

**Department of Ecology, Evolution, and Natural Resources  
and  
Ecology and Evolution Graduate Program Newsletter**



**September 2012**

**Previous newsletters may be found at:**

**<http://www-rci.rutgers.edu/~deenr/news.html>**

**Welcome to the Incoming Ecology and Evolution Graduate Program  
Students of Fall 2012:**

This fall finds us welcoming 13 new students to the Ecology and Evolution Graduate Program together with 2 transferring in from other graduate programs in the university. The students come from diverse backgrounds and plan to study diverse areas of ecology and evolution. We welcome them and wish them success in their endeavors.

- Allison Anholt has a degree in criminology from the College of New Jersey. She will be working with Rick Lathrop on her master's degree.
- Liz (Elizabeth) Ballare is transferring from Newark into Erin Vogel's lab to work towards her PhD. Liz's undergraduate degree from Montclair State University is in biology.
- Jennifer Blake-Mahmud received her degree in education from Vanderbilt University. Jennifer's PhD advisor is Lena Struwe.
- Bethanne (Elizabeth) Albert-Bruninga comes from Swarthmore College with a degree in biology. Bethanne is deciding between the Lockwood and the Winfree labs.
- Josh Echols will be working on his MS degree with Steven Handel. Josh attended Auburn University where his undergraduate major was microbiology.
- Sean Griffin's undergraduate degree is in Entomology from Cornell University. Sean is joining the Rae Winfree lab.

- Kathleen Kerwin received her undergraduate degree in ecology from Rutgers. Kathleen will be working on her MS advised by John Dighton.
- Rachel Paseka comes to E&E with a dual major in environmental sciences and biological sciences from the University of Nebraska- Lincoln. Rachel is a PhD student in Mike Sukhdeo's lab.
- Cameron Pineiro, also coming into the Mike Sukhdeo lab as a PhD student, has his degree in biology from Wake Forest University.
- Jenny Paterno attended Richard Stockton College of New Jersey and received a degree in marine sciences. Jenny is working towards her MS with Dave Bushek at the Haskin Shellfish Research Lab.
- Amanda Sorensen has an undergraduate degree in ecology from Rutgers. Amanda is working with Rebecca Jordan towards her PhD.
- Sarah Stewart has an undergraduate degree from Rutgers in psychology and a Master's in early modern English literature from King's College London. Sarah is working with Rebecca Jordan on her MS.
- Matthew Strom has a BS in biology from Georgetown University. He is working with Cesar Rodriguez-Saona towards his PhD.
- Michele Talmadge transferred from Plant Biology in the spring semester. Michele, whose undergraduate degree from Boston University is in ecology, is working towards a MS with JeanMarie Hartman.
- Rafael Valentin is working with Julie Lockwood towards his PhD. He has a BS from Rutgers in ecology.

### **Welcome to the new faculty, visiting scholars, scientists and post-docs that have joined the department this fall**

Myla Aronson has joined the department as a Visiting Research Scholar in Steven Handel's lab.

John L. Clark from University of Alabama joined Lena Struwe's lab as a Visiting Scientist. His research focuses on the evolution of gesneriad plants, especially as it relates to neotropical biodiversity and the interactions between floral morphology and pollination.

Lazaros Gallos has joined the Nina Fefferman lab as a Research Assistant.

Xin Hai Li is a Visiting Scholar in the Ming Xu lab.

Huan Qui is a new post-doc working with Debashish Bhattacharya

## Presentations:

### Ecological Society of America Annual Meeting in Portland Oregon, August 5-10

A special [symposium](#) titled “ Ecosystem Consequences of Species Alterations: Special Symposium in Memory of Late Professor Joan Ehrenfeld” and a [poster](#) session titled “The Scientific Legacy of the Late Professor Joan Ehrenfeld: Current Research Findings From Alumni of Dr. Ehrenfeld's Laboratory” were organized at the Ecological Society of America (ESA) meetings in memory of Joan Ehrenfeld. Both of these sessions included former Ehrenfeld lab alumni as well as colleagues of Joan presenting their research findings and the cutting edge of several research topics Joan worked on (i.e., invasion biology, urban ecology, etc.). The organizers of these sessions intended for them to be opportunities for those who knew Joan to reflect on her life and her influence on their own lives as well as a chance for Rutgers students, faculty and alums to convene and catch up.

