



# Bohart Museum Society

Winter 2007

## Newsletter

No. 34

### Editors Note-

*I'm sad to write that museum namesake and founding father, Richard M. Bohart died this past February. His passing is a great loss, he influenced so many lives and he was largely responsible for the museum being what it is today. We have included a more detailed obituary inside, which includes the time and place of his memorial service.*

*Moving from this sad event, I'm happy to say that there are many positive changes happening in the museum. We are getting ready for Picnic Day, the university's campus wide open house, which means new exhibits. We are also in the process of redesigning our website.*

-Lynn S. Kimsey



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### Spotlight on a Species

#### Asian Tiger Mosquito

Size can be misleading in insects. Some of the most dangerous species of insects are really quite small. As humans we often seem to assume that danger comes in large packages. We often shock visitors to the museum when we show them how small the Africanized honeybee really is. Mosquitoes are no exception. The largest mosquitoes, species in the genus *Toxorhynchites*, don't bite humans and in fact don't feed on blood at all. Conversely, some of the smallest species, such as the Asian Tiger Mosquito, may be dangerous vectors of pathogens that cause human disease.



Asian Tiger Mosquito, courtesy of Susan Ellis, <http://www.invasive.org>.

The Asian Tiger Mosquito, *Aedes albopictus*, is one of these dangerous small insects. It is a well known and very effective vector of disease-causing viruses, including Yellow Fever, Dengue Fever, West Nile Virus, and a number of other encephalitis viruses.

This is a distinctive mosquito. It is small, barely ¼ inch long, and brightly marked, with white bands and spots on a black back ground. Tiger mosquitoes bite mostly around sunrise and sunset. They are vicious biters and make sitting out-of-doors really unpleasant in some parts of the U. S.

The Asian tiger mosquito is native to Southeast Asia but has been transported all over the world, particularly into seasonally warm humid regions. It is well-adapted to living in close proximity with humans and can breed in small pools of water trapped in human litter, such as cans, bottles or even discarded automobile tires. The larvae can also develop in small pools of water in flower pots, broken roof tiles or gutters.

The Tiger Mosquito was introduced to the continental United States in 1985 in used tires imported from Japan, which were brought into the southeast for recycling. From the site of the imported tires the mosquitoes rapidly moved into new regions. In the southeastern U. S., abandoned tires remain one of the chief breeding grounds for the species. In a recent trip to Lexington, Kentucky in July, the Asian Tiger Mosquito was found to be present in enormous numbers in the city. This is apparently a problem throughout the southeastern U. S.

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## In Memorium Richard M. Bohart 1913-2007



Richard M. "Doc" Bohart, founder and namesake of the museum died Feb. 1 in Berkeley at the age of 93. He was world-renowned for his expertise on wasps, mosquitoes and Strepsiptera (twisted winged parasites). During his career, Bohart identified more than 1 million mosquitoes and wasps, many housed in the Museum. He authored 230 separate publications, and wrote six books on mosquitoes and wasps.

In 2006, Bohart received the International Society of Hymenopterists Distinguished Research Medal, one of three ever awarded. Hymenoptera is an order of insects that includes bees, wasps and ants. In nominating him for the award, Bohart's former students noted that their mentor had "contributed substantially to the world literature of the Hymenoptera order, including co-writing two landmark books, *"Sphecid Wasps of the World"* (with A. S. Menke) and *"The Chrysidid Wasps of the World"* (with L. S. Kimsey).

Doc is one of the few systematists to have a family of insects named after him – the strepsipteran family Bohartillidae, genus *Bohartilla* Kinzelbach.

James M. Carpenter, curator of Hymenoptera at the American Museum of Natural History, New York, described Bohart as a "giant among hymenopterists. His combination of publications (both quantity and quality), collection building, and student training (many of whom are distinguished scholars; leading scientists in their own right) is unsurpassed among the world's leading hymenopterists of the last century," Carpenter noted.

Born Sept. 28, 1913, in Palo Alto, Bohart began collecting butterflies at age 7. He went on to study at UC Berkeley, receiving three degrees in entomology, including his doctorate in 1938. He and his brother George played on the UC Berkeley football team.

He taught at UCLA from 1938 to 1941, and then enlisted in the U.S. Navy Medical Corps in 1941, serving as a lieutenant commander of the Pacific Area and Washington. He joined the UC Davis faculty in 1946, chaired the Department of Entomology from 1956 to 1965, and retired in 1980 as an emeritus professor.

Bohart lived in Davis for more than three decades with his wife, Margaret, who died in January 1994. They had no children. Several years ago he moved to Hercules, Contra Costa County, with his second wife, Elizabeth Arias. In addition to his wife, he is survived by nieces and nephews.

