

## *Ecology & Evolution Graduate Program Newsletter*

### **July -August 2016**

Previous newsletters may be found at:  
<http://rci.rutgers.edu/~deenr/news.html>

Summer is a busy time for travel to meetings and research. Let us know if you have made presentations at meetings, published papers, received grants and awards, or traveled to do research. Please don't be shy about sending in material for the newsletter! Keep those emails, cards, letters, and social media posts coming! Send your news and accomplishments to [pjmorin@rci.rutgers.edu](mailto:pjmorin@rci.rutgers.edu).

### **Congratulations!**

**Judy Weis** –

Earlier in June, Judy was honored to receive the Merit Award from the Society of Wetland Scientists, meeting in Corpus Christi TX.

### **Presentations:**

**Students and faculty were well-represented at the Annual Meeting of the Ecological Society of America held in Ft. Lauderdale, FL in August!**

**ESA contributed papers and symposium presentations:**

1. A game of drones: Coordination between sexes constrains the optimization of reproductive timing in honey bee colonies. **Natalie Lemanski**, Rutgers University; **Nina H. Fefferman**, Rutgers University
2. Plants in the city: Global to local patterns of taxonomic and trait diversity in response to urbanization. **Myla FJ Aronson**, Rutgers University
3. Conceptual modeling and external representations: Lessons from ecological examples. **Rebecca Jordan**, Rutgers University; **Amanda E Sorensen**, Rutgers University; Steven Gray,

Michigan State University; Cindy Hmelo-Silver, Indiana University; Greg Newman, Colorado State University; Alycia Crall, NEON

4. Control of emerging infectious diseases: How synchronicity of vector reduction efforts affect the size of Zika virus outbreaks. **Samantha R. Schwab**, Rutgers University; **Agnesa Redere**, Rutgers University; **Nina H. Fefferman**, Rutgers University

5. Novel and old plant interactions: Do good borders make good neighbors? **Claus Holzapfel**, Rutgers University; Hadas A. Parag, Rutgers University; Mark June-Wells, Aquatic Ecosystem Research; Rüdiger Prasse, Leibniz Universität Hannover

6. Canopy water use efficiency before, during and after gypsy moth attack in an upland forest in the New Jersey Pine Barrens. **Karina VR Schafer**, Rutgers University Newark; Diane Radwanski, Rutgers University Newark; Kenneth L. Clark, USDA Forest Service; Tomer Duman, Rutgers University Newark

7. Population genetics of two contrasting invasive species: Indications for dispersal in biological invasion. Anthony Brusa, Rutgers University Newark; **Claus Holzapfel**, Rutgers University

8. To crowd-source or citizen science ecological research? The implications of framing on broader outcomes of public participatory research. **Amanda E. Sorensen**, Rutgers University; **Rebecca C. Jordan**, Rutgers University School of Environmental and Biological Sciences

9. Oak succession in a pioneer forest on an urban brownfield. Anthony C. Cullen, Rutgers University; Sarah Korapati, Rutgers University; **Frank J. Gallagher**, Rutgers University; **Claus Holzapfel**, Rutgers University

10. Historical land use and past remediation efforts shape post-industrial brownfield plant communities of today. **Julia A. Perzley**, Rutgers University; **Claus Holzapfel**, Rutgers University

11. Temporal changes in vegetation assembly and soil metal pollution in an urban brownfield. **Frank J. Gallagher**, Rutgers University; **Jason C. Grabosky**, Rutgers University; Allyson B. Salisbury, Rutgers University

#### **ESA Posters:**

1. The role of floral density in determining bee foraging behavior: A natural experiment. **Bethanne Bruninga-Socolar**, Rutgers University; Elizabeth E. Crone, Tufts University; **Rachael Winfree**, Rutgers University

