Fourteenth Annual
Odum School of Ecology
Graduate Student
Symposium
18-19 January, 2008
Ecology Auditorium
Odum School of Ecology
University of Georgia
Athens

Brought to you by:
The Ecology Graduate Students

Symposium Coordinators: Chip Small and Ching-Yu Huang
Administrative Support: Anisa Jimenez and Jeremy Sanderlin
Program Committee: Andrew Mehring and Jamie Winternitz
Undergraduate Poster Committee: John Davis and Christina Faust
Judging Committee: Ashley Helton, Athena Anderson and Eva Whitehead
Souvenir Committee: Kathleen Rugel and Ken Leonard
Audio-visual Committee: John Kominoski, Dean Hardy, and many AV volunteers
Culinary Logistics Committee: Bruce Snyder, Andrew Binderup and Julie Rushmore

Thanks to Dr. C. Ronald Carroll for significant guidance and support, and thanks to all additional students, faculty and staff who made this possible
Schedule of Events

8:30am  Coffee available in exhibit hall

9:00 - 9:05  Introduction by Chip Small and Ching-Yu Huang, Symposium Coordinators

9:05 – 9:15  Welcome by Dr. John Gittleman, Dean, Odum School of Ecology

SESSION I – Introduction by Session Moderator

9:15 - 9:30  “Population and evolutionary dynamics of viruses following host shifts” by Daniel Streicker

9:30 – 9:45  “Long-term nutrient enrichment of a detrital-based system leads to a trophic dead-end” by John M. Davis

9:45 – 10:00  “Section 404 compensatory mitigation: balancing requirements for functional lift with existing watershed objectives” by Kelly Siragusa

10:00 – 10:15  “Effects of global warming on native bees and their efficiency as crop pollinators” by Athena Anderson

10:15 – 10:30  A.M. Coffee Break

SESSION II – Introduction by Session Moderator

10:30 – 10:45  “The competitive relationships between invasive and native earthworms and their effects on soil microbial biomass in tropical forest soils” by Ching-Yu Huang

10:45 – 11:00  “Selection dynamics and MHC variability in cyclic montane voles” by Jamie C. Winternitz

11:00 – 11:15  “Floodplain forests and oxygen demand in blackwater streams: Differential effects of leaf litter species” by Andrew Mehring

11:15 – 11:30  “Investigating the effects of groundwater withdrawals on coastal plain streams in the Lower Flint River basin” by Kathleen Rugel

11:30 – 1:00  Lunch (on your own – transportation provided)
**Schedule of Events**

**Friday, January 18**

**SESSION III – Introduction by Session Moderator**

1:00 – 1:15

“Predicting responses to nutrient enrichment in detritus-based streams: Contrast of effects on fine vs. coarse organic matter fractions” by Cynthia J. Tant

1:15 – 1:30

“Population ecology of greater siren (Siren lacertina) and two-toed amphiuma (Amphiuma means)” by Thomas M. Luhring

1:30 – 1:45

“Elemental imbalance between consumers and their food resources along a natural phosphorus gradient in neotropical streams” by Gaston Small

1:45 – 2:00

“Persistence and re-colonization potential for Podostemum ceratophyllum under short term hydrologic alteration exacerbated by drought” by Jennifer Plourde Pahl

2:00 – 2:15

“Promiscuity, host defenses, and sexually transmitted diseases in great apes” by Julie Rushmore

2:15 – 2:30

P. M. Coffee Break

**SESSION IV – Introduction by Session Moderator**

2:30 – 2:45

“New ways of seeing networks: a research plan” by Jane Shevtsov

2:45 – 3:00

“Variation at the base of the food web: Bottom-up implications for food web structure” by Jacob Allgeier

3:00 – 3:15

“Fungal-to-bacterial dominance of belowground communities: Consequences for ecosystem carbon dynamics” by Michael Strickland

3:15 – 3:30

“Effects of introduced guppy evolution on aquatic invertebrate communities in Trinidadian Northern Range streams” by Andrew J. Binderup

3:30 – 3:45

“Litter mixing alters microbial diversity in a detritus-based stream” by John S. Kominoski

3:45 – 4:00

P.M. Coffee Break

**SESSION V – Undergraduate Poster Session**

4:00 – 5:00

poster judging in exhibit hall

5:00

Refreshments in Courtyard
Schedule of Events

Saturday, January 19

8:30 am  Coffee available in exhibit hall

SESSION VI – Introduction by Session Moderator

9:00 – 9:15  “Distribution patterns of North American lizards and the status of Rapoport’s rule” by Shan Huang
9:15 – 9:30  “Quantitative effects of short-term hydrologic alteration on shoal productivity in the Middle Oconee River” by Rachel Katz
9:30 – 9:45  “Effects of stream chemistry on shrimp population dynamics and physiology” by Marcia Snyder
9:45 – 10:00 “Predicting population sensitivity to resource availability: A new look at the resource ratio hypothesis” by Ken Leonard
10:00 – 10:15 “Influence of bivalves on the persistence of avian influenza virus in water” by Christina Faust