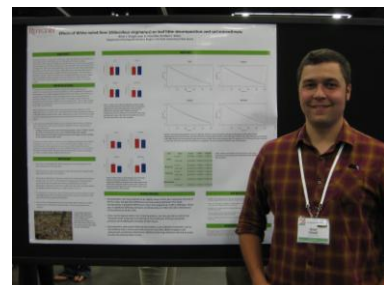


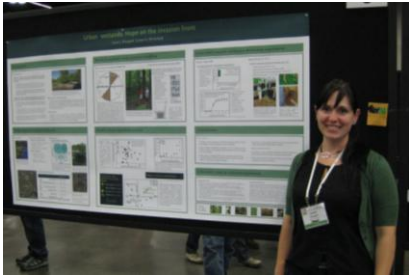
E&E faculty and alumni who spoke at the symposium are below. Bolded names are the E&E people. For a complete list of posters and presentations visit the ESA website.

- “Professor Joan Ehrenfeld's scientific legacy”  
**Weixing Zhu**, State University of New York - Binghamton; **Emilie Stander**, USAID/AAAS; **Lisamarie Windham-Myers**, USGS; **Richard V. Pouyat**, United States Forest Service
- “Nitrogen cycling in urban wetlands”  
**Peter M. Groffman**, Cary Institute of Ecosystem Studies
- “Invasive plants modify the composition and function of soil microbial communities”  
Elizabeth Czerwinski, Central Michigan University; Nicole Lynn-Bell, Central Michigan University; **Peter Kourtev**, Central Michigan University
- “Ecological and social connectivity in an urban river system”  
**Manisha Patel**, Rutgers University; **Myla F.J. Aronson**, Hofstra University; Karen O'Neill, Rutgers University; Jeff Dowd, Rutgers University; Rachael Shwom, Rutgers University; Joan G. Ehrenfeld, Rutgers University
- “Professor Ehrenfeld's legacy as an educator and a mentor”  
**Emilie Stander**, USAID/AAAS; **Weixing Zhu**, State University of New York - Binghamton; **Lisamarie Windham-Myers**, USGS; **Richard V. Pouyat**, United States Forest Service

E&E current students, faculty, post-docs and alumni who presented posters are below. Bolded names are E&E people. For a complete list of posters and presentations visit the ESA website. (Poster photos courtesy of Faye Benjamin)

- “Designing bioretention systems to improve nitrogen removal”  
Sivajini Gilchrist, US Environmental Protection Agency; **Emilie Stander**, USAID/AAAS; Michael Borst, US Environmental Protection Agency
- “Effects of white-tailed deer over-browse on soil microclimate and leaf litter decomposition”  
**Brian Clough**, Rutgers University; Joan G. Ehrenfeld, Rutgers University; Ed Green, Rutgers University





- “Urban wetlands: Hope on the invasion front”  
**Laura J. Shappell**, Rutgers University; Joan G. Ehrenfeld, Rutgers University

