**
Who Seung Lee, Stephan Munch, Youngroo Lee, Marc Mangel
- 8:45 Like grandfather like grandson: the trans-generational effects of dopamine manipulation on behavioural traits in the guppy, Poecilia reticulata**
Alex De Serrano, Helen Rodd, Kimberly Hughes
- 9:00 Complex interactions among individual traits affect behavioral plasticity expressed by female green swordtails (Xiphophorus hellerii) in two social contexts**
Rachael DiSciullo, Alexandra Basolo
- 9:15 The evolution of cooperation: Interacting phenotypes among social partners**
Bronwyn Bleakley, Mat Edenbrow, Safi Darden, Charles Tyler, Indar Ramnarine, Darren Croft
- 9:30 Social plasticity and the maintenance of alternative life histories: a modelling approach**
Elizabeth Lange, Leithen M'Gonigle

Session Sat1-B113 Evolutionary theory 1
Saturday - 8:30 - 9:45 **Room B113**

- 8:30** Transmission mode evolution in response to spatial heterogeneity in symbiont quality
Alexandra Brown, Erol Akcay
- 8:45** Stags, hawks, and doves: Social evolution theory and individual variation in cooperation
Jeremy Van Cleave
- 9:00** Genetic variation in legume sanctions and the maintenance of ineffective rhizobia
Camille Wendlandt, Joel Sachs
- 9:15** Hidden Benefits Aid the Evolution of Altruism in Small Populations of Unrelated Individuals
Sarah Fumagalli, Sean Rice
- 9:30** A cybernetic evolution theory: evolutionary duality of environmental stochasticity and natural selection
Kurt Heiningner

Session Sat1-B114-115 Conservation biology 1
Saturday - 8:30 - 9:45 **Room B114-115**

- 8:30** Large-scale genomic data change our understanding of the hybridization dynamics of the endangered California tiger salamander
Evan McCartney-Melstad, Janet Vu, Jarrett Johnson, Bradley Shaffer
- 8:45** Novel solution to an old problem? Adaptation to transmissible cancer in the Tasmanian Devil
Amanda Stahlke, Paul Hohenlohe
- 9:00** Hawaiian tree snails in a hot, dry world
Melissa Price, Rob J. Toonen, Zac Forsman, Ingrid Knapp, Michael Hadfield
- 9:15** Investigating genome-wide patterns of deleterious variation in Channel Island foxes and Isle Royale wolves
Jacqueline Robinson, Diego Ortega Del Vecchio, Zhenxin Fan, Bernard Kim, Clare Marsden, Bridgett vonHoldt, Kirk Lohmueller, Robert Wayne
- 9:30** The effects of severe population crashes on genome-wide diversity in the Island Fox, *Urocyon littoralis*
Nicole Adams, Xiaoming Wang, Suzanne Edmands

Session Sat1-B116 Speciation 1
Saturday - 8:30 - 9:45 **Room B116**

- 8:30** Climate-driven diversification in a clade of Peruvian poison frogs
Connor French, Jason Brown
- 8:45** Amphibian and reptile speciation along elevational gradients in Ecuador
Juan Guayasamin, Alejandro Arteaga
- 9:00** Insipient speciation in the high Andes? The tale of the Ecuadorian Hillstar, *Oreotrochilus chimborazo*
Elisa Bonaccorso, Carlos Rodríguez-Saltos, Nicolás Peñafiel, Nora Oleas
- 9:15** A hotspot for marine speciation: the Cape Verde Islands
Regina Lopes da Cunha, Rita Castilho
- 9:30** Speciation in plethodontid salamanders of the Trans-Mexican Volcanic Belt
Maria Guadalupe Segovia Ramírez, Sean Rovito

Session Sat1-B117-119 Adaptation 1
Saturday - 8:30 - 9:45 **Room B117-119**

- 8:30** Desiccation and the effect on diapause in two species of *Rhagoletis* fruit flies
Peter Meyers, Meredith Doellman, Lauren Ashley Miller, Christa Kohnert, Dietmar Schwarz, Gregory Ragland, Jeffrey Feder

- 8:45 Is climate change disrupting local adaptation? A meta-analysis of field transplants**
Amy Angert, Megan Bontrager, Devin Gamble, Rachel Germain, Anna Hargreaves, Liz Kleyhans, Catriona Leven, Thomas Richards, Ken Thompson
- 9:00 Plant adaptation along drought frequency gradients**
Grey Monroe
- 9:15 Assessing genomic divergence in American pika along elevational transects reveals insights into thermal adaptation**
Matthew Waterhouse, Liesl Erb, Erik Beever, Michael Russello
- 9:30 To guard or to grow? The role of pleiotropy and life history tradeoffs in the evolution of chemical defense clines in monkeyflowers.**
Nicholas Kooyers, Benjamin Blackman, Liza Holeski

Session Sat1-Ball202 SSB Mayr Award Symposium 1

Saturday - 8:30 - 9:45 **Room Oregon ballroom 202**

- 8:30 Late Miocene biome turnover constrained body size evolution across Australian vertebrates**
Ian Brennan
- 8:45 Birth-death dynamics reveal how phylogeny and ecology shape mammalian vomerolfaction**
Laurel Yohe, Liliana Davalos
- 9:00 Multiple sequence alignment averaging improves phylogeny reconstruction**
Haim Ashkenazy, Itamar Sela, Eli Levy Karin, Giddy Landan, Tal Pupko
- 9:15 The evolution of biomechanical complexity during the global radiation of Strumigenys**
Douglas Booher, Evan Economo
- 9:30 Stochastic character mapping of state-dependent diversification reveals the tempo of evolutionary decline in self-compatible lineages**
Will Freyman

Session Sat1-Ball203 Social systems

Saturday - 8:30 - 9:45 **Room Oregon ballroom 203**

- 8:30 Social norm choreography with tags**
Bryce Morsky, Erol Akcay
- 8:45 Social network position shapes nonlinear selection on weaponry in natural populations of forked fungus beetles**
Vincent Formica, David Tian, Butch Brodie
- 9:00 The foundress's dilemma: group selection for cooperation among queens of the harvester ant, Pogonomyrmex californicus**
Zachary Shaffer, Takao Sasaki, Brian Haney, Marco Janssen, Stephen Pratt, Jennifer Fewell
- 9:15 Coevolution of social behaviors and dynamic network structure**
Erol Akcay
- 9:30 What can social Isolation in mammals and insects teach us?**
Nadia Tsvetkov

Session Sat1-Ball204 ASN VP Symposium: The causes and consequences of evolutionary conflicts 1

Saturday - 8:30 - 9:45 **Room Oregon ballroom 204**

- 8:30 Introduction and some central ideas in evolutionary conflict**
Locke Rowe
- 8:45 Sexual conflicts: mechanisms and emerging themes**
Tracey Chapman
- 9:15 The role of phenotype plasticity in moderating evolutionary conflict**
Troy Day

Session Sat1-C120-122 Sensory systems

Saturday - 8:30 - 9:45

Room C120-122

- 8:30 Color Preferences and Visual Tuning in Guppies: From Individuals to Populations**
Ben Sandkam, Mitchel Daniel, Karen Carleton, Helen Rodd, Felix Breden
- 8:45 Analyses of New World Vulture Olfactory Receptor Repertoires Reveals Dynamic Patterns of Evolution**
Joni E. Wright, Rebecca Kimball, J. Gordon Burleigh, Ed Braun
- 9:00 Evolutionary and Ecological Implications of Chromophore Usage in Rhodopsin**
Nihar Bhattacharya, Frances Hauser, James Morrow, Akimori Wada, Belinda Chang
- 9:15 What big eyes you have: Eye scaling and visual range in cephalopods**
Kate Thomas, Michael Vecchione, Sönke Johnsen
- 9:30 Spectral sensitivity via chromatic aberration-an alternative evolutionary path to color vision?**
Alexander Stubbs

**Session Sat1-C123 SSE Education symposium
Communicating (the relevance of) human evolution 1**

Saturday - 8:30 - 9:45

Room C123

- 8:30 Why Communicating (The Relevance of) Human Evolution Still Matters**
James Smith
- 8:45 Using human examples to teach evolution in high school classrooms increases understanding and decreases cognitive biases and misconceptions**
Briana Pobiner, Bill Watson, Paul Beardsley, Constance Bertka
- 9:15 Evolution is not racist, sexist or anti-theist, and does not replace religion**
Holly Dunsworth

Session Sat1-C124 Expression studies / transcriptomics 1

Saturday - 8:30 - 9:45

Room C124

- 8:30 Regulatory evolution and the Island Rule**
Mark Nolte, Bret Payseur, Colin Dewey
- 8:45 Gene co-expression network connectivity is an important determinant of selective constraint**
Niklas Mähler, Jing Wang, Barbara K Terebieniec, Pär K Ingvarsson, Nathaniel R Street, Torgeir R Hvidsten
- 9:00 Using genetic variance of fitness and transcriptomics to estimate evolutionary potential in new environmental conditions**
Eva Koch, Frédéric Guillaume
- 9:15 Genes involved in musculature, metabolism, and the immune system are up-regulated in yellow-bellied marmots prior to dispersal**
Tiffany Armenta, Steven Cole, Robert Wayne, Daniel Blumstein
- 9:30 Contrasting gene expression programs correspond with predator-induced phenotypic plasticity within and across-generations in Daphnia.**
Nicole Hales, Drew Schield, Daren Card, Audra Andrew, Matthew Walsh, Todd Castoe

Session Evo101 Workshop for Science Educators

Saturday - 8:30 - 16:00

Room C126

Prior registration required (separate from conference registration - see below). Intended for K-12 science educators. Questions? Contact [Kristin Jenkins](#)

Topic: Evolution can often seem very distant from students' lives, making it hard to engage them in studying this core biological concept. Human evolution offers compelling and relevant examples of evolutionary processes for students. At this hands-on workshop we will share free resources based on human evolution you can use in your classroom. The workshop is designed for middle and high school teachers. We encourage you to bring a colleague! Lunch and certificates of participation will be provided for participants.

- This workshop has its own registration process separate from the main conference. You don't need to register or attend the main conference to sign-up for this event.
- Schedule, registration and other information can be found [here](#). **Registration deadline: June 1, 2017**

- Supported by the [Society for the Study of Evolution](#) Education Committee and the [Howard Hughes Medical Institute](#)

Session Coffee break

Saturday - 9:45 - 10:15 **Room Exhibit Hall A**

Sponsored by:



Session Sat2-A105 Diversification

Saturday - 10:15 - 11:30 **Room A105**

- 10:15 Genomic analysis of a transposable element explosion in woodpeckers and allies (Aves: Piciformes)**
Joseph Manthey, Stephane Boissinot
- 10:30 Structural genomic variation and the evolution of sugar accumulation in sweet sorghum**
Elizabeth Cooper, Stephen Kresovich, Christopher Saski
- 10:45 Sperm size evolution in passerine birds**
Jan T. Lifjeld
- 11:00 Population structure and hybrid zones in the tsetse fly *Glossina fuscipes fuscipes* (Diptera: Glossinidae) in Uganda: Implications for vector control**
Norah Saarman, Robert Opiro, Mary Burak, Serap Aksoy, Adalgisa Caccone
- 11:15 Visual signaling and morph discrimination in the rock-paper-scissors game**
Justin Yeager, Kinsey Brock, Danielle Edwards, Marie-Claire Chelini

Session Sat2-A106 Comparative phylogeography

Saturday - 10:15 - 11:30 **Room A106**

- 10:15 Comparative phylogeography, accounting for lineage fusion.**
Ryan Garrick
- 10:30 Historical demography and hybridization in *Enyalius* lizards from the Atlantic Forests**
Roberta Damasceno, Miguel Rodrigues
- 10:45 Comparative phylogeography of multiple *Viburnum* species based on RADseq data**
Elizabeth Spriggs, Deren Eaton, Yoshihisa Suyama, Tetsukazu Yahara, Erika Edwards, Michael Donoghue
- 11:00 Spatial and temporal congruence in regional genomic structure of Brazilian coastal fish communities**
Andréa Thomaz, L. Lacey Knowles
- 11:15 Comparative adaptive genomics in the Brazilian Atlantic Forest: environmental and genomic clines across multiple species**
Laura Bertola, Kyle McDonald, Mariana Vasconcellos, Nick Steiner, Ashfaq Khan, Natalia Quinteros, Ana Carnaval, Michael Hickerson

Session Sat2-A107-109 Species delimitation

Saturday - 10:15 - 11:30 **Room A107-109**

- 10:15 What the hellbender? Exploring species boundaries in North America's giant salamander.**
Paul Hime, Steven Price, Shem Unger, Jeffrey Briggler, Amy McMillan, Michael Freake, Andrea Drayer, Mary Foley, Emily Lemmon, David Weisrock

- 10:30 Integrated analyses of molecular, morphological, and bioacoustic data for species delimitation of an insular amphibian.**
Jim Labisko, Jeffrey Streicher
- 10:45 Species limits and relationships within tail-dropper slugs (genus *Prophysaon*) from the Pacific Northwest**
Megan Smith, Bryan Carstens, David Tank, Jack Sullivan, Megan Ruffley, Anahí Espíndola
- 11:00 Species Delimitation under the Multispecies Coalescent: Conflating Populations with Species in the Grey Zone**
Jeet Sukumaran, L. Lacey Knowles
- 11:15 Lineages vs species in macroevolution: an example from phylogenomics of lizards**
Craig Moritz

Session Sat2-B111-112 Phenotypic plasticity / GxE 2

Saturday - 10:15 - 11:30 **Room B111-112**

- 10:15 Transgenerational methylation variation induced by maternal vernalization in *A. thaliana***
Mariano Alvarez, Gabriela Auge, Kathleen Donohue
- 10:30 Epigenetic signatures of parental effects in soil mites**
Stuart Piertney, Tim Benton, Marius Wenzel, Marianne Mugabo
- 10:45 Climatic gradients shape intraspecific divergence in plasticity for functional traits and gene expression in a South African *Protea***
Melis Akman, Andrew M. Latimer, Jane E. Carlson
- 11:00 Transgenerational effects alter plant defense and resistance in nature**
Jack Colicchio
- 11:15 Genetic assimilation in the wild: evolution of gene expression plasticity during character displacement**
Nicholas Levis, Antonio Serrato, David Pfennig

Session Sat2-B113 Evolutionary theory 2

Saturday - 10:15 - 11:30 **Room B113**

- 10:15 Valley crossing in rapidly adapting sexual populations**
Taylor Kessinger, Jeremy Van Cleve
- 10:30 The effect of migration and environmental heterogeneity on the maintenance of standing genetic variation: a simulation study**
Tegan McDonald
- 10:45 Evolution of Pleiotropic Modules**
Jobran Chebib, Frédéric Guillaume
- 11:00 Fisher's geometrical model emerges as a property of complex integrated phenotypic networks**
GUILLAUME MARTIN

Session Sat2-B114-115 Conservation biology 2

Saturday - 10:15 - 11:30 **Room B114-115**

- 10:15 Global patterns of amphibian phylogenetic diversity across a gradient of human-modified environments**
Dan Greenberg, Arne Mooers, Wendy Palen
- 10:30 Key factors influencing the reproductive success of natural- and hatchery-origin spring Chinook salmon**
Ilana Janowitz Koch, Maureen Hess, Craig Rabe, Shawn Narum
- 10:45 The importance of evolutionary significant lineages for conservation: lessons from a giant water bug**
Emily Hartfield Kirk
- 11:00 Importance of evolutionary conservation; lineage turnover and carbon storage in Madagascar**
Abigail Burrus, Sarah Federman, Alex Dornburg
- 11:15 Predictive methods for conservation prioritization**
Anahí Espíndola, Tara Pelletier, Bryan Carstens, Jack Sullivan, David Tank

Session Sat2-B116 Speciation 3

Saturday - 10:15 - 11:30 **Room B116**

- 10:15 Wax on wax off: tradeoffs between desiccation resistance and pheromone production in the *Drosophila virilis* clade**
Jeremy Davis, Leonie Moyle
- 10:30 Interspecific competition and temporal resource partitioning facilitate speciation and the formation of community biodiversity**
Glen Hood, Thomas Powell, Andrew Forbes, Scott Egan, Alice Harada, Jeffrey Feder
- 10:45 Reproductive isolation in an edaphic endemic monkeyflower species: Habitat selection in plants via manipulation of dormancy and dispersal**
James Sobel
- 11:00 Does ecological divergence accelerate premating reproductive isolation based on song in birds?**
Benjamin Freeman
- 11:15 A genomic and ecological view of (recent) speciation in the white stickleback**
Kieran Samuk, Dolph Schluter

Session Sat2-B117-119 Adaptation 2

Saturday - 10:15 - 11:30 **Room B117-119**

- 10:15 Genomic inference of selection on sperm proteins in the monarch butterfly**
Andrew Mongue, James Walters
- 10:30 Mutual selection pressures exerted by free-spawned gametes at fertilization**
Keyne Monro, Dustin Marshall
- 10:45 Transcriptomic evaluation of male reproductive adaptation in the cactus mouse (*Peromyscus eremicus*)**
Lauren Kordonowy, Matthew MacManes
- 11:00 Maternal Effects on Reproduction and Fitness in the Least Killifish, *Heterandria formosa***
Samantha Levell, Joseph Travis, Samuel Bedgood
- 11:15 A local duplication of the melanocortin receptor 1 (*Mc1r*) locus in *Astyanax* fish**
Joshua Gross, James Weagley, Bethany Stahl, Li Ma, Luis Espinasa, Suzanne McGaugh

Session Sat2-Ball202 SSB Mayr Award Symposium 2

Saturday - 10:15 - 11:30 **Room Oregon ballroom 202**

- 10:15 Phylogeny, evolution, and the biogeographic history of Calandrinia (Montiaceae)**
Lillian Hancock, Abigail Moore, Jurriaan De Vos, Erika Edwards
- 10:30 TraitRateProp: An Integrated Model of Phenotypic Trait Changes and Site-Specific Sequence Evolution**
Eli Levy Karin, Susann Wicke, Tal Pupko, Itay Mayrose
- 10:45 Untangling the coevolutionary trees between New World ground-doves and their parasitic lice**
Andrew Sweet
- 11:00 Diagnosing Effects of Systematic Error and Phylogenetic Signal in Phylogenomics: A Case Study on the Order Cypriniformes**
Milton Tan, Jonathan Armbruster
- 11:15 Phenotypes linked to polyploidy: Revisiting Stebbins' 1938 hypothesis**
Rosana Zenil-Ferguson, Jose Miguel Ponciano, J. Gordon Burleigh

Session Sat2-Ball203 SSE Hamilton Award Symposium 1

Saturday - 10:15 - 11:30 **Room Oregon ballroom 203**

- 10:15 Rapid evolution of learning in natural populations of *Drosophila melanogaster***
Emily Behrman, Tadeusz Kawecki, Paul Schmidt

- 10:30 The Reptile Gut Microbiome: Its Role in Host Evolution and Community Assembly**
Timothy Colston, Brice Noonan, Colin Jackson
- 10:45 The role of chromosomal inversions in life history divergence and reproductive isolation in *Mimulus***
Jenn Coughlan, John Willis
- 11:00 Investigating performance costs incurred in exchange for adaptive resistance to tetrodotoxin in the Newt-Snake co-evolutionary arms Race**
Robert Eugene del Carlo, Jessica S. Reimche, Michael Hague, Edmund D. Brodie, Jr., Normand Leblanc, Chris Feldman
- 11:15 The evolution of parallel Arctic charr ecotypes via non-parallel evolutionary and genomic routes**
Arne Jacobs, Kathryn Elmer, Natalia V. Gordeeva, Sergey S. Alekseyev, Colin E. Adams

Session Sat2-C120-122 Sensory systems / molecular evolution

Saturday - 10:15 - 11:30

Room C120-122

- 10:15 Photoreceptor transmutation in snakes and geckos**
Ryan Schott, Belinda Chang
- 10:30 The molecular evolution of sensory genes in neotropical bats**
Kalina Davies, Laurel Yohe, Elizabeth Dumont, Karen Sears, Liliana Davalos, Stephen Rossiter
- 10:45 Visual evolution in marine-derived Amazonian fishes**
Alexander Van Nynatten, Belinda Chang, Nathan Lovejoy
- 11:00 Convergent Cold-Adaptations of the Visual Pigment Rhodopsin at High Altitudes**
Gianni Castiglione, Nathan Lujan, Belinda Chang
- 11:15 Population differentiation and molecular evolution of pheromone communication in two orchid bee sibling species**
Philipp Brand, Thomas Eltz, Santiago Ramirez

Session Sat2-C123 SSE Education symposium Communicating (the relevance of) human evolution 2

Saturday - 10:15 - 11:30

Room C123

- 10:15 Teaching undergraduate life sciences majors**
Melissa Wilson Sayres
- 10:45 Panel discussion: Communicating (the relevance of) human evolution**
Norman Johnson

Session Sat2-C124 Expression studies / transcriptomics 2

Saturday - 10:15 - 11:30

Room C124

- 10:15 Evolutionary lability of vernalization responsiveness in Pooideae grasses**
Jinshun Zhong, Meghan Robbett, Siri Fjelheim, Jill Preston
- 10:30 Dosage Compensation in Yeast **withdrawn 2017-06-09 10:32:10.0****
Holly McQueary
- 10:45 Gene expression evolution in parallel cold-adapted *Drosophila* populations**
Yuheng Huang, John Pool
- 11:00 Differential responses under future ocean acidification between populations of *Balanophyllia elegans* corals from different upwelling environments**
Joanna Griffiths, Morgan Kelly
- 11:15 Extreme evolution: crustacean vision in a land-to-deep-sea gradient.**
Hernan Vazquez Miranda, Heather Bracken-Grissom

Session Sat2-Ball204 ASN VP Symposium: The causes and consequences of evolutionary conflicts 2

Saturday - 10:15 - 11:45

Room Oregon ballroom 204

10:15 The Causes and Consequences of Selection at the Gametic Level

Simone Immler

10:45 War and Peace: The Invasion, Proliferation, and (Occasional) Domestication of Mobile DNA in Host Genomes

Sarah Schaack, Michael Song

11:15 Socio-reproductive conflicts and the father's curse of hormones

Mikael Mokkonen, Tanya Procyshyn, Bernard Crespi

Session Evolution editorial board meeting

Saturday - 11:30 - 13:30

Room B110

Session Lunch / Student and PDF networking lunches

Saturday - 11:30 - 13:30

Room On the town

Conference lunch is on your own.

The SSE Graduate Student Advisory Council organized small group networking lunches to facilitate interactions between i) students and faculty; and ii) postdocs and faculty. To participate, you had to indicate your interest during main conference registration. Groups are responsible for finding their own lunch venues.

Session Early career researchers workshop (1 of 2):

Publishing your research: tips for success (Taylor & Francis)

Saturday - 12:15 - 13:15

Room B113

Cost: free, no registration required. Bring your own lunch.

Organizer: [Ashlynn Merrifield](#), [Ali Paskins](#), Andrew Polaszek, and Jeffrey Streicher

This talk will guide new authors through the publishing process from selecting a journal, to preparing for submission, to navigating the peer review process. Andrew Polaszek (Editor-in-Chief, JNH) and Jeffrey Streicher (Associate Editor, JNH) will give you a valuable insight into the editorial process for Journal of Natural History, including advice for successful publication. We will also cover essential tips for writing a review article, how to respond to reviewer comments, acting as a reviewer, plus more, giving a thorough understanding of the steps involved, the key information sources to be aware of, and what authors can be doing to help get their paper published.

Session Sat3-Ball204 ASN Symposium - Across the Nth dimension: Quantitative and conceptual advances in the study of niche breadth 1

Saturday - 13:20 - 14:45

Room Oregon ballroom 204

13:20 Introductory Remarks: Exploring the N Dimensions of Niche Breadth

Nancy Emery

13:30 On the history and current status of niche concepts: Implications for niche breadth research

Robert Holt

14:00 Mechanisms of niche breadth 1: Adaptive evolution and the nested niche. Copepod thermal tolerance and evolutionary potential in the face of warming waters.

Morgan Kelly

14:15 Mechanisms of niche breadth 2: Plasticity and the nested niche. Ecological causes and consequences of individual-level specialization.
Richard Svanbäck

Session Sat3-A105 Phylogenetic comparative methods 1
Saturday - 13:30 - 14:45 **Room A105**

13:30 Morphological convergence among grassland-adapted clades of South American ghost spiders
Nicolas Mongiardino Koch, F. Sara Ceccarelli, Eduardo Soto, Martin J. Ramirez

13:45 Continuously-varying adaptive landscapes over macroevolutionary timescales

Josef Uyeda

14:00 Rapid adaptive shifts are a common mode of macroevolution
Michael Landis, Joshua Schraiber

14:15 A Penalized Likelihood Framework For High Dimensional Phylogenetic Comparative Methods
Julien Clavel, H  l  ne Morlon

14:30 A Bayesian Method for Inferring Discrete-trait-dependent Rates of Continuous-trait Evolution
Michael May, *Brian Moore*

**Session Sat3-A106 Comparative phylogeography /
biogeography**

Saturday - 13:30 - 14:45

Room A106

13:30 An Anthropocene map of genetic diversity
Katharine Marske, Andreia Miraldo, Sen Li, Michael Borregaard, Alexander Florez-Rodriguez, Shyam Gopalakrishnan, Mirnesa Rizvanovic, Zhiheng Wang, Carsten Rahbek, David Nogués-Bravo

13:45 Beyond topography: The role of rain asynchrony on the diversification of tropical frogs
Carlos Guarnizo, Paola Montoya, Ignacio Quintero, Daniel Cadena

14:00 Biogeographic origins of the frog fauna on the semi-arid Caribbean Coast of South America
withdrawn 2017-06-08 12:03:17.0
Andrew J. Crawford

14:15 Integrating island assembly models and comparative population genetics.
Isaac Overcast, Michael Hickerson

14:30 Intraspecific genetic relationships of two coastal species (red and white mangroves) reveal broad phylogeographic patterns in the Caribbean
Richard Hodel, Pamela Soltis, Douglas Soltis

Session Sat3-A107-109 Species delimitation / speciation
Saturday - 13:30 - 14:45 **Room A107-109**

13:30 Linking floral traits, pollinators, and speciation in *Camassia*: How important are geography and ecological contexts?
Susan Kephart

13:45 Using a classic speciation data set to test coalescent methods for species delimitation
Luke Campillo, Robert Thomson, Anthony Barley

14:00 The mitonuclear compatibility species concept
Geoffrey Hill

14:15 Caught in the act: incipient speciation in a fossorial mammal from Madagascar, the mole tenrec *Oryzorictes hova* (Tenrecidae)
Kathryn Everson, Kyndall B.P. Hildebrandt, Link Olson

14:30 Testing the tri-trophic speciation patterns of parasitoid wasps in *Peristenus pallipes* complex (Hymenoptera: Braconidae)
Miles Zhang, Amber Bass, Catalina Fernández, Barbara Sharanowski

Session Sat3-B111-112 Phenotypic plasticity / quantitative genetics

Saturday - 13:30 - 14:45

Room B111-112

- 13:30 Genetic basis of total energy budget in different nutrient environments**
Anna Perinchery, Elizabeth King
- 13:45 Testing the Importance of Phenotypic Plasticity in Facilitating Survival in a Novel Environment**
Shengpei Wang
- 14:00 Multiple forms of selection act on trait phenotypes and plasticities in nature: evidence from a manipulative field experiment.**
Freddy Herrera, Elizabeth Lacey
- 14:15 When three traits make a line: Evolution of phenotypic plasticity and genetic assimilation through linear reaction norms in stochastic environments**
Torbjørn Ergon, Rolf Ergon
- 14:30 The genetic basis of variation in phenotypic plasticity**
Karin van der Burg, Robert Reed

Session Sat3-B113 Evolutionary theory 3

Saturday - 13:30 - 14:45

Room B113

- 13:30 Why is cytoplasmic incompatibility so common?**
Michael Turelli
- 13:45 Gene network drift and speciation**
Joshua Schiffman, Peter Ralph
- 14:00 Excess of genomic defects in a woolly mammoth on Wrangel island**
Rebekah Rogers, Montgomery Slatkin
- 14:15 Fitness landscapes of drug interactions**
Bjørn Østman, Tina Kang, Van Savage, Pamela Yeh

Session Sat3-B114-115 Conservation biology 3

Saturday - 13:30 - 14:45

Room B114-115

- 13:30 Phylogeography of two species of minnow from the eastern Oregon desert **withdrawn****
2017-06-19 10:51:47.0
Christian Smith, Jennifer Von Bargen, Patrick DeHaan, Paul Scheerer
- 13:45 Phylogenetic Assessments for California's Highest Risk Mammals**
Christopher Jorgensen, Joshua Reece
- 14:00 Using RAD data to inform the population and conservation strategies of *Melipona subnitida* (Apidae, Meliponini), an endemic bee in dry forest of Brazil**
Vanessa Bonatti, Gregory Thom, Sonia Andrade, Maria Cristina Arias, Michael Hickerson, Tiago Franco
- 14:15 Climate drives adaptive genetic responses associated with survival in big sagebrush (*Artemisia tridentata*)**
Lindsay Chaney, Bryce Richardson, Mathew Germino
- 14:30 Biologically informed niche models predict slightly less dire future for mountaintop plethodontid salamanders.**
Marta Lyons, Ken Kozak

Session Sat3-B116 Speciation 2

Saturday - 13:30 - 14:45

Room B116

- 13:30 Geographic variation in New Guinean paradise kingfishers: the classic case of peripatric speciation**
Gregory Mayer
- 13:45 Does size matter? Giant sperm in *Caenorhabditis* worms**
Rebecca Schalkowski
- 14:00 A model for coexistence and divergence in insect-vectored yeast populations**
Kelly Thomasson

- 14:15 "Fishing" for vertebrate fertilization genes: the evolution of threespine stickleback reproductive proteins**
Emily Killingbeck, Damien Wilburn, Gennifer Merrihew, Michael MacCoss, Catherine Peichel, Willie Swanson
- 14:30 Speciation in the Tropical Eastern Pacific? A Case Study with Prionurus Surgeonfishes**
William Ludt, Moises Bernal, Eva Salas, Prosanta Chakrabarty

Session Sat3-B117-119 Adaptation 3

Saturday - 13:30 - 14:45 **Room B117-119**

- 13:30 Effects of gene flow on performance at the northern range margin of *Clarkia pulchella***
Megan Bontrager, Amy Angert
- 13:45 Functional divergence of the dim-light opsin accompanies cichlid invasion of Central America**
Frances Hauser, Katriina Ilves, Gianni Castiglione, Ryan Schott, Hernan Lopez-Fernandez, Belinda Chang
- 14:00 Molecular evolution of cold response in temperate grasses (Pooideae)**
Marian Schubert, Lars Grønvold, Simen Sandve, Torgeir R Hvidsten, Siri Fjelheim
- 14:15 Life at high latitudes: the role of photoperiodic flowering in diversification of the grass subfamily Pooideae in northern temperate regions**
Siri Fjelheim, Jill Preston
- 14:30 Non-adaptive plasticity promotes adaptation to high-elevation in *Peromyscus* mice**
Jonathan Velotta, Zachary Cheviron, Graham Scott

Session Sat3-Ball202 Host-parasite

Saturday - 13:30 - 14:45 **Room Oregon ballroom 202**

- 13:30 Microbial-Host Dynamics and the Evolution of Nearshore Diversity**
Jimiane Ashe
- 13:45 Avian Haemosporidian Diversification: from hosts to habitats**
Johanna Harvey, Gary Voelker
- 14:00 Intrapopulation size and composition influence reproductive success of a parasitic plant**
Kelsey Yule, Judith Bronstein
- 14:15 Predictors of the correlation between sexual reproduction and infection: a meta-analysis of the Red Queen Hypothesis**
Meredith Krause, Marc Lajeunesse
- 14:30 Mating biology, cheating behavior, and the evolution of social parasitism in ants**
Romain Dahan, Ben Gerstner, Martin Bollazzi, Christian Rabeling

Session Sat3-Ball203 SSE Hamilton Award Symposium 2

Saturday - 13:30 - 14:45 **Room Oregon ballroom 203**

- 13:30 Immune and antioxidant performance of carotenoid-free canaries questions a longstanding hypothesis for the evolution and maintenance of colored signals**
Rebecca Koch, Geoffrey Hill
- 13:45 Direct evidence that metabolic genes underlie temperate adaptation of *Drosophila melanogaster* life history**
Spencer Koury
- 14:00 The origin and evolution of polymorphic in warning signals**
J.P. Lawrence, Bibiana Rojas, Antoine Fouquet, Johanna Mappes, Annelise Blanchette, Ralph Saporito, Renan Bosque, Elodie Courtois, Brice Noonan
- 14:15 Beyond topology: Coevolution of structure and flux in metabolic networks**
Erin Morrison, Alexander Badyaev
- 14:30 The extent of parallelism in independent lineages in shared environments: Migration phenology of even-year and odd-year pink salmon**
Krista Oke, Curry Cunningham, Thomas Quinn, Gregor Rolshausen, Caroline LeBlond, Andrew Hendry

Session Sat3-C120-122 Sexual selection 1
Saturday - 13:30 - 14:45 **Room C120-122**

- 13:30** Are we wrong about territoriality in Anolis lizards?
Ambika Kamath, Jonathan Losos
- 13:45** A sexual selection model of mate location: a foundational, but missing, mechanism of mate recognition evolution
Kerry Shaw, H. Kern Reeve
- 14:00** A "sexy" co-evolutionary arms race: structural insights into the rapid evolution of egg-sperm interactions in Pacific abalone
Damien Wilburn, Willie Swanson
- 14:15** Beyond resource trade-offs: An alternative mechanism for maintaining honesty from colorful ornaments used in mate choice
Ryan Weaver, Rebecca Koch, Geoffrey Hill
- 14:30** Evolutionary ecology of sexual communication in Bahamian mosquitofish
Sean Giery

Session Sat3-C123 ASN Education symposium Natural history as the inspiration for scientific inquiry: Stories and tools for teaching 1
Saturday - 13:30 - 14:45 **Room C123**

- 13:30** Natural History's place in Science and Society
Josh Tewksbury
- 13:45** Killifish and sensory drive in the active classroom
Becky Fuller
- 14:00** Using the extraordinary natural history of manakin courtship to teach fundamental concepts in evolution and behavior
Emily DuVal, Kevin Dixon, Charles Eldermire
- 14:15** Born to run: inquiry-based learning about experimental evolution of voluntary exercise in mice
Theodore Garland
- 14:30** "There are plenty of fish in the sea"—A scientific guide for finding the perfect match for each of our unique research interests
Molly Cummings

Session Sat3-C124 Expression studies / molecular evolution
Saturday - 13:30 - 14:45 **Room C124**

