

# Notes from the Field

November 2005

Volume 2 No 8

## Exciting News for the Ecology IGDP

~ Dave Mortensen, Chair, Ecology IGDP

Three years ago our Ecology Program was reviewed by a panel of external reviewers (a process that occurs every 6 years or so). The panel observed that our Program was sorely underfunded and our administrative support "thin" and strongly recommended that we find ways of increasing our financial resources and sure up administrative support of the program. Further, the panel recommended we find this support by formalizing ties with programs like the Huck Institute and the PSU Institutes of the Environment. After eighteen months of University-wide meetings centered on conceptualizing Graduate Program realignments in the Life Sciences, many discussions with the Ecology Program Committee, discussions at two Ecology faculty meetings and several Ecology Graduate Student Organization meetings, the message was clear; we had an opportunity to implement changes in the Program and we (the faculty, post-docs and graduate students) supported formalizing new Program alignments but did so with certain caveats. Those caveats include: 1) an increased number of graduate student stipends, 2) that the qualities of our Program, like governance and core program

requirements, not be compromised, 3) that alignments be inclusive (i.e. Ecology IGDP faculty and graduate students have ties with the Huck and with the Penn State Institutes for the Environment), and 4) that our administrative support is stabilized (we've had a third of one administrative support person for the past six years).

I am excited to announce that the enhancements in Program support we've sought have been realized. A formal linkage has been established with the Huck Institute of Life Science **and** The Penn State Institutes for the Environment. Our Ecology Program remains our Ecology Program. The caveats laid out above have been actively debated and pursued with the following results. First, the number of graduate student stipends will increase from 2.5 to 8 stipends a year in the Fall of 2006. Second, we retain governance of our Program. Third, we have sought and obtained formal alignments with the Huck Institute and the PSU Institutes for the Environment. In this joint model, the administrative support for day-to-day management of the Ecology IGDP would come through the Huck Institute, as would the graduate student stipend support. Such coordination with the Huck Institute will represent a significant improvement in program management, will enhance graduate student



recruitment and improve program visibility in and outside the University. Previously we reported directly to the Graduate School on matters of financial support and Program governance; matters of reporting and financial support will now go through the Huck Institute. Over the summer several important changes occurred in our front office. Rosemarie Hibbler accepted a new position in the College of Health and Human development. While we were sorry to see Rosemarie move on to another position on campus, we are excited to welcome Jenny Edwards as our new Ecology IGDP Coordinator. Jenny and Mary Hudson, Ecology IGDP Assistant, comprise our administrative team. Our new office is located on the first floor in room 101 of the Life Sciences building.

Interactions with the PSU Institutes for the Environment have taken and will continue to take several important forms. First, faculty in the Ecology IGDP have worked collaboratively with the Institutes for the Environment in creating “seeded” projects. Those seeded projects, sometimes jointly sponsored with the Huck Institute, Eberly School of Sciences and the College of Agricultural Sciences include formation of the highly successful Center for Infectious Disease Dynamics (Peter Hudson, Ottar Bjornstad, and Bryan Grenfell and their students are active members of the Ecology IGDP); the Northeast Regional Center of the DOE’s National Institute for Climate Change Research (Directed by Ken Davis and Dave Eissenstat – Ecology IGDP), which anticipates funding several ecology-focused projects; the Climate Change Monitoring Initiative in Arctic ecosystems (Eric Post and Dave Eissenstat and their students are active members of the Ecology IGDP); and the Northeast Ecology and Evolution Conference. In addition to these synergistic “seeded” projects, the Institutes for the Environment has and will continue to help support graduate student study by contributing support for stipends, summer salary and student research.

This is an exciting time for the Ecology IGDP. A reception outlining this new initiative will be held in the second floor arch of the Life Sciences Building this Tuesday, November 8 from 3:30 to 5:00. I hope to see you there.

#### **Schedule of Events:**

**Reception with Huck Life Sciences:** November 8<sup>th</sup> 3:30 to 5:00 in second floor bridge of Life Sciences Building.

**Fall Mini-Symposium and Program Planning Meeting:** December 1<sup>st</sup> at 4:00pm in Room 301D Life Sciences Building (on the Bridge, behind The Gateway Coffee Shop).