- “Soil texture and water retention as spatial predictors of denitrification in urban wetlands Does translocation influence growth or invasiveness of clonal cattail (*Typha*) species?”  
**Kenneth J. Elgersma**, University of Michigan; Radka Wildova, University of Michigan; Deborah Goldberg,
- “Broom crowberry habitat preferences in the New Jersey Pinelands”  
**Ekaterina Sedia**, Richard Stockton College of New Jersey; George Zimmermann, Richard Stockton College of New Jersey; Andrew Windisch, NJ Department of Environmental Protection
- “*Spartina alterniflora* invasion pace in an introduced coastal wetland of China explored by  $\delta^{13}C$  abundance of sediments”  
**Shen Yu**, Key Laboratory of Urban Environment and Health, Institute of Urban Environment, Chinese Academy of Sciences; Jing Ding, Key Laboratory of Urban Environment and Health, Institute of Urban Environment, Chinese Academy of Sciences; Xiaosan Luo, Key Laboratory of Urban Environment and Health, Institute of Urban Environment, Chinese Academy of Sciences; Didi Sun, Key Laboratory of Urban Environment and Health, Institute of Urban Environment, Chinese Academy of Sciences; Jun Ma, Key Laboratory of Urban Environment and Health, Institute of Urban Environment, Chinese Academy of Sciences
- “Coastal freshwater peat accretion – Physiologic processes and legacy impacts of dominant wetland plant species”  
**Lisamarie Windham-Myers**, USGS
- “Physiological and morphological responses of the invasive grass, *Microstegium vimineum*, to varying resource availabilities”  
Andrea Caruso, Fordham University; James D. Lewis, Fordham University; **Amy R. Tuininga**, Fordham
- “Evidence of mycorrhizal host generality for hemlock woolly adelgid-infested *Tsuga canadensis* trees growing in a *Quercus*-dominated landscape”  
Timothy Kerin, Fordham University; **Amy R. Tuininga**, Fordham University; James Lewis, Fordham University
- “The effect of an invasive shrub (autumn olive, *Elaeagnus umbellata*) on soil microbial communities depends on the proximity of soil to the invasive plant”  
Nicole Lynn-Bell, Central Michigan University; Elizabeth Czerwinski, Central Michigan University; **Peter Kourtev**, Central Michigan University



“Root productivity in nutrient-rich soil patches by invasive and native Northeastern shrubs”

**Cara A. Faillace**, Rutgers University; **Joshua S. Caplan**, Rutgers University; **Jason C. Grabosky**, Rutgers University; Joan G. Ehrenfeld, Rutgers University

- “The California Environmental Legacy Project: A multiplatform educational media project about environmental change”

**James W. Baxter**, California State University, Sacramento; Jeffrey W. White, Humboldt State University; Kit Tyler, The American Mercury, Inc.; David Scheerer, Humboldt State University

Other presentations and posters by E&E students and faculty at ESA follow:

- Curtis Burkhalter "Modeling habitat selection behavior using statistical decision theory and its implications for species conservation" co-authored with PhD advisor Julie Lockwood.
- Tina Harrison “Biotic homogenization in bee communities”
- Lea R. Johnson “Future urban forests: The influence of management on outcomes of ecological restoration in New York City.” co-authored with PhD advisor Steven Handel.
- Rebecca Jordan “Lessons from implementing a model-based pedagogy in the K12 classroom” co-authors C. Hmelo-Silver, PhD candidate Wes Brooks, and E&E Alumnus Steven Gray (PhD 2010).
- Robbie Robinson “Using a coupled predator-prey PVA to direct efforts of controlling predation on at risk populations.” coauthors were PhD advisor Julie Lockwood and Nina Fefferman.
- Elena S. Tartaglia “Nectar plant preferences and pollen loads in *Hemaris* moths: Diet analysis of pollen collected from individuals.” co-authored with PhD advisor Steven Handel.
- Rachael Winfree, Department of Entomology, was symposium co-organizer for “Pollination services in a changing world: ecological and evolutionary implications.” Rae presented “Predicting climate change impacts on pollination services” and was co-author on “Changes on the bee fauna of the northeastern United States across a century of global change” with \*I Bartomeus, J Ascher and R Winfree

Talia Young, a PhD candidate in Olaf Jensen’s lab, received the Union of Concerned Scientists and the Student Section of the Ecological Society of America’s EcoService Award. This award recognizes Talia for her work outside of academia with underserved students in the Philadelphia area. Many of us had the opportunity to meet some of these students last year at Talia’s Friday seminar. For more on the award and Talia please visit:

<http://blog.ucsusa.org/ucs-awards-young-scientists-for-work-outside-of-the-lab/>

## Other Venues:

Brian Clough, a PhD candidate working with Ed Green, participated in the DIMACS/MBI workshop on Quantitative Landscape Ecology and Sustainability in Durban, South Africa this past July. He presented a poster there titled "Mapping forest soil organic matter on New Jersey's Coastal Plain".

