



Bohart Museum Society

Winter 2005-2006

Newsletter

Issue 32

Editor: Dani DuCharme

Editor's Note

Editor's Note: The holidays have come and gone, and everyone at the Bohart is back to work. This Winter Quarter is full of the excitement of upcoming trips, classes, and meetings. Students are getting back into the swing of classes and labs, and student employees are setting their schedules. Because of the weather, it is a great time to come to the Bohart for a tour, so winter is our busiest season. Also, due to recent publicity (see article below), we have had oodles of walk-in visitors, eager to see the displays and live insects.

The Bohart Museum Society Newsletter is complimentary for all of the society's members. If you would like to join the Bohart Museum Society, or would like to see something particular in the newsletter, please email me at dmducharme@ucdavis.edu, or by mail at Department of Entomology/1 Shields Ave. /Davis, CA 95616.

The Bohart's Youngest International Collector

Annie Engilis, daughter of Andy Engilis, (Principal Museum Scientist for the UC Davis Fish and Wildlife Museum) has a true love of insect collecting. At the age of seven, she not only has collected specimens from in and around her home, but also abroad. Most recently, she traveled with her family to Chile, where she spent most of November 21 to December 19, 2005 collecting insects. Annie collected in two of Chile's many locales—two spots that couldn't be more different. The first was near Parque Nacional Frey Jorge in North Central Chile, at 31 degrees S. latitude. The second was near Puerto Guadal in Southern Chile, at 46 degrees S. latitude, where it is probable that no one has collected vertebrates or invertebrates before.

While collecting, Annie would select the location of the pitfall traps by looking for flowering plants. She set her pitfall traps by digging a hole with her tennis shoe, and placing a cup, colored blue, white or yellow into the ground. She would fill the cup with dish soap and water, so the bugs couldn't get out, and would die. Then, she would wake up early in the morning, dump the contents of the cup through a fish net, and store them in a whirl-pack bag of alcohol. Annie felt that the color of the cup didn't matter, and that the same amount of bugs fell into each color cup. Some problems she ran into were degus drinking the water in the cups, and having the cups getting crushed or stepped on during the night. Although Annie had help from her family, it was clear that she was the leader of the insect collecting expedition. Since her return, she has deposited her samples at the Bohart Museum of Entomology for processing and identification.

The coolest parts of Annie's trip were getting about a foot away from an endangered deer, crossing streams wearing waterproof pants, and bug collecting. The "freakiest" things were visiting pet llamas and a walk over a very scary bridge. The only bummer was walking so much.

Annie is six and three-quarters years old, and is in the first grade. She says her favorite insects are ants because they, "crawl all over me," and she likes ladybugs, too. When she grows up, she wants to travel to other countries to collect insects. One thing Annie learned is that it is much more work to collect and prepare mammals than insects. At one point, she asked her dad, "How many mammals have you collected?" When he responded, "about 100," she said, "Gee, Dad, I'm kicking your butt, I've collected like 1,000 insects . . ."



6¾ year old Annie Engilis with her collecting equipment in Chile

Staff Profile

Undergraduate Student Profile—Yoong!

This month in our undergraduate spotlight is a Junior Biotechnology major from Malaysia. Although she is known as 'Yoong' to everyone in the museum, that is actually her last name, as her Malaysian name, Fei Yian is difficult to pronounce. From a town called Bandar Baru Bangi, she came to the United States in September of 2003 to go to school at UC Davis. She has been in the United States ever since, except for one return trip home, as well as a trip to Europe over one summer. She has a love of plants, and that is why she chose the major she did, with a plant emphasis. She has yet to decide what she would like to do when she finishes, but wants to get a job or an internship where she can use genetics to produce transgenic crops and resistant plants. Perhaps she'll even go to graduate school!

Yoong started at the Bohart Museum as a volunteer. On Fridays, she would come after school to tend to the insect colonies. She loved doing this because she got to spend time outside collecting leaves for the insects, and enjoying her time dealing with plants. Now, Yoong has many other duties at the Museum including: sorting, labeling, and pinning preserved insects, taking care of the insect colonies, working on the mosquito project, logging and organizing incoming books, taking out the recycling, and washing dishes. Phew! What she loves the most about this job is seeing lots of different insects from all over the world. Plus, she likens the museum atmosphere to that of having dinner with her housemates—everyone is friendly, informal, and it is a stress-free work environment. Stop by and say hello to Yoong, our newest employee here at the Bohart!



Tenebrionid beetle photo courtesy of Fran Keller



Graduate Student Profile— Fran Keller!

Bohart Museum Graduate Student Fran Keller is in the spotlight this quarter. Fran has had a lot on her plate as of late, and here is just an overview about what she has done, and what she is up to.