## **Please Help with Ecology Program Recruitment**

~Jenny Edwards, Ecology Program Coordinator

With increased assistantship support starting next fall, recruiting top-notch students is a high priority. Because of our affiliation with the Huck Institutes, we have increasing opportunities to showcase our program on a national level, interact with prospective students at excellent undergraduate institutions in the region, and to disseminate information about the Ecology program. This fall, Ann Marie Daniel, Associate Director of Graduate Education who heads the recruiting efforts at the Huck Institute and I, have attended or plan to attend 16 graduate fairs including: Cornell University, Purdue and the Big Ten, Ohio State, University of Delaware, University of Minnesota and University of Wisconsin to name a few. Among the hundreds of students we contact at these fairs, about 13% indicate interest in the Ecology program. These students receive a letter from us with more information about the program, and are put on our mailing list for monthly emails highlighting Penn State events and rankings.

Dave Mortensen, Mary Hudson and I are developing strategies to make meaningful contacts on behalf of the program. We need your help! We would like to reach colleagues and associates of yours to inform them of our new openings for students next year and to invite them to spread the word about the fantastic program here at Penn State. There are several ways in which you can help (and time is of the essence as student applications should be reaching our office by January):

- 1) Let us know via email (jme145@psu.edu) 2-5 contacts at other schools to send information about our program.
- 2) Let us know if you are visiting a campus and we will send you Ecology Program information to take on your trip and to share with students and faculty you meet. Packets of information are available in 101 Life Science Bldg.
- 3) Talk it up! Share with colleagues that Penn State is looking for ecology students and has more support this year than in the past. Feel free to direct anyone with questions about the program to me, jme145@psu.edu, 814-865-5557

With your help we can boost the reputation of the Ecology program at Penn State as a center for excellence in research and student training!

## Don't let data perish. Persevere and publish!

~ Loren Byrne, PhD student, Entomology

Through our careers, we are all likely to generate small data sets from e.g., exploratory side projects or as part of research with undergraduates. Most often, we might place such work in the dark recesses of our filing cabinets and never look at it again. However, I suggest that small data sets can be useful for the scientific community and that they are publishable in certain journals. Here, speaking to my graduate student peers, I relate the story of obtaining my first first-author publication to show that it's important to persevere despite discouragement.

In 2001, I began my doctoral research with a small study about arthropods in State College lawns. It was a perfect one-summer project to help me gain footing and think about bigger questions. Although I only sampled on one date, the data I produced were intriguing. They generated new hypotheses about the effects of lawn management on soil arthropods that hadn't been discussed before. I was excited about my data especially because urban ecology is a relatively new field.

Because I can be overly enthusiastic, I aimed high and sent my data to one of the higher-profile soil ecology journals. The manuscript was easily rejected on the grounds that—you guessed it—the data were insufficient for publication. Still believing that I had a story to tell, I readjusted my aim, trimmed the manuscript's length and submitted it to another journal as a short communication. Within a week, I received the second rejection, this time because the editor said the topic wasn't relevant to the journal (which is untrue—the journal has published lawn and arthropod articles). I quickly re-sent the short article to another soil ecology journal, thinking that this time would be a charm. Alas, my third rejection was for a reason that I can't remember; I don't think I cared at the time.

After three failed publication attempts, one might suggest that my data set should be filed away to gather dust. However, the main point of my essay is this: **Perseverance can pay off.** I regrouped and, with much appreciated encouragement from my co-advisor Mary Ann Bruns, I decided to try once more. At Mary Ann's suggestion, I considered a lesser-known journal published by the South Carolina Entomological Society: *The Journal of Agricultural and Urban Entomology*. The name of this journal seemed to match my topic perfectly. Much more humble than before, I submitted one more time, and, hooray, Byrne and Bruns (2004) is the published result! The reviewers' comments were brief and favorable and I had to make very few revisions. The

biggest challenge was waiting for the purchase order to clear.

In my paper, I cited two articles about lawn arthropods from other less well-known journals that also contained small data sets. Thus, I conclude that small data sets can be important foundations for emerging areas of study and should be published in an appropriate journal (assuming, naturally, that they are scientifically valid data). Of course, we should all strive to conduct high-impact research for high-impact journals, but low-impact data and journals don't mean worthless. Personally, I'm glad that I persevered and published rather than let my data perish.

Byrne, L.B., M.A. Bruns. 2004. The effects of lawn management on soil microarthropods. *Journal of Agricultural and Urban Entomology* 21, 150-156.

### ***Congratulations to other Ecology grad students and post-docs with recent publications!***

#### **ANGELA ANDERS**

Anders, A.D. and Post, E. In press. Distribution-wide effects of climate on population densities of a declining migratory landbird. *Journal of Animal Ecology*.

#### **EELKE JONGEJANS**

Jongejans, E. and de Kroon, H. 2005. Space versus time variation in the population dynamics of three co-occurring perennial herbs. *Journal of Ecology* 93, 681–692.