By invitation John Dighton, Department of Marine and Coastal Sciences and Director of the Pinelands Field Station, presented a paper with former graduate student Sharron Crane (PhD 2011) and Tamar Barkay entitled "Response of ectomycorrhizal symbionts to mercury" at the 7th International Symbiosis Society Congress in Krakow, Poland in July.

John Dighton was also invited to Chair a session on soil ecology and secondary metabolites and present a paper entitled 'Effects of forest post-harvest residues and soil disturbance on soil ecology' at the 1st Annual World Congress of Biodiversity in Xian, China in April

Siobain Duffy reports the following invited and contributed talks and posters:

- S. Duffy. Molecular evolution of single-stranded DNA viruses: Insights from ssDNA phages. Viruses of Microbes II, Brussels, BE (7/12, invited)
- D. Cardinale and S. Duffy. Codon usage bias in single-stranded DNA viruses. Evolution 2012, Ottawa, CA (7/12, contributed)
- E. Ho, S.I. Gunderson and S. Duffy. A multispecies polyadenylation model. Great Lakes Bioinformatics Conference 2012. Ann Arbor, MI (5/12, contributed)
- J. Kuchie, E Ho and S. Duffy. Purifying selection in New World begomoviruses may compensate for loss of pre-coat protein. RiSE symposium, Rutgers University (8/1/12, poster)
- A.L. Hicks and S. Duffy. Cell tropism influences RNA virus nucleotide substitution rates. SMBE 2012, Dublin, IR (6/12, poster)

Jeremy Feinberg, a PhD candidate in Joanna Burger's lab, reports the following:

- "A newly elucidated cryptic leopard frog from the New York metro area: The past, present, and future of an unexpected discovery." The 7<sup>th</sup> World Congress of Herpetology, Vancouver, British Columbia. August 8-14, 2012. Contributed Poster:
- "A New Species of Leopard Frog (Anura: Ranidae) from the Urban Northeastern US" Staten Island Museum. Summer Soiree: Frog Night. Staten Island, NY, August 23, 2012. Invited talk:

Rebecca Jordan presented at poster at the Conference on Public Participation in Research.

- "Key Issues in Evaluating Citizen Science Learning Outcomes" (H. Ballard and T Phillips co-authors)

Oscar Schofield reports the following:

- Schofield, O., Neuman, L., Meredith, M. (July 2012). "The Southern Ocean Observing System (SOOS)." Scientific Committee of Antarctic Research Summit (Portland, OR)



## Publications:

Tamar Barkay, Department of Biochemistry and Microbiology, reports the following co-authored papers with E&E alumni Sharron Crane (PhD 2011) and Zac Freedman (PhD 2012 and colleagues:

- Freedman, Z., C. Zhu, and T. Barkay. Mercury resistance, mercuric reductase activities and expression among chemotrophic thermophilic *Aquificae*. *Appl. Environ. Microbiol.* Published online ahead of print July 6, 2012.
- Crane, S., T. Barkay, and J. Dighton. 2012. The effect of mercury on the establishment of *Pinus rigida* seedlings and the development of their ectomycorrhizal communities. *Fungal Ecol.* 5:245-251.

John Dighton, Department of Marine and Coastal Sciences and Director of the Pinelands Field Station, reports the following publications. Sharron Crane (PhD 2011) and Dennis Gray (PhD 2006). Jennifer Oberle-Kilic is a current E&E PhD student working with John.