10:15 – 10:30 A.M. Coffee Break

SESSION VII – Introduction by Session Moderator

10:30 – 10:45 “Sources and cycling of nutrients and carbon in a subtropical reservoir” by Julie McEntire
10:45 – 11:00 “The effects of land transformation in southwest Georgia on adult mosquito community structure and host feeding interactions” by Eva Whitehead
11:00 – 11:15 “Factors affecting the status of plankton as a reservoir for Vibrio species” by Jeff W. Turner
11:15 – 11:30 “Revegetation potential of slash pile burn sites in longleaf pine forest” by Michelle Creech
11:30 – 1:00 Lunch (on your own – transportation provided)
### Schedule of Events

**Saturday, January 19**

#### SESSION VIII – Introduction by Session Moderator

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>1:00 – 1:15</td>
<td>“Seasonal macroinvertebrate resource partitioning: labile versus recalcitrant litter” by John Frisch</td>
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<td>1:15 – 1:30</td>
<td>“Predicting invasion success of a lotic crayfish from physicochemical habitat variables and predator-avoidance behavior” by Lindsey Sargent</td>
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<td>1:30 – 1:45</td>
<td>“Mitigating non-point source pollution in Georgia: A guide book” by Daniel O’Brien</td>
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<td>1:45 – 2:00</td>
<td>“Influence of sediment oxygen demand in seasonally inundated floodplain swamps of the Georgia Coastal Plain” by M. Jason Todd</td>
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<td>2:00 – 2:15</td>
<td><strong>P.M. Coffee Break</strong></td>
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#### SESSION IX – Introduction by Session Moderator

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<tbody>
<tr>
<td>2:15 – 2:30</td>
<td>“Linking community structure to ecosystem processes: Effects of native faunal extirpation and invasive species in Neotropical island streams, Puerto Rico” by Pedro J. Torres</td>
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<td>2:30 – 2:45</td>
<td>“One of these things is not like the other: Examining functional equivalence across soil microbial communities” by Ashley Standbridge</td>
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<td>2:45 – 3:00</td>
<td>“Isotopic and elemental composition of bivalves and their food resources: Implications for resources utilization among species and stream nutrient cycling” by Carla L. Atkinson</td>
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<td>3:00 – 3:15</td>
<td>“Biodiversity and ecosystem services: Building a bridge for maximizing conservation success” by Dean Hardy</td>
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<td>3:15 – 3:30</td>
<td><strong>P.M. Coffee Break</strong></td>
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#### Plenary speaker introduction by Dr. H. Ronald Pulliam, Regents Professor Emeritus, Odum School of Ecology

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<tr>
<th>Time</th>
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<tr>
<td>3:30 – 3:45</td>
<td>“The Conservation Value of Landscape Corridors”</td>
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<td></td>
<td>Dr. Nick M. Haddad</td>
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<td>North Carolina State University</td>
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<td>3:45 – 4:45</td>
<td><strong>Reception in the exhibit hall</strong></td>
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4:45 – 7:00 **Reception in the exhibit hall**
Plenary Speaker

Dr. Nick M. Haddad

“THE CONSERVATION VALUE OF LANDSCAPE CORRIDORS”

Dr. Nick M. Haddad
North Carolina State University

Biographical Sketch

Nick Haddad is an associate professor in the Department of Zoology at North Carolina State University. His research focuses on the effects of habitat loss and fragmentation on populations, communities, and ecosystems, and the application of ecological theory to conservation and management. For 15 years, Nick and his colleagues have studied how organisms use corridors for dispersal to maintain populations and biodiversity. This work began with large, controlled experiments, and lately is focusing on how rare species use natural corridors within fragmented landscapes. Nick has tested hypotheses of the effects of habitat fragmentation and disturbance on species diversity and trophic structure on scales ranging from fragmented tropical forests in Brazil to 9x9 m grassland plots at Cedar Creek, Minnesota, to laboratory microcosms.

Nick received his B.S. with honors from Stanford University in 1991, with Paul Erlich as his thesis advisor. From 1990-1997 he worked as a research for the Guatemala Program through Stanford’s Center for Conservation Biology. Nick completed his Ph.D. in Ecology from the University of Georgia in 1997, working under Ron Pulliam. His dissertation research investigated the effects of experimental forest corridors on butterfly movement at the Savannah River Ecology Laboratory. From 1997-1999, Nick completed a post-doctoral fellowship with David Tilman at the University of Minnesota, before coming to North Carolina State University in 1999. Most recently, Nick spent a sabbatical collaborating with Marcel Holyoak and Tawny Mata at the University of California-Davis in 2006-2007.

Nick has numerous peer-reviewed journal publications including articles published in Science, Proceedings of the National Academy of Sciences, and The American Naturalist. He has won an award for outstanding paper in Landscape Ecology, as well as awards for outstanding teaching and advising.