

Out of the closet



MICHAEL CHEN / CENTRAL FLORIDA FUTURE

Stuart Fullerton, center, with student volunteers who help him organize his bug closet in the Biomedical Sciences building. The closet has hundreds of drawers that hold 485,000 insect specimens.

CRAWL SPACE

Creepy critters call campus their home in the Biological Sciences building's bug closet

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Contributing Writer

The new enrollment record at UCF has been broken. Students have been outnumbered — by bugs. For thousands of beetles, butterflies, spiders, wasps, flies and cockroaches, the bug closet in the Biological Sciences building is home.



"I just fell over as a young kid and there you were ... insects,"

Stuart Fullerton, founder of the collection, said to explain where his interest in creatures that most often cause fear and aversion came from.

Fullerton started the collection as a student of the biology graduate program in 1976. After graduating, he moved on, and it wasn't until after his retirement in 1990 that he started rebuilding the collection in his house

with the help of UCF student volunteers.

Fullerton said a unique characteristic of this collection is that it was built by students, for students and is still being used by students. There are currently six volun-



PLEASE SEE

COLLECTION ON A6



Collection holds 485K specimens

FROM A1

teers who work with the insects.

Sean McCarthy started six months ago as a volunteer and now does independent studies identifying arachnids.

"I guess I'll be the spider guy for a while," the senior biology major said while sitting in front of the dichotomous key he uses to compare the spiders, which are held in small tubes filled with water.

He considers his effort at the bug closet the opportunity to get hands-on experience working with arthropods, which will help him accomplish his goal of working with a government agency such as the Food and Drug Administration or the Fish and Wildlife Service.

In 1993, Fullerton started to help teach the lab section of a course on general entomology taught by David Vickers, then chair of the biology department.

"We put together the course and offered it for 12 years, disproving the concept that if you wanted to know about bugs you should go to Gainesville and you should have known that since sixth grade and started to make arrangements," Fullerton said.

Because Fullerton doesn't have a doctorate in entomology, he wasn't paid for teaching, but he did get to move the insect collection from his house to a small room on the first floor of the Biological Sciences building. A group of four volunteers — the "ferocious four" as Fullerton calls them — emptied the room, built a counter and set bookshelves and cabinets to turn a 7-by-16-foot room into the collection's home and the place where they did further research.

Now, the bug closet takes up another four rooms, where hundreds of drawers hold the 485,000



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Stuart Fullerton, above, catalogs flies he caught under an ultraviolet light for his expansive insect collection that dates back to 1976 when he was a biology graduate student.

specimens that make up the only collection in Florida that is entirely databased to the specimen level. Fullerton's original idea to document insects found in the UCF campus rapidly expanded to all of Orange County and its five surrounding counties.

The entomology course that helped Fullerton move the bug collection to UCF hadn't been taught for seven years until last fall. That is when the biology department hired Hojun Song, a specialist in entomology and taxonomy, to be assistant professor and curator of the collection. Song is the first trained insect taxonomist ever to be hired as a faculty member at UCF.

Song, who got his doctorate at Ohio State University, which houses a collection of 3 million specimens, said that when he began teaching at UCF, he thought the collection needed infrastructure improvements, but that its quality and scope surprised him.

"Every single specimen has been individually databased; that is unheard of. I would dare to say that this collection is the only col-

lection in the whole world that has all of its specimens databased," Song said.

However, the collection was barely known by students such as Hanna Stephens, who now volunteers at the bug closet.

"I had no idea this was here. It is not really advertised," Stephens said. "I think people should know about it. It is much more interesting to know about insects than to be like 'Ew! That's gross. I'm going to kill it.'"

Through volunteering, the anthropology major was inspired to start her own insect collection. Stephens' work includes correcting spelling mistakes in the catalog of specimens in preparation for its migration to Ohio State University's database. Many people involved with collections are getting together in an effort to gather more information for the creation of maps that show where specimens can be located and help researchers compare different habitats.

Fullerton has largely self-funded the collection, purchasing cabinets, pins, computers, microscopes and even paying for volun-

teers out of his pocket. Song said the collection caught the department's attention and it decided to make the collection more visible and hired him as a curator.

Song's job includes improving the collection in terms of infrastructure, functionality, personnel and its availability as a resource to the scientific community. In order to achieve these improvements, Song sought a funding opportunity from the National Science Foundation last year. Funding was declined because the collection needed to have institutional support from the university.

After this experience, the professor could demonstrate the value of the collection to administrators. The College of Sciences and the biology department created the full-time position to provide university support.

Sandor Kelly, a UCF alumnus, was appointed as the collection's manager two weeks ago. Kelly graduated with a degree in biology and took Fullerton's course as a student.

"The main goal of this collection is to understand

What's bugging you?

Is it possible to predict when unwelcome guests will invade our picnics, backyard barbecues and baseball games? Yes and no. Temperatures and precipitation can delay or hasten their debuts. Here's more about the insects we love to hate:



Yellow jacket

Wasps' unpredictable flight patterns makes us shudder but not as much as their sting

Yellow jackets can get quite aggressive in July and August, when they're foraging for food

Ticks are out as early as April; wood ticks tend to bite in June, but blacklegged (deer) ticks, which carry Lyme disease, can be present from March into November



Wood tick

Black flies are smaller than a mosquito but their bite hurts more and swells more



Horse flies are bigger — and bite further — than ordinary houseflies



Stag beetles' sheer lumbering intimidate us but so do one bite a bloodsucker; they're more prevalent in wetter years



Asian lady beetles can bite in fall, when their favorite food (aphids) disappears



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Baker, Jeffery, assistant professor
at the University of Tennessee
Gordon, Jim Hoyle, Ray Grunney,
Meredith Star Tizard



When you can typically expect to see our least favorite visitors



biodiversity, because you would think people have been doing work here for a long time so probably they know about all the species and where they are located. But that's not the case, not even close to the case," Kelly said while sitting in front of some beetles that needed to be pinned and labeled.

Since the collection's beginnings in the early 1990s, the group of researchers, led by Fullerton, has discovered 18 new species, which have been described and published by specialists.

Song will apply to get financial support from the National Science Founda-

tion later this year. A revised proposal that shows institutional support will be submitted.

"I feel very strongly that this collection has a serious potential to become one of the most important collections in southeastern United States," Song said. "I foresee that in 10 years or so the collection will increase to about a million specimens."

Fullerton is now 72 years old and still arrives at 6:15 a.m. every Monday, Wednesday and Friday to pin and label specimens to continue building the collection that after 22 years, remains UCF's best kept secret.