- Crane, S., Barkay, T. & Dighton, J. (2012) The effect of mercury on the establishment of *Pinus rigida* seedlings and the development of their ectomycorrhizal communities. *Fungal Ecol.* 5: 245-251
- Dighton, J., Helmisaari, H-S., Maghirang, M., Smith. S., Malcolm, K., Johnson, W., Quast, L., Lallier, B., Gray, D., Setälä, H., Starr, M., Lurio, J. & Kukkola, M. (2012) Impacts of forest post thinning residues on soil chemistry, fauna and roots: implications of residue removal in Finland. *Applied Soil Ecol.* 20: 16-20. Doi:10.1016/j.apsoil.2012.02.023
- Oberle-Kilic, J., Dighton, J., Arbuckle-Keil, G. (2012) Title Chemical Characterization of Starch and Starch:Lignin Films Using Micro-attenuated Total Reflectance Fourier Transform Infrared Spectroscopy (micro-ATR FTIR) *Trends in Biomaterials and Artificial Organs* 26 (2) 107-109.
- Geng, Y., Dighton, J. & Gray, D. M. (2012) The effects of thinning and soil disturbance on enzyme activities under pitch pine soil in New Jersey Pinelands. *Appl. Soil Ecol.* Doi: 10.1016/j.apsoil.2012.07.001
- Gray, D. M., Swanson, J. & Dighton, J. The influence of contrasting ground cover vegetation on soil properties in the NJ Pine barrens. *Appl. Soil Ecol.* 20

Siobain Duffy:

- A.L. Hicks and S. Duffy. "One misdated sequence of rabbit hemorrhagic disease virus prevents accurate estimation of its nucleotide substitution rate BMC" *Evolutionary Biology*, 12:74.

Rebecca Jordan and Steven Gray (PhD 2010) report the following

- Jordan, R.C., H.L. Ballard, and T.B. Phillips. 2012. Key issues and new approaches for evaluating citizen-science learning outcomes. *Frontiers in Ecology and the Environment* 10: 307–309
- Shirk, J. L., H. L. Ballard, C. C. Wilderman, T. Phillips, A. Wiggins, R. Jordan, E. McCallie, M. Minarchek, B. V. Lewenstein, M. E. Krasny and R. Bonney. 2012. Public Participation in Scientific Research: a Framework for Deliberate Design. *Ecology and Society* 17 (2): 29.
- Gray, S.A., Nicosia, K. and Jordan, R.C. (2012) Lessons Learned from Citizen Science in the Classroom. A Response to "The Future of Citizen Science. *Democracy and Education*: Vol. 21: Iss. 1, Article 14. Available at: <http://democracyeducationjournal.org/home/vol21/iss1/14>

- Gray, S., Chan, A., Clark, D. and R.C. Jordan. 2012. Integrating stakeholder knowledge in social-ecological system decision-making: Benefits and limitations to knowledge diversity. *Ecological Modeling* 229: 88-96.
- Crall, A.W., G.J. Newman, R. Jordan, K.A. Holfelder, J. Graham, and D.M. Waller. 2012. The Impacts of an Invasive Species Citizen Science Program on Participant Attitudes, Behavior, and Science Literacy. *Public Understanding of Science online first*

George McGhee, Department of Earth and Planetary Sciences, has the following online publication:

- Starcher, R. W. and McGhee, G. R. 2012. Theoretical morphology of colonial meshworks in the Fenestrata (Bryozoa): modelling hydraulic-resistance constraints and minimum fenestrule widths. *Historical Biology Online*.  
<http://www.tandfonline.com/doi/abs/10.1080/08912963.2012.713948>

Oscar Schofield, Department of Marine and Coastal Sciences, reports :