- 13:30** Cis-regulatory variation underlying population differences in HSPB1 expression and thermal tolerance in the copepod *Tigriopus californicus*
Sumaetee Tangwancharoen, Ron Burton
- 13:45** Gene expression dynamics are modified at the protein level by natural genetic variation in the *Saccharomyces cerevisiae* population
Daniel Pollard, Ciara Asamoto, Homa Rahnamoun, Austin Abendroth, Suzanne Lee, Scott Rifkin
- 14:00** Differential gene expression among developmental stages characterize genes implicated in sex determination of the cichlid fish *Astatotilapia burtoni*
Athimed El Taher, Nicolas Lichilin, Geoffrey Fucile, Walter Salzburger, Astrid Boehne
- 14:15** The transcriptional response of microbes to long-term warming and short-term seasonal fluctuations in a terrestrial forest
Priyanka Roy Chowdhury, Kristen DeAngelis
- 14:30** Copy number variation and a role in vision of CRAL-TRIO domain genes in *Heliconius melpomene*
Aide Macias-Muñoz, Kyle McCulloch, Adriana Briscoe

Session Coffee break

Saturday - 14:45 - 15:15

Room Exhibit Hall A

Sponsored by:



Session Sat4-A105 Phylogenetic theory

Saturday - 15:15 - 16:30

Room A105

- 15:15** The Past Sure Is Tense: On Interpreting Phylogenetic Divergence Time Estimates $\Sigma(-\infty-\infty)$
Joseph Brown, Stephen Smith
- 15:30** Climate niche variation of Hawaiian Psychotria in an endemic island diversification
Elaine Zhang, John Paul
- 15:45** Are Bryophytes monophyletic? - Evidence from Organellar and Nuclear Protein-Coding Genes
Filipe Sousa, Cymon Cox
- 16:00** Assessing Combinability of Phylogenomic Data using Bayes Factors
Suman Neupane, Karolina Fučíková, Louise A. Lewis, Lynn Kuo, Ming-Hui Chen, Paul Lewis
- 16:15** The probability of monophyly of a sample of gene lineages on a species tree.
Rohan Mehta, David Bryant, Noah Rosenberg

Session Sat4-A106 Biogeography / phylogeography

Saturday - 15:15 - 16:30

Room A106

- 15:15** Phylogeography, Biogeography, and the Origins of Indo-Pacific Reef Fishes
Brian Bowen
- 15:30** A phylogeographic study of birds supports that the Andean-Atlantic forests connection occurred through the Cerrado
Gustavo Sebastian Cabanne, Leonardo Campagna, Natalia Trujillo, Irby Lovette, Pablo Tubaro
- 15:45** A temperate armadillo: a genomic portrait of the nine-banded armadillo's northward migration
Lucy Tran, Lydia Smith
- 16:00** Phylogenetic biogeography of fossil Canidae: combining models of imperfect detection, fossil databases as taphonomic controls, and Biogeographical Stochastic Mapping
Nicholas Matzke, Laura Sällä
- 16:15** Model selection in historical biogeography: why DEC and DEC+J likelihoods are not statistically comparable
Richard Ree, Isabel Sanmartín

Session Sat4-A107-109 Macroevolution 1

Saturday - 15:15 - 16:30

Room A107-109

- 15:15** The role of diversification rates on the assembly of frugivory networks.
Gustavo Burin, Paulo Roberto Guimaraes Jr, Tiago Quental
- 15:30** Elaborating the macroevolutionary dynamics of ants-plant interactions
Matthew Nelsen, Corrie Moreau, Richard Ree

- 15:45 Predictors of secondary sympatry across the global radiation of extant bats**
Jeff Shi, Erin Westeen, Elizabeth Dumont, Daniel Rabosky
- 16:00 Mutualism breakdown and ecological opportunity in leafhopper-leafhopper moth interactions**
David Hembry, Noah Whiteman, Katrina Dlugosch
- 16:15 Macroevolution of perfume signalling in orchid bees**
Marjorie Weber, Santiago Ramirez, Thomas Eltz

Session Sat4-B111-112 Quantitative genetics

Saturday - 15:15 - 16:30 **Room B111-112**

- 15:15 Genetic costs of domestication and improvement**
Brook Moyers, Peter Morrell, John McKay
- 15:30 Predicting evolutionary responses when genetic variance and selection covary with the environment: a large-scale Open Access Data approach**
Jip Ramakers, Phillip Gienapp, Antica Culina, Marcel E Visser
- 15:45 Genetic constraints on wing pattern variation in *Lycaeides* butterflies**
Lauren Lucas, Chris Nice, Zachariah Gompert
- 16:00 Observational evidence of directional and stabilizing selection in a contemporary human population**
Jaleal Sanjak, Kevin Thornton, Matthew Robinson, Peter Visscher
- 16:15 Indirect genetic effects, resource competition, and a potential evolutionary constraint in North American red squirrels**
David Fisher, Andrew McAdam, Alastair Wilson

Session Sat4-B113 Evolutionary theory 4

Saturday - 15:15 - 16:30 **Room B113**

- 15:15 Evolution and the duration of a doomed population**
Richard Gomulkiewicz, Stephen Krone, Christopher Remien
- 15:30 Role of Sustainability in Evolution**
PANKAJ VALLABH
- 15:45 Modeling How Selection in One Trait Clonally Interferes with Adaptation in Another**
Kevin Gomez, Jason Bertram, Joanna Masel
- 16:00 When do fluctuating environments select for epigenetic memory?**
Stephen Proulx, Henrique Teotonio
- 16:15 Epigenetic change increases local adaptation in small, poorly adapted populations**
Mark Smithson, Mark Dybdahl, Scott Nuismer

Session Sat4-B114-115 Conservation biology / population genetics

Saturday - 15:15 - 16:30 **Room B114-115**

- 15:15 Population Genetics and Adaptive Variation within a Cryptic and Threatened Hawaiian Seabird ~~withdrawn 2017-06-08 00:03:54.0~~**
Carmen Antaky, Melissa Price
- 15:30 Conservation genetics of a rare species of beardtongue: *Penstemon caryi* (Plantaginaceae)**
Benjamin Stone, Andrea Wolfe, Alexander Ward
- 15:45 Old school vs. new school: comparing inferences of population structure using RADseq and microsatellite datasets**
Justin Bohling
- 16:00 Population genomics of *Oenothera primiveris*, insights into plant conservation and role of inbreeding.**
Anita Cisternas Fuentes, Rick Overson, Jeremie Fant
- 16:15 Genome-wide historical DNA analysis reveals insights into population genetic theory and conservation practice**
Evelyn Jensen, Adalgisa Caccone, Michael Russello

Session Sat4-B116 Speciation / adaptation

Saturday - 15:15 - 16:30 **Room B116**

- 15:15 Repeated dune adaptation and speciation in sunflowers**
Kate Ostevik, Rose Andrew, Loren Rieseberg
- 15:30 Speciation and adaptive diversification within the box-ironbark eucalypts**
Jasmine Janes, Kevin Murray, Norman Warthmann, Jamieson Gorrell, Timothy Collins, Rebecca Jordan, Jeremy Bruhl, Justin Borevitz, Rose Andrew
- 15:45 Across the tipping point? The transition from host race to species in the *Rhagoletis pomonella* species complex**
Meredith Doellman, Thomas Powell, Stewart Berlocher, Gregory Ragland, Scott Egan, Peter Meyers, Glen Hood, Jeffrey Feder
- 16:00 Repeated patterns of adaptation along the speciation continuum: insight from studies of North American rattlesnakes**
Drew Schield, Daren Card, Richard Adams, Giulia Irene Maria Pasquesi, Blair Perry, Nicole Hales, Audra Andrew, Andrew Corbin, Stephen Mackessy, Todd Castoe
- 16:15 Hybridization maintains of ecological divergence between *Pinus strobiformis* and *Pinus flexilis***
Mitra Menon, Chris Friedline, Anna Schoettle, Sam Cushman, Daniel McGarvey, Kristen Waring, Amy Whipple, Richard Snieszko, Lluvia Flores, Andrew Eckert, Justin Bagley, Christian Wehenkel, Alejandro Sáenz

Session Sat4-B117-119 Adaptation / expression studies

Saturday - 15:15 - 16:30 **Room B117-119**

- 15:15 Complexities of gene expression patterns in natural populations of an extremophile fish (*Poecilia mexicana*, Poeciliidae)**
Courtney Passow, Joanna Kelley, Michael Tobler
- 15:30 Environmental adaptation in House mice: the role of gene regulation along a latitudinal cline**
Katya Mack, Mallory Ballinger, Megan Phifer-Rixey, Michael Nachman
- 15:45 Adaptive genetic variation for low salinity tolerance in populations of Olympia oysters**
Melissa Pespeni, Jillian Bible, Eric Sanford, Tyler Evans
- 16:00 A master regulator of oxygen homeostasis contributes to adaptive hypoxia signaling in deer mice.**
Zachary Cheviron, Jonathan Velotta, Rena Schweizer, Catie Ivy, Graham Scott
- 16:15 Transcriptome and whole genome sequencing promise to reveal the genomic substrate of a textbook adaptive radiation**
Marylaure de La Harpe, Margot Paris, Hess Jaqueline, Michael Barfuss, Walter Till, Nicolas Salamin, Michael Kessler, Ray Ming, Christian Lexer

Session Sat4-Ball202 Host-parasite / pathogens

Saturday - 15:15 - 16:30 **Room Oregon ballroom 202**

- 15:15 Balancing Selection on a Cis-Regulatory Region Maintains Disease-Associated Genetic Variation in a Wild Primate**
Noah Simons, Geeta Eick, Maria Jose Ruiz Lopez, Colin Chapman, Tony Goldberg, Nelson Ting, Kirstin Sterner
- 15:30 Natural selection on immune function**
Otto Seppälä
- 15:45 Contagious Clam Cancer: Evolution at the intersection of cancer and infectious disease**
Michael Metzger, Antonio Villalba, María Carballal, David Iglesias, James Sherry, Carol Reinisch, Annette Muttray, Susan Baldwin, Stephen Goff
- 16:00 Evolution under competition: signatures of strain structure within the major blood-stage antigen of the malaria parasite *P. falciparum***
Mary Rorick, Yael Artzy-Randrup, Shazia Ruybal-Pesántez, Kathryn Tiedje, Thomas Rask, Abraham Oduro, Anita Ghansah, Kwadwo Koram, Karen Day, Mercedes Pascual

16:15 Does phylogeny predict what ails you? – A pollinator community study
David Pascall, Lena Wilfert

Session Sat4-Ball203 SSE Hamilton Award Symposium 3
Saturday - 15:15 - 16:30 **Room Oregon ballroom 203**

15:15 Negative genetic interactions among adaptive mutations in yeast turn positive in a harsher environment

Jasmine Ono, Aleeza Gerstein, Sally Otto

15:30 Misaligned interests between plants and pollinators revealed through functional exploration of flower morphospace

Foen Peng, Toby Bradshaw, Tom Daniel

15:45 Microsatellites as “tuning knobs” of adaptation in *Helianthus annuus* (Asteraceae)

Chathurani Ranathunge, Gregory Wheeler, Melody Chimahusky, Andy Perkins, Mark Welch

16:00 Selection against LTR retrotransposons is balanced by locally adapted transposable element alleles in *Arabidopsis thaliana*

Michelle Stitzer, Jeffrey Ross-Ibarra

16:15 There is no cure that does not cost: fitness trade-offs and putative mechanisms of resistance to bovine tuberculosis in a wild mammal

Hannah Tavalire, Anna Jolles

Session Sat4-C120-122 Sexual selection 2
Saturday - 15:15 - 16:30 **Room C120-122**

15:15 Gene Expression and Reduced Sexual Dimorphism in Threespine Stickleback Throat Coloration

Jeffrey McKinnon, Chris Balakrishnan, Burns Newsome

15:30 The non-sexual origins of sexual preferences and ornaments in live-bearing fishes

Michael Foisy, Jeremy Beaulieu, Luke Frishkoff, Mark Springer, David Reznick, Arcadio Gonzalez, Helen Rodd, D. Luke Mahler

15:45 The influence of resource limitation on male reproductive investment

Josiah Ritchey

16:00 Consequences of inbreeding and environmental stress on a species with sexually selected weaponry

Pablo Allen, Christine Miller

Session Sat4-C123 ASN Education symposium Natural history as the inspiration for scientific inquiry: Stories and tools for teaching 2
Saturday - 15:15 - 16:30 **Room C123**

15:15 Teaching natural history in the Anthropocene: some rules of engagement

Harry Greene

15:30 Using electron-mediated mutualism to teach from molecule to community

Kristina Hillesland

15:45 “Ordinary, extraordinary junco: bringing field and evolutionary biology to the classroom”

Ellen Ketterson, Jonathan Atwell

16:00 Teaching animal physiology from physical principles

Chris Cheng

16:15 The unnatural concept of extinction in species-area relationships and teaching conservation biology

Liliana Davalos, M. Elise Lauterbur, Anusha Shankar

Session Sat4-C124 Expression studies / hybridization

Saturday - 15:15 - 16:30

Room C124

- 15:15** Variation of mitochondrial function in hybrid Tree lizards: assessing the role of differential gene expression
Greg Haenel
- 15:30** Do regulatory differences maintain the phenotypic boundary between sister species of Streamertail Hummingbirds (*Trochilus polytmus* & *T. scitulus*)?
Caroline Judy, Robb Brumfield, Gary R. Graves
- 15:45** Sex differences in mouse hybrids: Differential expression and morphology in brain and placenta
Lena Arévalo, Polly Campbell
- 16:00** Introgressive hybridization among *Virroconus*
Andrew Wood, Thomas Duda
- 16:15** RNA-Seq reveals unexpected patterns of endosperm imprinting in interploid *Mimulus* hybrids
Taliesin Kinser, Ronald Smith, Mario Vallejo-Marin, Joshua Puzey

Session Sat4-Ball204 ASN Symposium - Across the Nth dimension: Quantitative and conceptual advances in the study of niche breadth 2

Saturday - 15:15 - 16:45

Room Oregon ballroom 204

- 15:15** Does niche breadth predict vulnerability to changing environments? From population-level traits and demography to diversification in deep time
Seema Sheth
- 15:45** Defining niche breadth through statistical modelling - A historical perspective
Guillaume Blanchet
- 16:15** A guide to quantifying niche breadth: classifying and comparing niche breadth metrics
Kelly Carscadden, Carlos Alberto Arnillas, Nancy Emery, Marc Cadotte, Dominique Gravel, Michelle Afkhami, J. Scott MacIvor

Session American Society of Naturalists 'Happy Hour' and graduate student networking

Saturday - 16:30 - 17:30

Room Oregon ballroom 201

Open to all ASN members - students, postdocs & faculty. Come chat with your ASN colleagues. Cash bar and ASN grad member free drink tickets accepted.

Session Sat5-Ball202 ASN Presidential address & award announcements

Saturday - 17:30 - 18:30

Room Oregon ballroom 202-204

ASN Presidential Address
Kathleen Donohue

Session ASN Members business meeting

Saturday - 18:30 - 19:30

Room A105

Open to all ASN members.

Poster Session Sat-01 Adaptation

- 1 **Dynamics of seasonal adaptation in *Drosophila melanogaster***
Emily Behrman, Dmitri Petrov, Paul Schmidt
- 2 **Evolutionary responses in *Daphnia* over eutrophic gradients**
Michelle Packer, Matthew Walsh
- 3 **Feeling the Squeeze: Adaptation to High Hydrostatic Pressure in Ctenophore Proteomes**
Jacob Winnikoff
- 4 **Local adaptation in leeches: Estimating the relative fitness of three northern Arizona *Helobdella modesta* populations in natal and non-natal water**
Rebecca Beresic-Perrins, James Boothroyd, Angela Rincon, Cassidy Klovansh, Stephen Shuster
- 5 **Evaluating the role of growth defense trade-offs in the evolution of locally adapted ecotypes across the *Mimulus guttatus* species complex**
Damian Popovic

Topic Sat-02 Behavior

- 6 **Feeding and neural mechanisms underlying the predatory behavior of a model aquatic invertebrate**
Elizabeth Preza, Elizabeth J. Walsh
- 7 **Do you see what I see? The Evolution of Visual Signals Across Spotted Winged *Drosophila* Species Groups**
Paula Roy, Jennifer Gleason
- 8 **Behavioral, neuroendocrine, and reproductive implications of exposure to an endocrine disrupting pesticide in *Gambusia affinis*.**
Isaac Ligocki, Amelia Munson, Victoria Farrar, Rebecca Calisi
- 9 **Reproductive isolation driven by pheromones in mimetic and closely related butterflies**
Carolina Pardo-Diaz, Maria Fernanda Gonzalez, Camilo Salazar, Chris Jiggins, Kathy Darragh
- 10 **Foraging Rates of a Freshwater Drift-Feeding Salmonid, *Salvelinus malma*, Under a Dominance Hierarchy**
Jeff Cullen
- 11 **Habitat Utilization Preferences in *Potamopyrgus antipodarum*, a Freshwater Snail from New Zealand**
Colette Ohotnicky, Deanna Soper

Topic Sat-03 Biogeography

- 12 **Biodiversity and distribution of hydroids (Cnidaria, Hydrozoa) in southern South America and Antarctica: an approach using marine ecoregions and provinces**
Thais Miranda, Marina Fernandez, Antonio Marques
- 13 **Ultraconserved elements reveal the biogeographic origin of Madagascar's endemic iguanas (Opluridae)**
Rachel Welt, Christopher Raxworthy, Marcelo Gehara
- 14 **The temporal puzzle of North American disjunct plants**
Chloe Drummond, Kenneth Sytsma
- 15 **Phylogenetic and Biogeographic History of the Conifer Family Araucariaceae inferred from Chloroplast Genome Sequences**
Linda Raubeson, Mei Wenbin, Markus Ruhsam, Sarah Mathews
- 16 **Panmixia across the range of the assortatively mating Lesser Snow Goose ~~withdrawn~~**
2017-06-19 22:24:09.0
Tom Quinn, Brent Horowitz

Topic Sat-04 Bioinformatics

- 17 **De novo detection of transposable elements in high-throughput sequence data: one approach to detect them all**
Laura Helou, Joanna Kelley, Anna-Sophie Fiston-Lavier
- 18 **High Quality Phylogenomic Data Through Accurate Sorting of Anchored MetaPrep Reads**
Sean Holland
- 19 **A Pipeline for Rapid and Inexpensive Processing of Anchored MetaPrep Data**
Kirby Birch, Alan Lemmon

Topic Sat-05 Coevolution

- 20 **Coevolutionary Forces Reveal an Alternative Origin for Dim-Light Vision**
Gianni Castiglione, Belinda Chang
- 21 **High-throughput investigation of species-specific binding of abalone reproductive proteins**
Jolie Carlisle, Willie Swanson, Damien Wilburn
- 22 **Gene-culture Price equation for the evolution of behavior.**
Elliot Aguilar, Erol Akcay
- 23 **Apoptotic machinery: An ancient adaptation to aerobic conditions**
Joanna Klim, Arkadiusz Gladki, Roza Kucharczyk, Urszula Zielenkiewicz, Szymon Kaczanowski
- 24 **Preference driven Co-evolution of *Drosophila melanogaster* and *Saccharomyces cerevisiae***
Amanda Thompson, Kelly Thomasson, Janine Fischer
- 25 **Genetic analysis of host immunity and microbiota variation in threespine stickleback**
Emily Beck, Clayton Small, Mark Currey, William Cresko

Topic Sat-06 Comparative biology

- 26 **Evolutionary origin and functional impact of the GHR deletion**
Hannah Calkins
- 27 **Evolution of swimming in Neotropical tree frogs (Anura: Hylidae)**
Itzue Caviedes-Solis
- 28 **Three-dimensional analysis of craniofacial traits across distinct cavefish populations using micro-computed tomography (micro-CT)**
Daniel Berning, Amanda Powers, Joshua Gross, Patricia Ornelas-García
- 29 **Fundulus shape and osmoregulation efficiency**
Jason Pienaar, Ryan Earley, Joe Styga, Peter Scott
- 30 **Comparison of skin in two European species of lizards (*Lacerta agilis* and *Anguis fragilis*)**
withdrawn 2017-06-16 06:15:20.0
Pawel Kaczmarek
- 31 **Incorporating the logic of anatomical homology in a gene-phenotype knowledgebase: Phenoscape KB**
Wasila Dahdul, James Balhoff, Hilmar Lapp, Todd Vision, Paula Mabee

Topic Sat-07 Comparative phylogeography

- 32 **Phylogeographic comparisons of Leptasterias clades near estuarine outflow along the Pacific Coast**
Jeyna Perez, C. Sarah Cohen
- 33 **Rivers as barriers across space, time and species: dissecting the role of river barriers using tests of concordant divergence in Amazonian species**
Renata Pirani, Fernanda Werneck, Andréa Thomaz, Mariah Kenney, Marcelo Sturaro, Teresa Avila-Pires, Miguel Rodrigues, L. Lacey Knowles
- 34 **Drivers of Phylogenetic Endemism and the Conservation of Centres of Endemism in the Coastal Forests of Eastern Africa**
Simon Loader, Chris Barratt
- 35 **Improving the predictive power of comparative phylogeographic tests using refined hypotheses**
L. Lacey Knowles

Topic Sat-08 Computational biology

- 36 The coexistence of competing mathematical and natural solutions to the 'paradox of the plankton': does the paradox still exist? **withdrawn 2017-05-31 21:13:58.0**
Richard Knecht
- 37 **genotypeR: an integrated R package for SNP genotype marker design and data analysis**
Stephen Sefick, Magdalena Castronova, Laurie Stevison
- 38 **Between a rock and a hard place: climate change and limited distribution of the California native plant *Arabis blepharophylla* (Brassicaceae)**
Nila Le, John Paul
- 39 **Evolutionary Conserved Alternative Splicing in the Rice Genus *Oryza***
Nathan Catlin, Rod Wing, W. Brad Barbazuk

Topic Sat-09 Conservation biology

- 40 **Population genetics and adaptive variation within a cryptic and threatened Hawaiian seabird**
Carmen Antaky, Melissa Price
- 41 **Genetic structure of the water rat *Nectomys squamipes* in a fragmented habitat of the Brazilian Atlantic forest**
Hudson Lemos, Luana Maroja, Pablo Gonçalves
- 42 **Does habitat specific seed sources result in differential success of *Chamaecrista fasciculata* in a restored tallgrass prairie?**
Robert Philips, Diane Byers
- 43 **Don't Cross the Streams: Population Structure Among Three Adjacent Steelhead Streams?**
Brice Adams, Christian Smith
- 44 **How do Niches Evolve? Leveraging observational community data**
Luke Frishkoff
- 45 **Genetic diversity in the endangered parakeet *Pyrrhura griseipectus* and implications for conservation**
Roberta Canton, Chrysoula Gubili, Tomas Hrbek, Camila Ribas, Fabio Nunes

Topic Sat-10 Development

- 46 **Developmental Timing In Periodical Cicada (Hemiptera: Magicicada) Lifecycle Evolution**
Diler Haji
- 47 **The Influence of Temperature on the Development, Mortality, and Spatial Behavior of Vernal Pool Odonate Larvae**
Nene Ugbah
- 48 **Evo-Devo, metamorphosis and critical developmental periods for shaping the feeding biomechanics of fishes**
W. James Cooper, Sarah McMenamin, Demi Galindo, Mitchell Wagner, Casey Carter, Adrian Deleon
- 49 **Role of Genetic Variation in the Ontogeny of Metabolism during Development of *Drosophila***
Omera Matoo, Cole Julick, Kristi Montooth
- 50 **The origin of muscle precursors in non-amniotic and amniotic species. **withdrawn 2017-06-16 06:15:23.0****
Mateusz Hermyt

Topic Sat-11 Diversification

- 51 **Diversity-dependent diversification: but do modern planktonic foraminifera actually compete?**
Marina Rillo, Michal Kucera, Thomas Ezard

- 52 **Diversification of lineages and functional phenotypes in the Neotropical electric fish Apteronotidae**
Lesley Kim, Kory Evans, Maxwell Bernt, James Albert
- 53 **Glacial cycles drive rapid genomic differentiation in the field vole**
Nicholas Fletcher

Topic Sat-12 Ecological genetics

- 54 **Genetic variation at a CNE correlates with microhabitat-associated behavioral differentiation in Malawi African cichlid fishes**
Emily Moore, Lynea Bull, Reade Roberts
- 55 **Reintroducing Western Pond Turtles to Yosemite Valley: A Conservation Genomics Approach**
Laura Van Vranken, Ninette Daniele, Molly Thompson, Rob Grasso, Danielle Edwards

Topic Sat-13 Evolutionary ecology

- 56 **The role of urbanization on the evolution of selfing and population genetic structure in *Impatiens capensis***
Ruth Rivkin, Marc Johnson
- 57 **Alternative survival strategies in vectored yeasts**
Kate McKee
- 58 **Using ABC to Understand Trait-Mediated Community Assembly**
Megan Ruffley, Luke Harmon
- 59 **Influence of temporal selection in evolutionary response to temperature in *Daphnia***
Hamanda Badona Cavalheri, Celia Symons, Marika Schulhof, Natalie Jones, Jonathan Shurin
- 60 **Multivariate selection and the range limit of alderia willow: effects of salinity and trait covariance**
Jackson Powell, Patrick Krug, Dustin Marshall

Topic Sat-14 Evolutionary theory

- 61 **Spontaneous-mutation spectra and fitness loss of *Daphnia pulex* mutation-accumulation lines exposed to chronic, sub-lethal concentrations of heavy metals** **withdrawn 2017-06-10 10:21:56.0**
James Bull, Jullien Flynn, Frederic Chain, Melania Cristescu
- 62 **Most colorful example of genetic assimilation? Exploring the evolutionary destiny of recurrent phenotypic accommodation**
Ahva Potticary, Erin Morrison, Alexander Badyaev
- 63 **Self-deception in the Service of Deceit: An Adaptationist Account**
Shahab Zareyan, Christoph Hauert, Sally Otto
- 64 **Comparing patterns of selection on Phospholipase A2 toxins within and between species of North American Pitvipers**
Michael Hogan, Darin Rokyta, Christopher Parkinson

Topic Sat-15 Experimental evolution

- 65 **Experimental adaptation of a non-host-associated bacterium to the zebrafish digestive tract**
Jarrett Lebov, Brendan Bohannon
- 66 **Rapid accumulation of variation in mutation rate under relaxed selection in *C.elegans***
Ayush Saxena

Topic Sat-16 Gene flow

- 67 From spawning to settlement: Identifying fine-scale connectivity in the Convict Tang, *Acanthurus triostegus*, across O'ahu
Richard Coleman, Derek Kraft, Rob J. Toonen, Brian Bowen
- 68 The role of gene flow on local adaptation in a field cricket contact zone
Emma Collosi, Jeanne Robertson, David Gray
- 69 Jumping through the desert: population genetics and structure of a kangaroo rat in northern Mexico
Alejandro Flores-Manzanero, Ella Vázquez-Domínguez, Rodney Dyer
- 70 Genetic distinctiveness of Atlantic Spotted dolphin along coastal Brazil
Karina do Amaral, Valentina Franco-Trecu, Dalia Barrera, Nohelia Curtidor, Susana Caballero, Ana Carolina de Meirelles, Vidal Martin, Manuel Carrillo, Paula Mendez-Fernandez, Marcos Oliveira Santos, Salvatore Siciliano, L. Lacey Knowles, Nelson Fagundes, Ignacio Moreno, Ana Rita Amaral
- 71 The Evolution of Dispersal in Trinidadian Guppies
Robert Prather, David Reznick

Topic Sat-17 Genomics

- 72 3D genome structure and the splicing of the mysterious minor spliceosomal introns
Swadha Singh, Graham Larue, Scott Roy
- 73 Variation in fluorescent protein gene family cause expression differences among individuals in a stony coral, *Acropora digitifera*
Shiho Takahashi-Kariyazono
- 74 Sexually Dimorphic Exon Splicing and Gene Expression in the Rock Dove HPG Axis
Andrew Lang, Suzanne Austin, Rebecca Calisi, Matthew MacManes

Topic Sat-18 Geographic variation

- 75 Maintenance of the geographic variation of flower color in *Leavenworthia stylosa*: Role of local adaptation in different life history stages
Mahaguruge Fernando, Chris Herlihy, Jeffrey Walck
- 76 Genetic underpinnings of transgressive segregation: Increased thermal tolerance in experimental interpopulation hybrid crosses of *Tigriopus californicus*. **withdrawn 2017-06-20 15:32:11.0**
Reginald Blackwell, Ron Burton
- 77 Evidence of introgression in a geographically widespread venomous marine snail species complex
Peter Cerda, Thomas Duda
- 78 Mitochondrial evolution in *Tigriopus californicus* is marked by geographic variation in tRNA structure and codon usage bias
Eric Watson, Heath Blackmon, Suzanne Edmands

Topic Sat-19 Host-parasite

- 79 Testing for selection in chipmunk sucking lice
Kayce Bell, Anna Phillips, Julie Allen, Kevin Johnson, John Demboski, Joseph Cook
- 80 Landscape impacts on white footed mouse movement in southern New England
Kerry Barrett, Jonathan Richardson, Georgi Silveira
- 81 How does endoparasitism evolve? Insights from Venom allergen-like proteins in blood flukes (Platyhelminthes: Trematoda: Digenea)
Breanna Siple, Ash Bullard, Kenneth Halanych

Topic Sat-20 Hybridization

- 82 **Genomic data distinguish phenotypically distinct birds despite low levels of divergence**
Stephanie Aguillon, Richard Harrison, Irby Lovette
- 83 **A window into the introgression of male reproductive genes in a natural primate hybrid zone (Alouatta palliata x A. pigra)**
Molly Choi, Liliana Cortes Ortiz
- 84 **Genetic and phenotypic evidence of a contact zone between populations of the red-eyed treefrog, Agalychnis callidryas**
Maria Akopyan, Erica Bree Rosenblum, Zachariah Gompert, Karina Klonoski, Andres Vega, Rachel Mackelprang, Jeanne Robertson
- 85 **Fine scale admixture patterns across the genome of the Africanized honeybee (Apis mellifera)**
Daniela Zárate
- 86 **Detecting introgressive hybridization in red-eyed treefrogs through genomics and color pattern distribution**
Meaghan Clark, Andres Vega, Jeanne Robertson
- 87 **Inferring selection on hybrids in wild populations of Spadefoot toads**
Audrey Kelly, Karin Pfennig

Topic Sat-21 Invasive/invasion

- 89 **Invasive rat colonization history and movement dynamics in Haida Gwaii**
Bryson Sjodin, Robyn Irvine, Gregg Howald, Michael Russello
- 90 **A genetic reconstruction of the invasion of the calanoid copepod Pseudodiaptomus inopinus across the North American Pacific Coast**
Eric Dexter, Stephen Bollens, Jeffery Cordell, Ho So, Gretchen Rollwagen-Bollens, Susanne Pfeifer, Jérôme Goudet, Severine Vuilleumier

Topic Sat-22 Life history

- 91 **The Genetic Basis for Inheritance of Life History Traits in Trinidadian Guppies**
Sarah Ruckman, Simon Zhu, Vincent Poon, Yuridia Reynoso, David Reznick
- 92 **Sex ratio of mirid populations shifts in response to hostplant co-infestation or altered cytokinin signaling**
Nora Adam, Theresa Erler, Mario Kallenbach, Martin Kaltenpoth, Grit Kunert, Ian Baldwin, Meredith Schuman
- 93 **Testing the effects of species, life stage and sex on Isoprene emission in mosses.**
Timea Deakova

Topic Sat-23 Macroevolution

- 94 **Dating the terrestrial invasion of the Cyclophoroidea (Mollusca:Gastropoda) using the Fossilized Birth-Death model.**
Timothy Gervascio, Jesse Czekanski-Moir, Rebecca Rundell, Nicole Webster
- 95 **Characterizing the performance of species diversification models**
Natya Hans, Jose Miguel Ponciano, J. Gordon Burleigh
- 96 **Body shape modularity and morphological diversification rates in a hyperdiverse freshwater fish lineage**
Mike Burns

Topic Sat-24 Molecular evolution

- 97 **Molecular underpinings of a novel defensive enzyme in tomato**
Allan Castillo, Mark Rausher
- 98 **Comparative molecular analyses of the amniote p53 signaling network: Rapid evolution and positive selection on mammalian mediators of p53.**
Courtney Passow, Heath Blackmon, Suzanne McGaugh
- 99 **Large-scale assessment of mitochondrial adaptation to high altitude in birds**
María Cecilia Estalles, Pablo D. Lavinia, Pablo Tubaro, Dario Lijtmaer

Topic Sat-25 Mutualism

- 100 **Bacterial communities associated with butterflies and their effect on butterfly fitness**
Krutika Phalnikar, Deepa Agashe, Krushnamegh Kunte
- 101 **The density dependence of mutualistic interactions**
Christopher Moore, Karen Abbott
- 102 **Microbes aid adaptation to a novel environment**
Aparna Agarwal, Deepa Agashe

Topic Sat-26 Paleobiology

- 103 **Convergent body size evolution of crocodyliformes upon entering the aquatic realm**
William Gearty, Jonathan Payne
- 104 **Total dental occlusal area as a constrained feature in modern walruses**
Win McLaughlin, Samantha Hopkins, Edward Byrd Davis, Caitlyn Boatman

Topic Sat-27 Pathogens

- 105 **Acquisition of azithromycin resistance in *Neisseria gonorrhoeae* via intragenus recombination**
Crista Wadsworth, Yonatan Grad
- 106 **Horizontally acquired biosynthesis genes boost *Coxiella burnetii*'s physiology**
Jess Millar, Abraham Moses, Matteo Bonazzi, Paul Beare, Rahul Raghavan
- 107 **Evolutionary analysis of viral strains infecting a single anole species**
Sofia Prado-Irwin, Martijn van de Schoot, Anthony Geneva

Topic Sat-28 Phenotypic plasticity/GxE

- 108 **Phenotypic Differences in a Single Clonal Type in Newly Colonized and Established Populations**
Madison Armstrong, Mark Dybdahl
- 109 **Physiological Plasticity and Divergence in Migrating vs Nonmigrating Monarch Butterflies**
Cole Julick, Delbert Green, Ayse Tenger-Trolander, Marcus Kronforst, Kristi Montooth

Topic Sat-29 Phylogenetic comparative methods

- 110 Morphological form is predicted by genetic evidence function of the mammalian vomeronasal system**
Laurel Yohe, Simone Hoffmann, Liliana Davalos
- 111 Functional coupling and morphological integration in the evolution of suction feeding and gill ventilation of sculpins and relatives (Perciformes: Cottoidei)**
Stacy Farina, Katherine Corn, Matthew Knope, William Bemis, Adam Summers
- 112 Pair-living as a stepping stone to group-living in primate social evolution**
Luca Pozzi, Peter Kappeler

Topic Sat-30 Phylogenetic methods development

- 113 FastNet: Fast and accurate inference of phylogenetic networks using large-scale genomic sequence data**
Hussein Hejase, Natalie VandePol, Gregory Bonito, Kevin Liu
- 114 A macroevolutionary simulator for phylogenomic data**
Wade Dismukes, Tracy Heath
- 115 Reducing the size of terraces in phylogenetic tree space through the removal of taxa from a supermatrix phylogeny**
Joseph Charboneau, Michael Sanderson