By Kathy Garvey



A campus memorial for Professor Bohart will be held on Saturday, March 24, from 2-4pm in the University Club. For more information contact Lynn Kimsey at (530) 752-5373 or [lskimsey@ucdavis.edu](mailto:lskimsey@ucdavis.edu).

*"Bohart was a giant  
among  
hymenopterists"*

James M. Carpenter



Receiving the International Society of Hymenopterists Distinguished Research Medal 2006.



Hard at work in 1990.



*Trioioxera boharti* Kathiramby (Strepsiptera)

## Museum Comings and Goings

### A Visit from State Senator Tom Torlakson

Senator Tom Torlakson visited the museum on January 29, 2007. He has a strong interest in education and educational outreach. We showed him the workings of the museum but the best part of his visit was his enthusiasm for our outreach program. At the same time we had a tour from the Visions School Charter School in Carmichael. Senator Torlakson had a great time with the kids and enjoyed the interaction between the kids, our petting zoo and the students giving the tour and hands-on activities.



Senator Tom Torlakson, with Mike Niemela (left) and Lynn Kimsey (center).

### Mike Niemela – Moving On

Graduate student Mike Niemela is making some big changes in his life. He will be moving on soon. He's just taken a full-time job with the Sacramento-Yolo Mosquito and Vector Control District, and he just discovered he's going to be a father for the second time. Mike has been working in the museum for quite a number of years both as an undergraduate and graduate student, and in between. His Masters Thesis on the forensically important flies of California is undergoing final editing and will be turned in soon.



Museum graduate students, Fran Keller (left), Mike Niemela (center left), Eddie Thomsen (center right), and Deanna Jackson (right).

### Microcosms Project

By Mark Meadow and Bruce Robertson, UC Santa Barbara  
(<http://microcosms.ihc.ucsb.edu/intro.html>)

#### Microcosms Project



*"...obviously there is no classification of the universe that is not arbitrary and conjectural. The reason is very simple: we do not know what the universe is."*

Jorge Luis Borges

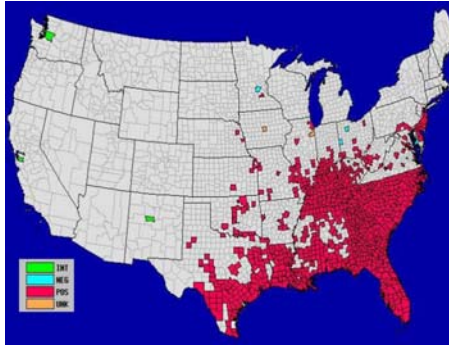
The University of California's physical collections are vast and dispersed. The UC system contains about forty million objects, placing it among the largest university collections in the world. As the second largest collection in the Western Hemisphere, after the Smithsonian, it would conservatively cost \$30,000,000,000 to replace. These objects are found and used in every division and department of the university, across the spectrum of sciences, humanities, and arts. Yet, despite the huge investment in research, space, personnel, and other resources that these holdings represent, there is an almost complete absence of scholarship and discourse about the history, purpose, and future of university collections. Indeed, university material holdings are largely invisible outside the narrow disciplinary boundaries that contain them. As a result, there exists no consistent policy concerning development, conservation, and research purposes for material collections, no general understanding of their value, no discourse on their meaning. Microcosms: Objects of Knowledge is a multiyear, interdisciplinary project that seeks to research comprehensively a material "economy of knowledge" within the university.

Deanna Jackson, a graduate student in the Museum is working for the Microcosm project. Her role is to gather information on collections on the UC Davis campus. More than ten years ago we surveyed the campus for biological collections. A year of searching from department to department revealed more than 104 biological collections, ranging from dystrophic chickens to yeasts, in addition to the more obvious insect and plant collections.

The goal of the Microcosms project is to locate *all* collections. This is proving to be an enormous task. The Davis campus houses an amazing variety of collections of all kinds. There are collections of wine labels, antique bicycles, native American baskets and more. Deanna has her work cut out for her.



Deanna Jackson



Distribution of the Asian Tiger Mosquito in the U.S. as of 2000, courtesy of the Center for Disease Control, Atlanta.

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In the late 1990's the Tiger Mosquito was accidentally introduced into California. Large numbers of larvae and adults were found in shipping containers used to carry "Lucky Bamboo" (*Dracaena sanderiana*) into the Port of Long Beach from mainland China, Taiwan and Hong Kong. Lucky Bamboo is very popular and some believe that it is a symbol of good luck that will bring fortune in business and long life. Because of this popularity, merchants had greatly increased the volume of plants shipped but in order to reduce costs they began shipping the plants by sea. To do this the plants are shipped in containers filled with 2 inches of water. Transit time from port to port is two weeks. All of which is ideal for tiger mosquitoes to breed. Fortunately, California is relatively arid so the mosquito would be unable to survive in most parts of the state.