- Bernard, K. S., Steinberg, D. K., Schofield O. 2012. Summertime grazing impact of the dominant macrozooplankton off the Western Antarctic Peninsula. *Deep Sea Research*. doi:10.1016/j.dsr.2011.12.015
- Ducklow, H. W., Schofield, O., Vernet, M., Stammerjohn, S., Erickson, M. 2012. Multiscale control of bacterial production along the western Antarctic Peninsula: A regional and decadal-scale investigation. *Journal of Marine Systems*. doi:10.1016/j.jmarsys.2012.03.003
- Mass, T., Drake, J., Haramaty, L., Rosenthal, Y., Schofield, O., Sherrell, R., Falkowski, P. G. 2012. Aragonite precipitation from nano-polyps in coral cell culture. *Plos One* 7(4): e35049
- Schofield, O., Meredith, M., Newman, L., Sparrow, M., Urban, E. 2012. Implementing a southern ocean observing system. *EOS, Transactions of the American Geophysical Union* 93(26): 241-243.
- Yager, P. L., Stammerjohn, S., Sherrell, R., Alderkamp, A. C., Schofield, O., Ducklow, H., Wilson, S., Lowry, K. E., Duken, G. L., Bertilsson, S., Riemann, L., Ndungu, K., Arrigo, K., Severmann, S., Moksnes, P. O., Post, A. F. 2012. The Amudsen Sea polynya international research expedition (ASPIRE). *Oceanography* 25: 30-43.
- Rintoul, S., Meredith, M., Newman, L., Schofield, O. 2012. The Southern Ocean Observing System. *Oceanography* 25(3): 24-25.
- Oliver, M., Moline, M. A., Robbins, I., Fraser, W., Patterson, D., Schofield, O. Letting penguins lead: Dynamic modeling of penguin location guide autonomous robotic sampling. *Oceanography* 25(3): 120-121. [doi.org/10.5670/oceanog.2012.84](http://doi.org/10.5670/oceanog.2012.84)

Lena Struwe is a co-author on the following:

- Pohlit AM, Mustafa dos Santos EV, Mesquita da Silva TC, Reis de Moraes SK, Nunomura SM, & Struwe L. 2012. A rare secoiridoid monoterpene and a xanthone from *Tachia grandiflora* Maguire & Weaver. *Biochemical Systematics and Ecology* 44 (2012) 267–269

Ximing Guo, Department of Marine and Coastal Sciences and Haskin Shellfish Research Lab, has a paper in *Nature* detailing several years of work to sequence the oyster genome .

<http://www.nature.com/nature/journal/vaop/ncurrent/full/nature11413.html>



Rachael Winfree , Department of Entomology, reports the following publication:

- Mandelik, Y, R Winfree, T Neeson and C Kremen. Complementary habitat use by wild bees in agro-natural landscapes. *Ecological Applications* 22: 1535-1546

## Faculty Achievements and Activities:

Jason Grabosky received the *2012 L C Chadwick Award for Aboricultural Research* presented by the International Society of Aboriculture. Jason is recognized for his research in two main areas: tree crown growth in relation to wind resistance, pruning, and decay; and his development of Cornell Structural Soil, which has become an industry standard for growing healthy, vibrant trees in compact soil with limited root space. More about Dr. Grabosky at [myCentralNJ.com](http://myCentralNJ.com) or ISA [article](#) (scroll to bottom) or [video](#).

Steven Handel, Brooke Maslo and Jessica Cummings were part of the team that received the Green Urban Planning Award from The Chicago Athenaeum Museum of Architecture and Design. 2012 for "Full Circle: St. Louis City+Arch+River" landscape design, Weiss-Manfredi, design team lead. This was for a comprehensive plan to re-do the lands around the St. Louis Arch National Park, on both sides of the Mississippi River. Steven and his partners did the ecological restoration plans for the habitats along the river.



### [Restoring American Chestnut Trees to Northeastern Forests](#)

Drs. Steven Handel, Belén Sánchez Humanes and Christina Kaunzinger from the department's Center for Urban Restoration Ecology (CURE) are planting hybrid chestnut trees in forest gaps at Duke Farms, Hillsborough, NJ. Their goal is to determine if forest gaps, created by removal of non-native species, provide a viable re-entry location for chestnut's return to northeastern forests. [READ MORE](#)

Terry McGuire, Department of Genetics, has developed a new course connecting science with social issues that is getting a lot of attention with the media.