Topic Sat-31 Phylogenomics

- 116 A Migratory Divide in the Painted Bunting (*Passerina ciris*)**
C.J. Battey, Ethan Linck, Kevin Epperly, Cooper French, David Slager, Paul Sykes, John Klicka
- 117 Reaffirming Hennig in the Genomics era: evolution of spider flies (Diptera, Acroceridae)**
Jessica Gillung, Shaun Winterton
- 118 *Kryptolebias marmoratus* phylogenomics and future laboratory applications**
Shawn Trojahn, Luana Lins, Joanna Kelley
- 119 Molecular evolution of the DNA Methyltransferase gene family in vertebrates**
Karen Bobier
- 120 A Phylogenetic Analysis of the Pannota**
Hayden Kallas, T. Heath Ogden
- 121 Phylogeny of the *Amphisbaenia* (Reptilia: Squamata) based on anchored phylogenomics and morphological dataset**
Roberta Graboski, Emily Lemmon, Alan Lemmon, Hussam Zaher, Tracy Heath
- 122 Combining genomic and morphological data in a model-base approach to ascertain species-delimitation in the South America marsh rat (*Holochilus*)**
Joyce Prado, L. Lacey Knowles, Alexandre Reis Percequillo

Topic Sat-32 Phylogeography

- 123 Phylogeography of Melanesian flycatchers (Aves: Monarchidae) based on ultraconserved elements**
Lukas Klicka, Brian Weeks, Chris Filardi, Robert Moyle
- 124 Phylogeography of *Micrurus surinamensis* and *Micrurus lemniscatus***
Renan Bosque, Hussam Zaher, Guarino Colli, Miguel Rodrigues, Omar Torres-Carvajal, Nelson Jorge da Silva Junior, Ana Lucia da Costa Prudente, Felipe Grazziotin, Laurie Vitt, Brice Noonan
- 125 Trait-based population genomics across a biogeographic barrier**
Kaiya Provost, William Mauck III, Brian Smith
- 126 Phylogeography of the South American *Rhinella granulosa* species complex**
Danielle Rivera, Matthew Fujita

Topic Sat-33 Plant reproductive biology

- 127 **Range-wide variation in selfing rate in American bellflower (*Campanula americana*)**
Yva Eline, Matthew Koski, Laura Galloway, Jeremiah Busch
- 128 **Sterile marginal flowers increase insect visitation and fruit set in the hobblebush (*Viburnum lantanoides*)**
Brian Park, Michael Donoghue

Topic Sat-34 Population genetics: inference of selection

- 129 **Investigating genetic adaptation to high altitude across Andean hummingbird species and populations**
Marisa Lim, Christopher Witt, Catherine Graham, Liliana Davalos
- 130 **The genomics of behavioral adaptation to photoperiodism in an Asian burying beetle.**
Yuki Haba, Hsiang-Yu Tsai, Dustin Rubenstein, Sheng-Feng Shen
- 131 **Comparative species and population analyses identify human-specific patterns of selection at schizophrenia GWAS loci**
Mariam Sankoh, Brian Verrelli
- 132 **Evidence of selection in extant and extinct monk seals**
Stephen Gaughran, Emily Lipstein, George Amato, Matthew Aardema, Alan Scott, Jeffrey Powell, Adalgisa Caccone

Topic Sat-35 Population genetics: molecular ecology

- 133 **Population Genetics of Steller Sea Lions at a Single Haulout: Optimized Low Copy DNA Methods**
Peter Han, Brad Swanson
- 134 **Population genomic study of adaptation and selection in a dune sunflower**
April Goebel, Silas Tittes, Nolan Kane
- 135 **Population genomics of the armored catfish *Hypancistrus* sp. from the Xingu River, in the Brazilian Amazonia**
Marcella Santos, Leandro Sousa, Brice Noonan
- 136 **Historical demography of Malagasy herpetofaunal assemblages**
Arianna Kuhn
- 137 **Characterizing adaptive immunogenetic variation in the endangered salt marsh harvest mouse, *Reithrodontomys raviventris***
Anastasia Ennis, C. Sarah Cohen
- 138 **Genome-wide markers reveal the determinants of genetic divergence in a lowland Mesoamerican bird (*Icterus gularis*)**
Lucas Rocha Moreira, Blanca Hernández Baños, Brian Smith

Topic Sat-36 Quantitative genetics

- 139 **Should I stay or should I go? Evaluating the genetic basis of migration-related traits in rainbow trout (*Oncorhynchus mykiss*).**
Spencer Weinstein, Matt Hale, Frank Thrower, Krista Nichols
- 140 **Evolution of a Novel Trophic Organ: Ovipositor bristles that both cut and taste host plants**
Julianne Pelaez

Topic Sat-37 Reproductive biology

- 141 The evolution of mating type loci in lichenized fungi. **withdrawn 2017-06-10 10:25:18.0**
Kristin White
- 142 Disrupted Genomic Imprinting Negatively Affects Maternal Behaviors in an Interspecific Mouse Cross
Sarah Gardner, Polly Campbell
- 143 *Drosophila* accessory gland secondary cells mediate between-male competition for fertilisations
Ben Hopkins, Irem Sepil, Tommaso Pizzari, Clive Wilson, Stuart Wigby

Topic Sat-38 Sensory systems

- 144 Heat of the moment? Effects of long term temperature exposure on cricket courtship song
Hayden Waller, Kerry Shaw
- 145 Transcriptome sequencing reveals divergent selective pressures on snake visual transduction genes associated with rod-cone transmutation
Ryan Schott, Alexander Van Nynatten, Daren Card, Todd Castoe, Belinda Chang
- 146 Pheromone and Vomeronasal Receptor Evolution in House Mice
Caitlin Miller, Polly Campbell, Michael Sheehan

Topic Sat-39 Sex/recombination

- 147 Identifying a neo-sex chromosome via deep resequencing in a hybridizing primate species
Marcella Nidiffer, Liliana Cortes Ortiz, Priscilla Tucker, Jacob Mueller
- 148 Estimating mutational fitness effects from growth data in budding yeast
Linnea Sandell, Sally Otto, Anastasia Kuzmin

Topic Sat-40 Sexual selection

- 149 Predator-induced maternal and paternal effects independently alter female offspring mate choice
Whitley Lehto, Robin Tinghitella
- 150 Increased sperm transfer and fertilization success in the copulatory silk wrapping nursery web spider, *Pisaurina mira*
Alissa Anderson, Eileen Hebets
- 151 Determining the role of postcopulatory sexual selection in female sperm storage organ evolution in *Drosophila*.
Tiffini Smith, Mollie Manier
- 152 Female color variation and male harassment in the polymorphic damselfly *Megalagrion calliphya*
Phoebe Cook, Rebecca Rasmussen, Anjali Batra, Jonathan Brown, Idelle Cooper
- 153 Quantifying Female Reproductive Cyclicity Across Four *Peromyscus* species
William Weber, Heidi Fisher
- 154 Parental clutch traits as a source of transgenerational developmental stress: consequences for secondary sexual traits and reproductive success in the zebra finch
Kerianne Wilson, Nancy Burley
- 155 Population variation in mating traits and preferences: character displacement or selective tradeoffs?
Gina Calabrese, Karin Pfennig

Topic Sat-41 Social systems

- 156 Worker ovicide can drive the evolution of social polymorphism and split sex ratios**
Gil Henriques, Andrés Quiñones, Ido Pen

Topic Sat-42 Speciation

- 157 Subspeciation rates and diversity gradients**
Mauro Toshiro Sugawara, Matthew Pennell
- 158 Patterns of speciation under adaptation from standing genetic variation**
Ken Thompson, Matthew Osmond, Dolph Schluter
- 159 Genetic divergence and speciation of a generalist insect herbivore**
Mayra Vidal, Shannon Murphy
- 160 Hybrid speciation in Phlox**
Benjamin Goulet, Robin Hopkins
- 161 Studying genomic differentiation among Northern Goshawks in British Columbia**
Kenneth Askelson, Darren Irwin, Armando Geraldes
- 162 Phenotypic and phylogenetic homogeneity corroborate conservative macro-evolutionary dynamics in the Neotropical tree genus Myrcia**
Thais Vasconcelos, Eve Lucas, Gerhard Prenner, Marion Chartier

Topic Sat-43 Species delimitation

- 163 Hybridization and Species Delimitation in Oregon Buttercups**
Jessica Persinger, Pamela Thompson, Brendan F Kohn, Mitch Cruzan
- 164 Differential fitness reveals a speciation process in karyotypic variants of the Brazilian rodent *Akodon cursor* (Sigmodontinae)**
Fernanda Zaidan, Cristina Nogueira-Massariol, L. Lacey Knowles, Valeria Fagundes

Topic Sat-44 Systematics

- 165 Molecular Analysis of Mayfly Family Baetidae (Ephemeroptera)**
Bryson Carrier, Daniel Ferguson, T. Heath Ogden
- 166 Population admixture in the cosmopolitan fern genus, *Pteridium* (Dennstaedtiaceae)**
Sylvia Kinoshian, Paul Wolf, Carol Rowe, Joshua Der, Zachariah Gompert, Martin Schilling, Peter Lockhart, Lara Shepherd, Trish McLenachan, John Thomson

Topic Sat-45 Last minute additions

- 167 Population Genomics of Moss Campion**
Heather Gillette
- 168 Adaptation and demographic history of two tidal marsh species inferred from whole genome sequencing.**
Gemma Clucas, Jennifer Walsh, Matthew MacManes, Adrienne Kovach
- 169 Sex and chromosome effects on transcriptome variation**
William Etges
- 170 Differentiation in seed endophytic communities among natural populations of *C. bursa-pastoris***
Byungwook Choi, Seorin Jeong, Eunsuk Kim

- 171 Rapid adaptation in a contaminated environment: Evolutionary adaptive response of old field grass *Andropogon virginicus* to heavy metals in abandoned Lead and Zinc mines**
Samantha Sharpe, Loretta Johnson, Nora Bello, Matthew Gallart, Olivia Parrish

Session Sun1-Ball202 SSB Symposium - A debate of conceptual issues surrounding genetic-based species delimitation in the genomic era 1

Sunday - 8:15 - 9:45

Room Oregon ballroom 202

- 8:15 Benefits of using the multi species coalescent for species delimitation**
Matthew Fujita
- 8:30 When sampling matters: biases in species delimitation.**
Kelly Zamudio, Nicholas Mason, Nicholas Fletcher
- 8:45 Moderated discussion: Does the multispecies coalescent delimit species?**
David Hillis, L. Lacey Knowles
- 9:00 The necessity of morphology for delimiting species in the molecular age**
Felipe Zapata
- 9:15 The superfluity of morphology for species delimitation in the molecular age**
SARA RUANE
- 9:30 Moderated discussion: Is species delimitation necessary for assessing the drivers of diversification?**
David Hillis, L. Lacey Knowles

Session Sun1-A105 Phylogenetic methods development 1

Sunday - 8:30 - 9:45

Room A105

- 8:30 Independent rate models are biologically unrealistic**
Mario dos Reis
- 8:45 Some additional new plotting methods for phylogenies & comparative data**
Liam Revell
- 9:00 Tools for assessing ancestral recombination graphs**
Mary Kuhner
- 9:15 Horseshoes and hand grenades: shrinking models with exploding numbers of parameters using horseshoe priors**
Andrew Magee, Adam Leache, Vladimir Minin
- 9:30 Flexible Modeling of Morphological Characters for Phylogenetic Inference**
April Wright, Walker Pett, Tracy Heath

Session Sun1-A106 Biogeography 1

Sunday - 8:30 - 9:45

Room A106

- 8:30 Filter-dispersal assembly of lowland Neotropical rainforests across the Andes**
Jordan Bemmels, Joe Wright, Nancy Garwood, Simon Queenborough, Renato Valencia, Christopher Dick
- 8:45 Global patterns and drivers of squamate body sizes**
Alex Slavenko, Feldman Anat, Shai Meiri
- 9:00 Unveiling geographical, ecological, and evolutionary relationships of a Neotropical species complex of unisexual lizards of genus *Loxopholis* (Squamata: Gymnophthalmidae) through GIS-based analysis**
Tuliana Brunes, Katia Pellegrino, Levi Carina Terribile, Matheus Lima-Ribeiro, Sergio Marques de Souza, Miguel Rodrigues
- 9:15 Speciation and the Assembly of Global Vertebrate Diversity**
Daniel Rabosky
- 9:30 Biodiversity and Topographic Complexity: Modern and Geohistorical Perspectives**
Tara Smiley

Session Sun1-A107-109 Macroevolution 2

Sunday - 8:30 - 9:45 **Room A107-109**

- 8:30 The influence of wing morphology upon the dispersal, geographic distributions and diversification of a global radiation of passerine birds**
Jon Kennedy, Michael Borregaard, Knud Jønsson, Petter Marki, Jon Fjeldså, Carsten Rahbek
- 8:45 Evolutionary and Ecologic Signal of Colors in Fungal Fruit Bodies**
Franz Krah, Hanno Schaefer, Antje Heideroth, Lynne Boddy, Carrie Andrew, Einar Heegaard, Håvard Kauserud, Jacob Heilmann-Clausen, Joerg Mueller, Robert Freckleton, Christoph Heibl, Claus Baessler
- 9:00 Major habitat transitions within Class Gastropoda**
Teresa Rose Osborne, David Bullis, Jesse Czekanski-Moir, Rebecca Rundell
- 9:15 Origins of diversity in caridean shrimps: insights from a time-calibrated supertree**
Katie Davis, Sammy De Grave, Cyrille Delmer, Matthew Wills
- 9:30 Evolution of extreme ontogenetic allometric diversity and heterochrony in pythons, a clade of giant and dwarf snakes**
Damien Esquerre, Emma Sherratt, J. Scott Keogh

Session Sun1-B111-112 Quantitative genetics / adaptation

Sunday - 8:30 - 9:45 **Room B111-112**

- 8:30 Resolving the Genetic Architecture Paradox in Complex Trait Evolution: A Simulation Study**
David Remington, Mario Augustinovic
- 8:45 Deeply conserved genetic constraints influence adaptive radiation of Anolis lizards**
Joel McGlothlin, Megan Kobiela, Helen Wright, Jason Kolbe, Jonathan Losos, Butch Brodie
- 9:00 Expression of additive genetic variance for fitness in a population of partridgepea grown in two field sites**
Ruth Shaw, Seema Sheth, Mason Kulbaba, Rachel Pain
- 9:15 Pollen dispersal slows geographical range shift and accelerates ecological niche shift under climate change**
Ophelie Ronce, Robin Aguilee, Gael Raoul, Francois Rousset
- 9:30 Can parental environment influence the potential for adaptation to global change?**
Evatt Chirgwin, Dustin Marshall, Carla Sgrò, Keyne Monro

Session Sun1-B113 Behavior 1

Sunday - 8:30 - 9:45 **Room B113**

- 8:30 Information Warfare: Mimicry & Signal Detection**
David Kikuchi
- 8:45 Behavioural adaptations in Darwin's finches**
Kiyoko Gotanda
- 9:00 A distance-performance trade-off in the phenotypic basis of dispersal in a stream salamander**
Brett Addis, Bret Tobalske, Winsor Lowe
- 9:15 Father-embryo coevolution in Neotropical glassfrogs**
Jesse Delia
- 9:30 The eco-evolutionary consequences of agonistic character displacement**
Kenichi Okamoto, Jonathan Drury, Greg Grether

Session Sun1-B114-115 Inbreeding / conservation biology

Sunday - 8:30 - 9:45 **Room B114-115**

- 8:30 Genomic consequences of inbreeding in a wild wolf population**
Toby Fountain, Marty Kardos, Mikael Åkesson, Øystein Flagstad, Olof Liberg, Pall Olason, Håkan Sand, Petter Wabakken, Camilla Wikenros, Hans Ellegren

8:45 Genome-scale data reveals that endemic *Poecilia* populations from small sulfidic springs display no evidence of inbreeding

Anthony Brown, Ryan Greenway, Samuel Morgan, Corey Quackenbush, Luca Giordani, Lenin Arias-Rodriguez, Michael Tobler, Joanna Kelley

9:00 Reviving a Lost Species: The Case of the Floreana Galápagos Giant Tortoise *Chelonoidis elephantopus*

Joshua Miller, Maud Quinzin, Nikos Poulakakis, Jonathan Sandoval-Castillo, James Gibbs, Luciano Beheregaray, Ryan Garrick, Michael Russello, Claudio Ciofi, Danielle Edwards, Elizabeth Hunter, Washington Tapia, Dany Rueda, Jorge Carrión, Andrés Valdivieso, Adalgisa Caccone

9:15 Effect of ecological stress (host and temperature) on magnitude of inbreeding depression in *Callosobruchus maculatus*

Amy Springer, Zachariah Gompert, Frank Messina

9:30 Unequivalent lethal equivalents: Approaches for quantifying genetic load and inbreeding depression

Pirmin Nietlisbach, Lukas Keller

Session Sun1-B116 Hybridization 1

Sunday - 8:30 - 9:45

Room B116

8:30 Chemical compounds of pheromone signals and reproductive isolation in naturally-hybridizing swordtail fish.

Chris Holland, Gil Rosenthal

8:45 Mechanical and tactile incompatibilities cause reproductive isolation in young damselfly species

Alexandra Barnard, Ola Fincke, Mark McPeck, John Masly

9:00 The collapse of assortative mating uncovers a melanoma hybrid incompatibility

Mateo Garcia, Daniel Powell, Gil Rosenthal, Manfred Scharl, Molly Schumer

9:15 Modeling local ancestry and Dobzhansky-Muller incompatibilities in a hybrid zone

Joel Smith, Megan Frayer, John Novembre, Bret Payseur

Session Sun1-B117-119 Adaptation / genomics 1

Sunday - 8:30 - 9:45

Room B117-119

8:30 Elucidating the genetic control of long-term success in a near century long study of barley (*Hordeum vulgare*)

Jacob Landis, Angelica Guercio, Christopher Fiscus, Daniel Koenig

8:45 The *Panicum hallii* genome and the evolution of molecular drought-responses in C4 grasses.

John Lovell, Thomas Juenger, Jeremy Schmutz

9:00 Polygenic adaptation in maize.

Emily Josephs, Jeremy Berg, Jeffrey Ross-Ibarra, **Graham Coop**

9:15 Population Genomics of Moss Champion ~~withdrawn 2017-06-04 07:32:32.0~~

Heather Gillette, Katrina Dlugosch, Brittany Barker, William Morris, Daniel Doak

9:30 Impact of Horizontal Gene Transfer on the Evolution of the Early Fungi

Michał Ciach, Anna Muszewska, Paweł Górecki

Session Sun1-Ball203 Parallel / convergent evolution

Sunday - 8:30 - 9:45

Room Oregon ballroom 203

8:30 Why convergence? Inferring constraint from comparative genomic studies of local adaptation

Sam Yeaman, Michael Whitlock, Kathryn Hodgins, Aleeza Gerstein

8:45 What determines the distinct morphology of species with a particular ecology? The roles of many-to-one mapping and trade-offs in the evolution of frog ecomorphology and performance

Daniel Moen

9:00 Ploidy drive in fungal microbes: an evolutionary mystery waiting to be solved

Aleeza Gerstein, Meleah Hickman, Judith Berman, Kirsten Nielsen, Sally Otto

9:15 From simplicity to complexity: Evolution and development of flower color patterning in *Mimulus*

Arielle Cooley

9:30 Linking changes in gene expression to the macroevolution of flower color
Maximilian Larter, Stacey Smith, Andrea Berardi, Amy Dunbar-Wallis

Session Sun1-Ball204 ASN Spotlight - Processes underlying pattern: considering the evolutionary mechanisms underlying population-level differentiation

Sunday - 8:30 - 9:45

Room Oregon ballroom 204

8:30 Introduction: Connecting pattern to process in studies of speciation
Rebecca Safran

8:45 Anthropogenic changes in nutrient availability alter sexual selection dynamics and population differentiation in a butterfly
Emilie Snell-Rood, Anne Espeset, Kristin Sikkink, Megan Kobiela

8:50 Genetic basis and adaptive significance of population level and plastic variation in leaf shape
Kathleen Ferris, Graham Coop, Jeffrey Ross-Ibarra, Johanna Schmitt

8:55 Differences in spatial autocorrelation between habitat types promote local adaptation in dispersal strategy
Meredith Censer, Leithen M'Gonigle

9:00 Isolation by distance as a null hypothesis of population structure
Gideon Bradburd

9:15 Surfing in pools of beetles: using replicated landscape experiments to disentangle signatures of selection and drift
Silas Tittes, Ruth Hufbauer, Nolan Kane, Brett Melbourne, Christopher Weiss-Lehman

9:20 How hybridization structures the genomes of related birds
David Toews

9:25 Coevolutionary diversification in the yucca-yucca moth interaction
Kari Segraves

9:30 Correlated evolution of functional physiology and thermal niches in tropical freshwater fishes
Zachary Culumber

Session Sun1-C120-122 Ecological genetics / adaptation

Sunday - 8:30 - 9:45

Room C120-122

8:30 Evolution of daylength adaptation in temperate grasses
Erica Leder

8:45 Natural selection on phenology across a seasonal gradient in elevation of an annual plant, *Rhinanthus minor*
Dylan Sora, Christopher Eckert, Dave Ensing, Anna Hargreaves

9:00 Genomic evidence of rapid adaptation to a novel freshwater environment
Janna Willoughby, Jacob Tennesen, Kim Scribner, Mark R. Christie

9:15 Circadian clock function correlates with diurnal changes in gas-exchange traits in *Brassica rapa* crop types and RILs in controlled environmental settings
Yulia Yarkhunova, Matti Salmela, Brent Ewers, Ping Lou, C. Robertson McClung, Cynthia Weinig

9:30 Local adaptation and adaptive variation in distantly-related conifers
Jeremy Yoder, Sally Aitken

Session Sun1-C123 Education

Sunday - 8:30 - 9:45

Room C123

8:30 GET CREATIVE TO MAXIMIZE AN EVOLUTION CLASS
E Dale Broder

8:45 Feedback in Online Learning Activities: Should We K.I.S.S. or Try to Explain?
David Ford, Anna Hiatt

9:00 Women in Academia: Trends in funding success rates and submissions across the sciences at the National Science Foundation
Leslie Rissler

9:15 Avida-ED web based version
Diane Blackwood, Robert Pennock

Session Sun1-C124 Genomics / expression studies
Sunday - 8:30 - 9:45 **Room C124**

8:30 Differential gene expression across tissues, sex, and life stages in the sea urchin *Tripneustes gratilla*

Aki Jarl Láruson, Floyd Reed

8:45 Linking genomic transposable element evolution to germ-line expression in snakes.

Giulia Irene Maria Pasquesi, Michael Vandeweghe, Audra Andrew, Nicole Hales, Andrew Corbin, Todd Castoe

9:00 Comparative functional genomics of osmotic physiology in 16 species of killifish

Noah Reid

9:15 Seasonal variation in gene expression across a community of plants at Harvard Forest

Hannah Marx, Eldridge Wisely, Stacy Jorgensen, Katrina Dlugosch, Michael Barker

9:30 The genomics of conflict: **X-chromosome drive** in the fly *Drosophila neotestacea*

Kelly Dyer, Kathleen Pieper, Robert Unckless

Session American Naturalist editorial board meeting
Sunday - 8:30 - 10:15 **Room C126**

Session Taylor & Francis editorial board meeting
Sunday - 8:30 - 10:15 **Room B110**

Session Coffee break
Sunday - 9:45 - 10:15 **Room Exhibit Hall A**

Sponsored by



Session Sun2-A105 Phylogenetic methods development 2
Sunday - 10:15 - 11:30 **Room A105**

10:15 Sensitivity of quartet-based species tree methods to missing data

Ian Gilman, David Tank

10:30 Utility for off-target DNA mining in non-model organisms and an assessment of the discriminatory power of DNA barcodes in plants and animals.

Alisha Mechtley

10:45 The development of scientific consensus: analyzing conflict and concordance among Avian phylogenies

Joseph Brown, Ning Wang, Stephen Smith

11:00 Evaluating allopolyploid origins in strawberries (*Fragaria*) using haplotypes generated from target capture sequencing **withdrawn 2017-06-20 12:55:44.0**

John Syring, Olga Kamneva, Aaron Liston, Noah Rosenberg

11:15 Species tree reconstruction using ASTRAL: recent advances and future directions
Siavash Mirarab

Session Sun2-A106 Biogeography 2

Sunday - 10:15 - 11:30 **Room A106**

- 10:15 An empirical test of the role of topographic complexity in the general dynamic model of oceanic island biogeography**
Yannik Roell
- 10:30 Islands in Idaho: Using a Naturally Fragmented Landscape to Investigate Communities**
Katie Peterson, Christine Parent
- 10:45 Convergent phenotypes obscure biogeographic history in Neotropical Seedeaters (Aves: Sporophila)**
Nicholas Mason, Arturo Olvera-Vital, Irby Lovette, Adolfo Navarro-Sigüenza
- 11:00 Patterns of character evolution in a mega-diverse angiosperm clade (Asteridae)**
Gregory Stull, Melanie Schori, Douglas Soltis, Pamela Soltis
- 11:15 The evolution of clonality in seasonal seas: the influence of temperature on geographic patterns of life cycle diversity in the sea anemone *Diadumene lineata***
Will Ryan

Session Sun2-A107-109 Macroevolution 3

Sunday - 10:15 - 11:30 **Room A107-109**

- 10:15 Evolution of sexual dichromatism in the 'blue' cardinalids (Aves: Cardinalidae)**
Natalia Garcia, Ana Barreira, Pablo Tubaro
- 10:30 How ecology shapes adaptive phenotypic evolution in a eusocial lineage: the evolution of the specialized soldier caste in turtle ants**
Shauna Price, Scott Powell, Corrie Moreau
- 10:45 Extinction and time are drivers of the marine-terrestrial biodiversity gradient: Is the ocean a deathtrap?**
Elizabeth Miller, John Wiens
- 11:00 Disentangling the evolutionary history of nickel tolerance and hyperaccumulation in wild sunflowers (*Helianthus*): a function-valued phylogenetic comparative approach**
Eric Goolsby, Chase Mason, Lauren Brill, Gaven Meyers, Lisa Donovan
- 11:15 Testing sexual selection as a determinant of species extinction and origination in Late Cretaceous cytheroid ostracodes**
Maria Joao Fernandes Martins, Gene Hunt, T Markham Puckett, Rowan Lockwood, John P Swaddle

Session Sun2-B111-112 Quantitative genetics / genomics

Sunday - 10:15 - 11:30 **Room B111-112**

- 10:15 Dissecting the genetic basis of learning, memory and thermal tolerance in a multi-parental population.**
Patricka Williams-Simon, Elizabeth King, Troy Zars
- 10:30 Genetic constraints in the evolution of chemical defenses in multiple tissues of *Boechera stricta***
Rose Keith, Tom Mitchell-Olds
- 10:45 A genomic scan for flower shape variation in *Penstemon virgatus*: implications for transitions to hummingbird pollination**
Carolyn Wessinger, John Kelly, Lena Hileman
- 11:00 Heritability and Genomic Basis for Variation in Thermal Tolerance of the Coral Holobiont in *Orbicella faveolata***
Katherine Dziedzic, Eli Meyer
- 11:15 Fine-mapping the genetic basis of extreme color diversity used for social recognition**
Michael Sheehan, Sara Miller, Andrew Legan, Sarah Bluher

Session Sun2-B113 Behavior 2

Sunday - 10:15 - 11:30

Room B113

- 10:15 Cooperative Breeding Influences Evolution of Communicative Complexity in Birds**
Gavin Leighton
- 10:30 It pays to wait: intragenerational social mobility key to long-term stability in Tibetan macaque society**
Lixing Sun, Dongpo Xia, Shine Sun, Lori Sheeran, Jinhua Li
- 10:45 Fighting over food unites the birds of North America in a continental dominance hierarchy**
Eliot Miller, David Bonter, Charles Eldermire, Benjamin Freeman, Emma Greig, Luke Harmon, Curtis Lisle, Wesley Hochachka
- 11:00 Does boldness predict ecological outcomes in a clonal sea anemone**
David Ayre, Rick Grosberg
- 11:15 Geographical barriers as drivers for song and genetic divergence in the highland endemic Timberline Wren (*Thryorchilus browni*)**
Andrés Camacho

Session Sun2-B114-115 Invasive / invasion 1

Sunday - 10:15 - 11:30

Room B114-115

- 10:15 Genetic signatures of adaptation and gene surfing in replicated biological range expansions**
Christopher Weiss-Lehman, Silas Tittes, Nolan Kane, Ruth Hufbauer, Brett Melbourne
- 10:30 Effect of temperature and genetic structure on gypsy moth invasiveness at a range margin**
Trevor Faske, Lily Thompson, Chris Friedline, Salvatore Agosta, Derek Johnson, Kristine Grayson, Andrew Eckert
- 10:45 Impact of suburban landscape features on dispersal of *Brachypodium sylvaticum*, an invasive grass**
Tina Arredondo, Mitch Cruzan
- 11:00 Distribution of co-invading specialist rhizobium mutualist limits the potential of *Medicago polymorpha* to invade via large and small scale dispersal events**
Zoie Lopez, Maren Friesen, Stephanie Porter
- 11:15 Rapid Evolution and Tripartite interactions**
Chandra Jack, Maren Friesen

Session Sun2-B116 Hybridization 2

Sunday - 10:15 - 11:30

Room B116

- 10:15 Genomic Patterns in a North American Pitcher Plant Hybrid Zone**
Katherine Bell, Kristen L. King, Allan Strand
- 10:30 No Easy D: Little Evidence for Introgression from Whole-Genome Data in Wild Solanum**
Jennafer Hamlin, Leonie Moyle
- 10:45 Functionality of genome wide introgression in old world mice**
Eslam Elshahat, Michael Kohn
- 11:00 Introns gained or borrowed in *Daphnia*: on the importance of considering evolutionary history**
France Dufresne
- 11:15 Population modeling reveals several layers of genetic structure in a hybridizing multispecies complex, California white oaks**
Prahlada Papper

Session Sun2-B117-119 Adaptation / genomics 2

Sunday - 10:15 - 11:30

Room B117-119

- 10:15 The timescales of selection in stickleback: Why rapid adaptation takes millions of years**
Thomas Nelson, William Cresko
- 10:30 Genomic signatures of local adaptation in Atlantic salmon**
Victoria Pritchard

- 10:45 The Gulf pipefish genome enriches our understanding of an evolutionary innovation**
Clayton Small, Susan Bassham, Julian Catchen, Angel Amores, Allison Fuiten, Adam Jones, William Cresko
- 11:00 Evolution after whole genome duplication - insights from the salmonids**
Simen Sandve
- 11:15 Finding a Genomic Basis for Coral Thermal Tolerance and Assessing Adaptive Potential in *Platygyra daedalea*** **withdrawn 2017-06-21 21:38:32.0**
Holland Elder, Line Bay, Eli Meyer

Session Sun2-Ball203 SSE Spotlight - Speciation with and without sex chromosomes

Sunday - 10:15 - 11:30

Room Oregon ballroom 203

- 10:15 Speciation and sex chromosomes: (Wh)y X?**
Norman Johnson
- 10:30 Haldane's rule in *Caenorhabditis* nematodes**
Joanna Bundus, Asher Cutter
- 10:35 Does dominance theory explain Haldane's rule in marsupials?**
Eric Watson, Jeff Demuth
- 10:40 Exploring the relationship between ecological isolation and reproductive isolation in nudibranchs**
Allison Fritts-Penniman
- 10:45 Not playing by the rules: speciation genetics in the absence of sex chromosomes**
Suzanne Edmands
- 11:00 Are mito-nuclear incompatibilities especially important for the evolution of reproductive isolation in taxa without sex chromosomes?**
Thiago Lima, Ron Burton, Ricardo Pereira
- 11:05 The multifaceted nature of speciation: variation in reproductive isolation across a species range**
Karen Barnard-Kubow, Laura Galloway
- 11:10 The small majority: the microbiome as a unit of selection and speciation**
Robert Brucker
- 11:15 Patterns and drivers of reptilian speciation with and without sex chromosomes**
Nicole Valenzuela

Session Sun2-Ball204 Sex / recombination 1

Sunday - 10:15 - 11:30

Room Oregon ballroom 204

- 10:15 The evolution of recombination rate in finite populations during ecological speciation**
James Reeve, Daniel Ortiz-Barrientos, Jan Engelstädter
- 10:30 Multicellularity drives the evolution of anisogamy, sexual dimorphism**
Erik Hanschen
- 10:45 The measure of total recombination**
Carl Veller, Pavitra Muralidhar
- 11:00 Demography influences the detection of recombination hotspots**
Amy Dapper, Bret Payseur
- 11:15 Gametic selection, meiotic drive, sex ratio bias, and transitions between sex determination systems**
Michael Scott, Matthew Osmond, Sally Otto

Session Sun2-C120-122 Ecological genetics 1

Sunday - 10:15 - 11:30

Room C120-122

- 10:15 Different landscape features influence seed and pollen movement in the small forb *Lasthenia californica*, as seen through whole chloroplast genome sequencing and nuclear genotyping-by-sequencing**
Pamela Thompson, Mitch Cruzan

- 10:30 Genomic signals of selection predict climate-driven population declines in a migratory bird**
Rachael Bay
- 10:45 Targeted sequencing of venom genes from cone snail genomes reveals multiple genetic and ecological mechanisms shaping venom diversification**
Mark Phuong
- 11:00 Ecophysiological genomics and the desert adapted rodent, *Peromyscus eremicus***
Matthew MacManes
- 11:15 Experimental evidence natural selection affects genome-wide geographic and host-related differentiation during sympatric divergence.**
Jeffrey Feder, Meredith Doellman, Glen Hood, Gregory Ragland, Peter Meyers, Thomas Powell, Scott Egan, Mary Glover, Cheyenne Tait, Dan Hahn, Stewart Berlocher, Patrik Nosil

Session Sun2-C123 Education / outreach

Sunday - 10:15 - 11:30 **Room C123**

- 10:15 Accepting Evolution: Factors that lead to change in students' acceptance of evolution.**
Daniel Ferguson, T. Heath Ogden
- 10:30 Seeking Common Ground in World Views: Humility and Hubris in Science and Religion**
John Niedzwiecki
- 10:45 Virtual Biology Lab 2.0: improving and implementing an inquiry-based educational resource**
David Ford, Anna Hiatt, Thomas Jones
- 11:00 Evolutionary video games as vehicles for outreach and engagement.**
Barrie Robison, Terence Soule, Samantha Heck, Landon Wright
- 11:15 Using natural history collections to train students in informal science education**
Susan Masta, Annie Lindgren

Session Sun2-C124 Genomics

Sunday - 10:15 - 11:30 **Room C124**

- 10:15 DNA transposon dynamics among fungi with diverse lifestyles**
Anna Muszewska, Kamil Steczkiewicz, Marta Stepniewska-Dziubinska, Julia Pawlowska, Krzysztof Ginalski
- 10:30 Using Genomic Data to Inform Population Viability in a Long-Lived Endangered**
jaime ashander
- 10:45 Evolutionary variation in growth and stress responses underlying kidney regenerative growth from snakes to human organoids**
Audra Andrew, Blair Perry, Daren Card, Drew Schield, Robert Ruggiero, Suzanne McGaugh, Amit Choudhary, Stephen Secor, Todd Castoe
- 11:00 Plastome evolution in Bignoniaceae (Bignoniaceae)**
Alexandre Zuntini, Lúcia Lohmann
- 11:15 Genome size evolution in neotropical salamanders.**
Paul Decena, Sean Rovito

Session Sun2-Ball202 SSB Symposium - A debate of conceptual issues surrounding genetic-based species delimitation in the genomic era 2

Sunday - 10:15 - 11:45 **Room Oregon ballroom 202**

- 10:15 When are standardized protocols for species delimitation problematic?**
David Hillis, E. Anne Chambers, Harry Greene
- 10:30 When are standardized protocols for species delimitation appropriate?**
Thomas Near
- 10:45 Moderated discussion: Should we seek a "standardized protocol" for species delimitation?**
David Hillis, L. Lacey Knowles

- 11:00 When are species delimitation methods misleading in the study of macroevolutionary patterns?**
Catherine Wagner
- 11:15 When are species delimitation methods necessary for studying macroevolutionary patterns?**
Brian Smith
- 11:30 Moderated discussion: What is the role of morphology in species delimitation in the genomic era?**
David Hillis, L. Lacey Knowles

Session Diversity in Science luncheon: Essentials of a successful diversity and inclusion program

Sunday - 11:30 - 13:30

Room Oregon ballroom 201

Prior registration required (during conference registration).

