UF UNIVERSITY of FLORIDA IFAS Entomology and Nematology Newsletter

December 2009

Faculty News

Dr. **Robert McSorley** was featured in a UF/IFAS news release detailing his experiments with soil solarization. Using this process, farmers prepare planting beds by covering them with clear plastic sheets for several weeks during the summer, trapping heat that destroys weeds, nematodes and fungi.

Drs. **Roxanne Connelly** and **Jonathan Day** were featured in a UF/IFAS news release on the status of dengue fever in Florida. As of 21 November, 20 human cases of locally acquired dengue fever were reported in Monroe County. A recent survey (with blood tests) of 240 residents showed that "...41 percent had been exposed to the dengue virus or other Flavivirus, either through exposure to one of the viruses or through vaccinations, such as the yellow fever vaccine." As a result, Connelly, Day and other UF and state medical entomologists are urging Florida residents to take a more active approach to prevention of mosquito-borne diseases.

On 8 December 2009, Dr. **Carl Barfield**'s Fall 2009 "Bugs and People" Course (ENY 1001) was responsible for another insect infestion on the University of Florida's Turlington Plaza. To see a sample of the pests and their hosts (bug food) that appeared, click here.

Staff News

Allison Bechard recently moved from Canada to join the laboratory of Dr. **Christine W. Miller** as a full-time research technician. Allison graduated from the University of Toronto in 2002, and began work as an animal health/research technician in the neurobiology laboratory of Dr. John Roder (Mount Sinai Hospital, Toronto). Her enthusiasm in this research environment, where she had the opportunity to behaviorally characterize mutant mice with the goal of developing new models of human disease, contributed to six published papers and the discovery of a new candidate gene involved in learning and memory. A keen interest in understanding animal behavior and animal welfare took her to the University of Guelph in the fall of 2006 to complete a M.S. with Dr. Georgia Mason. Allison won an Animal Welfare Institute project grant and Ontario Graduate Scholarships for her graduate work investigating how the husbandry of laboratory mice affects adult levels of anxiety. Allison began work with Christine Miller on November 30th and will be focusing on behavior, ecology, and evolution in cactus bugs. Welcome, Allison! - Dr.

Christine Miller

Student News

On 19 November, Ph.D. student **Harsimran Rosie Gill** received the 2009 Alec Courtelis Award, a plaque and $3,000 at the 15th International Student Academic Awards Ceremony in the Reitz Union Grand Ball Room. The Alec Courtelis Award is presented annually to the international student nominated by the colleges and departments based on outstanding academic excellence and outstanding contributions to the university community. A wall plaque bearing the name of the award recipients and the year it was awarded is located at the University of Florida International Center, in the HUB. Gill also received the 2009 International Student Outstanding Achievement award as the best international graduate student from the College of Agriculture and Life Sciences. Her advisor is Dr. **Robert McSorley**. For more information about her achievement, click on links.

The Entomology and Nematology Student Organization (ENSO) will sponsor a presentation practice and comment session at 2:30 pm on Thursday, December 10th, in Room 1031. The practice session is to help graduate students presenting at student competition sessions in the coming months and as a final practice session prior to Entomological Society of America (ESA) meeting this month. All students and faculty are encouraged to attend. The session will be organized in a fashion similar to the ESA Student competition sessions, with a timed 10-12 minute session for each student. Several professors from our department will referee the session, and all presenters will be given constructive feedback and graded according to ESA guidelines. Comment sheets will also be available if you want feedback from other observers. As an additional component of the session, the refereeing professors will select the most outstanding presentation of the session, and ENSO will be providing a $100 travel grant to the winning presenter! - **Dan Fitzpatrick**, ENSO president

Publications

Huang J, **Stelinski LL**, Miller JR, Gut LJ. 2009. Attraction and fecundity of adult codling moth, *Cydia pomonella*, as influenced by methoxyfenozide-treated electrostatic powder. Journal of Applied Entomology 133: 666-672.

Obenauer PJ, **Kaufman PE**, Allan SA, **Kline DL**. 2009. Infusion-baited ovitraps to survey ovipositional height preferences of container-breeding mosquitoes in two Florida habitats. Journal of Medical Entomology 46: 1507-1513.

Bentley MT, **Kaufman PE**, **Kline DL**, **Hogsette JA**. 2009. Response of adult mosquitoes to light emitting diodes placed in resting boxes and in the field. Journal of the American Mosquito Control Association 25: 285-291.

Mann RS, **Kaufman PE, Butler JF**. 2009. *Lutzomyia* spp. (Diptera: Psychodidae) response to olfactory

attractant- and light-emitting diode-modified Mosquito Magnet X (MM-X) traps. Journal of Medical Entomology 46: 1052-1061.

Focus on Fumigation

Nearly 40 fumigation professionals from throughout the United States and the world attended the 22nd Annual School of Structural Fumigation, held 16-20 November 2009 at the University of Florida, Fort Lauderdale Research and Education Center in Davie, Florida.

