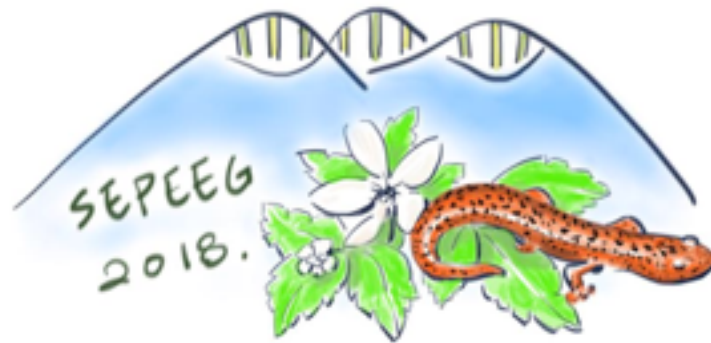
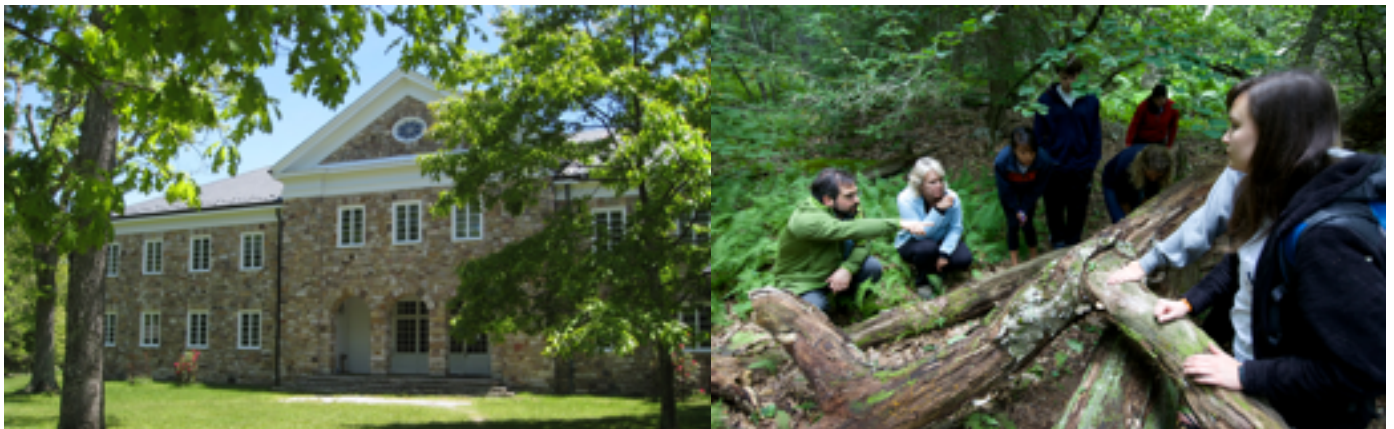


# SouthEaStern POpulation EColoGy and Evolutionary GEnetics (SEPEEG)



October 5-7th, 2018  
Mountain Lake Biological Station, VA



Hosted by:



**WILLIAM & MARY**  
CHARTERED 1693



Generous Support from:



SouthEastern Population Ecology and Evolutionary Genetics (SEPEEG)

**Friday (10/5)**

- 7:00-8:00 Opening reception and Social  
8:00-9:00 **Opening seminar, Butch Brodie, UVA**  
9:00-onwards Campfire/Social

**Saturday (10/6)**

- 7:30-8:30 Breakfast  
8:45-9:00 Gather in Lewis auditorium for opening remarks  
9:00-10:15 **Four 15 minute talks, three lightning talks**  
9:00-9:15 Fossorial adaptations in caecilian amphibians: insights from molecular evolution  
(Maria Torres)  
9:15-9:30 Genome evolution following Whole-Genome Duplications in paramecium.(Jean-Francois Gout)  
9:30-9:45 Losing sweetness: insights into reduced nectar in the selfing syndrome (Irene Liao)  
9:45-10:00 Transcriptomic analysis of variation in a life history trade-off in response to diet  
(Patricia Moore)  
  
10:00-10:05 The Effect of Resource Dispersion on Social Interactions (Robin Costello)  
10:05-10:10 Specialization of the parasite *Serratia marcescens* in genetically heterogeneous  
populations of *Caenorhabditis elegans* hosts (Signe White)  
  
10:15-10:45 Coffee break  
10:45-11:55 **Four 15 minute talks, three lightning talks**  
10:45-11:00 Does an invasive orbweaver spider exhibit behavioral spatial sorting across its  
introduced range? (Angela Chuang)  
11:00-11:15 Genome-wide discovery of epistatic loci affecting antibiotic resistance using  
evolutionary couplings (Rohan Maddamsetti)  
11:15-11:30 Prezygotic reproductive isolation in sympatric *Mimulus* (Samuel Mantel)  
11:30-11:45 Repeatability of intrasexual behavior in forked fungus beetles (Liza Mitchem)  
  