Organizers: [SSE Graduate Student Advisory Council](#) with input from SSB and ASN

Topic: Join us for a discussion on identifying bias and increasing diversity across all dimensions.

Keynote speaker: [Lee Bitsoi](#) (Rush U.)

Session Lunch

Sunday - 11:30 - 13:30

Room On the town

Session SSE Education & Outreach committee meeting

Sunday - 11:30 - 13:30

Room C126

Session Early career researchers workshop (2 of 2): Maximizing the impact of your research (British Ecological Society)

Sunday - 12:15 - 13:15

Room B113

Cost: free, no registration required. Bring your own lunch.

Organizers: [Chris Grieves](#) (*Methods in Ecology and Evolution*)

In recent years there has been a significant increase in the number of academic articles published. At the same time, readers are changing how they find content – searching for individual articles rather than looking through journals. This interactive workshop will provide new authors with the necessary skills to maximize the impact of their research in the digital age. It will include guidance on optimising your articles for search engines, identifying the best forums to promote your work, pitching your paper to different audiences, and using social media.

Session Sun3-A105 Phylogenetic methods development 3

Sunday - 13:30 - 14:45

Room A105

- 13:30 Morphometrics on phylogenies: progress report on a likelihood approach**
Joe Felsenstein
- 13:45 Polymorphism-aware phylogenetic Models (PoMos) and their Applications** **withdrawn**
2017-06-20 13:12:34.0
Carolyn Kosiol, Dominik Schrempf
- 14:00 Budding or Anagenesis? Paraphyly and Ancestor-Descendant Relationships from Tip-Dating Phylogenies of Fossil Lineages**
David Bapst, Sandra Carlson
- 14:15 A FORMAL MODEL OF CLONAL EXPANSION IN BACTERIAL POPULATION GENETICS**
Alice Ledda, Xavier Didelot
- 14:30 A comprehensive view of the plant tree of life.**
Stephen Smith, Joseph Brown

Session Sun3-A106 Biogeography / evolutionary ecology

Sunday - 13:30 - 14:45 **Room A106**

- 13:30** Niche conservatism or divergence: Insights into the evolutionary histories of *Pinus taeda*, *P. rigida*, and *P. pungens*
Constance Bolte
- 13:45** Inferring diversification rates without molecular phylogenies or the fossil record: long-term diversity declines inferred for the Hawaiian archipelago
Charles Marshall, Jun Ying Lim
- 14:00** Testing for latitudinal gradients in defence at the macroevolutionary scale
Daniel Anstett, Jeff Ahern, Marc Johnson, Juha-Pekka Salminen
- 14:15** Ecological niche co-evolution through time between aye-ayes (Primates) and their major food plant, *Canarium* **withdrawn 2017-06-13 18:44:55.0**
Jen Tinsman
- 14:30** Niche divergence in *Mimulus*: driven by range overlap and time
Qin Li, Dena Grossenbacher, Amy Angert

Session Sun3-A107-109 Macroevolution 4

Sunday - 13:30 - 14:45 **Room A107-109**

- 13:30** Macroevolutionary patterns in the diversification of tropical marine invertebrates
Guadalupe Bribiesca Contreras
- 13:45** Phylogenetic comparative methods and cultural diversity: what drives the evolution of human kinship systems?
Catherine Sheard, Sam Passmore, Péter Rácz, Fiona Jordan
- 14:00** The Diversity of Avian Egg Shape through Time and Morphospace
Mary Stoddard
- 14:15** Functional diversification of a skeletal novelty in bats
Kathryn Stanchak, Sharlene Santana
- 14:30** Evaluating the evolution of trait seasonality with environment in dogwoods (*Cornus*): utility of a function-valued approach
Chase Mason, Michael LaScaleia, Grey Monroe, Eric Goolsby

Session Sun3-B111-112 Quantitative genetics / life history

Sunday - 13:30 - 14:45 **Room B111-112**

- 13:30** Genetic dissection of nutrition-induced plasticity in insulin/insulin-like growth factor signaling and median lifespan in a *Drosophila* multiparent population
Elizabeth King, Patrick Stanley, Enoch Ng'oma, Siri O'Day
- 13:45** Evolutionary potential of nutrition-dependent effects on lifespan in a multi-parental population of *Drosophila melanogaster*
Enoch Ng'oma, Anna Perinchery, Kevin Middleton, Elizabeth King
- 14:00** The Phenotypic Correlates and Quantitative Genetics of Masculinization in the Rodent, *Octodon degus*
Derek Roff, Matthew Wolak, Loreto Correa, Mauricio Soto-Gamboa
- 14:15** Detection of candidate genes for life history tradeoffs in outcrossing *Arabidopsis lyrata* using allele-specific expression studies.
Bishwa Giri, David Remington
- 14:30** Effect of life history on the predictability of selection and adaptation to a fluctuating environment
Olivier Cotto, Luis-Miguel Chevin

Session Sun3-B113 Behavior genetics

Sunday - 13:30 - 14:45 **Room B113**

- 13:30 Uncovering the genetic basis of social cognition in a 'smart' paper wasp**
Sara Miller, Michael Sheehan
- 13:45 The inheritance and neurogenomics of paternal care in sticklebacks**
Alison Bell
- 14:00 DNA methylation and the evolution of bee eusociality**
Natalia Araujo, Maria Cristina Arias
- 14:15 Genome-wide selection components analysis in a fish with male pregnancy**
Sarah Flanagan, Adam Jones

Session Sun3-B114-115 Invasive / invasion 2

Sunday - 13:30 - 14:45 **Room B114-115**

- 13:30 Evolution of an agricultural weed, *Helianthus annuus***
Emily Drummond, Loren Rieseberg
- 13:45 Evidence for eco-evolutionary dynamics during aquatic invasions**
Michael Gillis, Matthew Walsh
- 14:00 Two types of cryptic invasion of the shrub *Cytisus scoparius* in Europe.**
Ursula Brandes, Siri Fjelheim, Beate Beatriz Furevik, Lene Rostgaard Nielsen, Erik Dahl Kjær
- 14:15 Tracking the evolution of a plant invasion through time and space**
Kathryn Turner
- 14:30 Hybridization with an invader and position along the watershed influence morphological variation in populations of *Orconectes sanbornii***
Angela Roles, Elisa Henderson

Session Sun3-B116 Speciation / reproductive isolation

Sunday - 13:30 - 14:45 **Room B116**

- 13:30 Choosy natives and industrious immigrants: Genome duplication and pollinator discrimination in an ecologically dominant southwestern desert shrub (*Larrea tridentata*; Zygophyllaceae)**
Robert Laport, Diana Pilson
- 13:45 Divergence before the host shift? Prezygotic reproductive isolation among three varieties of a specialist fly on a single host plant**
Alaine Hippee, Marty Condon, Andrew Forbes
- 14:00 Battle of the sexes: the relative importance of female versus male mate-choice in *Drosophila* speciation**
Roman Yukilevich, Elizabeth Peterson
- 14:15 Assortative mating by an obliquely transmitted local cultural trait reduces hybridization**
Justin Yeh
- 14:30 Male-driven reproductive and agonistic character displacement in darters**
Rachel Moran, Becky Fuller

Session Sun3-B117-119 Adaptation / genomics 3

Sunday - 13:30 - 14:45 **Room B117-119**

- 13:30 Variants of large-effect underlie sex-specific resistance to a transmissible cancer**
Mark Margres, Brendan Epstein, Menna Jones, Rodrigo Hamede, Paul Hohenlohe, Andrew Storfer
- 13:45 The genetics of rapid adaptation to extreme environments in house mice across the Americas**
Kathleen Ferris, Mallory Ballinger, Gabriela Heyer, Michael Nachman
- 14:00 The color code: a multi-trait perspective on color evolution in a diverse salamander lineage (*Salamandra* spp.).**
James Burgon, David Vieites, Sebastian Steinfartz, Miguel Vences, Barbara Mable, Kathryn Elmer
- 14:15 The predictability of genomic changes underlying a recent host shift in *Melissa* blue butterflies**
Samridhi Chaturvedi, Lauren Lucas, Matthew Forister, Zachariah Gompert

14:30 Systems Analysis of Diversity within Experimental E. coli populations.
Megan Behringer, Brian Choi, Sam Miller, Wanfeng Guo, Thomas Doak, Jonathan Karty, Michael Lynch

Session Sun3-Ball202 SSB Symposium - Phylogenetic approaches to connecting genotypes to phenotypes 1

Sunday - 13:30 - 14:45 **Room Oregon ballroom 202**

13:30 Introduction to phylogenetic approaches to associating genes and phenotypes
Casey Dunn, Stacey Smith

14:00 Genome-wide association mapping in the context of complex evolutionary histories: new phylogenomic approaches
Hussein Hejase, Natalie VandePol, Gregory Bonito, Patrick Edger, Kevin Liu

14:30 Promises and pitfalls of phylogenetic mapping in species radiations
Fabio Kuriki Mendes, Matthew Hahn

Session Sun3-Ball203 SSE Spotlight -Sexual selection via male competition and the process of speciation

Sunday - 13:30 - 14:45 **Room Oregon ballroom 203**

13:30 Male competition as the flipside of sexual selection in speciation
Janette Boughman, Jason Keagy

13:45 Female competition in a hybrid zone between sex-role reversed species
Sara Lipshutz, Elizabeth Derryberry

13:50 Sexual conflict can constrain the evolution of reinforcement
Alison Wardlaw, Yaniv Brandvain

13:55 Divergent versus convergent sexual selection from male competition: ecology is key
Alycia Lackey, Janette Boughman

14:00 Can male competition enhance reproductive isolation? Evaluating the association between success in intraspecific and heterospecific sperm competition
Leonie Moyle, Jeremy Davis

14:15 Emergence and diversification of male grasping structures in the water strider genus Rheumatobates
Augustin Le Bouquin, Abderrahman Khila, Locke Rowe

14:20 Phenotypic and genetic divergence in weaponry across a broad landscape in a cactus-feeding bug
Pablo Allen, Christine Miller

14:30 Contrasting patterns of male competition and female choice in recently diverged threespine stickleback color types
Robin Tinghitella

Session Sun3-Ball204 Sex / recombination 2

Sunday - 13:30 - 14:45 **Room Oregon ballroom 204**

13:30 Genome dynamics of the anciently asexual bdelloid rotifers
Reuben Nowell, Pedro Almeida, Christopher Wilson, Alan Tunnacliffe, Chiara Boschetti, Tim Barraclough

13:45 Phenotypic Versus Genotypic Sex: Characterization of Multiple Loci in a Complex Sex Determination System
Ashley Elias

14:00 Sex chromosome evolution in voles
Polly Campbell, Matthew B. Couger, Scott Roy

14:15 Sex reinforces DNA methylation in plants
Adam Bewick, Alex Harkess, Zefu Lu, Paul Fourounjian, Brigitte Hofmeister, Robert Schmitz, Joachim Messing, Blake Meyers

14:30 Evolution of sexual dimorphism in the genome-wide recombination rate in house mice
April Peterson, Bret Payseur

Session Sun3-C120-122 Ecological genetics 2
Sunday - 13:30 - 14:45 **Room C120-122**

- 13:30 Range-wide genetic diversity of the ringed salamander (*Ambystoma annulatum*)**
Jacob Burkhardt, Chelsey Kroese, Emily Puckett, Raymond Semlitsch, Lori Eggert
- 13:45 Genetic diversity and hybridization in New Zealand's Selliera (*Goodeniaceae*)**
Vaughan Symonds, Kay Pilkington
- 14:00 Environmentally-driven morphological and genomic divergence in forest mice (*Praomys* sp.) across Central Africa**
Katy Morgan
- 14:15 Ecological Transcriptomics of Trophic Divergence in the Highly Polymorphic Arctic Charr: Uncovering the Molecular Phenotype**
Madeleine Carruthers, Arne Jacobs, Kathryn Elmer, Colin E. Adams, Natalia V. Gordeeva, Sergey S. Alekseyev
- 14:30 Genetic and evolutionary bases for structural color shift in the Buckeye butterfly**
Rachel Thayer

Session Sun3-C123 Contemporary evolution 1
Sunday - 13:30 - 14:45 **Room C123**

- 13:30 Eco-evolutionary consequences of mosquitofish domestication**
Zachary Wood, David Fryxell, Eric Palkovacs, Michael Kinnison
- 13:45 Combining niche shift models and population genetics predicts rapid phenotypic evolution during invasion of a marine alga**
Erik Sotka
- 14:00 Rapid evolution following experimental introduction in *Brassica rapa***
Steven Franks, Michael Sekor
- 14:15 Contemporary evolution and genetic variation in an invasive species affect biotic and abiotic resistance to invasion**
Casey terHorst
- 14:30 Adaptive potential of native and introduced ragweed populations**
Brechann McGoey, John Stinchcombe

Session Sun3-C124 Genomics / methods / theory
Sunday - 13:30 - 14:45 **Room C124**

- 13:30 Genotyping in thousands by sequencing (GT-seq): A low cost, high-throughput, targeted SNP genotyping method**
Nate Campbell, Stephanie Harmon, Shawn Narum
- 13:45 Expressed Exome Capture Sequencing (EecSeq): a method for cost-effective exome sequencing of non-model organisms**
Jonathan Puritz, Kathleen Lotterhos
- 14:00 Co-association networks reveal the genetic architecture underlying adaptation to a multivariate environment**
Kathleen Lotterhos, Sam Yeaman, Kathryn Hodgins, Jonathan Degner, Sally Aitken
- 14:15 The effects of low coverage sequence data on demographic reconstruction**
Angela Taravella, Melissa Wilson Sayres
- 14:30 Modeling next-generation sequencer sampling error dramatically reduces false positives in genetic structure tests**
Rebecca M. Hamner, Jason D. Selwyn, Evan Krell, Scott A. King, Chris Bird

Session Coffee break
Sunday - 14:45 - 15:15 **Room Exhibit Hall A**

Sponsored by



Session Sun4-A105 Phylogeography

Sunday - 15:15 - 16:30

Room A105

- 15:15 Evaluating mechanisms of diversification in a Guineo-Congolian forest frog using demographic model selection**
Daniel Portik, Adam Leache, Danielle Rivera, David Blackburn, Matthew Fujita
- 15:30 Sequence analysis of California populations of redwood sorrel (*Oxalis oregana*) supports post-glacial recolonization of the Pacific Northwest from northern and southern refugia**
Chris Brinegar
- 15:45 Using ddRAD-seq phylogeography to test for genetic effects of headwater river capture in *Hypostomus* catfishes from central Brazil**
Justin Bagley, Pedro De Podestà Uchôa de Aquino, Tomas Hrbek, Sandra Hernandez, Francisco Langeani, Guarino Colli
- 16:00 Using hypothesis testing to unearth phylogeographic patterns within Mole Skinks**
Kathryn Mercier, Milagros Baylac, Christopher Parkinson
- 16:15 Mito-nuclear discordance in the evolutionary history of a widespread passerine (*Troglodytes aedon*)**
Dario Lijtmaer, Cecilia Kopuchian, Pablo Tubaro, Leonardo Campagna

Session Sun4-A106 Disease

Sunday - 15:15 - 16:30

Room A106

- 15:15 Host response to changes in the microbiome through symptom progression in Sea Star Wasting Disease**
Melanie Lloyd, Melissa Pespeni
- 15:30 Unlocking the story in the swab: A new genotyping assay for the amphibian chytrid fungus**
Allison Byrne, Erica Bree Rosenblum, Andrew Rothstein, Thomas Poorten, Matthew Settles, Jesse Erens
- 15:45 Measuring the within tumor clonal spatial mixing level with phylogenies of phased haplotypes**
Yuantong Ding
- 16:00 Population genetic analysis of the DARC locus (Duffy), involved in malaria resistance in humans**
Omar Cornejo, Kimberly McManus, Martin Sikora, Carlos Bustamante, Brena Henn, Angela Taravella
- 16:15 Natural hybridization in poplars reveals new genomic architectures of disease resistance.**
Karl Fetter, Stephen Keller

Session Sun4-A107-109 Macroevolution 5

Sunday - 15:15 - 16:30

Room A107-109

- 15:15 Variation in population differentiation and speciation rate in a species-rich clade of lizards**
Sonal Singhal, Huanteng Huang, Maggie Grundler, Raquel Marchan, Pascal Title, Daniel Rabosky
- 15:30 Macroevolution of the dewlap and diversification of *Anolis* lizards**
Travis Ingram
- 15:45 What drives signal evolution in birds?**
Chris Cooney, Gavin Thomas

- 16:00 Hybridization accelerates speciation rates in salamanders**
Austin Patton, Brendan Epstein, Jonathan Eastman, Luke Harmon, Andrew Storfer
- 16:15 Life in Trees: Macroevolution of Morphology and Diversity in Arboreal Plethodontid Salamanders**
Erica Baken, Dean Adams

Session Sun4-B111-112 Quantitative genetics / sexual selection

Sunday - 15:15 - 16:30

Room B111-112

- 15:15 The quantitative genetics of sexual dimorphisms: how important are sex-linkage and dominance?**
Daphne Fairbairn, Derek Roff
- 15:30 Using sexually antagonistic skewers to explore the genetic architecture of sexual dimorphism in Anolis lizards**
Robert Cox, Joel McGlothlin
- 15:45 The genomic architecture of repeated sexual signal divergence**
Thomas Blankers, Kerry Shaw
- 16:00 Inter-population and genetic variation in the thermal sensitivity of reproductive behaviors of the vibrationally-singing insect *Enchenopa binotata***
Kasey Fowler-Finn, Dowen Jocson, Morgan Smeester
- 16:15 The role of the Y-chromosome in the evolution of autosomally coded traits**
Ian Kutch, Kenneth Fedorka

Session Sun4-B113 Behavior / genomics

Sunday - 15:15 - 16:30

Room B113

- 15:15 Adaptation and acclimation in a changing climate: integrating physiology, transcriptomics, and genomics of a thermal specialist**
Maria Tonione
- 15:30 Genetic architecture of social organisation in the ant *Pheidole pallidula***
Emeline Favreau, Rodrigo Pracana, Claude Lebas, Eckart Stolle, Max Reuter, Christophe Eizaguirre, Yannick Wurm
- 15:45 Comparative population genomics in halictid bees provides insights into the evolution of social behavior**
Ben Rubin, Sarah Kocher
- 16:00 The genetic basis for song-preference coevolution in the Hawaiian cricket *Laupala***
Mingzi Xu, Kerry Shaw
- 16:15 Genomic perspectives on the recurrent evolution of brood parasitic behavior**
Christopher Balakrishnan, Matthew Louder, Michael S. Brewer, Claire N. Spottiswoode, Michael Sorenson, Mark Hauber

Session Sun4-B114-115 Population genetics: inference of selection 1

Sunday - 15:15 - 16:30

Room B114-115

- 15:15 Viability selection in raptors: Using pooled sequencing and FST outlier tests to pinpoint whether genome-wide or locus-specific heterozygosity confers a survival advantage**
Jacqueline Doyle, J. Andrew DeWoody, Janna Willoughby, Nadia Fernandez
- 15:30 Assessing differential selection on immunity-related genes across monarch butterfly populations**
Wen-Hao Tan, Nicole Gerardo, Jacobus de Roode
- 15:45 Adaptation and gene flow among tidal marsh sparrows **withdrawn 2017-06-04 07:33:29.0****
Gemma Clucas
- 16:00 Genome-wide evidence of evolution and adaptation in the invasive Florida python population**
Daren Card, Blair Perry, Richard Adams, Audra Andrew, Drew Schield, Acacia Young, Tereza Jezkova, Mike Rochford, Frank Mazzotti, Kristen Hart, Margaret Hunter, Todd Castoe

16:15 Genomic data provides new insights into the origins of adaptive variation in the bush monkeyflower (*Mimulus*)
Madeline Chase, Sean Stankowski, Matt Streisfeld

Session Sun4-B116 Speciation / hybridization

Sunday - 15:15 - 16:30 **Room B116**

15:15 Genome-wide admixture, differential introgression, and signatures of reproductive isolation in a howler monkey hybrid zone
Marcella Nidiffer, Liliana Cortes Ortiz

15:30 Tracing the footprints of a moving *Setophaga* warbler hybrid zone
Silu Wang, Darren Irwin

15:45 Ancient and recent hybridisation and polyploidy in monkeyflowers (*Mimulus*)
Mario Vallejo-Marin

16:00 Assortative mate choice and maintenance of reproductive barriers: lessons from a phenotypically diverse avian species
Georgy Semenov, Elizabeth Scordato, David Khaydarov, Chris Smith, Nolan Kane, Alexander Badyaev, Evgeniy Koblik, Yaroslav Red'kin, Rebecca Safran

16:15 The genetic basis and evolutionary dynamics of a hybrid incompatibility in *Mimulus*
Matthew Zuellig, Andrea Sweigart

Session Sun4-B117-119 Adaptation / genomics 4

Sunday - 15:15 - 16:30 **Room B117-119**

15:15 Whole genome scan reveals the multigenic basis of recent tidal marsh adaptation in a sparrow
Petra Deane-Coe, Bronwyn Butcher, Russell Greenberg, Richard Harrison, Irby Lovette

15:30 Herbarium accessions for temporal studies of adaptation to climate in *Arabidopsis thaliana*.
Lua Lopez Perez, Stephanie Marciniak, Victoria DeLeo, George "PJ" Perry, Jesse Lasky

15:45 Characterizing potential adaptations of Tasmanian devil populations in the face of a transmissible cancer
Alexandra Fraik, Brendan Epstein, Mark Margres, Rodrigo Hamede, Menna Jones, Paul Hohenlohe, Joanna Kelley, Andrew Storfer

16:00 The Genetic Mechanisms of Local Adaptation
David Lowry, Billie Gould

16:15 LANDSCAPE GENOMICS OF STEELHEAD TROUT (*ONCORHYNCHUS MYKISS*) THROUGHOUT THE COLUMBIA RIVER BASIN.
Steven Micheletti, Shawn Narum

Session Sun4-Ball203 SSE Spotlight - Evolution of hybrid incompatibilities

Sunday - 15:15 - 16:30 **Room Oregon ballroom 203**

15:15 Genetic and evolutionary causes of hybrid incompatibilities in *Mimulus*
Andrea Sweigart

15:30 Causes of hybrid incompatibility polymorphism early in speciation
Erica Larson, Jeff Good

15:35 Ecological divergence and the evolution of hybrid phenotypic incompatibilities
Ken Thompson

15:40 Assortative mating and hybrid incompatibility in natural hybrid populations
Molly Schumer

15:45 Gene regulation and speciation in house mice
Michael Nachman, Katya Mack, Polly Campbell

16:00 Complex hybrid incompatibilities inferred from widespread pairwise interactions among sterility loci
Rafael Guerrero

- 16:05 Incompatibility between mutations from parallel adaptation to a common environment**
Jasmine Ono, Aleeza Gerstein, Sally Otto
- 16:10 Parental conflict, parent of origin effects, and the evolution of hybrid seed failure in *Mimulus***
Jenn Coughlan, John Willis
- 16:15 Dissecting the role of sex chromosomes in *Drosophila* speciation: genetic mapping of hybrid male sterility genes**
Colin Meiklejohn, Emily Landeen, Sarah Kingan, Anthony Geneva, Jeffrey Vedanayagam, Christina Muirhead, Kathleen Gordon, Daniel Garrigan, David Stern, Daven Presgraves

Session Sun4-Ball204 Sex / recombination 3

Sunday - 15:15 - 16:30 **Room Oregon ballroom 204**

- 15:15 Rapidly Evolving Recombination Hotspots in Threespine Stickleback**
Alice Shanfelter, Michael White, Madison Zwick, Lucas Nell
- 15:30 Hot chocolate: Recombination hotspots across the *Theobroma cacao* genome**
Enrique Jimenez Schwarzkopf, Omar Cornejo
- 15:45 An ancient UV sex chromosome system in mosses**
Sarah Carey, Adam Payton, Matthew Johnson, Stuart McDaniel
- 16:00 Sex determination in East African cichlid fishes: limited options or space for novelty?**
Astrid Boehne, Nicolas Lichilin, Athimed El Taher, Geoffrey Fucile, Walter Salzburger
- 16:15 The effects of insulin signaling on sexually dimorphic gene expression in *Drosophila***
Rita Graze, RueiYing Tzeng, Tiffany Howard, Michelle Arbeitman

Session Sun4-C120-122 Ecological genetics 3

Sunday - 15:15 - 16:30 **Room C120-122**

- 15:15 Population genomics of *Boechera stricta* reveals demographic history and signatures of selection**
Baosheng Wang, Tom Mitchell-Olds
- 15:30 Conflict between symbionts: Can plants repel parasitic nematodes while attracting mutualistic bacteria?**
Corlett Wood, Bonnie Pilkington-Lindo, Priya Vaidya, John Stinchcombe
- 15:45 Coevolution of skeletal and behavioral traits in deer mice**
Emily Hager, Hopi Hoekstra
- 16:00 Biome and migratory behaviour significantly influence vertebrate genetic diversity**
Nadia Fernandez, Janna Willoughby, Mekala Sundaram, Bhagya Wijayawardena, Maureen Lamb, Steven Kimble, Yanzhu Ji, Jennifer Antonides, Nicholas Marra, J. Andrew DeWoody
- 16:15 Taking Isolation by Distance into the Temporal Dimension**
Arthur Weis, Madeline Peters

Session Sun4-C123 Contemporary evolution 2

Sunday - 15:15 - 16:30 **Room C123**

- 15:15 Eco-evolutionary feedbacks predict the time course of rapid life-history evolution**
Joseph Travis, Corey Handelsman, Cameron Ghalambor, Ron Bassar, David Reznick
- 15:30 Contemporary evolution of monarch butterflies in their introduced range**
Micah Freedman, Hugh Dingle
- 15:45 Predation induced life history evolution**
Kelsey Lyberger
- 16:00 Detecting short-term selection in a pedigreed natural population**
Nancy Chen, Ivan Juric, Reed Bowman, John Fitzpatrick, Andrew Clark, Graham Coop
- 16:15 New methods for detecting selection on structural variants and introgressions**
Luca Ferretti

Session Sun4-C124 Genomics / gene flow

Sunday - 15:15 - 16:30

Room C124

15:15 Reconstructing the demographic history of Atlantic salmon across its distribution range using approximate Bayesian computations

Quentin Rougemont, *Louis Bernatchez*

15:30 Genomics of adaptive lateral gene transfers in plants

Luke Dunning, *Jill Olofsson, Colin Osborne, Patrik Nosil, Pascal-Antoine Christin*

15:45 Exploring the role of environmental bacteria in the spread of antibiotic resistance genes

Lauren Brooks, *Mark Sistrom*

16:00 We're one, but we're not the same: Shallow evolutionary divergence between two andean hummingbirds

Catalina Palacios, *silvana Garcia, Juan Luis Parra, Andrés Cuervo, F. Gary Stiles, John McCormack, Leonardo Campagna, Daniel Cadena*

16:15 Genomics and gene flow in the Galapagos finches

Lucinda Lawson, *John Niedzwiecki, Kenneth Petren*

Session Sun4-Ball202 SSB Symposium - Phylogenetic approaches to connecting genotypes to phenotypes 2

Sunday - 15:15 - 16:45

Room Oregon ballroom 202

15:15 Applying stochastic models for expression evolution to identify genes with adaptive expression

Rori Rohlfs, *Scott Roy, Ksenia Arzumanova, Manuel Irimia, Jamie Moon*

15:45 Distinguishing among modes of convergent evolution using population genomic data

Kristin Lee, *Graham Coop*

16:15 Evaluating the evidence for protein coding convergence in phenotypically convergent anoles

Russell Corbett-Detig

Session SSB Social Mixer

Sunday - 16:30 - 17:30

Room Oregon ballroom 201

Open to all SSB members - students, postdocs & faculty. Come chat with your SSB colleagues. Cash bar and SSB grad member free drink tickets accepted.

Session SSE Hamilton award judges meeting

Sunday - 16:30 - 17:30

Room B110

Session Sun5-Ball202 SSB Presidential address & award announcements

Sunday - 17:30 - 18:30

Room Oregon ballroom 202-204

One Tree to Rule Them All
Anne Yoder

Session SSB Members business meeting

Sunday - 18:30 - 19:30

Room A105

Open to all SSB members.