California has one of the most effective mosquito control programs in the world. This time the local abatement districts were able to control and eradicate the introduced population. Other regions of the U.S. have not been so fortunate. This mosquito is a very real threat because of its close association with people and its ability to transmit disease-causing viruses to humans and other animals.

### Kids Corner: Insect Jokes

In keeping with the mosquito theme we decided it was time for more insect jokes; in this case mosquito jokes. For those of you old enough to remember shaggy dog, dead baby and elephant jokes, these mosquito jokes will cause you to groan in a similar fashion.

How do you know if you have a tough mosquito?  
*You slap him and he slaps you back!*

What is the most religious insect?  
*A mosque-ito!*

What has 6 legs, bits and talks in code?  
*A morse-quito!*

What is the difference between a mosquito and a fly?  
*Try sewing buttons on a mosquito!*

What do you get if you cross the Lone Ranger with an insect?  
*The masked-quito!*

What has antlers and sucks blood?  
*A moose-quito!*

What is a mosquito's favorite sport?  
*Skin-diving!*

Why are mosquitoes religious?  
*They prey on you!*

Why did the mosquito go to the dentist?  
*To improve his bite!*



Mosquito Knock-knock jokes:

Knock-knock!  
Who's there?  
Amos  
Amos who?  
Amosquito just bit me.



Knock-knock!  
Who's there?  
Andy  
Andy who?  
Andy just bit me again!



Knock, knock  
Who's there?  
Anna  
Anna who?  
Anna'nother mosquito



Knock, knock  
Who's there?  
Yetta  
Yetta who?  
Yetta another mosquito



## Focus on a Pest

### Diaprepes Root Weevil

The Diaprepes Root Weevil, *Diaprepes abbreviatus*, has recently arrived in California. It is native to the Caribbean Region where the genus is relatively diverse. The species was first reported in Florida in 1964. Since then it has become a significant pest in the lower two-thirds of the state, damaging citrus, ornamental plants and other crops.

These are distinctive insects. They are large, roughly as long as a dime is wide, brightly colored weevils. They are plant feeders, feeding on about 270 different plant species, including oaks, citrus, avocado, peach, hibiscus and guava. They are particularly damaging to citrus. The adults feed on foliage and the larvae on roots. Larval feeding can severely damage the root systems of trees and shrubs and can lead to the death of trees by girdling the root systems.

In California the weevils were first discovered in San Diego County in 2006. The California Department of Food and Agriculture (CDFA) has put out a call for the public to keep their eyes open for this pest and to report sightings as soon as possible. For more information go to the CDFA website: <http://www.cdfa.ca.gov/phpps/pdfs/Diaprepes.pdf> or San Diego County's Web page [www.sdcawm.org](http://www.sdcawm.org).



Photo by H. J. Brockman, University of Florida.



Photo by Max Dolberg, North County Times.

## Beetle Corner

### The Hunt for *Stenomorpha*



*Stenomorpha* is a genus of tenebrionid (darkling) beetle that occurs in dry sandy locations in the western U.S. and northern Mexico. Revision of this genus of large black beetles is the thesis topic for Fran Keller, a second year graduate student in the Museum. Because of the human transformation of California's Central Valley, many *Stenomorpha* species are now reduced to small relictual populations. So the discovery of *Stenomorpha lecontella* (left) at the Jamesan

Vernal Pools near Earlimart by Dennis Haines (Tulare County Agricultural Commissioner's Office) is an important finding.

You never know what unpleasant surprises field work will turn up or in this case turn over. On a recent trip to the Jamesan Vernal Pool site, Keller, Haines and Pat Randolph (U.C. Davis) were looking to find live *Stenomorpha* to confirm what species occurred there and to bring back to the lab to learn more about their biology. Vernal pool *Stenomorpha* can be found either running into the water along the edge of the pools or in grassy areas near rabbit burrows. The large pool at Jamesan was completely dry so collecting along the water edge was out, but one beetle was eventually located in a grassy area. But unexpectedly, the team began to find beetles by flipping over cow pies. This new fact about the biology of these beetles, inconsequential as it seems, could pay big dividends if it makes finding living specimens easier for Fran, and it may also have some importance in the way vernal pools should be managed to preserve these beetles. The cow flops left by grazing cattle may provide important shelter for these beetles.



Dennis Haines in collecting mode – shovel in hand.



Pat Randolph lifting a "pie".



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