



Lehigh Valley Ecology & Evolution Symposium 2022

Saturday, April 23, 2022

Schedule

- 8:45-9:00 *Opening & welcome*
Amber Rice, Ph.D., Lehigh University
- 9:00-10:05 Session 1
- 9:00 The Role of Secondary Acoustic Cues in Sea-finding by Green (Chelonia mydas), Hawksbill (Eretmochelys imbricata), and Leatherback (Dermochelys coriacea) Sea Turtles
Bethany Holtz, St. Joseph's University
- 9:12 Endosymbiont strategic shifts inhibit cooperation during coral bleaching recovery
Luella Allen-Walker, Graduate Student, University of Pennsylvania
- 9:24 Characterization of Phytoplankton and Bacterioplankton Communities in the Eutrophic Raritan Bay
Austin Best, Lafayette College
- 9:36 Leaf size-number trade-off and its ecological consequences in a hyperdiverse Amazonian forest
Marcel Caritá Vaz, Ph.D., Wilkes University
- Lightning round talks
- 9:48 Leveraging differences in multiple prey traits allows selective copepods to meet their threshold elemental ratios
Emily Herstoff, Ph.D., St. Francis College

- 9:53 Atrazine and amphibians: Atrazine's impacts on neurodevelopment and behavior in an anuran model
Janniry Cabrera Belen, Moravian University
- 9:58 8-min Lightning Round Questions
- 10:05-10:20 *Break*
- 10:20-11:20 Session 2
- 10:20 Developmental Exposure to Ecologically Relevant Levels of a Carbamate Pesticide Causes Changes in Brain Structure in Amphibians
Delanie Crabtree, Moravian University
- 10:32 Cover Crops in a Changing Climate: Can Mixtures Reduce Water Stress
Nhu Truong, Dickinson College
- 10:44 Attachment variation in the carrier shells *Xenophora conchyliophora* and *Onustus caribaeus*
Liam O'Donnell, Graduating Senior, Widener University
- 10:56 Effect of road proximity and habitat fragmentation on the dispersal and genetic diversity of the Wood Frog (*Rana sylvatica*) in natural and created vernal pools
Emily Wilson, Graduating Senior, Lafayette College
- 11:08 Mapping genetic variation that contributes to complex traits
Dimitra Aggeli, Ph.D., Lehigh University
- 11:20-11:35 *Break*
- 11:35-12:20 *Poster Session I (odd-numbered posters)*
- 12:20-1:10 *Poster Session II (even-numbered posters)*
- 1:10-1:20 *Closing remarks & prize announcements*

Questions:

Amber M. Rice, Ph.D. (Pronouns: she, her, hers)

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Poster presentations

Posters 1-11 in 'Ecology'

Posters 12-22 in 'Evolution'

#1 Assessing hybrid chickadee cognitive impairment in the wild

Shane A. McFoy, Michael D. Rowley, Dovid A. Kozlovsky, Breanna L. Bennett, Eli S. Bridge, Brittany A. Coppinger, Robert L. Curry
Villanova University

#2 Bird olfaction: effects of ecological odors on the behavior of three songbird species

Paul Heveran, Evan Ritter, Austin Dotta, Caitlin McNamara, Dr. Alex Van Huynh
DeSales University

#3 Planarian Regeneration in Water Contaminated with Environmentally Realistic Concentrations of an Organophosphorus Pesticide

Joelis Rodríguez Santos
Moravian University

#4 Microbial Bio-Solubilization for Enhanced Phosphorus Recovery from Wastewater Biosolids

Kaelyn Gormley, John Rybnik, Shane McCarthy
Lafayette College

#5 Past and Present Species Distribution Models for *Vonones sayi* and *Vonones ornatus*

Samuel Does, Daniel Proud
Moravian University

#6 Relating Gut Microbiome Diversity to Cognition in Hybridizing Chickadees

Austin Russell, Amber Rice
Lehigh University

#7 Species delimitation within *Nuncia chilensis* complex (Arachnida, Opiliones)

Luana Rebello, Daniel Proud
Moravian University

#8 The Behavioral Differences Between Red-Backed Salamanders When Exposed to Different Temperatures

Rosella Cuomo and Gabriel Jimenez
Ursinus College

#9 The combined effect of reduced salinity and increased temperature on the coral *Astrangia poculata*

Julia Rakowsky, Kayla Cayemitte, Nicholas Galbraith, Gaby Pundos, Yohanna Snyder, Dr. Kate Goddard
Ursinus College

#10 The effects of leaf litter depth on Oriental bittersweet (*Celastrus orbiculatus*)

Theresa A. Bui and Amy E. Faivre
Cedar Crest College

#11 Tritrophic interactions with avian predators: the effect of host plant species and herbivore-induced plant volatiles on recruiting avian predators
Mercille Nguyen, Caitlin McNamara, Catherine McGrath, Alex Van Huynh
DeSales University

#12 Does the relative size of potential mates affect the mate search process in female convict cichlids?
Nicole Barbera, Joseph Leese
DeSales University

#13 Genome Evolution in Cephalotes Gut Symbionts
Daniel Freeman, Christian Cabuslay, Jawhara Karam, Jacob Russell
Drexel University

#14 How Parental and Hybrid Species of Chickadees Respond Differently in NT Test
Yueqi (Maggie) Lu, Amber Rice
Lehigh University

#15 Identifying Mechanisms that Mediate the Conserved Response to Metabolic Stress in *Drosophila Melanogaster*
Attilio Ceretti
Lehigh University

#16 The Impact of Hybridization on Cognitive Flexibility Based on Associative and Reversal Learning Tests in Lab-Reared Carolina, Black-Capped and Hybrid Chickadees
Eleanor Labay
Lehigh University

#17 Pea aphid fitness costs when carrying a facultative endosymbiotic microbe: a fair-weather friend?
Ian Abrahams and Cory Straub
Ursinus College

#18 Social Learning in Hybridizing Chickadees
Noel Martinez
Lehigh University

#19 The effect of predator exposure on territorial aggression in female convict cichlids
Molly Buehler and Andrew Testaverde
DeSales University

#20 The Effect of Temperature on Behavior in Black-Capped Chickadees, Carolina-Chickadees, and Their Hybrids
Sana Sheikh and Claudia Small
Lehigh University

#21 The Effects of Ocean Acidification and Warming on the Embryonic Development of *Euprymna berryi*
Allison Wheelan and Dr. John Cigliano
Cedar Crest College

#22 The influence of individual ability and species type on novel versus problem solving test performance in chickadees
Caroline Palmer
Lehigh University