This one-week course is organized and sponsored with the help of fumigation industry members, manufacturers, suppliers, Florida Department of Agricultural and Consumer Services personnel, and University of Florida faculty. Instruction is given by a team of qualified and experienced professionals with expertise in structural fumigation. "It's the only school of its kind in the world," said Dr. **Rudolf H. Scheffrahn**, professor of entomology, University of Florida. "It's pertinent to anyone working in the field of structural fumigation."

This year's agenda included a complete review of all technical aspects of structural fumigation including 38 hours of classroom, lab and workshop instruction plus two on-site structural fumigations, with a special emphasis on safety. Activities also included hands-on training with fumigation equipment such the Fumiscope, Interscan, SF ExplorIR, dosage rate calculators and self-contained breathing apparatus.

Instructors provided updates on recent fumigation research and changes in labeling and regulations, suggestions for avoiding costly fumigation errors and instruction on identifying structural pests controlled by fumigants. And for the fourth year in a row, the program featured an increased emphasis on bed bug elimination with facilitators demonstrating containerized fumigation. As this market continues to expand, "a lot of fumigators are getting involved in bed bug work," Scheffrahn said, "and they can do this work without investing in the tarps, sand snakes and other equipment used in a structural fumigation."

In all, 39 students participated in this year's program including students from the United States, the West Indies, and as far away as Australia. Upon completion of the course, the Florida Department of Agriculture & Consumer Services (FDACS) offered Special ID Card (SPID) and Fumigation Exams.

Next year's School of Structural Fumigation is scheduled for 15-19 November 2010. To be placed on the "alert list" when registration opens for this week-long event, send an email to Scheffrahn at rhsc@ufl.edu.

Grants

Drs. **Mike Scharf** and **Drion Boucias** received a $550,000 USDA-AFRI grant to fund the project "Functional characterization of novel target sites for reduced-impact biopesticides in the gut of the termite *Reticulitermes flavipes*".

Outreach

Mother Nature came up with a little rain and some cold weather during a couple of days of the Ocali Country Days, but the official gate was still 8,333 visitors, of which 4,431 were students who came out during the week. Dr. **Rebecca Baldwin** said they gave out almost 1,000 "I Love Bugs" stickers on just the first day. To receive a sticker, a student had to pet one of the permanent Outreach Staff, either the tarantula or one of the hissing cockroaches. Sadly, our whip-scorpion died just before the event. Eighteen of our faculty, staff and students participated over the six days and all had a good time, a few doing more than one day. The most exciting day was Saturday, when the tarantula, tired from all the attention, bit **Katie Buckley**.

Thanks go to **Ben Anderson, Crystal** and **Eddie Atkinson, Dr. Rebecca Baldwin, Sara Brennan, Katie Buckley, Sharon Clemmensan, Dr. Kamran Fakhimzadeh, Thomas Fasulo, Dan Fritzpatrick, Rosie Gill, Stephanie Gillespie, Gaurav Goyal, Jane Medley, Catherine Nalen, Chi Nguyen, Katrina Sharp** and **Matt Thom** for helping out.

Segments

While it may not be news to entomologists, the MicroSoft Network thought the fact that a beetle apparently protects itself by constructing armor made from excrement was good enough to post on its main news page. Click here for details.

Ever laid awake at night wondering why the German cockroach, *Blatella germanica*, eliminates excess nitrogen by excreting ammonia, in contrast to most terrestrial insects that commonly produce uric acid as a waste compound? Now you can get some sleep as scientists at the University of Valencia may have discovered the reason. Summarized in an article on the Scientific Computing Web site, the complete journal article is available in PLoS Genetics. But now you can stay awake at night trying to figure out why the people at Scientific Computing illustrated their summary with a photograph of an American cockroach rather than the German cockroach.

All good farmers know that nitrogen-fixing bacteria make their gardens grow. Perhaps this is why leaf-cutter ants are so successful. Click here for details.

The development of large-scale monoculture crops is often criticized as lacking genetic diversity and being susceptible to major pest infestations that require frequent pesticide applications. However, the fungus-growing termites of the Old World tropics think this is just scientific balderdash. Click here for details.

Sometimes it is just too cold to have sex. At least, that appears to be a problem if you are a fly. Click here for details.

People often find flies to be really annoying. It is somewhat satisfying to find that other flies feel that way too. Click here for details.

Bug Quote

Mosquito

Onto a boy's arm came a mosquito.
"Don't hit! Don't hit!" it hummed.
"Grandchildren have I to sing to."
"Imagine," the boy said.
"So small and yet a grandfather."

— **Eastern Eskimo song**

Newsletter Minutiae

Thomas Fasulo is the newsletter editor. Departmental faculty, staff, students and alumni can submit news anytime to **fasulo@ufl.edu**. Issues usually are published by early mid-month. Submit items for an issue by the 7th of that month.

UF-Bugnews-L listserv subscribers receive notices when issues are posted on the newsletter Web site at **http://entomology.ifas.ufl.edu/news**, which has instructions for subscribing and unsubscribing. **Pam Howell** and **Nancy Sanders** review the newsletter for errors. Thomas Fasulo does the HTML coding.

In the last 12 months, the newsletter Web site recorded 112,482 page views.

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