#### **ERIC LONG**

Long, E.S., Sweitzer, R.A., Diefenbach, D.R., and Ben-David, M. 2005. Controlling for anthropogenically induced atmospheric variation in stable carbon isotope studies. *Oecologia* 146, 148-156.

#### **DIETMAR SCHWARZ**

Schwarz, D., Matta, B.M., Shakir-Botteri, N.L. and McPheron, B.A. 2005. Host shift to an invasive plant triggers rapid animal hybrid speciation. *Nature* 436, 546-549.

#### **OLAV SKARPASS**

Skarpas, O., Shea, K. and Bullock, J.M. 2005. Optimizing dispersal study design by Monte Carlo simulation. *Journal of Applied Ecology* 42, 731-739.

#### **ANDY WILSON**

Wilson, A.M., Fuller, R.J., Day, C. and Smith, G. 2005. Nightingales *Luscinia megarhynchos* in scrub habitats in the southern fens of East Anglia, England: associations with soil type and vegetation structure. *Ibis* 147, 498.

**We are always looking for news and stories! Please send submissions for the next newsletter to Angie Luis (ADL12@psu.edu) by November 20<sup>th</sup>.**



**Noteworthy:** Eco-grad, Hugo Castillo-Gonzalez (PhD, Microbial Ecology Option, December 2004) has been working as a post-doc at the University of West Florida Center for Environmental Diagnostics and Bioremediation and has recently been offered a tenure-track faculty position at the University of Chihuahua, Mexico. *Congrats, Hugo!*

## ***Recent race pits Ecologists against each other for some friendly rivalry ...***

### **The Four Sigmas**

**~Ruscena Wiederholt, PhD student, Anthropology**

A few weeks ago, I awoke at an ungodly early hour (for a Saturday), put on my running shoes and was out the door to run the Tussey Mountainback 50 mile Relay. For those of us newcomers to Appalachia it did present the particular challenge of actually taking place in mountainous terrain. After 7 hours of forested paths, changing leaves, the sounds of tennis shoes hitting the gravel and friendly screams from the passing cars, we were done - I having the honor of crossing the finishing line, albeit in slow motion, for my team. There were two rivaling teams from the Ecology Program, hundreds of runners, and even a few brave souls who ran the entire course themselves. Much exhaustion, sore muscles, and exceeding levels of energy characterized my teammates and I later that night. But as I fell asleep that night, with images of tree lined, sun speckled roads behind my eyelids, I know it will be gladly run again next year...

### **Arrival of the Fittest**

**~Glenna Malcolm, PhD student, Horticulture**

Anxious and happy runners convened at my house for a major carbo-load fest the night before the big run. We were readying ourselves for a race that would take place in Rothrock State Forest, called The Tussey Mountainback (MTB) 50-Mile Race. The race benefited kids with leukemia, through the Jared Box Organization.

Eight folks from Biology and Ecology signed up to form a team, called Arrival of the Fittest. Members included Martha Nelson, Rachel Erwin, Dale Holen, Sarah Perkins, Jill Crompt, Dave Mortensen, JB Moon, and me. A competing team, Four Sigmas, consisted of some other familiar faces, namely Joe Dauer, Jenny Edwards, Ruschena Weiderholt, and Bret Lehmer (Dauer's roommate).

If you saw me hobbling around with a cane a few weeks ago, you may have guessed that my preparation for the run was non-existent. I was definitely a bit worried as Jenny Edwards and myself lined up at the start



Arrival of the fittest: *Top row: Martha, Dale, Rachel.*

*Middle row: Sarah, Dave, JB. Bottom row: Glenna, Jill.*

line for a rigorous three-mile climb up a "mountain." I could hear other members of the Four Sigmas goading Jenny to trip, or alternately shove me off the mountain, if I tried to pass her. I was beginning to think twice about having fed one of their team members the previous night. In the end, I think Jenny will agree that leg #1 was quite a challenging way to begin the day. I can vouch that I was ready for a nap directly after and it was only 8:30am. And we both had at least one more leg to go.

For the rest of the day, Jenny, myself, and the rest of the biologists and ecologists had good fun egging each other on and joking about poisoning each other's Gatorade. When the results were tallied, Four Sigmas came in third place in the "tri/quad mixed open group" category with a stellar time of 6:49:02. Arrival of the Fittest came in shortly thereafter with a smoking time of 7:03:21.

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*Show your support for the program while being extremely stylish by purchasing an Ecology T-shirt. Several sizes and colors still available. Only \$15. They make great Christmas gifts! Email Angie (ADL12@psu.edu) for info.*