2. Invasion scratches more than just the surface: Soil seed reservoirs of exotic and native desert annuals. Hadas A. Parag, Rutgers University; Jennifer L. Schafer, William Jewell College; Carolyn E. Haines-Klaube, The College of New Jersey; Marjolein Schat, Rutgers University; Erika L. Mudrak, Cornell University; Andres Fuentes-Ramirez, Universidad de La Frontera; Kirk A. Moloney, Iowa State University; **Claus Holzapfel**, Rutgers University

## Other Presentations:

### Joni Baumgarten (from the Dighton lab)-

1. **Baumgarten, J.**, Cunnick, H. & Palmer, M. I. (2016, April). Population dynamics of the rare sedge *Rhynchospora knieskernii*. Talk presented at the Mid-Atlantic ESA Annual Meeting, Kutztown, PA.
2. Johnson, J., Bushta, J., **Baumgarten, J.** & Dighton, J. (2016, April). How do plant-soil interactions effect the biomass of the biofuel crop *Panicum virgatum*? Poster presented at the Mid-Atlantic ESA Annual Meeting, Kutztown, PA.
3. **Baumgarten, J.** & Howe, N. (2016, March). Conservation and non-native plants: Is the non-native *Teesdalia nudicaulis* negatively affecting local Pine Barrens plant communities? Poster presented at the 20th Annual NJ Land Conservation Rally, Trenton, NJ.

### LaShanda Williams (from the Duffy Lab) –

**Williams, L.**, Scott, R., **Duffy, S.** Experimental Coevolution with Bacteria and Phage Provide Insights into Human-Pathogen Coevolutionary Dynamics. Poster Session, American Association of Physical Anthropologists annual meeting, Atlanta, GA, 4/16/16.

### Jennifer Hoey (from the Pinsky Lab)-

**Jennifer Hoey.** "Candidate loci under environmental selection in a panmictic marine population" at the American Genetics Association Presidential Symposium: "Local adaptation: from phenotype to genotype to fitness" in Pacific Grove, CA from July 14-17th.

## Publications:

### LaShanda Williams (from the Duffy Lab) –

Amato, K., Matinez-Mota, R., Righini, N., Raguets-Schofield, M., Corcione, F., Marini, Elisabetta, Humphrey, G., Gogul, G., Gaffney, J., Lovelace, E., Williams, L., Luong, A., Dominguez-Bello, M.G., Stumpf, R., White, B., Nelson, K., Knight, R., Leigh, S. "Phylogenetic and ecological factors impact the gut microbiota of two Neotropical primate species." *Oecologia* (2015): 1-17.

## Grants:

**Rick Lathrop is the lead PI on two new big grants!**

**1. Moore Foundation Grants \$1.2 Million to Support Progress on Mid-Atlantic Ocean Data**

**Portal.** A collaboration between Rutgers Center for Remote Sensing and Spatial Analysis (CRSSA), the Edward J. Bloustein School of Planning and Public Policy, The Nature Conservancy and Monmouth University's Urban Coast Institute (UCI) has received a \$1.2 million Gordon and Betty Moore Foundation grant to continue the development of the Mid-Atlantic Ocean Data Portal ([portal.midatlanticocean.org](http://portal.midatlanticocean.org)). The Rutgers Team is led by **Rick Lathrop** (CRSSA) and Jeanne Herb (Bloustein); Monmouth's UCI is the project lead. The Portal was initiated under the guidance of the Mid-Atlantic Regional Council on the Oceans (MARCO) with previous funding provided by the Moore Foundation in 2015 and the National Oceanic and Atmospheric Administration in 2013.