In August 2005, Fran traveled to Southern California and Arizona to collect *Stenomorphra* (Coleoptera: Tenebrionidae) for her thesis project. Fran also traveled to the Bahamas in August to continue her ecology research. She also has put a lot of time and energy into her new webpage. You can check it out at www.tenebrionid.net.

In December 2005, Fran presented a symposium talk at the ESA Annual meeting in Ft. Lauderdale--"Honoring the Life of E.O. Wilson--Entomologist and Mentor." The following webpage hosts the abstract as well as the recorded presentation: http://esa.confex.com/esa/2005/techprogram/paper_19978.htm. For this presentation, Fran traveled to Harvard in May to interview E.O. Wilson for two days. Fran plans to publish the interview in the near future.

For the 2006 ESA Annual Meeting, Fran is organizing a symposium with fellow Tenebrionid worker, Ian Foley from Montana State University entitled, "Darklings into Light: A Celebration of Tenebrionid Beetle Diversity". Also this year, she plans to travel to Carrizo Plain, the Bahamas, the Mojave and Arizona to collect insects for both her thesis and ecology projects. All this, in addition to working on two books—one on beetles, and one on mayflies—and being a TA, makes for one busy quarter!

Check out Fran's new website, and check back to the newsletter on future grad student updates. Good luck Fran!

Insect Happenings!

Madagascar Moon Moth Emerges!

On October 19, 2005, nine *Argema mittrei* caterpillars from Madagascar arrived at the Bohart Museum. These large green caterpillars arrived in their third or fourth instar, to eat and eat until they were able to form a cocoon and pupate. Their diet was solely comprised of pepper tree, *Schinus molle*, of which they ate plenty, as before they pupated, the caterpillars were the size of a hot dog. The caterpillars began to pupate on November 21, 2005, and over the next two weeks, five caterpillars successfully completed pupation. After that time, one became parasitized by phorid flies. Yet, four remained. On January 11, 2006, the first moth emerged. The moth was a male, with a wingspan of 12 centimeters (cm) and tails of 9.5cm. For a male, this specimen was small, as they can reach a wingspan of 14-15cm, with tails of up to 20cm! No females have emerged yet, but they can reach a wingspan of 18-20cm, with tails of up to 20cm. Unless a female emerges within a few hours of the male, so that they could mate, a single moth is preserved for collection and display. Other leps (moths and butterflies) that have been raised here at the Bohart include: the painted lady, imperial moth, anise swallowtail, emperor gum moths, *Dirphia avia*, and *Rothschildia lebeau forbesi*. Stop by the Bohart, and check out our entire collection of these beautiful creatures.



Madagascar Moon Moth emerging from its chrysalis.



Fully emerged Moon Moth hanging from its chrysalis in preparation for flight.

What's In a Name?

Depending on where in the world you live, insects can have different common names (for example ladybug and ladybird beetle). Some insects have names that describe exactly what they look like, i.e. praying mantis, yet others, like the earwig, keep us guessing. This month, we'll take a closer look at the origin of one of our favorite local bugs, the earwig, came to be named. Thanks to a book entitled, *Things Not Generally Known: Language, Literature and Books*, by D.A. Wells, in 1886, we know: "The insect is doubtless named from its supposed fondness for getting into the human ear, the effect of which, it has been believed, is to penetrate the brain, and cause madness. Now, the earwig is not more likely than any other insect to enter the ear; and if it does so, the *membranum tympani*, the drumhead of the ear; will prevent the progress of the intruder, which may be killed or dislodged with means of a few drops of oil. Now, as to the name of the earwig, its wings, when fully expanded, are in shape precisely like the human ear. "It seems highly probable that the original name of the insect was ear-wing, and not ear-wig, which appears to be entirely without a meaning."—Newman's *Grammar of Entomology*, p. 65. The name is also traced to the Saxon *ear wigea* from its destroying ears of grain and fruit.—Thompson's *Etymons of English Words*.

And, now you know.



Bohart News

Bohart Museum in the Spotlight!



On October 31, 2005, Channel 3 featured the Bohart Museum. As Halloween is the creepiest holiday, and perfectly suited for insects, they wanted to view how entomologists celebrate the day. The museum was decorated for the holiday, so Channel 3 got the spooky holiday piece they were looking for.

On December 28, 2005, the Bohart Museum was featured in a front page Sacramento Bee Metro Article entitled, "UC group revels in a bug's life." The article discussed the museum's holdings, as well as the variety of insects housed at the Bohart. Both the pinned collection and the petting zoo were mentioned. This article really fueled walk-in visitors to stop by the museum and check out the live insects. A few even left donations! This kind of publicity lets the general public know we are out there, and increases traffic, especially with school groups.