Poster Session Sun-01 Undergrad Diversity
Sunday - 18:30 - 20:30 **Room EHA-01**

- 1 Evolution of the functional determinants in epigenetics readers**
Cristobal Carrera, Jordon Rahaman, Jessica Siltberg-Liberles
- 2 No evidence for adaptation to the local mutualistic rhizobium in the legume *Medicago lupulina***
Isabela Borges, Tia Harrison, Corlett Wood, John Stinchcombe
- 3 Testing whether coevolution occurred in a microbial mutualism**
Blanca Rodriguez, Norhan Algetany, Navriti Sharma, Stephen Wallen, Amina Becic, Nathan Kaneko, Claire Dang, Helen Triplett, Willie Christianto, Colin Feng, Kristina Hillesland
- 4 Quantifying the role lipids play in primate brain adaptation.**
Mariamagdalena Ortiz
- 5 Darwin's Demons: An Evolutionary Video Game**
Samantha Heck, Terence Soule, Landon Wright, Spencer Gomez, Barrie Robison
- 6 Return of the African Wild Dog *Lycaon pictus* to the Serengeti**
Anastasia Wlaschin-Wiest
- 7 Sex-Specific Dispersal of Urban Brown Rats (*Rattus norvegicus*)**
Destiny Mims, Emily Puckett, Matthew Combs, Jason Munshi-South
- 8 Variation in dominance traits and body condition in urban *Anolis cristatellus***
Derek Briggs
- 9 Effects of Viral Mutations in the Evolution of Thermotolerance**
Erin McClure, Hannah Busch, Sonia Singhal, Benjamin Kerr
- 10 More than meets the eye? Protective functions of body color pigments in Hawaiian damselflies**
Edward Hsieh, Jongbeom Park, Idelle Cooper, Jonathan Brown
- 11 Assessment of prevalence and phylogenetic diversity of avian haemosporidians from Italy**
Taylor Verrett, Gary Voelker, Johanna Harvey
- 12 The distribution and diversity of symbiotic microbial communities within a widespread Neotropical ant host (*Cephalotes atratus*)**
Destiny Reeves
- 13 Unraveling the diversification of Equidae at different taxonomic levels and under different preservation models**
Rodolfo Graciotti, Mathias Pires, Tiago Quental
- 14 The Synonymous and nonsynonymous substitution ratios (dN/dS) associated with habitat transitions in the Gastropoda**
Alyssa Lau, Jesse Czekanski-Moir, Teresa Rose Osborne, David Bullis, Rebecca Rundell
- 15 Retention of the Symbiosis Island in a *Mesorhizobium* population**
Angeliqua Montoya, Stephanie Porter, Emily E., Amanda Khosravifar
- 16 Extracellular proteases: a potential *Bacillus subtilis* defense mechanism against bacteriophage infection**
Madison Strine, Jenna DeCurzio, Veronique Delesalle, Greg Krukonis
- 17 The genomic health of ancient hominins**
Taylor Cooper, Joseph Lachance
- 18 Morphological stasis despite deep genetic divergences in pseudoscorpions**
Emmanuelle Callaghan, Troy Olsen, Susan Masta
- 19 Understanding the origins and diversity of wild and inbred brown rats (*Rattus norvegicus*) using nuclear and mitochondrial genome analysis**
Olivia Micci-Smith, Emily Puckett, Jason Munshi-South
- 20 Isle Royale Populations of *Primula mistassinica* are Isolated by Geography, Genetics, and Pollinators**
Jonathan MacDougall, Luana Maroja, Joan Edwards
- 21 Approaches and troubleshooting using custom TaqMan in a non-model organism, *Mimulus guttatus***
Toshiro Newsum, Vanessa Koelling
- 22a Rapid, high-throughput quantification of phenotypes via crowdsourcing**
Emmanuel D'Agostino, Caitlin Lewarch, Hopi Hoekstra
- 22b Phenotypic consequences of sexual conflict in the context of reproductive mode polymorphism**
Emma Greimann, Maurine Neiman, Joel Sharbrough

Topic Sun-02 Adaptation

- 23 **Adaptive response during historic drought in a Sierran monkeyflower: a resurrection experiment**
Jason Sexton, Erin Dickman, Steven Franks
- 24 **Acute and chronic artificial selection on heat tolerance result in different thermal performance curves in *Drosophila subobscura*.**
Andres Mesas, Angélica Jaramillo, Luis Castaneda
- 25 **Convergence in Gecko Toe Pad Shape**
Travis Hagey
- 26 **Heat tolerance responses to different warming scenarios in the invasive fly, *Drosophila subobscura***
Luis Castaneda, Andres Mesas, Angélica Jaramillo

Topic Sun-03 Bioinformatics

- 27 **Uncovering Constraints on the Evolution of Genome Architecture: A Computational Analysis of Models of Gene Rearrangement in Metazoan Mitochondrial DNA**
Abigail Bisesi, Angela Roles
- 28 **Development of Software for Genome Sequence Analysis**
David Farr
- 29 **An Analysis of the Benchmark Test Izbench for Open-Source Compressors**
Abigail Howell
- 30 **Degeneration of a nuclear rRNA group I intron in *Teloschistes chrysophthalmus***
Dawn Simon, Audrey Codina, Dawson Johnson, Derek Kleier, Stefanie Hartmann, Jolanta Miadlikowska, Ester Gaya, François Lutzoni

Topic Sun-04 Coevolution

- 31 **Fitness benefits of paternal mitochondrial transmission in hybrids**
Joseph Ross, Shadi Adineh
- 32 **Are complementary male and female genital morphologies genetically coupled? Exploring the genetic architecture of sexually coevolved reproductive structures in a damselfly **withdrawn****
2017-06-19 17:01:01.0
Alexandra Barnard, John Masly
- 33 **Community-scale analysis of lizard gut microbiomes**
Iris Holmes
- 34 **Novel compounds extracted from endophytes isolated from *Juniperus osteosperma***
Schylar Ellsworth, Merrill Halling

Topic Sun-05 Computational biology

- 35 **An integrated mathematical/computational approach to define the impact of TGF-Beta inhibition on the evolution of bone metastatic prostate cancer**
David Basanta, Leah Cook, Arturo Araujo, Conor Lynch
- 36 **Stop and go, fast and slow: can the Covarion model of rate variation improve our understanding of phylogenies and molecular evolution?**
Ashley Schoonmaker, Jeremy Brown, Lyndon Coghill, Lauren Rodriguez
- 37 **Not all **those who wander are lost: A simulation modelling framework for exploring the interplay between** dispersal evolution and environmental adaptation in plants**
Courtney Van Den Elzen, Nancy Emery, Samuel Flaxman, Brett Melbourne

Topic Sun-06 Diversification

- 38 Reticulate evolution and species delimitation in Asian *Spiranthes* (Orchidaceae)
Siddharthan Surveswaran, Mei Sun
- 39 Climate-driven diversification revealed by calibrating avian time-trees
Santiago Claramunt, Emmanuel Paradis, Joel Cracraft
- 40 Patterns in global diversification of the hyperdiverse plant lineage Psychotrieae (Rubiaceae)
withdrawn 2017-06-16 14:41:25.0
John Paul, Elaine Zhang, Nila Le
- 41 Life history is associated with accelerated rates of climatic niche evolution in salamanders
Samuel Weaver, Ken Kozak
- 42 Elaborating the evolution and phylogenetic distribution of fungal ecologies and nutritional modes
Matthew Nelsen, C. Kevin Boyce

Topic Sun-07 Ecological genetics

- 43 Horizontal gene transfer as a mechanism for convergent evolution in divergent arthropods
Jennifer Kovacs, Jack Werren
- 44 Sharp adaptive divergence of Hawaiian picture-wing *Drosophila* across an elevation gradient evidenced by whole transcriptome profiling and measures of physiology and behavior
M. Renee Bellinger, Jonathan Eldon, Don Price
- 45 Evolutionary response of Carbonic Anhydrase (isoforms 1, 2, and 5) in *Daphnia pulicaria* populations across a pH gradient in three North American lakes
Billy Culver, Francisco Acosta
- 46 Subsampling Loci From a Large RAD Dataset to Estimate Effective Population Size
Joseph Braasch, Brittany Barker, Katrina Dlugosch

Topic Sun-08 Education

- 47 Changes in Acceptance of Evolution and Associated Factors During a Year of Introductory Biology Instruction
Ryan Dunk, Jason Wiles
- 48 Teaching Evolution & Biology to a Diversity of Learners and Viewpoints: Accessibility, Inclusion, and Belief
Cheryl Pinzone
- 49 Cretaceous Crusaders: Educational gaming as a tool to teach evolution
Chandra Jack, Thomas Haynes, Mia Swanton, Maren Friesen, Barrie Robison, Terence Soule
- 50 Signs along the learner's way in evolutionary biology
Víctor Rogelio Hernández Marroquín, Rodolfo Salas Lizana, Rosaura Ruiz Gutiérrez, Javier Fregoso Urrutia, Ana Escalante García, Gloria Montaña Aguilar, Eréndira Álvarez Pérez
- 51 A Course-based Undergraduate Research Experience (CURE) to Explore NextGen Sequences of *Rhagoletis* Mitogenomes, Personal Genotypes and Core Concepts in Evolution
James Smith, Patrick Edger
- 52 QUBES: Building a community to promote undergraduate quantitative biology education
Gabriela Hamerlinck
- 53 Evaluating the use of integrative Evo-Ed cases for evolution education
Alexa Warwick, Peter White, Louise Mead, James Smith

Topic Sun-09 Evolutionary ecology

- 54 **Coexistence mechanisms as promoters of divergence**
Kelly Thomasson
- 55 **Phenotypic, Genetic, and Epigenetic Population Structure of Olympia Oysters in Puget Sound, WA**
Katherine Silliman, Steven Roberts, Tynan Bower
- 56 **Variation of Leaf Hydraulic Conductance in Genus Rhododendron**
Sharon Danielson, Lawren Sack, Juliana Medeiros
- 57 **The Role of Urbanization & Community Assembly on the Microbial Defense Mechanisms of *Plethodon cinereus***
Elle Barnes
- 58 **Rapid assessments of genetic viability predict long-term population trends in wood frogs**
Jonathan Richardson, David Skelly, Robin Waples
- 59 **Phenology of *Drosophila* species across a temperate growing season**
Jennifer Gleason, Paula Roy, Elizabeth Everman, Terry Gleason, Theodore Morgan

Topic Sun-10 Evolutionary theory

- 60 **Role of Sustainability in Evolution of Species**
PANKAJ VALLABH
- 61 **Environmental Robustness in Populations with Differential Adaptive Histories**
Ao Wang
- 62 **Aneuploidy and Sex Chromosome Evolution**
Heath Blackmon
- 63 **Chaos and the predictability of evolution in a changing environment**
Artur Rego Costa, Florence Debarre, Luis-Miguel Chevin
- 64 **Insights from Fisher's geometric model on the likelihood of speciation under different environmental scenarios**
Ryo Yamaguchi, Sally Otto

Topic Sun-11 Experimental evolution

- 65 **Experimental evolution of sexual dimorphism in the nematode *C. remanei*.**
Maria Modanu
- 66 **Effects of experimental drought on rapidly-flowering *Brassica rapa***
Stephen Johnson, Steven Franks
- 67 **Adaptation to spatially structured environments results in longer generations and lower infectivity in T7 bacteriophage**
Richard Heineman
- 68 **Autocatalytic Self-assembly of a Catalytic RNA from Many Small Fragments**
Niles Lehman, Tharuka Jayathilaka

Topic Sun-12 Expression studies/transcriptomics

- 69 **Comparative transcriptomics of *Lithocarpus* with and without leaf epicuticular wax**
Chih-Wei Huang, Bing-Hong Huang, Pei-Chun Liao
- 70 **Evolution of gene expression following whole genome duplication**
Gareth Gillard, Rori Rohlf, Torgeir R Hvidsten, Simen Sandve
- 71 **A global co-expression network approach for connecting genes to specialized metabolic pathways in plants**
Jennifer Wisecaver
- 72 **Comparing gene repertoires in annual and perennial soybean (*Glycine*)**
Michael Song, Jeremy Coate, Jeff Doyle
- 73 **Diet and life-stage remodeling of lipid metabolism regulation in the duplicated Atlantic salmon genome**
Thomas Harvey, Gareth Gillard, Simen Sandve, Torgeir R Hvidsten

- 74 Transcriptional Activity of a Sex-specific B Chromosome in African Cichlids**
Frances "Betsy" Clark, Matthew Conte, Thomas Kocher
- 75 Evolutionary rates and expression patterns in allopolyploid brown algae**
Filipe Sousa, Joao Neiva, Linda Anderson, Peter Raimondi, Nelson Martins, Ester Serrao, Gareth Pearson

Topic Sun-13 Gene flow

- 76 Microgeographic analysis of gene flow across an elevational gradient in northeastern red spruce forests**
Brittany Verrico, Stephen Keller
- 77 On a puzzling relationship between a bacterium and its virus**
Olga Zhaxybayeva, Shannon Soucy, Migun Shakya, Xin Chen
- 78 Testing for adaptive introgression between *Mus musculus domesticus* and *Mus spretus***
Sarah Banker, Michael Nachman
- 79 Landscape genetics of fine-scale seed dispersal in *Lasthenia californica***
Avery Pheil, Mitch Cruzan, Pamela Thompson
- 80 Genomic regions with the genes related to species differences between two Sulawesi macaque species**
Yohey Teraï
- 81 Inference of gene flow across spatial landscapes**
Erik Lundgren, Peter Ralph
- 82 The relative frequency of local adaptation to balanced polymorphism inferred from the Sunflower transcriptome.**
Mark Welch, Michael Kartje
- 83 Effects of novel P transposable element invasion in *Drosophila yakuba***
Antonio Serrato, Stephania Zhang, Daniel Matute
- 84 Inferring genetic connectivity in real populations, exemplified by coastal and oceanic Atlantic cod**
Ingrid Spies

Topic Sun-14 Genomics

- 85 Investigating gene loss in the reptilian lineage**
Erin Gilbertson, Heath Blackmon, Suzanne McGaugh
- 86 Fungal lifestyle reflected in serine protease repertoire**
Anna Muszewska, Marta Stepniewska-Dziubinska, Kamil Steczkiewicz, Julia Pawlowska, Agata Dziedzic, Krzysztof Ginalski
- 87 Exploring the oral microbiome of ancient humans**
Carlie Harding
- 88 Genomic Architecture of Inbreeding Depression in *C. remanei***
Paula Adams, Janna Fierst

Topic Sun-15 Geographic variation

- 89 Populations that vary in the ability to self-fertilize display similar levels of reproductive assurance under pollen limitation**
Lia Leibman, Anne Rowe, Matthew Koski, Laura Galloway
- 90 The Geography of Morphology in the Big Water Crayfish Species Complex**
Melyssa Minto, Bronwyn Williams
- 91 Phenotypic selection in Ponderosa Pine (*Pinus ponderosa*) under warm-dry climate.**
Marcus Warwell
- 92 Demographic History of the *Drosophila subquinaria* Complex**
Paul Ginsberg, Devon Humphreys, Brooke White, Kelly Dyer

Topic Sun-16 Host-parasite

- 93 **Evolutionary History of Howler Monkeys and their Pinworms**
Xorla Ocloo, Liliana Cortes Ortiz
- 94 **Evolution of antigenic diversity in the malaria parasite *P. falciparum*** **withdrawn 2017-06-07 15:13:10.0**
Mary Rorick, Yael Artzy-Randrup, Shazia Ruybal-Pesántez, Kathryn Tiedje, Thomas Rask, Abraham Oduro, Anita Ghansah, Kwadwo Koram, Karen Day, Mercedes Pascual
- 95 **Evolution of natural enemies of oak gall-forming wasps**
Anna Ward, Andrew Forbes
- 96 **Helminth infections in male garter snakes (*Thamnophis* spp.) and their implications for host reproduction**
Emily Uhrig, Christopher Friesen, Sean Spagnoli, Michael Kent, Robert Mason
- 97 **Host population dynamics lead to diploid male production and decline of a natural hyperparasitoid population**
Abhilash Nair, Etsuko Nonaka, Saskya van Nouhuys

Topic Sun-17 Hybridization

- 98 **Do mitochondrial-nuclear interactions influence nuclear allele frequencies as a result of hybrid breakdown? A test across candidate pathways in the copepod *Tigriopus californicus*.**
Daniel Schneck, Felipe Barreto
- 99 **A comparative approach to studying the effects of climate change and landcover change on hybrid zones in a suture zone**
Shawn Billerman, Irby Lovette
- 100 **Heterogeneous patterns of genetic differentiation across the genomes of hybridizing woodrats (*Neotoma*)**
Josh Jahner, Marjorie Matocq, Thomas Parchman
- 101 **deNovo assembly and annotation of *Ambystoma laterale* and *Ambystoma jeffersonianum* transcriptomes: the first steps toward investigating polyploid salamander expression**
Sheri Sanders, Michael Pfrender

Topic Sun-18 Invasive/invasion

- 102 **Rapid Adaptation to Cold in the Invasive Cane Toad *Rhinella marina***
Cinnamon Mittan
- 103 **Multiple introductions of the dengue vector, *Aedes aegypti*, into California**
Evlyn Pless, Andrea Gloria-Soria, Benjamin Evans, Vicki Kramer, Jeffrey Powell
- 104 **Does genome size variation have ecological consequences in an invasive plant?**
Alice Cang, Katrina Dlugosch
- 105 **Poultry in paradise: comparing independently feral *Gallus gallus* from Bermuda and Kauai**
Eben Gering, Dominic Wright, Thomas Getty
- 106 **Precise adaptation without loss of adaptive potential: An example from the avian beak evolution**
Georgy Semenov, Robert Hollingsworth, Amin Abtahi, Alexander Badyaev

Topic Sun-19 Life history

- 107 **Minding the gap: evolutionary transitions between ecto- and endoparasitism in the Chalcid wasps and ramifications for host specificity**
Rebecca A Boulton, George Heimpel
- 108 **Does the Cost of Reproduction Increase with Age? A Test Using Burying Beetles**
Ethan Damron, Dane Jo

- 109 **Inefficient energy metabolism disrupts nutrient sensing in *Drosophila***
Justin Buchanan, Kristi Montooth
- 110 **The equilibrium between aging and rejuvenation in bacterial lineages**
Audrey Menegaz Proenca
- 111 **Life in the mud: Amphipod growth and reproduction under chronic arsenate stress**
Ioanna Visviki, Michael Judge
- 112 **The evolution of diapause, developmental arrest during embryology, in the Killifish genus *Rivulus***
Andrew Furness, David Reznick, Andrey Tatarenkov, John Avise
- 113 **Estimating performance curves in fluctuating environments**
Frank Shaw, Joel Kingsolver
- 114 **Kinship interacts with density and nutrient availability to influence fitness components in the American toad (*Bufo americanus*)**
Sara Garnett, Thomast Getty

Topic Sun-20 Macroevolution

- 115 **Doing it with a spermatostyle: preliminary insights into the diversity and evolution of sperm in ground beetles (family Carabidae)**
Antonio Gomez, David Maddison
- 116 **Massive increase in visual range preceded the origin of terrestrial vertebrates**
Malcolm MacIver, Lars Schmitz, Ugurcan Mugan, Todd Murphey, Curtis Mobley
- 117 **Biogeography modeling and plumage color pattern evolution in birds**
Chad Eliason, Michael Andersen, Shannon Hackett
- 118 **Evolution of Body Size and Cranial Modularity in Caviomorph Rodents**
Genevieve Perdue, Samantha Hopkins, Samantha Price

Topic Sun-21 Molecular evolution

- 119 **Ancient and recent duplications support functional diversity of *Daphnia* opsins**
Christopher Brandon, Matthew Greenwold, Jeff Dudycha
- 120 **Molecular evolution of the PEVK region of titin, a giant sarcomeric protein**
Kathleen Muenzen, Findley Finseth, Jenna Monroy
- 121 **Tempo and mode of Peto's Paradox: a molecular evolutionary approach to understanding cancer prevention**
Marc Tollis, Aika Schneider-Utaka, Carlo Maley
- 122 **Evolution of secretin-containing secretion systems**
Davi Ortega, Grant Jensen

Topic Sun-22 Phylogenomics

- 123 **Understanding the effects of recombination on phylogenetic analysis**
Michael Conry, Alan Lemmon
- 124 **Phylogenomic appraisal of species limits and hybridization in the endemic Lake Baikal sculpins (genus *Limnocottus*)** **withdrawn 2017-06-10 09:29:57.0**
Andres Aguilar, Michael Sandel, Frank Gutierrez, David Neely, Sergei Kirilchik
- 125 **Phylogenomics and Macroevolutionary Dynamics of Diplodactyloid Geckos**
Phillip Skipwith, Paul Oliver
- 126 **Mitochondrial transfer RNA genes became drastically reduced early in spider evolution**
Deborah Catanese, Susan Masta
- 127 **Evolution of vernalization response in the PACMAD clade of the grass family (Poaceae)**
Martin Paliocha, Marian Schubert, Jill Preston, Siri Fjelheim
- 128 **Phylogenomics And Proteomics Of Longamoebia: Flat Amoebae Without Center**
Yonas Tekle

- 129 Phylogenomics and the complexity of millipede chemical warfare through time**
Juanita Rodriguez, Tappey Jones, Paul Marek, Petra Sierwald, William Shear, Kevin Kocot, Jason Bond
- 130 Biologically inspired models of rate variation for ultraconserved elements**
Jeremy Brown, David Morris
- 131 Widespread Site-to-Site Synonymous Substitution Rate Variation in the Metazoans**
Sarah Wisotsky, Spencer Muse, Rachel Marceau West
- 132 Dating the Diversification of the Paper Wasp (Genus Polistes) Under the Fossilized Birth-Death Process**
Kevin Quinteros, Amy Toth, Tracy Heath
- 133 Genomic insights into the evolution of mud turtles (Kinosternidae)**
Brendan Reid

Topic Sun-23 Phylogeography

- 134 Landscape genomics of *Pinus tabuliformis* reveals deep divergence beyond the LGM**
Hanhan Xia, Baosheng Wang, Xiao-Ru Wang, Jian-Feng Mao
- 135 Foundations for Defining Species Boundaries in a Four Species Contact Zone (Hylidae: *Pseudacris*)**
Mysia Dye, Emily Lemmon
- 136 Genetic and genomic evidence suggest incipient speciation with phenotypic divergence across an environmental barrier in a forest passerine (*Pipraeidea melanonota*)**
Pablo D. Lavinia, Ana Barreira, Leonardo Campagna, Pablo Tubaro, Dario Lijtmaer
- 137 Phylogeography of the circumtropical shrimp, *Stenopus hispidus* (Crustacea: Decapoda), reveals divergent Atlantic and Pacific lineages**
Alealani Dudoit, Richard Coleman, Matthew Iacchei, Michelle Gaither, William Browne, Brian Bowen, Rob J. Toonen
- 138 On the demography of colilargo rodents in the Central Andes**
Natali Hurtado
- 139 Climate events and the lineages of the Neotropical spider *Nephila clavipes***
Vera Solferini, Luiz Bartoletti
- 140 Genetic assessment reveals intraspecific differentiation in the Southern lapwing (*Vanellus chilensis*) in South America**
Belen Bukowski, Pablo Tubaro, Dario Lijtmaer

Topic Sun-24 Plant reproductive biology

- 141 Soil traits impacts on female frequency of a gynodioecious prairie plant, *Lobelia spicata*.**
Diane Byers, Tyler Rippel, Robert Philips
- 142 Evolution of energy supply from haploid gametophytes to diploid sporophytes and genomic conflict in plants**
Kazuhiro Bessho, Hisashi Ohtsuki, Akira Sasaki
- 143 Analyzing Potential for Gametophytic Selection & Selective Ovule Abortion in *Mimulus guttatus***
Elizabeth Pérez, Mitch Cruzan, Jaime Schwach
- 144 When to Move on: Generalist Pollinators Exhibit a Temporal Decrease in Floral Fidelity Towards a Common Prairie Perennial, *Echinacea angustifolia***
Leah Prescott, Jennifer Ison
- 145 The fitness effects of unusually early flowering time in *Leavenworthia stylosa* following a mild winter.**
Caitlin Banaszak, Chris Herlihy

Topic Sun-25 Population genetics: inference of selection

- 146 The genetics of environmental adaptation: house mice in the Americas**
Megan Phifer-Rixey, Felipe Martins, Ke Bi, Michael Nachman

- 147 **Seasonally fluctuating predation pressures and the maintenance of genetic diversity in *Daphnia***
Karen Barnard-Kubow, Dörthe Becker, Alan Bergland
- 148 **Detecting adaptive genetic variation among cryptic species of the microinvertebrate *Euchlanis dilatata*, using RAD-Seq**
Azar Kordbacheh, Elizabeth J. Walsh, Jonathon Mohl
- 149 **Population genomic signatures of selection associated with freshwater invasion by the saline copepod *Eurytemora affinis***
Tiago da Silva Ribeiro, Martin Bontrager, Carol Eunmi Lee
- 150 **Modeling the Evolution of Alternative Splicing**
Ksenia Arzumanova, Jamie Moon, Scott Roy, Manuel Irimia, Rori Rohlf

Topic Sun-26 Population genetics: molecular ecology

- 151 **On the Impact of Adhesion in Geckos: Species Limits and Phylogeography of the South American Dwarf Gecko, *Gonatodes humeralis***
Brendan Pinto, Guarino Colli, Timothy Higham, Anthony Russell, Laurie Vitt, Tony Gamble
- 152 **Population genomics of stream salamanders in an urban versus suburban watershed**
Nicole Fusco
- 153 **Assessing aquatic diversity through space and time using next-gen sequencing**
Sergio Samaniego, Elizabeth J. Walsh
- 154 **Genetic monitoring of a sockeye salmon repatriation to improve interactive fisheries management**
Lucas Elliott, Michael Russello
- 155 **sppIDer: Species Identification and Hybrid Detection with Short-Read Data**
Quinn Langdon, David Peris, Chris Hittinger

Topic Sun-27 Population genetics: theory and methods

- 156 **Forward-time simulation in Python using fwdpp**
Kevin Thornton, Jaleal Sanjak
- 157 **Using genealogical properties to identify selective sweeps in the human thousand genomes**
Martina Rauscher, Johannes Wirtz, Thomas Wiehe
- 158 **Investigating Western rattlesnake population genetics and demographics to inform management and conservation**
Danielle Schmidt, Purnima Govindarajulu, Karl Larsen, Michael Russello
- 159 **Can we predict geographic range expansions?**
Carly Prior, Jeremiah Busch
- 160 **Chromosome Drive and the Survival Probability of New Inversions**
Spencer Koury

Topic Sun-28 Sexual selection

- 161 **The genetic basis for song-preference coevolution in the Hawaiian cricket *Laupala***
Mingzi Xu, Kerry Shaw
- 162 **Ornamental Plumage in the Non-breeding Season is Associated with Behavioral Change in a Tropical Passerine**
Trey Hendrix, Sarah Toner, Samantha Lantz, Joseph Welklin, Facundo Fernandez-Duque, John P Swaddle, Michael Webster, Jordan Karubian

Topic Sun-29 Speciation

- 163 The geographic context of speciation by sexual selection or Let's talk about speciation in crickets**
Thomas Blankers, Kerry Shaw
- 164 Parallel ecotypic divergence on its way to new species? A case study of autotetraploid *Cochlearia officinalis* from Northern Norway**
Marie Kristine Brandrud, Ovidiu Paun, Maria Lorenzo, Inger Nordal, Anne Brysting
- 165 Identifying genome-scale structural differences between ecologically divergent populations of cactophilic flies**
Coline Jaworski, Carson Allan, Luciano Matzkin
- 166 Has climatic oscillation influenced the *P. axillaris* evolutionary history?**
Giovanna Giudicelli, Caroline Turchetto, Gustavo Adolfo Silva-Arias, Loreta Brandão de Freitas
- 167 Defining a species: Genomic differentiation between *Rhagoletis mendax* and the undescribed sparkleberry fly**
Katherine Inskeep, Meredith Doellman, Scott Egan, Peter Meyers, Thomas Powell, Stewart Berlocher, James Smith, Jeffrey Feder

Topic Sun-30 Last minute additions

- 168 Weed Adaptation: Genetic Differentiation vs. Phenotypic Plasticity**
Ava Garrison, Jeffrey Conner
- 169 Predator cues decrease development time and reduce sexual size dimorphism in the mosquito, *Aedes aegypti***
Brandon Pope, Robert Cox, Aaron Reedy
- 170 Playing it safe? Behavioral responses of a mosquito larvae encountering a fish predator**
Avehi Singh, Karthikeyan Chandrasegaran, Moumita Laha, Suhel Quader

Session 7th annual Evolution Film Festival/Video contest Sunday - 19:30 - 21:30 Room A107-109

Cost: free, no registration required.

One of the highlight of the conference that should not be missed! Join us for an evening of terrifically informative and entertaining videos, while enjoying popcorn and beer/wine/soda (courtesy of HHMI). During the first hour, event co-sponsor HHMI Biointeractive will screen some of the wonderful evolution videos they offer, and you will have a chance to ask questions of scientists and filmmakers involved in producing their videos. During the second hour, we will screen the top entrants to this year's contest. We asked the science and science education communities to tell a story about evolution in 3 min. or less, using animation, art, music, dance, etc. We have some terrific entries and you will be able to see them all and vote on your favorite. (To learn more and see past years' entries, go to evolutionfilmfestival.org and follow #evofilmfest on Twitter.)

Sponsored by the Duke Initiative for Science & Society, the Howard Hughes Medical Institute (HHMI), the Society for the Study of Evolution, and the BEACON Center for the Study of Evolution in Action.

Session SSE/BEACON Undergraduate Diversity Program: Undergraduate breakfast social Monday - 8:00 - 9:30 Room Oregon ballroom 201

Open to undergraduates and their advisers and mentors. Cost: free, but attendees had to pre-register.
Organizer: [Alexa Warwick](#)

Come to meet and mingle with other undergrads, their advisors/mentors, and alumni of the Undergrad Diversity Program. This social is a great opportunity to discuss your research, career plans, etc. and expand your network in an informal setting while enjoying free continental breakfast!

Session Mon1-A105 Phylogenomics 1

Monday - 8:30 - 9:45

Room A105

8:30 Hidden diversity in the Vangas of Madagascar

Jane Younger, Lynika Strozier, Matt Bonfitto, Chris Kyriazis, Arpad Nyari, J Dylan Maddox, Neha Siddiqui, Steve Goodman, Marie-Jeanne Raherilalao, Sushma Reddy

8:45 In situ diversification is an important driver of parachuting frog diversification on the Sunda Shelf

Kyle O'Connell, Eric Smith, Utpal Smart, Nia Kurniawan, Matthew Fujita

9:00 A comprehensive species-level phylogeny of suboscine birds using genomic markers

Michael Harvey, Gustavo Bravo, Graham Derryberry, Santiago Claramunt, Terry Chesser, Andrés Cuervo, Jessica Shearer, Robert Moyle, Frederick Sheldon, Joel Cracraft, Brian Smith, Luís Fábio Silveira, Robb Brumfield, Elizabeth Derryberry, Daniel Rabosky

9:15 The challenge of testing introgression when introgression obscures phylogeny: The case of the South American siskins.

Elizabeth Beckman, Christopher Witt

9:30 Evolution of the genes and genomes of 76 arthropod species

Gregg Thomas, Matthew Hahn, Stephen Richards

Session Mon1-A106 Development

Monday - 8:30 - 9:45

Room A106

8:30 Relationship between ontogenetic trajectory and evolutionary variability in avian limb skeleton: implications for evolutionary diversification in birds

Junya Watanabe

8:45 The role of a complex life cycle in facilitating morphological divergence

Emma Sherratt, Marta Vidal-García, Marion Anstis, J. Scott Keogh

9:00 Egg teeth of squamate reptiles - embryonic adaptation to hatching

Mateusz Hermyt, Paweł Kaczmarek, Katarzyna Janiszewska, Hubert Okła, Weronika Rupik

9:15 Embryology of the vomeronasal organ and associated structures in the context of squamate evolution: a 3D perspective

Paweł Kaczmarek, Katarzyna Janiszewska, Mateusz Hermyt, Weronika Rupik

9:30 When are maternal effects maternal strategies? Environmental mismatch in a passerine bird

Ahva Potticary, Renee Duckworth

Session Mon1-A107-109 Macroevolution / diversification

Monday - 8:30 - 9:45

Room A107-109

8:30 Diversification in time and space: disentangling the radiation of New World pitvipers

Laura Alencar, Irina Birskis, Marcio Martins, Tiago Quental

8:45 Do macrophylogenies yield stable macroevolutionary inferences? An example from squamate reptiles

Pascal Title, Daniel Rabosky

9:00 The Nearshore Cradle and Museum of Early Vertebrate Diversification

Lauren Sallan, Matt Friedman, Robert Sansom, Ivan Sansom

9:15 Rates of speciation and extinction are highly correlated in mammals

Tiago Quental, Mathias Pires

9:30 Dimensions of morphological diversification: an ecomorphological perspective from carnivorans.

Graham Slater, Anthony Friscia

Session Mon1-B111-112 Life history / plasticity

Monday - 8:30 - 9:45

Room B111-112

8:30 Genetic Basis of Variation in Life Cycle

Gabriel Golczer, Erastus Thuo, Genevieve Kozak, Steve Bogdanowicz, Erik Dopman

- 8:45 Plasticity is a locally adapted trait and has consequences for responses to novel environments**
Tom Cameron, Matthew Bond, Stuart Piertney, Tim Benton
- 9:00 Multiple paths to success: fitness consequences of tiger salamander morphs with different life history strategies**
Alycia Lackey, Howard Whiteman, Michael Moore
- 9:15 Generalized adaptive responses to novel mutagens: costs of up-regulated antioxidant pathways?**
Emilie Snell-Rood, Reilly Hostager, Nathaniel Fremling, Megan Kobiela
- 9:30 Temperature **tipping points**: plasticity, adaptation, and trade-offs shape range-wide climate tolerances of a long-lived alpine plant**
Megan Peterson, Daniel Doak, William Morris

Session Mon1-B113 Genetics: behavior & disease

Monday - 8:30 - 9:45 **Room B113**

- 8:30 Examining the genetic structure and physiological mechanisms underlying an evolutionarily novel, complex biochemical trait, mycotoxin tolerance, in a *Drosophila tripunctata* population**
Clare Scott Chialvo, Olivia Sorrell, Logan Griffin, Laura Reed
- 8:45 Genes underlying parasitoid-induced behavior in the fruit fly**
Michael Martin, Todd Schlenke
- 9:00 Neural basis of female receptivity in *Drosophila melanogaster* and *D. simulans***
Pria Mahabir, Amanda Moehring
- 9:15 The genetic basis for cuticular hydrocarbon biosynthesis in *Drosophila***
Heather Ward, Amanda Moehring
- 9:30 Mapping resistance to naturally coevolving viruses in the genetic model organism *Drosophila melanogaster***
Rodrigo Cogni, Francis Jiggins

Session Mon1-B114-115 Population genetics: inference of selection 2

Monday - 8:30 - 9:45 **Room B114-115**

- 8:30 **Footprints of Adaptive Introgression****
Joachim Hermisson, Derek Setter, Michael DeGiorgio, Rasmus Nielsen
- 8:45 The Selective Maintenance of Allelic Variation Under Generalized Dominance**
Hamish Spencer, Cuilodair Mitchell
- 9:00 Determining the factors driving selective effects of new nonsynonymous mutations across multiple species**
Kirk Lohmueller, Bernard Kim, Clare Marsden, Ying Zhen, Christian Huber
- 9:15 The Temporal Signature of Linked Selection**
Vince Buffalo
- 9:30 Is Background Selection a Confounding Effect to Local Selection?**
Remi Matthey-Doret, Michael Whitlock

Session Mon1-B116 Speciation / gene flow

Monday - 8:30 - 9:45 **Room B116**

- 8:30 Characterizing the evolutionary dynamics of an hybrid sterility allele in *Mimulus guttatus***
Rachel Kerwin, Andrea Sweigart
- 8:45 Reproductive isolation and gene flow vary among contact zones between incipient species**
Catherine Debban, Laura Galloway
- 9:00 Contrasting genetic profiles of a contact zone in California voles.**
Dana Lin, Ke Bi, Christopher Conroy, Rauri Bowie
- 9:15 Population transcriptomic analysis of ecologically differentiated, partially reproductively isolated *Anolis* lizards**
Anthony Geneva, Fatih Sarigol

9:30 Integration of the genomic and geographic landscapes reveals the impact of an ecological barrier to gene flow in the bush monkeyflower (*Mimulus*)
Sean Stankowski, Madeline Chase, Matt Streisfeld

Session Mon1-B117-119 Evolutionary ecology 1
Monday - 8:30 - 9:45 **Room B117-119**

8:30 Computational Food Web Models
Gavin Abernethy

8:45 Testing character displacement as a potential driver in the evolution of root traits
Sara Colom, Regina Baucom

9:00 Evolution of chemical signals in Neotropical *Piper* within the context of ecological interactions with bats
Zofia Kaliszewska, Sharlene Santana, Jeff Riffell

9:15 Ecosystem consequences of rapid evolution in a coastal sedge
Jason McLachlan, Michael Blum, Rachel Gentie

9:30 The effects of consumer satiation and interference on the strength of disruptive selection.
Kyle Coblentz, Mark Novak

Session Mon1-Ball202 SSB Spotlight - Uncertainty in the face of strong support: new approaches and examples in the identification of signal, noise, and conflict in phylogenetic datasets

Monday - 8:30 - 9:45 **Room Oregon ballroom 202**

8:30 Detecting causes of conflict in phylogenomic datasets
Robert Thomson, Lyndon Coghill, Jeremy Brown

8:45 Mito-nuclear discordance: distinguishing between contemporary hybridization, ILS and introgression
Alana Alexander, Yong-Chao Su, Carl Oliveros, Karen Olson, Scott Travers, Rafe Brown

8:50 Gene tree conflict in neobatrachian frogs.
Paul Hime

8:55 Understanding ancestry when canned programs give strange results
Suzanne McGaugh

9:00 Beyond supermatrix resolution: Deep metazoan phylogeny from gene content
Walker Pett

9:15 The effect of heterotachy on phylogenomics.
Lyndon Coghill, Ashley Schoonmaker, Lauren Rodriguez, Robert Thomson, Jeremy Brown

9:20 Missing data in RADseq phylogenetics reduces branch length accuracy and increases computational cost
Devon Humphreys, E. Anne Chambers, Katie Lyons

9:25 Phylogenomics of Neotropical knifefishes (*Gymnotiformes*): reconciling phylogenetic signal and electric signals
Fernando Alda

9:30 Testing the limits of phylogenomics for resolving the bird tree of life
Sushma Reddy, Rebecca Kimball, Ed Braun

Session Mon1-Ball203 SSE Symposium - Evolution in urban ecosystems 1
Monday - 8:30 - 9:45 **Room Oregon ballroom 203**

8:30 Urban Evolutionary Biology: novel selection pressures and a new subdiscipline for the Anthropocene
Jason Munshi-South

- 8:45 Pigeon Sex, Stress, and Reproduction: Developing Genomic Tools to Study Urban Impact**
Suzanne Austin, Matthew MacManes, Andrew Lang, Rebecca Calisi
- 9:00 The anthropogenically driven evolution of a globally reemerging ectoparasite**
Warren Booth, Christopher Lawrence, Ondrej Balvin, Edward Vargo, Coby Schal
- 9:15 Phylogeography and demography of the global spread of the brown rat (*Rattus norvegicus*)**
Emily Puckett, Jason Munshi-South
- 9:30 Urbanization facilitates gene flow in the Western black widow spider, *Latrodectus hesperus***
Lindsay Miles, Brian Verrelli