**2. Rutgers Center for Remote Sensing & Spatial Analysis, Center for Vector Biology and the Jacques Cousteau National Estuarine Research Reserve awarded a 2016 NOAA-NERRS Science Collaborative Research grant.**

The project entitled, *Investigating the Interconnectedness of Climate Change, Nuisance Mosquito Populations, and Long-term Resilience of Coastal Salt Marsh Systems*, will examine the intersection between sea level rise, salt marsh structure, habitat modification/ restoration, and nuisance mosquito populations which can pose serious health risks to humans, livestock, and pets. Chief concerns are how climate change and sea level rise may affect marsh habitats and consequent mosquito production but also how past physical alterations to reduce mosquito habitat affect the ability of salt marshes to maintain their relative elevation position and thereby their long term resiliency in the face of sea level rise. The three year grant from the NOAA-NERRS Science Collaborative is for \$743,000. The research team, led by **Rick Lathrop** (CRSSA), includes **Dina Fonseca** (CVB), **Mike Kennish** and Lisa Auermuller (JCNERR), and Scott Crans of the New Jersey Office of Mosquito and Control Coordination. Mosquito control agencies and other land management partners will aid in the design and implementation of a research program to inform management actions, plans and strategies. For more information: <http://graham.umich.edu/water/news/nerrs-projects-2016>

**Amy Gage (from the Handel lab) –**

**Amy Gage** was awarded a Research Development Fellowship at the Science and Resilience Institute at Jamaica Bay for \$5000.

## Faculty Achievements and Activities:

### George McGhee-

George McGhee is on a 10-week Fellowship at the Konrad Lorenz Institute for Evolution and Cognition Research in Klosterneuburg, Austria. He gave the following lecture to the KLI on 09 June 2016: "Limits and directionality in evolution: a theoretical perspective".

The KLI also hosted a Workshop on Convergent Evolution and Stone Tool Technology on 16-20 June 2016, with 16 invited participants from around the world (Australia, Argentina, South Africa, in addition to the USA, Germany, Austria). McGhee was part of the Workshop and gave the following paper on 17 June 2016: "Limits on the possible forms of stone tools: a perspective from convergent biological evolution."

### Peter Morin –

Peter led an international review team for a site visit (June 29-July 1) to evaluate a proposal for a new Helmholtz Institute for Functional Marine Biodiversity at Oldenburg University in Germany. Peter returns to Berlin on September 1 to participate in the final review and selection process for the new Helmholtz Institutes.

## Student Achievements and Activities:

**LaShanda Williams** (from the Duffy Lab) has been very busy! -

### Fellowships

Smithsonian Graduate Student Fellowship, Department of Anthropology, National Museum of Natural History, Summer 2016

Ford Foundation Predoctoral Fellowship, The National Academies of Sciences, Engineering, and Medicine, Fall 2015, *Honorable Mention*

### Awards:

Pre-Dissertation Award, Graduate School – New Brunswick, Rutgers University, Fall 2016

Zelnick Graduate Research Grant, Zelnick Family Research Fund, Center for Human Evolutionary Studies, Rutgers University, Fall 2016

Travel Fellowship for the 2016 Meeting of the International Society for Evolution, Medicine, & Public Health (ISEMPH), Durham, NC, Summer 2016

Conference Travel Award, Rutgers University, Spring 2016

Pilot Research Grant, Center for Human Evolutionary Studies, Rutgers University, Fall 2015

## Transitions:

Congratulations to **Dr. Nicholas Pollock** on the successful defense of his Ph.D. Dissertation on August 9, 2016.

Congratulations to **Amanda Wenczel** on the successful defense of her Preliminary Proposal on August 9, 2016.

Congratulations to Amanda Sorensen on the successful defense of her Preliminary Proposal On July 14, 2016

## Alumni News:

**Dr. Eric Weisburger** appears in the video [Spat! Bringing Oysters Back to the Chesapeake Bay](#)

**Dr. Amy Karpati** has just been appointed Director of Science and Programs at Teatown Lake Reservation in Ossining, NY. This is a 1,000 acre preserve dedicated to education and conservation.

**Dr. William Reiners** published an article in the July ESA Bulletin about his graduate experience at Rutgers in the 1960s that provides some fascinating reading about what it was like to be a graduate student working with the legendary Murray Buell. The article is titled "The Cowles–Cooper Tradition under Murray F. Buell: A Personal Retrospective." There is open access to it at <http://onlinelibrary.wiley.com/doi/10.1002/bes2.1254/full>