<http://sas.rutgers.edu/news-a-events/feature-archive/1303-signature-course-connecting-science-to-social-issues-> and YouTube [http://www.youtube.com/watch?v=zvbAc1\\_M0xQ](http://www.youtube.com/watch?v=zvbAc1_M0xQ)

Oscar Schofield:

- 2012-2014 Co-Chair of Scientific Steering Committee of the International Southern Ocean Observing System
- 2012 Chair, Science Review Committee of Naval Research Laboratory's Oceanography Program at Stennis Space Center

Lena Struwe attended the Justin Morrill Symposium in Strafford, VT under the theme 'Higher Education in the 21st Century', on Aug 11-12, 2012.

## Grants:

Siobain Duffy:

- Siobain Duffy has received a National Science Foundation award to create a Tree of Life for the most compact viruses on earth – the circular eukaryotic single-stranded (CESS) DNA viruses. Even though viruses affect all forms of cellular life, their evolutionary history has proven difficult to discern. CESS viruses are the smallest known viruses, known for devastating impacts to agriculture and also recently found in other hosts including insects and fungi. Duffy and University of South Florida collaborators Mya Breitbart and Karyna Rosario will find and classify CESS viruses in previously untested hosts. “Collaborative Research: AToL: ACCESS DNA Viruses: A Comprehensive Survey of Circular Eukaryotic Single-Stranded DNA Viruses in Invertebrates and Fungi to Bridge Gaps in a Tractable Branch of the Viral Tree of Life.” \$1.6m grant

Rebecca Jordan reports:

- 2012 National Science Foundation (\$1,434,906; collaboration with Cary Institute of Ecosystem Studies Shannon LeDeau lead PI). CNH: Urban Disamenities and Pests: Coupled Dynamics of Urban Mosquito Ecology and Human Systems Across Socioeconomically Diverse Communities

Brooke Maslo was awarded a \$69,050 USDA-NRCS Conservation Innovation Grant to demonstrate that bats can provide an important ecological service to New Jersey’s agricultural industry by controlling the new agricultural pest, the brown marmorated stink bug. Using DNA analysis of insect fragments in bat guano, the study will attempt to show that bats can consume brown marmorated stink bugs and other agricultural pests in sufficient quantities to reduce the pest management costs for crops, such as apples, peaches, blueberries, cranberries, soybeans, and bell peppers. If successful, farmers will have a financial incentive to increase the habitat for cavity-roosting bats, a species experiencing steep declines due to White Nose Syndrome.

Oscar Schofield:

- National Science Foundation OOI Program. 2012-2014. “OOI project scientists and glider software development” Schofield, O. (\$253,059)
- NOAA CINAR 2012. “Undergraduate development of ecological proxies using ocean observatory data in support of marine fisheries research” Schofield, O. (\$16,713)
- Rutgers SEBS Agricultural Experiment Station 2012 “Functional genomic analysis of the Antarctic cryptophyte, *Geminigera cryophila*, under variable salinity and nutrient regimes.” Saba, G., Schofield, O. (\$8,000)
- National Science Foundation, CARPA program 2012-2013 “Antarctic Quest” Schofield, O., Siedel, D. (\$210,906)

Undergraduate student Lauren Palatini (Environmental Science) received a \$3000 grant from the Byrne Seminar office at Rutgers to do research under the guidance of Lena Struwe on weeds on campus. She has been busy developing a research plan looking at campus parking lots as islands in an urban landscape, and inventorying weeds in those parking lots for an island biogeography project on a very small, local scale. She has also been collecting data on weeds in raised beds and compared raised beds with only solanaceous plants with beds planted with many more species.

## **Student Awards, Achievements, and Activities:**

Undergraduate student Patrice Crocevera (Ecology and Natural Resources) spent the summer involved in a research project on campus, looking at arthropod diversity in raised beds, as part of a large project focusing on the effect of multi-species-cropping in raised beds in urban gardening. She has worked with Lena Struwe and plant biology graduate student Victoria Ferguson.