11:45-11:50 Fitness Costs in a Moving Hybrid Tension Zone (Robert Driver)  
11:50-11:55 Reproductive isolation and gene flow vary among contact zones between  
incipient species (Catherine Debban)  
  
12:00-2:30 Lunch then free time for hikes, volleyball, etc.  
\*\*During lunch break please hang posters for evening poster session  
2:30-3:30 **Samantha Price, Emerging Leader seminar**  
**“What regulates vertebrate biodiversity?”**  
3:30-4:00 Coffee break

**4:00-5:15 Four 15 minute talks, four lightning talks**

4:00-4:15 Seasonal adaptation in *Drosophila* (Alan Bergland)

4:15-4:30 Limited plasticity constrains the mating system (Matthew Koski)

4:30-4:45 Using Fisher's geometric model to understand how to manipulate the microbiome (Corbin Jones)

4:45-5:00 Establishing a novel symbiosis using a nematode-bacterium model through experimental evolution (Kim Hoang)

5:00-5:05 Genetics and evolution of ovarian diapause and overwintering in *Drosophila melanogaster* (Priscilla Erickson)

5:05-5:10 Analyzing spatial genetic structure of an alpine endemic plant *Mimulus tilingii* (Rachel Lantz)

5:10-5:15 Reciprocal differences in hybrid seed lethality between populations of the *Mimulus tilingii* species complex (Gabrielle Sandstedt)

**5:30-7:00 Poster session and Social**

7:00-8:00 Dinner

8:00-9:00 **Keynote Address, Janis Antonovics**

**“The ecological genetics of disease transmission”**

9:00-onward Campfire/social

**Sunday (10/7)**

7:30-8:30 Breakfast

**8:45-10:00 Four 15 minute talks, three lightning talks**

8:45-8:50 Toxin production and competitive dynamics in multi-strain *Saccharomyces cerevisiae* communities (Meredith Andersen)

8:50-8:55 The ghost of temperature past: effect of previous and current thermal conditions on gene expression in *Manduca sexta* (Meggan Alston)

8:55-9:00 Morning glory crossing story: the evolution of intrinsic reproductive isolation between closely related *Ipomoea* species (Kate Ostevik)

8:45-9:00 Evolution of meiotic sex chromosome inactivation in threespine stickleback fish (Daniel Shaw)

9:00-9:15 Extreme variation in germline RNAi in *C. elegans* (Annalise Paaby)

9:15-9:30 Homogenizing effects of gene flow shape geographic patterns of coevolution in predator-prey arms race (Michael Hague)

9:30-9:45 Recombination rate varies within and between natural populations of *Drosophila pseudoobscura* (Kieran Samuk)

10:00-10:30 Coffee break

**10:30-11:45 Five 15 minute talks**

10:30-10:45 The evolution of age-specific resistance: Theory and data from anther-smut disease on wild carnations (Emily Bruns)

10:45-11:00 Genotypic variation in the inducibility and stability of parental effects (Mariano Alvarez)

11:00-11:15 Population genomics of the geographically variable *Acacia drepanolobium*  
ant-plant mutualism (John Boyle)

11:00-11:30 Molecular evolution of the voltage-gated sodium channel gene family and putative  
toxin resistance in birds (Angela Hornsby)

11:30-11:45 Predation induced adaptation in *Daphnia* (Dörthe Becker)

12:00-1:00     Box lunch and awards

1:00            Leave

# Posters

## **Estimating Cryptic Diversity in Salamanders**

Tara A Pelletier

## **Highly Virulent Coevolving Parasites Favor the Maintenance of Obligate Outcrossing in Populations of *C. elegans***

Jae Hoon Cho Arooj Khalid Sathvik Namburar McKenna Penley Samuel Slowinski Levi Morran

## **Molecular Evolution of the Recombination Pathway in Mammals**

Amy L. Dapper & Bret A. Payseur

## **The genetic basis of complex petal pigment patterns in *Mimulus* hybrids**

Caroline Schlutius, Cici Zheng, Joshua Puzey

## **Association studies in genomes reconstructed from ultra-low coverage sequence data: the Hybrid Swarm Mapping Population**