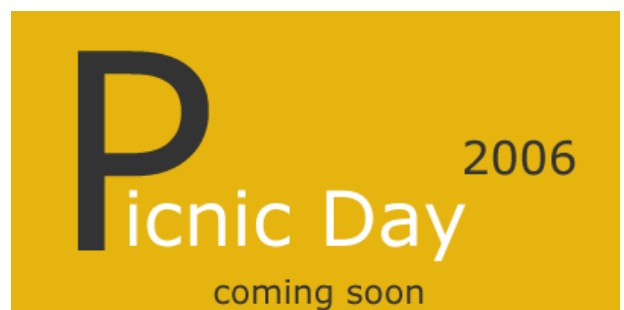
On January 9, 2006, Channel 13 stopped by the Bohart to discuss how the massive amount of rain received was going to affect the local insect populations. They reported that although people may have noticed an increase in flies and other pests around their homes, it will be awhile yet before we see insects such as mosquitoes emerging in large numbers due to the rain. While at the museum, they also filmed our insect zoo to show insects not found in our local area. Hopefully this piece will also prompt more people to visit our museum.



On January 11, 2006, Channel 10 dropped by the Bohart to film footage for California Postcards with John Mumm. Mr. Mumm interviewed museum scientist Steve Heydon, graduate student Fran Keller, and Education Coordinator Dani DuCharme. Featured on Friday, January 13th and Monday, January 16th, this California Postcard did the Bohart justice, as one of the local treasures in Davis, California.

Picnic Day Preview:

This year, Picnic Day will be held Saturday, April 22nd, on the UC Davis campus. This year's theme is still to be determined, but the Bohart Museum will be open for visitors, as usual. We will have preserved insects on display, live petting zoo animals to hold, a new wall display, and a family craft. This year, we are even adding a raffle, so some lucky visitor can take home some Bohart bugs of their very own! Stop by and see us on the 22nd, and see some cool bugs, up close and personal.



Pest Quests

“Insect” Question of the Quarter:

Q: I have small brown or black insects in the rice and cereal in my cupboards. No matter what I do, I can't get rid of them. What are they, and how do you suggest I treat for them?

--Rosa, Elk Grove

This is an excellent question, Rosa, because it actually hits close to home. Rather, it hits in my home—in the dried goods in my pantry and cabinets. In fact, never have I seen so many saw-toothed grain beetles as in this year—in contaminated samples from food warehouses and even in some walnut bark produced locally. What is the saw-toothed grain beetle and why is it here?

This beetle is extremely small—measuring about 1/10 of an inch. Named for the appearance of their body, rather than their “teeth,” these beetles feed on grain, grain products, and dried foods in both the larval and adult stages. In fact, the genus name of these beetles, *Oryzaephilus* is Greek for “rice-lover.” They can live for as short as six months to as long as three years. Therefore, if you find products contaminated with the tiny beetles, you should throw it away or freeze it, as they will be tough to get rid of otherwise. How can you tell if your product is contaminated? Well, you might not be able to see them, especially in a dark colored grain. However, for instance, if you add milk to contaminated cereal, or add rice to water before cooking, the beetles will float to the top. This beetle does not feed on undamaged grain; therefore, the grains it will be feeding on are those damaged in manufacturing, or those previously damaged by another grain-feeding insect.



Sawtoothed grain beetle on corn-- <http://www.extension.umn.edu>

Truth or Myth?

This month, we will take a look at a cool internet site, <http://www.snopes.com>, which busts urban myths. Here is one that deals with our eight-legged friends . . .

Forget about the FDA regulations that say there are x amount of bug parts in your everyday peanut butter, chocolate, tomatoes, etc. You eat insects (or at least parts of them) everyday, and, according to myth, you eat seven spiders every year—in your sleep! Just picture it, spiders climbing over your lips past your teeth, onto your tongue and down your esophagus. What would persuade a spider to do such a thing? This too is a MYTH.

There is no evidence to confirm that we have eaten spiders. In fact, it seems as though the warm carbon dioxide would deter the spider from coming in, as well as the movements we make in our sleep. Do they come out at night to avoid us squashing them with a Kleenex? Probably not. The night wandering spiders are nocturnal hunters that look for their prey and perhaps mates at night. These activities most likely deter them from looking for warm mouths to crawl into. Do you eat seven spiders a year in your sleep? Unless one falls from the ceiling into your snoring mouth, I declare this one a MYTH. In fact, I found the woman who made up this e-fact, unknowing that this one would become one of the most widely-circulated bits of misinformation found on the internet. So, we can say, courtesy of Lisa Holst, that this one undoubtedly is a MYTH.



<http://www.contamination.pwp.blueyonder.co.uk>



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Coming Soon: New Items to the Museum Gift Shop! Check Them Out!



Give Yourself a Hand! Bohart Museum Society Members 2006

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