Nick Pollock, a PhD student in the Henry John-Alder lab, gave a nature program/herpetology walk for the Nature Conservancy at Allaire State Park on Sunday August 19th

## **Media:**

Steven Handel was interviewed on NBC Nightly News, New York Nonstop cable network on , August 30. "Bringing back the American chestnut tree." Hosted by Roseanne Colletti.

Rachael Winfree, Department of Entomology, was interviewed by the *Philadelphia Inquirer* online, "Philly-area residents join national bee count" 13 August

Judy Weis and her lab were interviewed by the Bergen County Record about their research showing behavior alterations in Hackensack crabs/bluefish, [http://www.northjersey.com/news/bergen/Pollution\\_in\\_Hackensack\\_River\\_sediment\\_alters\\_eating\\_habits\\_of\\_crabs\\_and\\_fish.html](http://www.northjersey.com/news/bergen/Pollution_in_Hackensack_River_sediment_alters_eating_habits_of_crabs_and_fish.html)

Amanda Wenczel, a PhD candidate in Dave Bushek's lab, and her use of the FlowCam was written up in *Laboratory Talk* <http://www.laboratorytalk.com/analytical-instruments/cameras-and-imaging-systems/flowcam-to-be-used-in-study-of-coastal-ecosystem/404558.article>

## **Transitions:**

Congratulations to the following on the successful defense of their PhD Dissertation:

- Julian Avery, advisor Julie Lockwood, June 13, 2012
- Holly Vuong, advisor Peter Morin, September 12, 2012
- Jessica Sanders, advisor Jason Grabosky, October 1, 2012

Congratulations to the following on the successful defense of their Master's degree:

- Denise Hewitt, advisor Gareth Russell, on September 28, 2012.

Congratulations to the following on the successful completion of their Qualifying Exam:

- Molly MacLeod, advisor Rae Winfree, on September 19, 2012

## **Alumni:**

Tavis Anderson (PhD 2009, advisor Mike Sukhdeo) has moved to the Virus and Prion Research Unit, National Animal Disease Center (USDA/ARS) in Ames Iowa to work on influenza evolution and transmission.

Aspa Chatziefthimiou, PhD 2012, advisor Tamar Barkay reported the following presentation:

- Chatziefthimiou, A.D., Chien, M.-F., and T. Barkay. Community and *merA* gene diversities of indigenous soil bacterial communities in industrially mercury polluted areas

in the USA and Taiwan. The 14th conference of the International Society for Microbial Ecology, Copenhagen, Denmark, Aug. 19-24, 2012

Jeremy Fox, PhD 2000 advisor Peter Morin, has the following publication

- Fox JW (2012) When should we expect microbial phenotypic traits to predict microbial abundances? /Frontiers in Microbiology/ 3:268. doi: 10.3389/fmicb.2012.00268

Zac Freedman (PhD 2012, advisor Tamar Barkay): was awarded a USDA McIntire-Stennis grant (Co-PI Don Zak). They received a 2 year award, \$30,000/yr. The title of the proposal was "Does atmospheric nitrogen deposition reduce the diversity and ligninolytic potential of Bacteria in Michigan hardwood forests?"

### **The E&E family continues to grow.**

Frank Gallagher, visiting scientist and PhD 2008, announced the arrival of granddaughter Quinn Rose on September 20. Quinn weighed 9 lbs, 2 oz.

Matt Palmer (PhD 2005, advisor Joan Ehrenfeld) and wife Jen Freeman welcomed daughter Annabelle Willow Palmer on Sept 11 at 2:48 a.m. Annabelle weighed 8 lbs 7oz, 22 inches long! Everyone is doing great!

Erin Vogel and John Wiedenmann announced the arrival of Lincoln James born on July 13<sup>th</sup>. Lincoln weighed 7 lbs 13 ounces and was 22 inches long. He is doing great and his big sister loves making him smile!