Cory A. Weller, Priscilla A. Erickson, Alan O. Bergland

## **Connecting Demography and Phenology to Understand the Dormancy Polymorphism**

Brandie Quarles

## **Evaluating pathways of horizontal transmission of a microbial insect mutualist**

Kayla Stoy, Levi Morran, Nicole Gerardo

## **Evolutionary characterization of the voltage-gated sodium channel gene family**

Kerry Gendreau, Angela Hornsby, Joel McGlothlin

## **Global DNA cytosine methylation variation in *Spartina alterniflora* at North Inlet, SC.**

Trenton Agrelius, James T. Morris, Jeffery L. Dudycha

## **Hill-Robertson Interference and the Cost of Males**

Jordan Lewis, McKenna Penley, Levi Morran

## **Polarity Establishment through par genes: A model to study the complexity of genotype-phenotype relationship**

Samiksha Kaul, Annalise Paaby

## **Seasonal Selection across a Fine Temporal Timescale**

Alyssa Bangerter, Alan Bergland

## **The Evolution of Sex-Specific Recombination Rates through Changes in Chromatin Structure**

Alice F. Shanfelter, Ryan Musich, Michael A. White

**The Nasty Neighbor: Linking *Dictyostelium discoideum* mix performance to geography**

Louis Bubrig

**Making the best of both worlds: the evolutionary dynamics of a model cyclic parthenogen across space and time.**

Karen Barnard-Kubow, Dörthe Becker, Andrew Beckerman, Alan Bergland

**The genetic basis of host range in the mycoparasite *Escovopsis***

Caitlin E. Conn, Hassan S. Salem, Abraham J. Moller, Nicole M. Gerardo

**Fine-scale spatial structure of genetic, functional, and demographic traits within a population of *Asclepias syriaca***

Angela Ricono, Erin Eichenberger, Hannah Call, Katie Stahl, Joshua Puzey

**An Exploration of Overwintering and Cold Tolerance in *Drosophila Melanogaster* Using Seasonal and Thermosensory Approaches**

Helen Stone, Priscilla Erickson, Alan Bergland

**Fitness effects of DNA Methyltransferase 1 knockdown in female milkweed bugs, *Oncopeltus fasciatus***

Zachary Sanchez, Bob Schmitz, Elizabeth McKinney, Patricia J. Moore

**Integrating Genomic, Mitochondrial, and Morphological Datasets to Examine Species Boundaries in Seepage Salamanders (*Desmognathus aeneus*)**

Henri Vega-Bernal, Tyquan Shamir Smiths, David A. Beamer

**Investigating the Evolutionary Differences Between Host Tolerance and Resistance to Parasites**

Rishika Pandey, Manraj Singh, Levi Morran

**Methylation repatterning in the endosperm of interploid *Mimulus* hybrids**

Amelia Lawrence, Taliesin Kinser, Joshua Puzey

**Mitochondrial and Genomic Data Set Resolve Congruent Topologies in *Pseudotriton* and *Gyrinophilus***

Jessica Trueblood, Haley Honeycutt, Dave A. Beamer

**Something Scummy: An Investigation of Chlorophyll as an Algal Biomass Indicator**

Anne Marie Saunders

**The Continuous Invasion of Wavyleaf Basketgrass (*Oplismenus undulatifolius*)**

Elizabeth Lopez-Lopez, Jane Cleland

**The Genetics of Parallel Evolution of Hybrid Male Sterility in *Mimulus***

Andrea Sotelo, Sam Mantel, and Andrea Sweigart

**Wolbachia and its effect on reproductive phenotypes in a novel *Drosophila* host**

Rachel Keener, Paul Ginsberg, and Kelly Dyer

**Reinforcement as a Mode of Speciation in Macaques**

Taylor Papstein-Novak

**Effects on Gene Expression of Spontaneous Aneuploidy in Yeast Mutation Accumulation Lines**

Holly McQueary

***Plethodon meridianus*: Looking Outside the Park**

Babineau

**Effects of evolutionary pressure on competition between prion conformers  
in a yeast reporter system**

Matthew Dungan

**Introduction of a fly transposon to native populations of budding yeast**

Ashley Shultz

**Origin of an adaptive epigenetic trait in experimental budding yeast populations**

Aspen Cuff

**Molecular Evolution of the DNA Methyltransferase Gene Family in Vertebrates**

Karen Bobier

**Killer toxins, social interactions, and mat biofilm formation in yeast**

Alec Friedman and Helen Murphy

**The Genetic Basis Underlying the Transition of Commensal Microbes to Opportunistic Pathogens**

Maliha Ahmad, Despina Mason, and Helen Murphy

**Evolution of Plastic Adherence in Experimental Populations of Yeast**

Juliana Salcedo, Despina Mason, Alec Friedman, Sophie Harris and Helen Murphy

**The Genetic Architecture of Plastic Adherence in Yeast**

Sophie Harris, Brianna Meeks, and Helen Murphy

**Effects of evolutionary pressure on competition between prion conformers in a yeast reporter system**

Matthew Dungan, Meadow Parrish, and Helen Murphy