Session Mon1-Ball204 Predation

Monday - 8:30 - 9:45

Room Oregon ballroom 204

- 8:30 Interactions between color and behavior for aposematic and thermoregulatory functions in a caterpillar**
Matthew Nielsen, Johanna Mappes
- 8:45 Theoretical Shell Models: Mathematical and Biological Trade-offs**
Erynn Johnson, Lauren Sallan
- 9:00 More than Skin Deep: variation in behavior as a result of eumelanin-based coloration in the eastern mosquitofish**
Eve Humphrey, Joseph Travis, Kimberly Hughes
- 9:15 Natural selection in behavior? A field experiment with *Anolis* lizards from the Caribbean**
Oriol Lapiedra, Jonathan Losos, Jason Kolbe
- 9:30 The evolution of vertebrate eye size across an environmental gradient: phenotype does not predict genotype in a Trinidadian killifish**
Shannon Beston, Elijah Wostl, Matthew Walsh

Session Mon1-C120-122 Sexual selection / conflict 1

Monday - 8:30 - 9:45

Room C120-122

- 8:30 The physical environment mediates male harm and its effect on selection in females**
Li Yun, Patrick Chen, Amardeep Singh, Aneil Agrawal, Howard Rundle
- 8:45 Sexual Selection Accelerates the Rate of Adaptation in a Complex Mating Environment**
Li Yun, Patrick Chen, Michelle Yang, Malak Bayoumi, Howard Rundle, Aneil Agrawal
- 9:00 Testing for sexually antagonistic selection across ontogeny in a sexually dimorphic lizard**
Aaron Reedy, Ariel Kahrl, Cara Giordano, Heidi Seears, Daniel Warner, Robert Cox
- 9:15 Females lose potential fitness benefits through male anti-cannibalism strategy in the nursery web spider, *Pisaurina mira*.**
Alissa Anderson, Eileen Hebets
- 9:30 Remodeling and deweaponization as an alternative to the arms race of sexually antagonistic coevolution**
Samuel Snow, Richard Prum

Session Mon1-C123 Coevolution 1

Monday - 8:30 - 9:45

Room C123

- 8:30 Plant defenses and herbivores independently alter selection on reproductive traits in white clover (*Trifolium repens*)**
James Santangelo, Marc Johnson
- 8:45 The evolution of coexistence: reciprocal adaptation promotes the assembly of a simple community**
Ron Bassar, Joseph Travis, David Reznick
- 9:00 Evolutionary transitions in fruit colors with respect to climate**
Miranda Sinnott-Armstrong, Michael Donoghue
- 9:15 Highly dynamic genomic architecture of cooperation in wild populations of *Mesorhizobium***
Stephanie Porter, Joshua Faber-Hammond, Emily E., Cynthia Sackos, Maren Friesen
- 9:30 The Measurement of Coevolution in Mutualisms**
Bob Week, Scott Nuismer

Session Mon1-C124 Genomics / reproductive systems
Monday - 8:30 - 9:45 **Room C124**

- 8:30 Genomic insights into the evolutionary transition to selfing**
Allan Castillo, Joanna Rifkin, Irene Liao, Mark Rausher
- 8:45 Patterns of adaptive molecular evolution in a New Zealand freshwater snail**
Laura Bankers, Jeffery Boore, John Logsdon, Maurine Neiman
- 9:00 Genomic signatures of asexual and sexual reproduction within the colonial hydrozoan *Ectopleura larynx*.**
E. Sally Chang, Maria E. Orive, Paulyn Cartwright
- 9:15 Self-fertility triggers rapid genome shrinkage and loss of sperm competition proteins**
Da Yin
- 9:30 Genomic consequences of asexuality**
Maurine Neiman, John Logsdon, Jeffrey L Boore, Laura Bankers, Peter Fields, Joseph Jalinsky, Kyle McElroy, Joel Sharbrough, Peter Wilton

Session Executive joint council (ASN/SSB/SSE) exit meeting
Monday - 8:30 - 10:15 **Room C126**

Session Coffee break
Monday - 9:45 - 10:15 **Room Exhibit Hall A**

Session Mon2-A105 Phylogenomics 2
Monday - 10:15 - 11:30 **Room A105**

- 10:15 Deep Sea Lights: Evolution of bioluminescence and light detection in the twilight zone**
Heather Bracken-Grissom
- 10:30 The tuatara genome sheds light on phylogenetics and rates of evolution during the amniote radiation**
Marc Tollis, Chris Organ, Stefan Prost, David Winter, Neil Gemmell
- 10:45 Conflicting phylogenomic signals reveal a pattern of reticulate evolution in a recent high-Andean diversification (Asteraceae: Astereae: Diplostephium)**
Oscar Vargas, Edgardo M Ortiz, Beryl Simpson
- 11:00 Wading into beetle phylogenomics: application of the Coleoptera UCE bait set to Hydrophiloidea**
Alana Alexander, Andrew Short
- 11:15 Phylogeny and patterns of gene flow among fruit fly species of the fraterculus group inferred from Transcriptomic data**
Carlos Congrains, Roberto A Zucchi, Reinaldo A de Brito

Session Mon2-A106 Development / expression studies
Monday - 10:15 - 11:30 **Room A106**

- 10:15 Genomic and transcriptomic changes underlying the transition to an experimentally evolved multicellular lifestyle**
Noah Gettle, Michael Travisano
- 10:30 The analysis of early embryonic transcriptomes in rapidly-diversifying *Drosophila* species**
Madeline Chenevert, Joel Atallah
- 10:45 Floral symmetry in Asparagales and the evolution of candidate TCP genes**
Yesenia Madrigal Bedoya, Natalia Lucia Pabón-Mora, Juan Fernando Alzate
- 11:00 The developmental and genetic trajectory of coloration in the guppy (*Poecilia reticulata*)**
Cynthia Dick, Jeff Arendt, David Reznick, Cheryl Hayashi

11:15 Gene expression evolution during sunflower domestication
Ray Watson

Session Mon2-A107-109 Macroevolution / paleobiology

Monday - 10:15 - 11:30 **Room A107-109**

10:15 The changing functional composition of the North American species pool: modeling species origination-extinction as a function of functional group and environmental context
Peter Smits

10:30 Pervasive diversity imbalance among sister clades of ray-fin fishes
John Sime, Jonathan Chang, Michael Alfaro, Lauren Sallan

10:45 The fossil record of marine planktonic protists: resources, applications and potential for macroevolutionary research
David Lazarus

11:00 Diversity dynamics of Phanerozoic terrestrial tetrapods at the local-community scale
Roger Close, Roger B. J. Benson, Juan Benito, Emma Dunne, Richard Butler

11:15 Fossils flip phylogenetically-estimated extinction rates in salamander clades
Jonathan Mitchell, Daniel Rabosky, Joanna Larson

Session Mon2-B111-112 Adaptation / plasticity

Monday - 10:15 - 11:30 **Room B111-112**

10:15 Epigenetic differences associated with phenotypic divergence in a widespread invasive species
Jennifer Madrid Thorson

10:30 Plasticity and Specialization in Variable Environments: Adaptation in Vernal Pool Goldfields
Nancy Emery, Raffica La Rosa

10:45 Phenotypic plasticity can help or hinder adaptation to climate change: a simulation model
Sam Scheiner, Michael Barfield, Robert Holt

11:00 Ancestral plasticity and salt marsh colonization in the Savannah Sparrow.
Phred Benham, Zachary Cheviron

11:15 Effects of road salt on butterfly life history and potential for adaptation to high sodium levels
Megan Kobiela, Emilie Snell-Rood

Session Mon2-B113 Behavior / ecology

Monday - 10:15 - 11:30 **Room B113**

10:15 Temporal variation of anthropogenic perch use by populations of forest and urban lizards
Kevin Aviles Rodriguez, Liam Revell

10:30 The influence of relatedness and size on spatial structure in an urban population of Anolis carolinensis lizards
William Weber, Simon Lailvaux, Nicola Anthony

10:45 Assessing epigenetic and genetic diversity across a range expansion using bisulfite ddRADseq
Tricia Rubi

11:00 When is bigger better? A test of the relationship between body size and starvation resistance, competitive ability, and fitness in a burying beetle
Ashlee Smith, Mark Belk

11:15 Pharaoh ant colony productivity is linked to colony personality
Justin Walsh, Tim Linksvayer

Session Mon2-B114-115 Population genetics: inference of selection 3

Monday - 10:15 - 11:30 **Room B114-115**

- 10:15 Pooled capture sequencing of sea urchin larvae reveals consistent changes in allele frequency in response to experimental acidification**
April Garrett, Lauren Ashlock, Heidi Hargarten, Kaitlin Huber, Melissa Pespeni
- 10:30 Evolutionary genomics of glucosinolate defensive chemistry in *Boechera stricta***
Julius Mojica, Tom Mitchell-Olds
- 10:45 Gene-specific introgression drives local climatic adaptation in a conifer hybrid complex**
Jonathan Degner, Sam Yeaman, Kathryn Hodgins, Kristin Nurkowski, Loren Rieseberg, Sally Aitken
- 11:00 Local adaptation in a sensory complex: insight from the Cape horseshoe bat system**
Lizelle Odendaal

Session Mon2-B116 Speciation / genomics 1

Monday - 10:15 - 11:30 **Room B116**

- 10:15 The genomic landscape of prezygotic reproductive isolation in a sympatric species complex of intertidal isopods (*Jaera albifrons*)**
Marius Wenzel, Alex Douglas, Stuart Piertney
- 10:30 Genome-wide association mapping of seasonal mating time**
Genevieve Kozak, Crista Wadsworth, Brad Coates, Erik Dopman
- 10:45 Mito-nuclear incompatibilities contribute to hybrid inviability in early stages of divergence**
Thiago Lima, Ron Burton, Christopher Willett
- 11:00 From candidate variants to fitness landscapes: investigating the rare origins of novel trophic specialists during adaptive radiation**
Christopher Martin
- 11:15 Recombination, gene flow, and selection drive a heterogeneous pattern of divergence between ecotypes of *Mimulus aurantiacus***
Matt Streisfeld, Sean Stankowski, Madeline Chase

Session Mon2-B117-119 Evolutionary ecology 2

Monday - 10:15 - 11:30 **Room B117-119**

- 10:15 Diversification of crustacean visual opsins revealed using phylotranscriptomics**
Danielle DeLeo, Jorge Pérez-Moreno, Hernan Vazquez Miranda, Heather Bracken-Grissom
- 10:30 An R2R3MYB involving an anther-color polymorphism in a southeastern trout lily**
Rong-Chien Lin, Mark Rausher
- 10:45 Wild *Danio rerio* - a model for immunology, population genetics and ecology**
Thomas Wiehe, Jaanus Suurvaali, Christopher Kraus, Johannes Schoeneich
- 11:00 Differential altitudinal migration and elevational range size are associated with differences in thermal tolerance in birds**
Shane DuBay, Yongjie Wu, Zachary Cheviron, Graham Scott, Yanhua Qu, Fumin Lei, John Bates
- 11:15 Time to tree-think the genetic effects of forest management: Assessing evolutionary patterns and processes beyond heterozygosity indices**
Brandon Lind, Malcolm North, Andrew Eckert

Session Mon2-Ball202 Systematics 1

Monday - 10:15 - 11:30 **Room Oregon ballroom 202**

- 10:15 Ancient DNA analysis of the extinct diving ducks *Chendytes lawi* and the Labrador duck reveal convergent evolution of diving in boreal habitats**
Janet Buckner, Terry Jones, David Gold, Ryan Ellingson, David Jacobs
- 10:30 A global phylogeny of turtles and how it informs conservation planning**
Bradley Shaffer, Robert Thomson, Janet Vu
- 10:45 A new and freely available exome sequence capture probe set of 10,000 loci for frogs: testing its effectiveness across multiple phylogenetic scales**
Carl Hutter, Kerry Cobb, Scott Travers, Rafe Brown
- 11:00 Tusk evolution in the burrowing mayflies: traditional genes vs. phylogenomics.**
Dustin Miller, T. Heath Ogden

- 11:15 Leveraging the multispecies coalescent model for inferences of selection and its impact on species tree estimation and species delimitation**
Richard Adams, Daren Card, Drew Schield, Heath Blackmon, Todd Castoe

Session Mon2-Ball203 SSE Symposium - Evolution in urban ecosystems 2

Monday - 10:15 - 11:30

Room Oregon ballroom 203

- 10:15 Adaptive and non-adaptive genomic changes during urbanization in burrowing owls**
Jakob C. Mueller, Martina Carrete, Heiner Kuhl, Stefan Boerno, Jose Tella, Bart Kempenaers
- 10:30 Rapid evolution of ant thermal tolerance within urban heat islands**
Ryan Martin, Lacy Chick, Abe Perez, Stephanie Strickler, Sarah Diamond
- 10:45 Urban adaptation in Lizards: Connecting phenotypic shifts with performance and survival**
Kristin Winchell, Liam Revell
- 11:00 Is Convergence at the Level of the Phenotype Mirrored Across the Genome? The Repeated Evolution of Glyphosate Resistance in the Common Morning Glory, *Ipomoea purpurea***
Regina Baucom
- 11:15 Plant evolution in the urban jungle**
Marc Johnson

Session Mon2-Ball204 ASN Spotlight - Eco-evolutionary dynamics

Monday - 10:15 - 11:30

Room Oregon ballroom 204

- 10:15 Eco-evolutionary Dynamics**
Andrew Hendry
- 10:30 The role of behaviour in eco-evolutionary dynamics**
Kiyoko Gotanda, Pierre-Olivier Montiglio
- 10:35 Eco-evolutionary dynamics in model systems: It's very competitive**
Tom Cameron
- 10:40 Eco-evolutionary trophic cascades**
Zachary Wood, Eric Palkovacs, Michael Kinnison
- 10:45 Ecosystem evolutionary dynamics: Integrating indirect genetic effects and niche construction**
Joe Bailey, Jen Schweitzer, Michael Van Nuland, Ian Ware
- 11:00 Experimental test of how eco-evolutionary dynamics impact the maintenance of species diversity using duckweed.**
Martin Turcotte, Simon P. Hart, Jonathan M. Levine
- 11:05 What rescues the voles. Demographic consequences of contemporary adaptive evolution in a wild rodent population**
Timothée Bonnet
- 11:10 Ecological consequences of sexually selected traits: from populations to ecosystems**
Sean Giery
- 11:15 Eco-evolutionary dynamics – even in humans**
Fanie Pelletier

Session Mon2-C120-122 Sexual selection / conflict 2

Monday - 10:15 - 11:30

Room C120-122

- 10:15 Molecular Evolution of the *Caenorhabditis* Nematode Sperm Proteome**
Katja Kasimatis, Patrick Phillips
- 10:30 Sexually conflicting selection on floral design of the hermaphroditic plant *Silene stellata***
Juannan Zhou, Michele Dudash, Charles Fenster, Elizabeth Zimmer
- 10:45 Sexually antagonistic polymorphism and the evolution of dimorphic sexual systems**
Colin Olito, Tim Connallon
- 11:00 The sexual preferences of selfish sex chromosomes**
Pavitra Muralidhar, Robert Trivers

11:15 Unravelling the evolutionary causes and consequences of polyandry in a monandrous wasp
Rebecca A Boulton, David Shuker

Session Mon2-C123 Coevolution 2

Monday - 10:15 - 11:30

Room C123

10:15 High-throughput investigation of species-specific binding of abalone reproductive proteins
Jolie Carlisle, Damien Wilburn, Willie Swanson

10:30 Associating host genomic variation with gut microbiota in wild house mice
Taichi Suzuki, Megan Phiher-Rixey, Kathleen Ferris, Andreas Chavez, Michael Sheehan, Dana Lin, Michael Nachman

10:45 A time-calibrated natural history of Proteobacteria
Joanna Wolfe

11:00 Searching for Microbe Coevolution in the Uncharted Venomous Territories of Marine Cone Snails
Sabah Ul-Hasan, Robert Bowers, Tanja Woyke, Mark Sistrom

11:15 Coevolution drives influenza antiviral resistance evolution in the absence of antivirals
Samuel Scarpino

Session Mon2-C124 Molecular ecology / genomics

Monday - 10:15 - 11:30

Room C124

10:15 Exploring the use of random forest for SNP selection in genetic population assignment
Emma Sylvester, Paul Bentzen, Ian Bradbury, Marie Clément, Jon Pearce, John Horne, Robert Beiko

10:30 Molecular diversity of mangrove rivulus (*Kryptolebias marmoratus*) using genomic data
Luana Lins, Shawn Trojahn, Muh-Ching Yee, Alexandra Sockell, Carlos Bustamante, Ryan Earley, Joanna Kelley

10:45 A Functional Genomic Study of Alba: The Locus Affecting Life History and Color in Colias Butterflies
Alyssa Woronik

11:00 Genome-wide signatures of divergent selection in highly differentiated populations of *Theobroma cacao*
Joel Nelson, Omar Cornejo

11:15 Direct estimation of germline mutation rate in mouse lemurs, genus *Microcebus*
C. Ryan Campbell, Kelsie Hunnicutt, Rachel Williams, Peter Larsen, Mario dos Reis, Anne Yoder

Session Ecology and Evolution editorial board meeting

Monday - 11:30 - 13:30

Room B114-115

Session Lunch

Monday - 11:30 - 13:30

Room On the town

Session SSE Executive council exit meeting

Monday - 11:30 - 13:30

Room C126

Session Systematic Biology editorial board meeting

Monday - 11:30 - 13:30

Room B110

Session NSF Information session

Monday - 12:15 - 13:15

Room B113

Cost: free, no registration required.

A information session on NSF funding opportunities and program changes. Lunch is not provided (you can bring your own).

Host: Samuel Scheiner & George Gilchrist (NSF Program Directors)

Session Mon3-A105 Phylogenomics / plants

Monday - 13:30 - 14:45

Room A105

13:30 The Origin of land plants: Genomes and rocks

Mark Puttick, Jennifer Morris, Harald Schneider, Philip Donoghue

13:45 A fruitful phylogeny: using RADseq to reveal the evolutionary relationships of the mango genus (*Mangifera*)

Emily Warschefsky, Eric von Wettberg

14:00 Constructing phylogenies with hundreds of transcriptomes: a case study in Caryophyllales

Joseph Walker, Ya Yang, Michael J. Moore, Samuel F. Brockington, Ning Wang, Alfonso Timoneda, Tao Feng, Sonia Ahluwalia, Stephen Smith

14:15 Phylogenomic analysis of the domestication of coca (*Erythroxylum* spp.)

Dawson White, Roberta Mason-Gamer

14:30 Resolving the relationships of *Jatropha* using RADseq

Nathan LeClear, Beryl Simpson, Craig Linder

Session Mon3-A106 Development / genetics

Monday - 13:30 - 14:45

Room A106

13:30 The development, diversity, and ecology of solar tracking in sunflowers

Benjamin Blackman

13:45 Multiple Mechanisms Allow Rapid and Repeated Floral Diversification

Jamie Kostyun, Jill Preston, Leonie Moyle

14:00 Gene-By-Environment Interactions Drive Developmental Responses to Antibiotic Exposure in Threespine Stickleback Fish

Emily Lescak, Ryan Lucas, Kenneth Sparks, Koral Campbell, Kelly Ireland, Kat Milligan-Myhre

14:15 Genetic basis of nectar reduction in a selfing morning glory

Irene Liao, Joanna Rifkin, Mark Rausher

14:30 Straight from the fish's mouth: Genetic variants influencing adaptive craniofacial divergence and speciation in Caribbean pupfish

Joseph McGirr, Christopher Martin

Session Mon3-A107-109 Paleobiology / paleontology

Monday - 13:30 - 14:45

Room A107-109

13:30 Paleodiversity of a newly excavated cave site in Puerto Rico: Evidence of extinction and continuity

Melissa Kemp

13:45 Employing models of stratigraphic preservation in phylogenetic inference

Caroline Parins-Fukuchi

14:00 Dynamics of diversity and distribution patterns across geologically short time scales: Evidence from West Indian fossils

Jessica Oswald, Nancy Albury, Robert Guralnick, David Steadman

14:15 Sexual dimorphism is generally stable over the lifetime of fossil ostracode species

Gene Hunt, Maria Joao Fernandes Martins, T Markham Puckett, Rowan Lockwood, John P Swaddle, Jack Shaw

14:30 Dynamic trait covariances despite stationary univariate patterns on the approach to speciation

Thomas Ezard

Session Mon3-B111-112 Life history

Monday - 13:30 - 14:45 **Room B111-112**

- 13:30 From hostile host to mercurial mosquito: parasite strategies for maximizing transmission to a dynamic vector population**
Megan Greischar, Lindsay M. Beck-Johnson, Nicole Mideo
- 13:45 Sex-specific effects of compromised energy metabolism on immunity and life-history**
Justin Buchanan, Kristi Montooth
- 14:00 Does an introduced parasite cause life history trade-offs in Galapagos mockingbirds?**
Sabrina McNew, Dale Clayton
- 14:15 The Unicellular Origin of Biological Aging**
Lin Chao, Ulla Camilla Rang
- 14:30 Reevaluating the cost of reproduction**
Wendy Hood

Session Mon3-B113 Experimental evolution 1

Monday - 13:30 - 14:45 **Room B113**

- 13:30 The emergence, maintenance and demise of diversity in a spatially variable antibiotic regime**
Alanna Leale, Rees Kassen
- 13:45 Experimental Evolution of host-attachment in a facultative parasite: an evolutionary stepping-stone towards parasitism**
Emily Durkin, Lien Luong
- 14:00 Brrrr and beer: Cold adaptation in hybrid yeast**
Caiti Smukowski Heil, Chris Large, Maitreya Dunham
- 14:15 Evidence of intralocus sexual conflict in experimentally evolved *S. cerevisiae* populations.**
Katie Fisher, Sean Buskirk, Greg Lang

Session Mon3-B114-115 Pop gen: theory and methods

Monday - 13:30 - 14:45 **Room B114-115**

- 13:45 Rampant heterosis on the fitness landscape of regulatory genetic interactions**
Adam Porter, Norman Johnson, Alexander Tulchinsky
- 14:00 Using local PCA to summarize how relatedness varies along the genome**
Peter Ralph, Han Li
- 14:15 Detecting selection for ancestry in admixed populations with arbitrary population structure**
Erin Calfee
- 14:30 Testing how migratory fidelity influences connectivity: A novel Bayesian population assignment framework that incorporates proxies for migratory traditions**
Emma Carroll, Oscar Gaggiotti

Session Mon3-B116 Speciation / genomics 2

Monday - 13:30 - 14:45 **Room B116**

- 13:30 Integrating micro- and macroevolutionary approaches to understand the role of ecology in nudibranch diversification**
Allison Fritts-Penniman, Ngurah Mahardika, Terrence Gosliner, Paul Barber
- 13:45 Repeated divergent selection on pigmentation genes in a rapid finch radiation**
Leonardo Campagna, Márcio Repenning, Luís Fábio Silveira, Carla Suertegaray Fontana, Pablo Tubaro, Irby Lovette
- 14:00 Parallel transcriptomic landscape across continents within the *Coregonus* species complex.**
Clément Rougeux, Pierre-Alexandre Gagnaire, Kim Praebel, Louis Bernatchez
- 14:15 Phylogenomics of the Andean Plant genus *Burmeistera* (Campanulaceae)**
Simon Uribe-Convers, Nathan Muchhala

14:30 Detecting introgressed loci using machine learning
Daniel Schrider, Andrew Kern

Session Mon3-B117-119 Evolutionary ecology 3

Monday - 13:30 - 14:45 **Room B117-119**

- 13:30 Estimating the benefits of plasticity in ectotherm heat tolerance under natural thermal variability**
Alex Gunderson, Michael Dillon, Jonathon Stillman
- 13:45 Working with what you have: Exploring the role of Chlamydomonas defensive colonies in the development of permanent volvocine multicellularity**
Nicholas Lorusso
- 14:00 Historical distribution of diploid and autotetraploid Callisia graminea (Commelinaceae) and implications for climate change**
Kate Hertweck, Andrea Ortiz
- 14:15 Living within your means: low variability in Rhododendron wood traits constrains hydraulic supply but some clades mitigate through increased leaf variability or face increased hydraulic risk**
Juliana Medeiros, Charlotte Hewins
- 14:30 Functional variation in a key defense gene structures herbivore communities and alters plant performance**
Nora Adam, Mario Kallenbach, Stefan Meldau, Daniel Veit, Nicole van Dam, Ian Baldwin, Meredith Schuman

Session Mon3-Ball202 SSB Spotlight - Impact of gene flow and reticulation in phylogenetics

Monday - 13:30 - 14:45 **Room Oregon ballroom 202**

- 13:30 The effect of gene flow on coalescent-based species tree inference**
Laura Kubatko
- 13:45 HyDe: a Python package for genome-scale hybrid detection**
Paul Blischak
- 13:50 Evidence of intracontinental hybridization in the baobab trees**
Nisa Karimi
- 13:55 Unraveling the effects of gene flow on species limits and phylogenetic signal in Myotis bats**
Ariadna Morales, Brian O'Meara, Nathan Jackson, Bryan Carstens
- 14:00 Modeling hybridization with incomplete lineage sorting**
james degnan
- 14:15 Trait evolution on phylogenetic networks**
Brian O'Meara, Dwueng-Chwuan Jhwueng
- 14:23 Phylogenetic comparative methods on species networks**
Cécile Ané, Paul Bastide
- 14:30 The reticulating phylogenetic history of the kingsnakes**
Frank Burbrink, Marcelo Gehara

Session Mon3-Ball203 SSE Symposium - The impact of stress on genetic variation 1

Monday - 13:30 - 14:45 **Room Oregon ballroom 203**

- 13:30 Lessons learned from a century of meiotic recombination rate plasticity studies in Drosophila**
Laurie Stevison, Rita Graze, Stephen Sefick
- 14:00 Stress induced mutation and recombination - population genetic models**
Lilach Hadany

14:30 Evolution in the dark: the role of large effect variants in shaping phenotypes in cavefish
Suzanne McGaugh, Adam Herman, James Weagley, Richard Borowsky, Yaniv Brandvain, William Jeffery, Erin Gilbertson, Courtney Passow, Wesley Warren, Masato Yoshizawa, Kelly O'Quin, Luis Espinasa

Session Mon3-Ball204 Sexual selection / speciation

Monday - 13:30 - 14:45 **Room Oregon ballroom 204**

13:30 Reinforcement of conspecific sperm precedence weakens sexual selection in sympatric populations
Dean Castillo, Leonie Moyle

13:45 Male-male competition and its role in phenotypic divergence in a polymorphic poison frog
Yusan Yang, Corinne Richards-Zawacki, Matthew Dugas

14:00 Patterns of divergence over time: the effects of mate choice mechanisms
Maria Servedio, Reinhard Bürger

14:15 Building female mate preferences: gene to neuron to behavior.
Amanda Moehring, Ryan Calhoun, Tabashir Chowdhury

14:30 Male mate choice and the evolution of behavioral isolation among sexually dimorphic species
Tamra Mendelson, Jennifer Gumm, Michael Martin, Patrick Ciccotto

Session Mon3-C120-122 Sexual selection / behavior

Monday - 13:30 - 14:45 **Room C120-122**

13:30 The Evolution of Decadence by Mate Choice in the Club-winged Manakin (*Machaeropterus deliciosus*)
Richard Prum, Samuel Snow, Jacob Berv, Matthew Hack

13:45 Obligate, but not facultative, satellite males prefer same male sexual signal characteristic as females
Rachel Olzer, Marlene Zuk

14:00 Acoustic experience alters exploratory behavior and reproductive investment in Pacific field crickets
Justa Heinen-Kay, Daina Strub, Marlene Zuk

14:15 Mate choice in the dark: The role of visual and acoustic signals in female mate choice in red-eyed tree
Jeanne Robertson, Edauri Navarro Pérez, Chloe Boehkle, Andres Vega, Kristine Kaiser

14:30 Do guppies have a 'bro-code'? Testing for altruism and spite in male-male competition
Mitchel Daniel, Helen Rodd

Session Mon3-C123 Coevolution 3

Monday - 13:30 - 14:45 **Room C123**

13:30 Phylogenomics of *Sodalis* symbionts: models for repeated replacement
Bret Boyd, Kevin Johnson, Ian James, Adam Clayton, Andrew Sweet, Julie Allen, Robert Weiss, Colin Dale

13:45 UCEs and tangled trees: elucidating co-phylogenomic patterns in Panamanian figs and fig wasps
Jordan Satler, Tracy Heath, Deren Eaton, Allen Herre, Charlotte Jander, Carlos Machado, John Nason

14:00 Demographic differences predict patterns of local adaptation in a venomous snake and its resistant prey
Matthew Holding, Michael Sovic, Lisle Gibbs

14:15 Adaptive variation in the Sierra garter snake (*Thamnophis couchii*): The influence of biogeography and genetic structure on patterns of TTX-resistance
Joshua M. Hallas, Chris Feldman, Butch Brodie, Michael Pfrender, Edmund D. Brodie, Jr., Thomas Parchman

14:30 Finding disease genes in the face of the Red Queen
Ailene MacPheson, Sally Otto, Scott Nuismer

Session Mon3-C124 Mitochondria
Monday - 13:30 - 14:45 **Room C124**

- 13:30 If you can't stand the heat, get your X to the tropics**
Joseph Ross, Rania Haddad, Enrique Cazares-Navarro
- 13:45 Mitonuclear coevolution in the absence of sex**
Joel Sharbrough, Daniel Sloan, Kristi Montooth, Laura Bankers, Peter Fields, Kyle McElroy, Jeffrey L Boore, John Logsdon, Maurine Neiman
- 14:00 Mitochondrial genome evolution within the Paramecium genus**
Parul Johri, Georgi K. Marinov, Michael Lynch
- 14:15 Differential effects of thermal stress in populations of the intertidal copepod Tigriopus californicus**
Alice Harada, Ron Burton
- 14:30 The rhetorical and empirical extremes of mito-nuclear discordance**
David Toews

Session Coffee break
Monday - 14:45 - 15:15 **Room Exhibit Hall A**

Session Meet the Editors: A question and answer session
Monday - 15:15 - 16:30 **Room Oregon ballroom 201**

Cost: free, no registration required. Open to all conference attendees.
An informal question and answer session with a panel of editors from the leading journals in the field including:

- Judith Bronstein, *American Naturalist*
- Allen Moore, *Ecology and Evolution*
- Mohamed Noor, *Evolution*
- Zach Gompert, *Evolution Letters* (Assoc. editor)
- Barbara Mable, *Heredity*
- Thomas Near, *Systematic Biology*

Session Mon4-A105 Phylogenomics / systematics
Monday - 15:15 - 16:30 **Room A105**

- 15:15 Evolutionary origins and lifestyle transitions of Vespidae (Hymenoptera)**
Elizabeth Murray
- 15:30 Rapidly Evolving Long Exon Capture: A New Sequence Capture Dataset for Phylogenomics in Amniotes**
Benjamin Karin, Tony Gamble, Todd Jackman
- 15:45 The Evolution of Mayflies: Ephemeroptera Phylogenomics**
T. Heath Ogden, Dustin Miller, Jesse Breinholt
- 16:00 Interrogating difficult nodes in the placental mammal tree**
Jacob Esselstyn, Carl Oliveros, Mark Swanson, Brant Faircloth
- 16:15 Genomic evidence for gene flow between species of magic flowers (Achimenes, Gesneriaceae)**
Wade Roberts, Eric Roalson

Session Mon4-A106 Development / genomics
Monday - 15:15 - 16:30 **Room A106**

- 15:15 Evo-devo of mimetic color diversity in bumble bees**
Heather Hines, Li Tian, Sarthok Rahman
- 15:30 Developing Humanized Mouse Models to Study Human Evolution**
Emily Dutrow, James Noonan

15:45 Key losses in Hox Cluster Coding Regions and Regulatory Elements in the Gulf Pipefish
Allison Fuiten, Susan Bassham, William Cresko

Session Mon4-A107-109 Comparative biology / macroevolution

Monday - 15:15 - 16:30

Room A107-109

15:15 Developmental bias primes anurans for ear loss

Molly Womack, Jennifer Stynoski, Kim Hoke

15:30 Ecomorphological implications of presacral morphology in Temnospondyli

Aja Carter, Lauren Sallan, Peter Dodson, S-Tonia Hsieh

15:45 Comparing comparative methods: An evaluation of high-dimensional multivariate phylogenetic comparative approaches

Dean Adams, Michael Collyer

16:00 Functional controls on the morphological diversification of turtle shells

C. Tristan Stayton

16:15 Stepwise evolution of floral pigmentation predicted by biochemical pathway structure

Julienne Ng, Stacey Smith

Session Mon4-B111-112 Life history / evolutionary ecology

Monday - 15:15 - 16:30

Room B111-112

15:15 Selection on correlated life history traits under the risk of mortality

Veronica Chong, John Stinchcombe

15:30 Measuring the cost of whole-organism performance traits: an example with lizard life histories

Jerry Husak, Simon Lailvaux

15:45 Competition mediates selection on metabolic rates in the field

Amanda Pettersen, Craig White, Dustin Marshall

16:00 Should mothers provision their offspring equally?

Hayley Cameron, Keyne Monro, Dustin Marshall

16:15 Are we underestimating the strength and variability of selection?

Dustin Marshall

Session Mon4-B113 Experimental evolution 2

Monday - 15:15 - 16:30

Room B113

15:15 Population size determines the sign of indirect selection acting on mutation rate modifiers

Yevgeniy Raynes, C. Scott Wylie, Paul Sniegowski, Daniel Weinreich

15:30 Sounds of silence: the distribution of fitness effects of synonymous mutations

Eleonore Lebeuf-Taylor, Rees Kassen

15:45 Venom and Drosophila: Response Variation in an Experimental Prey Type

Micaiah Ward, Darin Rokyta

16:00 "Exploring the relationship between Epistasis and Selection"

Kedar Karkare

16:15 An experimental test of the effects of rapid evolution on species coexistence in the field.

Martin Turcotte, Simon P. Hart, Jonathan M. Levine

Session Mon4-B114-115 Population genetics / gene flow

Monday - 15:15 - 16:30

Room B114-115

15:15 Selective introgression of exons across a mule deer hybrid swarm

Margaret Haines, Gordon Luikart, Stephen Amish, Seth Smith, Emily Latch

- 15:30 Let the seeds fall where they may: Investigating the influence of landscape features on fine-scale seed dispersal**
Monica Grasty, Mitch Cruzan, Pamela Thompson, Brendan F Kohn, Elizabeth Hendrickson
- 15:45 Population genetics and gene flow of the arctic moist tundra sedge, tussock cottongrass (*Eriophorum vaginatum*), in the context of local adaptation and climate change**
Elizabeth Stunz, Jonathon Mohl, Ned Fetcher, Jim Tang, Michael Moody
- 16:00 Chromosome-wide divergence underlies local adaptation along an environmental cline in Atlantic Silversides**
Aryn Wilder, Stephen Palumbi, David Conover, Nina Overgaard Therkildsen
- 16:15 Population genomics and genomic architecture of central Texas cave and spring salamanders (*Eurycea*)**
Andrew Corbin, Matthew Moseley, Giulia Irene Maria Pasquesi, Drew Schield, Richard Adams, Daren Card, Todd Castoe, Paul Chippindale

Session Mon4-B116 Speciation / genomics / hybridization

Monday - 15:15 - 16:30

Room B116

- 15:15 RAD-seq as a genome-wide approach to understand allopolyploid evolution in *Dactylorhiza* (Orchidaceae)**
Marie Kristine Brandrud, Juliane Baar, Maria Lorenzo, Emiliano Trucchi, Mikael Hedren, Ovidiu Paun
- 15:30 Adaptive introgression from distant Caribbean islands contributed to diversification of novel trophic specialist pupfishes**
Emilie Richards, Christopher Martin
- 15:45 Pronounced epigenetic differentiation and asymmetric hybrid methylome disturbance in Lake Whitefish (*Coregonus clupeaformis*) species complex**
Martin Laporte, J  r  my LeLuyer, Madoka Krick, Anne-Marie Dion-C  t  , Louis Bernatchez
- 16:00 Exploring the surprisingly finely dissected genomes of the *Helianthus* hybrid species.**
Gregory Owens, Loren Rieseberg
- 16:15 Genome-wide patterns of introgression and differentiation in two tidal marsh sparrows**
Jennifer Walsh, Adrienne Kovach, Brian Olsen, Greg Shriver, Irby Lovette

Session Mon4-B117-119 Evolutionary ecology / diversification

Monday - 15:15 - 16:30

Room B117-119

- 15:15 A comparative analysis of the filling of ecological 'space' by marine animals**
Matthew Knope, Andrew Bush, Luke Frishkoff, Noel Heim, Jonathan Payne
- 15:30 Phylogenetic relationships and the evolution of wing shape tradeoffs in the subfamily Arsenurinae (Lepidoptera: Saturniidae)**
Chris Hamilton, Nathalie Keller, Jesse Breinholt, Jesse Barber, Akito Kawahara
- 15:45 Rewarding mimicry in a sunbird-pollination system in the Cape Floristic Region**
Anina Coetzee, Claire N. Spottiswoode, Colleen L. Seymour
- 16:00 The evolution of sexual dichromatism in large carpenter bees (genus *Xylocopa*)**
Bonnie Blaimer, Jonathan Mawdsley, Se  n Brady
- 16:15 Modeling community phylogenetic structure in adaptive and nonadaptive radiations**
Jesse Czekanski-Moir

Session Mon4-Ball202 Systematics 2

Monday - 15:15 - 16:30

Room Oregon ballroom 202

- 15:15 Whose ancestor is it anyway? Unraveling the history of polyploid speciation in the North American gray treefrog complex (*Hyla chrysoscelis/versicolor*)**
William Booker, Emily Lemmon, Alan Lemmon, Carl Gerhardt, Alyssa Hassinger, Johannes Schul
- 15:30 Phylogenetic position and evolutionary origin of capped-golden langur lineage**
Kunal Arekar, Praveen Karanth
- 15:45 Laboulbeniomyces fungal ectoparasites of cockroaches: three-gene phylogeny and implications**
Danny Haelewaters, Valter Pfliegler, Micha  l Gorczak, Donald Pfister

16:00 3-D morphology of pharyngeal dentition of the genus *Capoeta* (Teleostei: Cyprinidae), its taxonomic and possible phylogenetic significance
Anna Ayvazyan, Davit Vasilyan, Madelaine Böhme

Session Mon4-Ball203 SSE Symposium - The impact of stress on genetic variation 2

Monday - 15:15 - 16:30

Room Oregon ballroom 203

15:15 Gene regulation and the repeated evolution of hydrogen sulfide loving fish
Joanna Kelley, Courtney Passow, Michael Tobler

15:30 The expression of deleterious alleles under environmental stress
Crispin Jordan, Kathryn Hodgins, Dilara Ally, Laramy Enders, Charles Fox

16:00 Adaptive remodeling of the transcriptional response to drought stress in *Arabidopsis lyrata*
Juliette de Meaux, Fei He, Kim Steige, Maroua Bouzid Elkhessairi, Andreas Beyer

Session Mon4-Ball204 ASN Spotlight - '25 Years of Sensory Drive'

Monday - 15:15 - 16:30

Room Oregon ballroom 204

15:15 Past, present & future of Sensory Drive—predicting signal variation from the seen to the unseen
Molly Cummings

15:30 Uniting comparative and experimental approaches to test for a foraging-based sensory bias in live-bearing fishes
Michael Foisy, Jeremy Beaulieu, Luke Frishkoff, David Reznick, Mark Springer, Arcadio Gonzalez, Helen Rodd, D. Luke Mahler

15:35 The Efficient Coding Hypothesis and Signal Design
Samuel Hulse, Tamra Mendelson

15:40 The pervasive effects of lighting environments on the evolution of color patterns and color vision
Becky Fuller, Lisa Mitchem

15:45 The diversity of visual perception in animals: more than just differences in color vision
Sönke Johnsen, Eleanor Caves

16:00 Rapid and reversible visual plasticity across cichlid habitats
Miranda Yourick, Sri Pratima Nandamuri, Karen Carleton

16:05 Olfactory receptor evolution shows association with dietary radiation in neotropical Leaf-nosed bats
Laurel Yohe, Liliana Davalos

16:10 Sensory Space of the Threespine Stickleback
Robert Mobley, Janette Boughman

16:15 Does sensory drive tell us anything about visual-signal diversity in terrestrial habitats?
Leo Fleishman

Session Mon4-C120-122 Reproductive systems

Monday - 15:15 - 16:30

Room C120-122

15:15 Evolutionary lag and rescue in stage-structured clonal populations
María E. Orive

15:30 Overview of breeding systems in Fabaceae and Cactaceae
Lucy Delaney

15:45 The effects of historic range expansion on drift load, inbreeding depression, and autonomous selfing
Matthew Koski, Jeremiah Busch, Laura Galloway

16:00 Differences in Early Life History Traits Between Sexual and Asexual Easter Daisies
Evan Hersh, Alberto Ruiz-Larrea Medina, Jeannette Whitton

16:15 Inbreeding depression through a transcriptomic lens
Megan Van Etten, Regina Baucom

Session Mon4-C123 Coevolution / host-parasite
Monday - 15:15 - 16:30 **Room C123**

15:15 The strange behaviour of genotype frequencies in a hierarchically structured host-parasite metapopulation
Robert Dünner

15:30 Infection dynamics of an invasive trematode in the Upper Mississippi River Region
Jennifer Koop, Rebecca Bachtel, Madison Bailey-Schofield

15:45 The effect of parasite virulence and host-parasite coevolution on the maintenance of obligate outcrossing in host populations
Jae Hoon Cho, McKenna Penley, Sathvik Namburar, Levi Morran

16:00 Tree shape-based approaches for the comparative study of cophylogeny
Mariano Avino, Art Poon

16:15 Sexual Conflict and STIs
Alison Wardlaw, Aneil Agrawal

Session Mon4-C124 Molecular evolution / mammals
Monday - 15:15 - 16:30 **Room C124**

15:15 The Molecular Evolution of Human Breasts
Reed Cartwright, Joanna Malukiewicz, David Winter

15:30 Transposable Elements and the Evolution of Mammalian Pregnancy
Katelyn Mika, Vincent J. Lynch

15:45 Hox clusters molecular evolution provides hints for mammalian evolution
Mariana Nery, Lucas Canesin, Esther Camilo, Juan Pablo Torres-Florez, Tiana Kohlsdorf

16:00 Baby genomics: tracing the evolutionary changes that gave rise to placentation
Yue Hao, Hyuk Jin Lee, Michael Baraboo, Katie Burch, Taylor Maurer, Gavin Conant

16:15 Functional changes in bat dim-light visual pigment evolution are associated with differing echolocation abilities
Eduardo de Almeida Gutierrez, Gianni Castiglione, James Morrow, Belinda Chang

Session SSE Student-Faculty Mixer
Monday - 16:30 - 17:30 **Room Oregon ballroom 201**

Open to students & faculty SSE members. Come chat with your SSE colleagues. Cash bar and SSE grad member free drink tickets accepted.

Session Mon5-Ball202 SSE Presidential address & award announcements
Monday - 17:30 - 18:30 **Room Oregon ballroom 202-204**

Linking levels of selection with genetic modifiers
Sally Otto

Session SSE Members business meeting
Monday - 18:30 - 19:30 **Room A105**

Open to all SSE members.

Poster Session Mon-01 Adaptation

Monday - 18:30 - 20:30 **Room EHA-01**

- 1 Drought Resistance Not Lost in Cultivated Sunflower (*Helianthus annuus* L.)**
Victoria Burns, Lisa Donovan
- 2 The Evolution of *Saccharomycotina* Yeasts**
Dana Opulente, Emily Rollinson, Amanda Hulfachor, Cleome Bernick-Roehr, Antonis Rokas, Cletus Kurtzman, Chris Hittinger
- 3 Widespread duplication and gonad-specific expression of nuclear import genes in stalk-eyed flies (*Diopside*)**
Philip Johns, Nawat Bunnag, Rodzay Wahab, Richard Baker

Topic Mon-02 Bioinformatics

- 4 The effect of common inversion polymorphisms In(2L)t and In(3R)Mo on patterns of transcriptional variation in *Drosophila melanogaster***
Erik Lavington, Andrew Kern
- 5 The Supertree Toolkit**
Jon Hill, Katie Davis
- 6 An efficient pipeline for assaying whole-genome plastid variation for population genetics and phylogeography**
Brendan F Kohn, Jessica Persinger, Mitch Cruzan

Topic Mon-03 Comparative biology

- 7 The evolutionary origin of variation in song length and frequency in the avian family Cettiidae**
Chentao WEI, Trevor Price, Jiayu Liu, Per Alstrom, Yanyun Zhang
- 8 Phylogenetic trends and environmental correlates of genome size variation in *Helianthus* sunflowers**
Fan Qiu, Eric Baack, Dan Bock, Loren Rieseberg, Kenneth Whitney, Mark Ungerer
- 9 Life history correlates of adult attendance in New World temperate and tropical songbirds**
Suzanne Austin, W. Douglas Robinson, Tara Rodden Robinson, Robert Ricklefs
- 10 Evolution of diet and visual acuity in damselfishes (*Pomacentridae*)**
Sarah Williams, Madison Wiltse, Jessica Valenzuela, Lars Schmitz
- 11 Morphological divergence and integration among subcastes in the hyper-diverse ant genus *ants***
Nicholas Friedman, Beatrice Lecroq, Evan Economo

Topic Mon-04 Ecological genetics

- 13 Resurrected "ancient" *Daphnia* genotypes show reduced thermal stress tolerance compared to modern descendants**
Lawrence Weider, Aime'e Yousey, Priyanka Roy Chowdhury, Nicole Biddinger, Jennifer Shaw, Punidan Jeyasingh
- 14 Exploring Leaf Associated Fungal Communities of Grassland Plants**
Ryan Estes, Mark Ungerer, Ari Jumpponen
- 15 Genetic structure and diversity through time for northern California *Peromyscus maniculatus***
Robert Boria, Sarah Brown, Jessica Blois

Topic Mon-05 Education

- 16 **ETC (Explorer of Taxon Concepts) Pipeline for Text Mining, Ontology Building, Matrix Construction, and Taxon Concept Comparison**
Hong Cui, James Macklin, Nico Franz, Bertram Ludäscher, Lorena Endara, Lisa Moore, Carrine Blank, Robert Morris, Thomas Rodenhasen, Joel Sachs, J. Gordon Burleigh
- 17 **Undergraduate Student Conceptions About Randomness and Mutation.**
Michael Wiser, Robert Pennock, Louise Mead, Cory Kohn, James Smith
- 18 **Students Discover: ANTS - Connecting Science & Education**
Daniela Magdalena Sorger, Paige Derouin, Michelle Hafey, Maggie McKinley, Robert Dunn
- 19 **Efficacy of a Travel Award Program to Increase Diversity in Evolutionary Science**
Hollie Heape
- 20 **Procedural generation of video game creatures using evolution of digital genomes.**
Landon Wright, Barrie Robison, Terence Soule, Samantha Heck
- 21 **Biology Majors Acceptance of Evolution**
Chad Talbot, T. Heath Ogden
- 22 **Bringing Food Trucks Into the Classroom: A Lesson on Ecology, Evolution, and Community Assembly Theory**
Elizabeth Carlen, Elle Barnes

Topic Mon-06 Experimental evolution

- 23 **Dynamics of Adaptive Allele Frequency Change in Experimental Populations of *Saccharomyces cerevisiae***
Benjamin Weeder, Eugene Housman, Molly Burke
- 24 **Bacterial Motility Evolves in Response to Bacteriophage Spatial Structure**
Michael Blazanin, Michael Travisano
- 25 **Fitness Consequences of Cryopreservation on Diverse Natural Isolates of *Saccharomyces Cerevisiae***
Kieslana Wing, Molly Burke
- 26 **Effects of anthropogenic noise on mating behavior and fitness of an acoustically signaling invertebrate**
Gabby Gurule-Small
- 27 **Adaptation to Discovered and Self-constructed Niches During Incipient Speciation in an Experimental Population of *E. coli***
Zachary Blount, Caroline Turner, Richard Lenski, Kiyana Weatherspoon, Brooke Sommerfeld, Maia Rowles

Topic Mon-07 Expression studies/transcriptomics

- 28 **Physiological and genetic intersections between drought and freezing tolerance in Pooideae**
Aayudh Das, Natalie Dedon, Jill Preston
- 29 **Dissecting the causes of natural variation in protein expression dynamics**
Ciara Asamoto, Daniel Pollard
- 30 **Differential gene expression and hybrid male sterility in *Drosophila***
Alberto Civetta, Doaa Alhazmi
- 31 **Comparative transcriptomics of the cellular response to hypoxia in a hibernating primate**
Kelsie Hunnicutt, Adam Brown, Peter Larsen, Sheena Faherty, C. Ryan Campbell, Rachel Williams, Anne Yoder
- 32 **Evolved differences in gene expression underlie geographic variation in desiccation resistance in *Rhagoletis* flies**
Christa Kohnert, Dietmar Schwarz
- 33 **Vision loss and transcriptome evolution in cave-adapted crayfish**
David Stern, Keith Crandall

Topic Mon-08 Genomics

- 34 **Analysis of Host Range Mutants of *Bacillus subtilis* Bacteriophages**
Alexandra Agesen, Veronique Delesalle, Greg Krukonis
- 35 **MycoMeth: the comparison and evolution of DNA methylation across fungi**
Adam Bewick, Brigitte Hofmeister, Rob Powers, Zachary Lewis, Timothy James, Robert Schmitz, Jason Stajich
- 36 **Identifying the location of phototransduction genes in the rainbow trout genome**
Christy Smith
- 37 **Natural genomic variation underlying stress tolerance and metabolic traits in rhizobia**
Brendan Epstein, Liana Burghardt, Joseph Guhlin, Matt Nelson, Reda Abou-Shanab, Abdelaal Shamseldin, Michael Sadowsky, Peter Tiffin
- 38 **Roots To The Evolution Of Photosynthesis? Biofilm Communities In A Manganese Depositing Hot Spring**
Wendy Smythe

Topic Mon-09 Host-parasite

- 39 **Whole genome and transcriptome sequencing of a major crop pest in Sub-Saharan Africa, *Busseola fusca* (Lepidoptera)**
Kayla Hardwick, Sarah Schaack
- 40 **Macroevolutionary patterns of susceptibility to avian malaria**
Lisa Barrow, Sabrina McNew, Spencer Galen, Holly Lutz, Thomas Valqui, Heather Skeen, Jason Weckstein, Christopher Witt
- 41 **Bioinformatic analysis for viral sequences detection in the transcriptome of five species of bats from Yucatan, Mexico.**
Diana Moreno, Jorge Ortega, Georgina Hernández-Montes

Topic Mon-10 Hybridization

- 42 **Genomic analysis of ancestry in hybrid mice**
Megan Frayer, Leslie Turner, Bettina Harr, Diethard Tautz, Bret Payseur
- 43 **Investigating F1 hybrid seed inviability in subspecies of *Mimulus tilingii***
Gabrielle Sandstedt
- 44 **MHC genetic variation in hybridizing species, the case of the *Alouatta* hybrid zone in Mexico**
Adrian Melo Carrillo, Liliana Cortes Ortiz
- 45 **Inter-specific population dynamics of the Common goldeneye and Barrow's goldeneye**
Joshua Brown, Sarah Sonsthagen, Robert Wilson, Sean Boyd, Sandra Talbot, Philip Lavretsky
- 46 **Evolution of novel mimicry rings facilitated by adaptive introgression in tropical butterflies**
Juan Enciso, Carolina Pardo-Diaz, Camilo Salazar, Simon Martin, Chris Jiggins, Owen McMillan, Carlos Arias, Mauricio Linares

Topic Mon-11 Invasive/invasion

- 47 **Fitness cost of glyphosate resistance in hairy fleabane (*Erigeron bonariensis*) under drought conditions**
Ankit Pathak, Adam Avila, Katherine Waselkov
- 48 **Testing Darwin's Naturalization Hypothesis: Phylogenetic Community Structure Among Native and Non-Native Species**
William Weaver, Robert Laport, Julianne Ng
- 49 **Invasion dynamics of wavyleaf basketgrass (*Oplismenus undulatifolius*), an emerging threat to US mid-Atlantic forests**
Carrie Wu, Anna Hakkenberg, Emma Dressel
- 50 **Exploring the epigenetic reasons behind invasive species success**
Andrea Sequeira, Flavia Mendonca de Sousa, Mary Dornon, Viviana Confalonieri, Marcela Rodriguez, Noelia Guzman, Analía Lanteri
- 51 **Reciprocal transplantation of Japanese knotweed (*Reynoutria japonica*) reveals phenotypic differentiation, but no local adaptation across a wide latitudinal range.**
Acer VanWallendael, Elena Hamann, Steven Franks

Topic Mon-12 Macroevolution

- 52 **What Do We Know About Cockroach Diversification?**
Andres Velez, Juan M. Daza
- 53 **Miocene adaptive radiation in grasshoppers revealed by a species-level supertree of Orthoptera**
Katie Davis, Adam Bakewell, Ed Baker, Jon Hill, Peter Mayhew, David Chesmore
- 54 **Insights into feather diversity from the King of Saxony Bird of Paradise and other bizarre feathers**
Teresa Feo, Vinodkumar Saranathan, Richard Prum
- 55 **Pigeon domestication, what can artificial selection tell us about evolutionary constraints**
Cesar Augusto Espinoza Campuzano
- 56 **Accelerated diversification in lichen forming fungi after the K-Pg boundary**
Jen-Pan Huang

Topic Mon-13 Molecular evolution

- 57 **Mutation-selection models for the detection of adaptation in protein-coding genes**
Nicolas Rodrigue
- 58 **The evolution of metabolic networks in high-altitude deer mice** **withdrawn 2017-06-19**
10:56:45.0
Rena Schweizer, Zachary Cheviron
- 59 **Linking genotype to phenotype: Using CRISPR/Cas9 to alter the wing pattern coloration of Heliconius butterflies**
David Tian, Owen McMillan, Carolina Concha
- 60 **The risk of using amplicon size of chloroplast SSR marker for genetic relationship studies**
Sang Min Chung
- 61 **Numts and heteroplasmy disrupting mitochondrial markers on evolutionary studies**
Elaine Francisco, Paulo Cseri, Maria Cristina Arias

Topic Mon-14 Mutation

- 62 **Do somatic mutations speed up the evolution of Sitka spruce?**
Vincent Hanlon, Sally Aitken
- 63 **Investigating the genetic basis of glyphosate resistance in the San Joaquin Valley agricultural weed hairy fleabane (*Erigeron bonariensis*)**
Rigoberto Molina, Ankit Pathak, Katherine Waselkov
- 64 **Evolvability of emerging host range mutants of RNA virus phi6**
Lele Zhao, Siobain Duffy
- 65 **Accumulation and transmission dynamics of a naturally-occurring mtDNA deletion in *Caenorhabditis briggsae***
Jennifer Sullins, Anna Coleman-Hulbert, Suzanne Estes
- 66 **The Effects of Spontaneous Mutation on Neural Function**
Sarah Eberle, Djeneba Dezoumbe, Rhagan Humphrey, Shane Kinzer, Whitney Raver, Sarah Schaack, Leigh Latta IV

Topic Mon-15 Mutualism

- 67 **Distribution of a Host range restriction peptidase (hrrP) in populations of symbiotic *Ensifer medicae* across the native and invaded regions of its host legume**
Emily E., Joel Griffiths, Maren Friesen, Stephanie Porter

- 68 **Effects of antibiotic exposure on growth of bacterial strains isolated from threespine stickleback gut**
Kenneth Sparks, Emily Lescak, Ruth Isenberg, Ryan Lucas, Kelly Ireland, Koral Campbell, Kat Milligan-Myhre

Topic Mon-16 Paleobiology

- 70 **Phenotypic innovation and adaptive constraints in the evolutionary radiation of Paleozoic crinoids (Echinodermata)**
David Wright
- 71 **The NSB (Neptune) marine microfossil occurrences database: design, content and use in paleobiologic research**
David Lazarus, Johan Renaudie
- 72 **Body size evolution and homology of parafrontal bones in sphaerodactylid geckos (Reptilia: Squamata)**
Aaron Griffing, Tony Gamble, Aaron Bauer
- 73 **Inferring Behavioral and Social Organization in Fossil Antilocapridae**
Holley Flora, Edward Byrd Davis
- 74 **Revised Evolutionary History of the Sabertooth Carnivoran Barbourafelis (Nimravidae)**
Paul Barrett
- 75 **Machine reasoning about phenotypes: enhancing expert knowledge about the genetics of a fossil transition**
Todd Vision, James Balhoff, Wasila Dahdul, Alex Dececchi, Pasan Fernando, Hilmar Lapp, Paula Mabee, Prashanti Manda, Kellen Mastick, Monte Westerfield, Erliang Zeng
- 76 **Diversification rates vary more through time than between sub-clades for fossil Carnivorans**
Daniel VARAJAO DE LATORRE

Topic Mon-17 Pathogens

- 77 **Comparative Genomics and Evolution of Pseudomonas syringae Bacteriophages**
Jenna DeCurzio, Rebecca King, Britt Koskella, Norma Morella, Veronique Delesalle, Greg Krukonis
- 78 **Genomic signatures of pathogen-mediated selection across the bird tree of life**
Allison Shultz, Julia Yu, Tim Sackton
- 79 **Population Genetics of Complex Human Disease**
Jeremy Berg, Guy Sella
- 80 **Metabarcoding for streamlining vector surveillance: Culicoides spp. (Diptera: Ceratopogonidae) as a test case**
Matthew Hopken, Zaid Abdo, Antoinette Piaggio

Topic Mon-18 Phenotypic plasticity/GxE

- 81 **Genome-wide methylation patterns are associated with parasite load in guppies (Poecilia reticulata)**
JUNTAO HU, FELIPE PÉREZ-JVOSTOV, Léa Blondel, Rowan Barrett
- 82 **Untangling Morphotype and Latitudinal Variation in Spartina Alterniflora**
August Guang, Lillian Hancock, David Rand, Emily Hollenbeck
- 83 **Temperature effects on Oncorhynchus mykiss muscle physiology**
Erin Wiese, Patrick Carter
- 84 **Rapid plasticity of opsin expression in adult African cichlids**
Miranda Yourick, Sri Pratima Nandamuri, Karen Carleton
- 85 **Resource quality and predation risk influence prey eye size and allometry**
Jared Goos, Matthew Walsh
- 86 **Plastic induction of cellular differentiation in an undifferentiated species**
Dinah Davison, Richard Michod
- 87 **Evolution of plasticity: mechanistic link between development and reversible acclimation**
Julian Beaman, Craig White, Frank Seebacher

Topic Mon-19 Phylogenetic comparative methods

- 88 **The phylogenetic distribution of climate change vulnerability in California's birds**
Shelby Moshier, Joshua Reece, Gurjap Dhaliwal
- 89 **Phylogenetic relationships of Crocodyliformes based on morphology and RAG1 sequence data**
Alexandria DiGiacomo, Robert Meredith, Tracy Heath, Daniel Ksepka
- 90 **A novel approach for deciphering cryptic species problems using large scale RNA-seq data**
Fiona Wood, Yonas Tekle
- 91 **Morphological rate shifts and disparity in the postcrania of Rodentia**
Carl Saltzberg, Scott Steppan
- 92 **Floral Diversity of Eucnide (Loasaceae)**
Josh Brindley

Topic Mon-20 Phylogenetic methods development

- 93 **Graph Splitting Method: A New Phylogenetic Approach to Resolve the Early Evolution of Protein Superfamilies**
Motomu Matsui, Wataru Iwasaki
- 94 **Efficiency and accuracy of phylogenetic community detection using Treescaper**
Genevieve Mount, Diego Elias, David Morris, Jeremy Ash, Wen Huang, Melissa Marchand, Kyle Gallivan, James Wilgenbusch, Jeremy Brown
- 95 **Probabilistic Path Hamiltonian Monte Carlo for Bayesian Phylogenetic Inference**
Vu Dinh, Arman Bilge, Cheng Zhang, Frederick Matsen
- 96 **Faster likelihood computation for sparse alignment matrices**
Benjamin Redelings
- 97 **A complete ray-finned fish phylogeny using taxonomy and birth-death models**
Jonathan Chang, Michael Alfaro

Topic Mon-21 Phylogenomics

- 98 **Phylogenomics of Formica wood-ants reveals single origins of dependent colony foundation and frequent dispersal between the Old and New World**
Marek Borowiec, Christian Rabeling
- 99 **Phylogenomics using target capture of ultraconserved elements and exons reveals deep relationships within the Neotropical manakins (Aves: Pipridae)**
Rafael Leite, Rebecca Kimball, Ed Braun, Elizabeth Derryberry, Peter Hosner, Graham Derryberry, Marina Anciães, Diogo Meyer, Alexandre Aleixo, Camila Ribas, Robb Brumfield, Joel Cracraft

Topic Mon-22 Phylogeography

- 100 **Covariance Revisited: Using whole plastome sequence and RAD seq data to estimate the timing of speciation in Joshua Trees.**
Christopher Smith
- 101 **Phylogeography of seadragons inferred from genome-wide data**
Josefin Stiller, Nerida G. Wilson, Greg Rouse
- 102 **Testing diversification processes of Neotropical open biomes: phylogeography of the Narrow-Billed Woodcreeper (Lepidocolaptes angustirostris).**
Amanda Rocha, Gustavo Sebastian Cabanne, Alexandre Aleixo, Luís Fábio Silveira, Pablo Tubaro, Renato Caparroz
- 103 **Phylogeny and biogeography of deep-sea wood boring Xylophaginae (Mollusca, Bivalvia)**
Chiara Romano, Greg Rouse, Christian Borowski, Verena Tunnicliffe, Daniel Martin

- 104 Population genetic analysis of *Amusium pleuronectes* in the Coral Triangle to identify distinct populations or a species complex**
Jessica Matadamas, Alvin Alejandrino
- 105 Phylogeography, population genomics and adaptive variation on species complex *Pitcairnia lanuginosa* (Bromeliaceae)**
Clarisse Palma, Barbara Leal, Vanessa Graciano Araujo, Cleber Chaves, Luis Huacre, Myriam Heuertz
- 106 Effects of Andean geographic history on the population history of the plant-ant Azteca.**
Maria Fernanda Torres Jimenez, James Richardson, Graham Stone
- 107 An Investigation of the Impact of Phylogeny on Continental Scale Phenotypic Variation in Garter Snakes (*Thamnophis*)**
Leonard Jones, Frank Burbrink, Adam Leache

Topic Mon-23 Plant reproductive biology

- 108 Weed versus wildflower: Does habitat encroachment by an exotic dandelion species disrupt the breeding system of its native alpine congener?**
Austin Lynn, Candace Galen
- 109 Selection on floral traits in two species of Alpine orchids (*Gymnadenia*)**
Kelsey Byers, Roman Kellenberger, Philipp Schlüter
- 110 Pollen viability varies with elevation in high temperature conditions**
Caitlyn Byron, David Lowry
- 111 Does widespread purging of inbreeding depression occur in populations of the common yellow monkeyflower, *Mimulus guttatus*?: a field-based approach.**
Vanessa Koelling, Toshiro Newsum, John Kelly

Topic Mon-24 Population genetics: inference of selection

- 112 Evolutionary rescue of bat populations devastated by white-nose syndrome?**
Giorgia Auteri, L. Lacey Knowles
- 113 Investigating Expression Adaptation and Conservation in Alternative Splicing**
Jamie Moon, Ksenia Arzumanova, Scott Roy, Manuel Irimia, Rori Rohlf
- 114 Examining models of recurrent hitchhiking in *Drosophila melanogaster* and their effects on demographic inference**
Jeremy Lange, John Pool
- 115 Looking for signals of selection in the ochre sea star genome following a mass mortality event**
Dannise Ruiz-Ramos, Lauren Schiebelhut, John Wares, Michael Dawson

Topic Mon-25 Population genetics: molecular ecology

- 116 Population genomics supports speciation with gene flow, not genomic islands of differentiation, in sky-island populations of southwestern white pine**
Justin Bagley, Mitra Menon, Andrew Eckert
- 117 Comparative spatial genomics of urban brown rats: From studying populations to understanding species**
Matthew Combs, Jason Munshi-South, Michael Blum, Chelsea Himsworth
- 118 Genetic consequences of range expansions in North American amphibians and reptiles**
Jeffrey Streicher
- 119 Speciation despite gene flow in two owls (*Aegolius* spp.): evidence from 2,210 loci with ultraconserved elements (UCEs)**
Kevin Winker, Travis Glenn, Jack WWithrow, Spencer Sealy, Brant Faircloth

Topic Mon-26 Population genetics: theory and methods

- 120 On the joint distribution of coalescent tree height and tree length**
Ilana Arbisser
- 121 On the joint distribution of coalescent tree height and tree length**
Ilana Arbisser
- 122 MIG-seq: efficient PCR-based method for genome-wide sequencing**
Yoshihisa Suyama, Chika Mitsuyuki, Yoshihiro Tsunamoto
- 123 Inversion polymorphism in populations with sexual antagonism and reproductive skew**
Christopher McAllester, John Pool
- 124 Characterizing adaptive Neanderthal introgression in modern humans**
Sivan Yair, Graham Coop
- 125 How do inversions affect recombination? A study in the gibbon**
Debora Brandt, Lucia Carbone, Jeffrey Wall

Topic Mon-27 Quantitative genetics

- 126 Morphological, genetic and evolutionary bases for structural color shift in the Buckeye butterfly**
Rachel Thayer
- 127 A quantitative genetics approach to studying metabolite contributions to an ancient plant insect interaction**
Leslie Kollar, Todd Rosenstiel, Sarah Eppley, Stuart McDaniel
- 128 The Footprints of Hybrid Zone Movement**
Remi Matthey-Doret, Silu Wang

Topic Mon-28 Reproductive biology

- 129 Norms of reaction for pheromone response in *Saccharomyces cerevisiae* isolates**
Shelby Duffy, Daniel Pollard
- 130 Influence of weight and age on seminal parameters of captive golden-headed lion tamarin**
Patricia Hergert Bacher¹, Paloma Rocha Arakaki, Bruno Sauce, Rodrigo del Rio do Valle, Andrea C Peripato

Topic Mon-29 Reproductive isolation

- 131 Variation in drought-response traits in sympatric *Mimulus***
Samuel Mantel
- 132 Speciation in the fast lane: Rapid genetic and reproductive isolation in a young *Drosophila* species complex**
Roman Yukilevich, Luana Maroja
- 133 Mate -choice mechanisms and the dynamics of reproductive isolation: a simulation study**
Daniel Powell
- 134 Quantifying behavioral isolation between closely related species of mice**
Tyler Ryan, Polly Campbell
- 135 Testing for postzygotic isolation in a Joshua tree hybrid zone**
Anne Royer, Christopher Smith
- 136 Genetic patterns of pheromone strain divergence in the European Corn Borer**
Henry Kunerth, Steve Bogdanowicz, Genevieve Kozak, Jeremy Searle, Erik Dopman

Topic Mon-30 Sensory systems

- 137 **Dim-light vision in ancient whales: Reconstructing the ancestral cetacean rhodopsin**
Sarah Dungan, Belinda Chang
- 138 **Molecular phylogeny and behavioral trait evolution of singing flies**
Kaila Colyott, Jennifer Gleason
- 139 **Increasing structural complexity is associated with decreasing molecular complexity in the evolution of the shell-eyes of chitons**
Alexandra Kingston, Daniel Speiser

Topic Mon-31 Sex/recombination

- 140 **An ancient UV sex chromosome system in mosses**
Sarah Carey, Adam Payton, Matthew Johnson, Roth Conrad, J. Gordon Burleigh, Jeremy Schmutz, Jerry Jenkins, Kerrie Barry, Jane Grimwood, Stuart McDaniel
- 141 **The effects of reproductive mode and ploidy level on transposable element evolution**
Kyle McElroy, Emily Opfer, Jorge Moreno, Jeffrey L Boore, John Logsdon, Maurine Neiman
- 142 **Polygenic Sex Determination in *Astatotilapia burtoni***
Erin Peterson, Ashley Elias, Reade Roberts

Topic Mon-32 Sexual conflict

- 144 **Parental Care in Leeches: Cross Fostering and Parent-Offspring Recognition**
James Boothroyd, Angela Rincon, Hannah Combs, Rebecca Beresic-Perrins, Stephen Shuster

Topic Mon-33 Sexual selection

- 145 **Increased fitness with brighter juvenile color in collard lizards (*Crotaphytus collaris*)**
Jodie Wiggins
- 148 **Sexual Dimorphism and the Evolution of Sex-Limited Genes in the Dioecious Tree *Populus balsamifera***
Matt Olson, Brian Sanderson, Peter Tiffin, Li Wang, Zhi-qiang Wu
- 149 **Sex-specific effects of serotonin on aggressive behaviors in stalk-eyed flies**
Jaime Grace, Nadia Lovko
- 150 **Relative Importance of Natural and Sexual Selection in Speciation**
Megha Suswaram, Danielle Edwards, Justin Yeakel

Topic Mon-34 Social systems

- 151 **Foundations of chemosensation in paper wasps**
Andrew Legan, Michael Sheehan
- 152 **Society at the edge of collapse: Social mobility, opportunity, and adaptive strategy during group fission in a nonhuman primate**
Lixing Sun, Dongpo Xia, Shine Sun, Jinhua Li
- 153 **Shifting cichlid color vision: *Tbx2a* acts in trans on LWS opsin expression**
Ben Sandkam, Sri Pratima Nandamuri, William Gammerdinger, Connor O'Brien, Matthew Conte, Karen Carleton
- 154 **Understanding the evolution of social behavior: The regulation of estrogen receptor alpha expression in a species with alternative behavioral phenotypes**
Kathleen Grogan, Jennifer Merritt, Wendy Zinzow-Kramer, Suzanne Mays, Eric Ortlund, Donna Maney

- 155 The influence of sociality on the evolution of defensive morphology in butterflyfishes**
Jennifer Hodge, Peter Wainwright

Topic Mon-35 Speciation

- 156 Hybrid deficiency in learning and memory: A novel reproductive isolating barrier?**
Michael McQuillan, Amber Rice
- 157 Genome-wide congealing and the spatial scale of differentiation**
Martin Schilling, Samuel Flaxman, Jeffrey Feder, Patrik Nosil
- 158 Incipient speciation in a dune sunflower species**
Kaichi Huang, Kate Ostevik, Rose Andrew, Loren Rieseberg
- 159 Widespread species shed light on the process of speciation in Neotropical fishes**
Jack Craig, James Albert, William Crampton

Topic Mon-36 Species delimitation

- 160 Identifying the loci that underlie a multifaceted crossing barrier**
Kate Ostevik, Joanna Rifkin, Mark Rausher
- 161 Low-cost genomic architecture as a species delimitation tool using rDNA fingerprints**
John Sproul, David Maddison
- 162 A day-flashing Photinus firefly (Coleoptera: Lampyridae) from central Panamá: an emergent shift to predator-free space?**
Luana Maroja, Fredric Vencel, Xin Luan, Xinhua Fu
- 163 Genetic, morphological, and ecological species delimitation of the greenthroat darter (Etheostoma lepidum)**
Daniel MacGuigan, Thomas Near

Topic Mon-37 Systematics

- 164 Molecular phylogeny of a morphologically cryptic frog genus Fejervarya from South Asia reveals unrecognized diversity**
prudhvi raj
- 165 Tyrophagus curvipenis (Acari: Acaridae): investigating species boundaries using DNA and morphology**
PAMELA MURILLO, Pavel Klimov, Barry OConnor
- 166 Effects of orthology assessment and gene occupancy on the phylogenomic analysis of the orb-weaving spider family Araneidae (Arthropoda, Arachnida, Araneae).**
Robert Kallal, Rosa Fernandez, Gonzalo Giribet, Gustavo Hormiga
- 167 Phylogenetics in the speication "grey zone": disentangling relationships among the paintbrushes (Castilleja; Orobanchaceae) in the midst of rampant hybridization and introgression**
Maribeth Latvis, Paul Blischak, David Tank
- 168 Phylogeny of Mayfly Subfamily Ecdyonurinae (Heptageniidae: Ephemeroptera)**
Ishaah Talker, T. Heath Ogden
- 169 Evaluating Conflicting Topologies of the Genus Juniperus using Plastome Sequences**
Therese Balkenbush, Linda Raubeson, Rhiannon Peery, Julie Morris, Robert Adams, Andrea Schwarzbach
- 170 Revisiting the architecture of sciurid phylogeny**
John Mercer, V. Louise Roth

Session Tue1-A105 Phylogenetic comparative methods 2
Tuesday - 8:30 - 9:45 **Room A105**

- 8:30 Evolutionary correlates of seasonal migration in a family of avian aerial insectivores**
Clare Brown, Frederick Sheldon
- 8:45 Pattern and paradox in the macroecology and evolutionary history of Passerine nest types**
Jay McEntee, J. Gordon Burleigh
- 9:00 A slimy problem: body size and shape evolution in hagfish**
Joshua Reece, Theodore Uyeno, Toby Daly-Engel
- 9:15 Macroevolution and morphological diversification of Neotropical headstanding fishes (Characiformes: Anostomoidea) as illuminated by a new ultraconserved element phylogeny**
Brian Sidlauskas, Brant Faircloth, Michael Alfaro, Kendra Hoekzema, Bruno Melo, Mike Burns, Casey Dillman, Ben Frable, Mark Sabaj, Claudio Oliveira, Richard Vari
- 9:30 An evolutionary shift in photosynthetic pigment composition facilitated functional diversification in cryptophytes**
Matthew Greenwold, Brady Cunningham, Tammi Richardson, Jeff Dudycha

Session Tue1-A106 Bioinformatics

Tuesday - 8:30 - 9:45

Room A106

- 8:30 Authors in the driver's seat: fast, consistent, computable phenotype data and ontology production**
Hong Cui, James Macklin, Julian Starr, Anton Reznicek, Joel Sachs, Bruce Ford, Lyubo Penev, Hsinliang Chen
- 8:45 Blue tail, red tail: a solution to inapplicable discrete characters in phylogenetics**
Thomas Guillaume, Martin Smith, Martin Brazeau
- 9:00 A computer vision for animal ecology**
Ben Weinstein
- 9:15 Simpler is better: Machine learning using amino acid composition to classify CRESS viruses to genus.**
Erik Lavington, Lele Zhao, Siobain Duffy
- 9:30 aTRAM 2.0: Targeted assembly of loci from both reduced and whole genome NGS data**
Julie Allen, Raphael LaFrance, Ryan Folk, Kayce Bell, Kevin Johnson, Robert Guralnick

Session Tue1-A107-109 Comparative biology 1

Tuesday - 8:30 - 9:45

Room A107-109

- 8:30 Of cavefish and cavemen. What can we learn from blind, fat fish about ourselves?**
Nicolas Rohner
- 8:45 The evolution of size and shape of insect eggs across eight orders of magnitude**
Samuel Church, Seth Donoughe, Bruno de Medeiros, Cassandra Extavour
- 9:00 Comparative Analysis of Parental Effects on Developmental Period Length in Anseriform Birds**
Daniel Barton
- 9:15 The evolution of craniofacial changes in the blind Mexican cavefish**
Amanda Powers, Erin Davis, Shane Kaplan, Tyler Boggs, Joshua Gross
- 9:30 Big mammals with small voices - comparison of vocalization frequency limits shows how aquatic species diverged from expected trends.**
Kobe Martin, Marlee Tucker, Tracey Rogers

Session Tue1-B111-112 Microbes 1

Tuesday - 8:30 - 9:45

Room B111-112

- 8:30 Salamanders of the Trans-Mexican Volcanic Belt: the microbiome in a phylogenetic context**
Julio Cesar Garcia Sanchez, Sean Rovito
- 8:45 Genome evolution and gene loss in the luminous symbionts of deep sea anglerfish**
Tory Hendry
- 9:00 The microbe advantage: Adaptation to novel diet through a change in the microbiome**
Aparna Agarwal, Deepa Agashe
- 9:15 Inferring microbial gene family evolution despite phylogenetic uncertainty**
Mukul Bansal

9:30 The holobiont of domesticated and wild Brassicas
Elizabeth Mittell

Session Tue1-B113 Adaptation / experimental evolution
Tuesday - 8:30 - 9:45 **Room B113**

8:30 Experimental adaptation of a non-host-associated bacterium to the zebrafish digestive tract
Jarrett Lebov, Brendan Bohannon

8:45 Strategies for investigating resistance evolution in complex organisms
Barbara Mable, Stephen Doyle, James Cotton, Alan Reynolds, Eileen Devaney

9:00 Mitochondrial mutation compensates for nuclear-encoded ETC dysfunction during *C. elegans* experimental evolution
Stephen Christy, Suzanne Estes, Jennifer Sullins

9:15 Genomic Basis of Rapid Adaptation to a Low Quality Host Plant in *Callosobruchus maculatus*
Alexandre Rego, Samridhi Chaturvedi, Frank Messina, Zachariah Gompert

9:30 Reversal of response to artificial selection on body size in a wild passerine bird
Thomas Kvalnes, Thor Harald Ringsby, Henrik Jensen, Ingerid Julie Hagen, Bernt Rønning, Henrik Pärn, Håkon Holand, Steinar Engen, Bernt-Erik Sæther

Session Tue1-B114-115 Molecular ecology / gene flow
Tuesday - 8:30 - 9:45 **Room B114-115**

8:30 Comparative population structure of two pool breeding amphibian species in an urbanizing landscape
Jared Homola, Michael Kinnison, Cynthia Loftin

8:45 Inferring Demographic and Evolutionary History in a Coral Reef Goby (*Coryphopterus glaucofraenum*)
Daniel Volk, Carlos E. L. Ferreira, Eric Hoffman

9:00 Investigating Population Structure and Barriers to Gene Flow in the American Badger of British Columbia (*Taxidea taxus jeffersonii*) to Inform Conservation Action
Brett Ford, Rich Weir, Karl Larsen, Michael Russello

9:15 Deconstructing dispersal potential
Lauren Schiebelhut, Laura Jurgens, Brian Gaylord, Rick Grosberg, Michael Dawson

9:30 Drivers of demographic population structure in the Olympia Oyster (*Ostrea lurida*)
Katherine Silliman, Doug Earnisse

Session Tue1-B116 Hybridization / reproductive isolation
Tuesday - 8:30 - 9:45 **Room B116**

8:30 Cultural, genetic, and behavioral divergence coincide in an avian hybrid zone
Sara Lipshutz, Isaac Overcast, Michael Hickerson, Robb Brumfield, Elizabeth Derryberry

8:45 Mate-choice mechanisms and reproductive isolation in swordtail fish
Gil Rosenthal

9:00 The chemical ecology of a hybridizing chickadee system: olfaction and reproductive isolation
Alex Huynh

9:15 Repeated hybridization between Yellowstone cutthroat trout and rainbow trout
Elizabeth Mandeville

9:30 Mate choice in early generation hybrids
Daniel Powell, Gil Rosenthal

Session Tue1-B117-119 Adaptation / evolutionary ecology 1
Tuesday - 8:30 - 9:45 **Room B117-119**

- 8:30 Evolutionary constraint on range limits in *Boechera stricta*: Tradeoff linked to signaling network**
Jason Olsen, David Siemens
- 8:45 Little plant, big city: testing for urban adaptation in ragweed**
Amanda Gorton, David Moeller, Peter Tiffin
- 9:00 Climate change generates local maladaptation**
Susana Wadgyman, Jill Anderson
- 9:15 Evolutionary responses to repeated drought episodes in *Brassica rapa***
Elena Hamann, Steven Franks
- 9:30 A dynamic eco-evolutionary model predicts slow response of alpine plants to climate warming**
Olivier Cotto, Max Schmid, Stefan Dullinger, Wilfried Thuiller, Frédéric Guillaume

Session Tue1-Ball202 Mutation 1

Tuesday - 8:30 - 9:45 **Room Oregon ballroom 202**

- 8:30 Mutation load across mating systems: how does load change and how do we best estimate it?**
Kimberly Gilbert, Aneil Agrawal, Stephen Wright
- 8:45 The effect of ploidy level on the rate and spectrum of new mutations**
Nathaniel Sharp, Linnea Sandell, Chris James, Sally Otto
- 9:00 Direct estimates of intra- and interspecific variation in the rate and spectrum of mitochondrial mutation in the genus *Daphnia***
Fenner Macrae, Maia Benner, Anna Ritz, Sarah Schaack
- 9:15 The effects of cell-lineage selection on clonal evolution and adaptation in *Mimulus guttatus***
Jaime Schwoch, Mitch Cruzan
- 9:30 Patterns of mutation match physical branching topology in *Eucalyptus***
Adam Orr, Robert Lanfear, Reed Cartwright

Session Tue1-Ball203 SSE Spotlight - Genetic transmission at the population level

Tuesday - 8:30 - 9:45 **Room Oregon ballroom 203**

- 8:30 From haploid to diploid, from diploid to haploid, complex life cycles are everywhere**
Stacy Krueger-Hadfield
- 8:45 Population-genetic expectations for trait filtering of self-incompatibility on islands**
Jeremiah Busch, Nathan Layman
- 8:50 Inbreeding depression and polyploidy as a genetic island**
Nathan Layman, Jeremiah Busch
- 8:55 How to make an apomict: Asymmetrical crossing success between *Boechera* species**
Catherine Rushworth, Tom Mitchell-Olds
- 9:00 Chromosome gone wild: centromeric drive in *Mimulus***
Lila Fishman, Findley Finseth
- 9:15 The evolution of biparental organelle inheritance: a rescue mechanism for cytonuclear incompatibility?**
Karen Barnard-Kubow, Laura Galloway
- 9:20 Attack of the Clones - Asymmetrical reproductive interference in the *Crepis* agamic complex**
Evan Hersh, Jaime Grimm, Jeannette Whitton
- 9:25 The effects of haploid selection on plant Y chromosome evolution**
Georgy Sandler
- 9:30 How the mode of genetic transmission impacts introgression**
Yaniv Brandvain

Session Tue1-Ball204 Mutualism

Tuesday - 8:30 - 9:45 **Room Oregon ballroom 204**

- 8:30 Ecological context influences mutualism abandonment in the mycorrhizal symbiosis**
Hafiz Maherali, Brad Oberle, Gijsbert Werner, Daniel McGlinn, Kabir Peay, Dylan Schwilk

- 8:45 Population genomics of cryptic species in Caribbean Panama supports habitat specialization by symbiotic sea anemones**
Emily Bellis, Dee Denver
- 9:00 The enemy of my enemy is my friend: nematode infection of non-pollinating fig wasp antagonists and the consequences for the fig-fig wasp pollination mutualism**
Justin Van Goor, John Nason
- 9:15 The evolution of obligate endosymbiosis across the insects**
LEE HENRY, Anouk van't Padje, Toby Kiers, Ellers Jacintha
- 9:30 Host-derived resources may support long-term saprophytic survival of dormant rhizobia**
Katherine Muller, Ford Denison

Session Tue1-C120-122 Plant reproductive biology

Tuesday - 8:30 - 9:45 Room C120-122

- 8:30 Genomic journeys of a strawberry sex locus**
Jacob Tennesen, Na Wei, Shannon Straub, Rajanikanth Govindarajulu, Aaron Liston, Tia-Lynn Ashman
- 8:45 The ecological consequences of pollen color variation in trout lily (*Erythronium americanum*)**
Emily Austen, Shang-Yao Lin, Jessica Forrest
- 9:00 Environmental influences on the mating system of the common morning glory**
Diego Alvarado-Serrano, Shu-Mei Chang, Regina Baucom
- 9:15 The effective pollinators of *Silene vulgaris* do not respond to variation in sex ratio**
Brian Sanderson
- 9:30 Phenotypic selection on floral traits by three bee species**
Johanne Brunet, Austin Bauer

Session Tue1-C123 Species interactions

Tuesday - 8:30 - 9:45 Room C123

- 8:30 Character displacement in evolutionary-novel *Anolis* lizards**
James T. Stroud, Kenneth Feeley
- 8:45 Microbes, lagomorphs, & the geographic range limit of a California endemic wildflower**
John Benning, David Moeller
- 9:00 Does competition between the Dominican native *Anolis oculatus* and the invasive *Anolis cristatellus* drive changes in ecological, agonistic and reproductive traits?**
Claire Dufour, Anthony Herrel, Jonathan Losos
- 9:15 Phylogenetic approaches to studying behavioral interference shed light on interspecific territoriality in North American passerines**
Jonathan Drury, Madeline Cowen, Greg Grether
- 9:30 Domestication & Evolution of Eudicot defenses against a generalist fungal pathogen**
Celine Caseys, Nicole Soltis, Gongjun Shi, Daniel Kliebenstein

Session Tue1-C124 Molecular evolution 1

Tuesday - 8:30 - 9:45 Room C124

- 8:30 Conserved rates of molecular evolution among duplicate gene copies after whole genome duplication**
George Tiley, J. Gordon Burleigh
- 8:45 Nitrogen conservation pervades the transcriptional response to nitrogen starvation in yeast**
Claudia Acquisti
- 9:00 Population genomics of *Anolis carolinensis* transposable elements: insertion polymorphisms are abundant but rarely approach fixation**
Robert Ruggiero, Yann Bourgeois, Stephane Boissinot
- 9:15 Selective pressures on the fidelity of transcription.**
Jean-Francois Gout, Weiyl Li, Michael Lynch, Marc Vermulst

9:30 Strong and widespread action of site-specific positive selection in the snake venom Kunitz/BPTI protein family
Dusan Kordis

Session ASN Executive council exit meeting
Tuesday - 8:30 - 10:15 **Room C126**

Session SSB Executive council exit meeting
Tuesday - 8:30 - 10:15 **Room B110**

Session Coffee break
Tuesday - 9:45 - 10:15 **Room Exhibit Hall A**

Session Tue2-A105 Phylogenetic comparative methods 3
Tuesday - 10:15 - 11:30 **Room A105**

10:15 Deriving the appropriate protein substitution matrix to describe the single-stranded DNA virus tree of "life"

Lele Zhao, Erik Lavington, Siobain Duffy

10:30 Macroevolutionary analysis of discrete character evolution using BAMM

Michael Grundler, Daniel Rabosky

10:45 Some problems with model-fitting and model-selection in the analysis of discrete character evolution using likelihood

Klaus Schliep, Liam Revell

11:00 The impact of conflicting signal in protein structural classes on phylogenetic inference

Akanksha Pandey, Ed Braun

11:15 Scalable approximate inference for the phylogenetic threshold model

Nathaniel Pope, Eric Goolsby

Session Tue2-A106 Bioinformatics / genomics
Tuesday - 10:15 - 11:30 **Room A106**

10:15 Genome assembly strategies for outbred non-model organisms

James Lewis, Charles Danko, Robert Reed

10:30 Influence of reproductive mode on genome architecture in a freshwater snail

Jorge Moreno, Kyle McElroy, Maurine Neiman

10:45 Gene duplications associated with phytochemistry in Cannabis sativa

Daniela Vergara, Ezra Huscher, Kyle Keepers, Reggie Gaudino, Nolan Kane

11:00 The evolution of LTR retrotransposons in the genomes of two heterosporous ferns

Mathew Simenc, Koppers Nils, Alex Harkess, Aleksandra Berick, Shifeng Cheng, Gane Wong, Brautigam Andrea, Henriette Schluepmann, Kathleen Pryer, Paul Wolf, Fay-Wei Li, Joshua Der

11:15 Leveraging transcriptomic data to study regulatory motif evolution in Drosophila species

Joel Atallah, Ahmad Karkoutli, Colin Shew, Susan Lott

Session Tue2-A107-109 Comparative biology 2
Tuesday - 10:15 - 11:30 **Room A107-109**

10:15 Physiological and transcriptional responses to drought stress and recovery in grasses

Fan Qiu, Seton Bachle, Ryan Estes, Jesse Nippert, Mark Ungerer

- 10:30 Reinventing the limpet: Shell patterning and experimental morphology of a slipper-shell snail**
Darcy Ross
- 10:45 Placental invasiveness and Eutherian mammal diversification**
Andrew Furness, Mark Springer, William Freyman, Sebastian Hoehna
- 11:00 An evolutionary framework for dissecting and understanding regenerative intestine growth in snakes**
Blair Perry, Audra Andrew, Daren Card, Drew Schield, Giulia Irene Maria Pasquesi, Abu Hena Mostafa Kamal, Robert Ruggiero, Saiful Chowdhury, Stephen Secor, Todd Castoe
- 11:15 The genetic factors of bilaterian evolution.**
Peter Heger, Wen Zheng, Maria Thieser, Anna Schlizio, Thomas Wiehe

Session Tue2-B111-112 Microbes 2

Tuesday - 10:15 - 11:30 **Room B111-112**

- 10:15 Avian influenza virus and the cloacal microbiome of wild avian hosts**
Sarah Hird
- 10:30 The bite of the finch: Gut microbiome sequencing of Darwin's Finches reflects divergence of vampire finches**
Jaime Chaves
- 10:45 Determining the impact of metabolic role in symbiont genome decay in Adelgidae (Insecta: Hemiptera)**
Kathryn Weglarz, Gaelen Burke, Carol von Dohlen
- 11:00 Examining the role of maternal microbes in the insect immune response: *Lycaeides melissa* as a model for wild immunology**
Su'ad Yoon, Josh Harrison, Matthew Forister, Angela Smilanich
- 11:15 Bacterial communities associated with butterflies and their effect on butterfly fitness**
Kruttika Phalnikar, Deepa Agashe, Krushnamegh Kunte

Session Tue2-B113 Adaptation / life history

Tuesday - 10:15 - 11:30 **Room B113**

- 10:15 Effects of diadromous life histories on genetic diversity and population structure in fishes.**
Joel Corush, Evin Carter, Ben Fitzpatrick
- 10:30 Predation risk, body condition and immunity: Life history-related resource allocation in a dragonfly**
Rosalind Murray, Locke Rowe, Shannon McCauley
- 10:45 Updated Phylogeny and Ancestral State Reconstruction of Brooding in Crinoids**
Kathleen Torrence, Valeska Stamatti, Scott Steppan
- 11:00 Evolution of emergence strategies in a dynamic climate**
Collin Edwards, Louie Yang
- 11:15 Collective dispersal leads to variance in fitness and maintains offspring size variation**
Scott Burgess, Robin Snyder

Session Tue2-B114-115 Molecular ecology

Tuesday - 10:15 - 11:30 **Room B114-115**

- 10:15 The evolutionary history of Madagascar's dwarf lemurs**
Rachel Williams, Marina Blanco, Sheena Faherty, C. Ryan Campbell, Kelsie Hunnicutt, Peter Larsen, Anne Yoder
- 10:30 Population genomics of lodgepole and jack pines assessed with >20k SNPs**
Rhiannon Peery, Catherine Cullingham, Kate St. Onge, Janice Cooke, David Coltman
- 10:45 Genomic insights into the evolutionary history of the taxonomically controversial Northwestern Crow (*Corvus caurinus*)**
David Slager, Kevin Epperly, Renee Ha, Sievert Rohwer, Caroline Van Hemert, John Klicka
- 11:00 It's about time: Insights into temporal genetic patterns from biodiversity indices**
Matthew Iacchei, Elizabeth Butcher, Elan Portner, Erica Goetze

11:15 Phycodnavirus phylodynamic diversity across Pacific Northwest Cascadian lakes
Michael Zanis, Carolyn Stenbak, Lindsay Whitlow

Session Tue2-B116 Gene flow / hybridization

Tuesday - 10:15 - 11:30 **Room B116**

- 10:15 Genomic insights to diversification and speciation using hybrid zones of widespread Australian geckos (*Heteronotia binoei*)**
James Titus-McQuillan
- 10:30 The effects of admixture on deleterious genetic variation**
Bernard Kim, Jacqueline Robinson, Kirk Lohmueller
- 10:45 Detecting hybridization using phylogenetic invariants**
Paul Blischak, Julia Chifman, Andrea Wolfe, Laura Kubatko
- 11:00 Revisiting a wild perennial sunflower hybrid swarm**
Adam Herman, Jill Ekar, Mikey Kantar, Robert Stupar, Yaniv Brandvain
- 11:15 Divergence and introgression between closely-related spiny lizard (*Sceloporus*) species**
Shea Lambert

Session Tue2-B117-119 Adaptation / evolutionary ecology 2

Tuesday - 10:15 - 11:30 **Room B117-119**

- 10:15 Peeing Poison: The biochemistry of bamboo lemur cyanide survival**
M. Elise Lauterbur, Lydia Tongasoa, Jeremy Peralta, Marta Concheiro-Guisan
- 10:30 From sex pheromones to nestmate recognition: Deciphering evolutionarily conserved signaling properties of cuticular hydrocarbons**
Jan Buellesbach, Thomas Schmitt, Jürgen Gadau, Neil Tsutsui
- 10:45 A widespread salamander does not show predicted morph frequency shifts despite 40 years of climate change**
Annette Evans, Brenna Forester, Elizabeth Jockusch, Mark Urban
- 11:00 Response to drought in an assemblage of stream fishes: general predictors or species-specific responses?**
Mark Belk, Richard Simkins, R. Cary Tuckfield
- 11:15 Acclimation, body size, and thermal tolerance in a freshwater invertebrate**
Brooks Miner, Gabriella Ampem-Darko, Kathryn Dubyk

Session Tue2-Ball202 Mutation 2

Tuesday - 10:15 - 11:30 **Room Oregon ballroom 202**

- 10:15 Copy-Number Changes Under Varying Intensities of Selection During Mutation Accumulation and Fitness Recovery in *C. elegans* Experimental Evolution Lines**
Vaishali Katju, Anke Konrad, Ulfar Bergthorsson
- 10:30 rDNA Copy Number Loss in Mutation Accumulation Lines of *Daphnia pulex***
Eleanor Harvey, Melania Cristescu, Teresa Crease
- 10:45 *Cryptosporidium parvum* lactate dehydrogenase: a blacksheep in the Apicomplexa family**
Jacob Wirth
- 11:00 Evolution of the substitution gradient in ratsnake mt genomes**
Carolyn Sy, Frank Burbrink, Marcelo Gehara
- 11:15 Evaluation of epistatic interactions reveals possible functional constraints in the evolution of TTX-resistant sodium channels in garter snakes.**
Gabriela Toledo, Butch Brodie, Charles Hanifin, Shana Geffeney

Session Tue2-Ball203 SSE Spotlight - Sex in the wild

Tuesday - 10:15 - 11:30 **Room Oregon ballroom 203**

- 10:15 Keeping up with pathogens for fifty million years without sex: ecological and evolutionary insights from bdelloid rotifers**
Christopher Wilson, Antonios Kriezis, Joshua Potter, Timothy Penny, Cuong Tang, Sophie Gresham, Nicholas Tew, John Paterson, Tabassum Mujtaba, Isobel Eyres, Reuben Nowell, Constantinos Xenophontos, Tim Barraclough
- 10:30 Secondary contact and rare sex between distant lineages of the amphibian-killing chytrid fungus**
Thomas Jenkinson, Kelly Zamudio, Felipe Toledo, Timothy James
- 10:35 Sexual conflict and the maintenance of sex in facultative parthenogens**
Mercedes Burns
- 10:40 Sperm dependence limits niche expansion in unisexual salamanders of varying ploidy**
Robert Denton, Lisle Gibbs, James Bogart
- 10:45 Ecological differences and reproductive interactions between sexuals and their related apomicts in the sunflower family**
Jeannette Whitton
- 11:00 Macroevolutionary dynamics of flowering plant sexual systems**
Emma Goldberg
- 11:05 Mutation accumulation in an asexual plant**
John Lovell, Robert Williamson, Stephen Wright, Tim Sharbel
- 11:10 Balancing selection maintains sex/asex polymorphism in natural plant populations**
Catherine Rushworth, Tom Mitchell-Olds
- 11:15 Doing research in the wild: Why does it matter?**
Stephanie Meirmans

Session Tue2-Ball204 Mutualism / evolutionary ecology

Tuesday - 10:15 - 11:30 Room Oregon ballroom 204

- 10:15 Establishment of a novel symbiosis in a nematode-bacterium model through experimental evolution**
Kim Hoang, Nicole Gerardo, Levi Morran
- 10:30 Evolution of a Microbial Symbiont While Outside its Native Animal Host Diminishes the Negative Correlation Between Two Traits, Promotes Host Range Expansion, and Improves Host Colonization**
WILLIAM SOTO, Michael Travisano, Michele Nishiguchi
- 10:45 Select and re-sequence reveals fitness tradeoffs and loci underlying symbiotic and free-living fitness in a legume-rhizobium mutualism**
Liana Burghardt, Brendan Epstein, Joseph Guhlin, Matt Nelson, Margaret Taylor, Nevin Young, Michael Sadowsky, Peter Tiffin
- 11:00 Natural selection in a declining mutualism: How nitrogen addition causes the evolution of less cooperative rhizobia.**
Jennifer Lau, Dylan Weese, Katy Heath
- 11:15 Molecular dynamics of a nascent microbial mutualism**
Yee Mey Seah, Kristina Hillesland

Session Tue2-C120-122 Pollination

Tuesday - 10:15 - 11:30 Room C120-122

- 10:15 The early flower attracts the bee: consequences and mechanisms of phenological isolation in plants**
Jennifer Ison, Leah Prescott, Amy Waananen, Scott Nordstrom, Stuart Wagenius
- 10:30 The influence of distinct pollinators on male and female reproductive success in alfalfa.**
Emmanuel Santa-Martinez, Johanne Brunet
- 10:45 Drought effects on floral traits and their heritabilities in Phlox drummondii**
Sevan Suni, Ben Ainsworth, Robin Hopkins
- 11:00 The adaptive function of heterostyly investigated with quantum dots**
Marinus de Jager, Corneille Minnaar, Bruce Anderson
- 11:15 A meta-analysis of the causes of natural selection on floral traits**
Christina Caruso, Katherine Eisen, Ryan Martin, Nina Sletvold

Session Tue2-C123 Geographic variation
Tuesday - 10:15 - 11:30 **Room C123**

- 10:15 Selection across a light level spectrum explains the maintenance and spatial structure of colour morphs in a polymorphic bird**
Jacqueline Bishop
- 10:30 Evolution in continuous space using SLiM 2 models**
Benjamin Haller, Philipp Messer
- 10:45 Patterns of clinal variation in populations of *Drosophila simulans* from North and Central America**
Alisa Sedghifar, Julie Cridland, Perot Saelao, David Begun
- 11:00 Macroecology of benthic hydroids (Cnidaria) in the deep Atlantic Ocean**
Marina Fernandez, Antonio Marques
- 11:15 Species' range shifts drive the evolution of spatial difference in phenotypic plasticity and environmental tolerance**
Max Schmid, Ramon Dallo, Frédéric Guillaume

Session Tue2-C124 Molecular evolution 2
Tuesday - 10:15 - 11:30 **Room C124**

- 10:15 Using recursive dynamic Markov clustering (RD-MCL) for fine-grained classification of orthogroups**
Stephen Bond, Andy Baxevanis
- 10:30 Co-option of an ancient metabolic sensor in the evolution of polyphenism regulation in nematodes**
Joana Projecto Garcia, Erik Ragsdale
- 10:45 New molecular clocks for Arctic and tropical marine invertebrates**
Tzitziki Loeza-Quintana, Yash Bhatt, Christina Carr, Tooba Khan, Samantha Lyon, Sarah J. Adamowicz
- 11:00 Evolution of toxin resistance in avian sodium channels**
Angela Hornsby
- 11:15 Asian Ranid species possessing gastromyzophorous tadpoles (Amphibia, Anura): their phylogeny and biodiversity**
Umilaela Arifin, Stefan Hertwig, Eric Smith, Djoko Iskandar, Alexander Haas

Session Lunch
Tuesday - 11:30 - 13:30 **Room On the town**

Session Tue3-Ball202 Young Investigator / Dobzhansky Awards symposium 1
Tuesday - 13:30 - 14:45 **Room Oregon ballroom 202-204**

ASN Jasper Loftus-Hills Young Investigators Award

The Jasper Loftus-Hills Young Investigators Award was established in 1984 to recognize outstanding and promising work by investigators who received their doctorates in the three years preceding the application deadline or who are in their final year of graduate school. Jasper Loftus-Hills (1946-1974) was an Australian biologist of exceptional promise, whose career was cut short just three years after receiving his degree when he was killed by a hit-and-run driver while tape-recording frog calls along a Texas highway. The award includes presentation of a research paper at the annual meeting of the American Society of Naturalists, an award of \$500, a travel allowance of \$700, the cost of registration at the meetings, and a supplement of \$500 in case of intercontinental travel.

The 2017 winners are: Sarah Fitzpatrick, Anna Hargreaves, Martha Muñoz, and Alison Wright.

- 13:30 Young Investigator Prize announcement**
Kathleen Donohue
- 13:45 Linking evolution & demography through genetic rescue of small populations**
Sarah Fitzpatrick

14:15 Dynamics at the edge: species interactions vs. species distributions
Anna Hargreaves

Session Coffee break
Tuesday - 14:45 - 15:15 **Room Exhibit Hall A**

Session Tue4-Ball202 Young Investigator / Dobzhansky
Awards symposium 2
Tuesday - 15:15 - 16:45 **Room Oregon ballroom 202-204**

ASN Jasper Loftus-Hills Young Investigators Award

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The 2017 winners are: Sarah Fitzpatrick, Anna Hargreaves, Martha Muñoz, and Alison Wright.

SSE Theodosius Dobzhansky Prize

The Theodosius Dobzhansky Prize is awarded annually by the Society for the Study of Evolution to recognize the accomplishments and future promise of an outstanding young evolutionary biologist. The prize was established in memory of Professor Dobzhansky by his friends and colleagues, and reflects his lifelong commitment to fostering the research careers of young scientists.

The 2017 winner is Molly Schumer, *Harvard University*.

15:15 Janzen's Hypothesis Meets the Bogert Effect: A Synthesis Nearly 100 Years in the Making
Martha Munoz

15:45 Routes to the resolution of sexual conflict
Alison Wright

16:15 Dobzhansky prize announcement
Cynthia Weinig

16:25 Hybridization shapes the evolution of genomes and species: insights from swordtail fish
Molly Schumer

Session Super Social
Tuesday - 18:30 - 23:59 **Room Oregon Zoo**

The conference-ending Super Social will be held at an indoor/outdoor venue at the [Oregon Zoo](#) starting at 6:30 pm. Dinner is provided and a DJ for dancing will be available later in the evening. The zoo is located at 4001 SW Canyon Rd and is accessible via the MAX light rail using your free conference pass. From the Convention Center, take the Blue or Red line westbound and get off at Washington Park Station (the only one that is underground). Take the elevator at the east end of the platform. The train ride takes approximately 25 min.

Advance online ticket purchase is required for the Super Social. Tickets will NOT be available for purchase during the conference or at the zoo. Lost tickets will not be replaced. Your ticket will also get you entrance to the zoo any time during the day on Tuesday, should you want to visit earlier.

Session American Institute of Biological Sciences workshop:
Informing and Engaging Decision-makers
Wednesday - 9:00 - 17:00 **Room B110**

The is an optional post-conference event. Prior application was required (during conference registration). Lunch is 'own your own' and is not included in registration cost.

Sponsor: SSE

Organizer: [Janette Boughman](#) (Michigan State U.)

Topic: Rarely has the need for effective and influential communication about science been more important than it is today. Politicians and political interests are redefining and reinterpreting science—with great persistence and impact. The majority of the public still respect scientists and value science, but they often find it challenging to discern who and what is legitimate.

Simply adding to the noise will not provide individuals with the understanding they need to inform deliberations and decisions. Scientists must become more skilled at communicating with policymakers in impactful ways.

The [American Institute of Biological Sciences](#) (AIBS) will deliver this program. AIBS has a long and successful track record of engaging, informing, and influencing the public and science policy decision-makers. Audiences AIBS routinely work with include members of Congress, federal agency heads and program managers, state officials, and university administrators. AIBS has played important roles, for example, in helping to defeat state-level initiatives to introduce creationism into state curricula. AIBS has also been a leader in national efforts that have led to new federal investments in biology.

Participants will learn:

- How to tell a resonant story that informs decision-makers
- How to prepare for and engage in a meeting with a decision-maker
- How to protect your scientific reputation
- How to identify and define the audience you need to reach
- What policymakers want and need to know from a scientist