https://www.bgdailynews.com/news/so-many-insects-too-little-time-buggin-out-with-wku-s-new-distinguished-professor/article_702474e7-1941-5f17-beec-a76a1a0d3c6f.html

‘So many insects, too little time’: Buggin’ out with WKU’s new distinguished professor

By JAKE MOORE jake.moore@bgdailynews.com
Jan 28, 2023

Dr. Keith Philips shows Gatton Academy students a tailless whip scorpion during a 2014 nighttime hike in Playa Grande, Costa Rica. He has instructed a neotropical biodiversity course there since 2011.

By Clinton Lewis/WKU

Western Kentucky University’s newest distinguished professor is creating a different kind of buzz on campus.

Dr. Keith Philips was honored as a distinguished professor by WKU’s Board of Regents earlier this month. According to WKU, the nod is given to faculty who have served the institution with distinction and have compiled an “outstanding body of work.”

That body of work is on full display in Philip’s workspace. He shares his lab in WKU’s Engineering & Biological Sciences building with what he estimates to be around 2 million insects.

Boxes and vials full of creepy-crawlies, some difficult to see with the naked eye, can be found in every direction. Rather than keeping food fresh, a set of freezers preserves bags full of bugs from around the globe – some more than a decade old.

Philips is a leading expert on dung, spider and cave ground beetles, and is credited with the description of 16 new genera and documentation of 126 new insect species. His work on insect biodiversity has taken him to places as far as Peru, Chile and South Africa.

He said his love of insects began at 6 years old when his father recommended he start a bug collection.

“I never gave it up,” he said.

He came home to his distinguished professor title after working abroad. Philips just arrived back in the states from Costa Rica, where he had been teaching a neotropical biodiversity field biology class.

Philips has taught the class each year since 2011, save for a pandemic induced hiatus. Some of the creatures the group regularly encounters include leatherback turtles, toucans

and tapirs. On this year's trip, a group of the students worked to trap dung beetles to test what food source they seemed to prefer.

"They do real research. One thing about the course is the rigor compared to a lot of their (other) courses," Philips said.

Another facet of his research deals with how climate change is affecting insect populations and habitats. Speaking from anecdotal experience, Philips has begun to see shifts in the insect world in areas like WKU's Green River Biological Preserve.

"How many monarch (butterflies) am I seeing? I'm not seeing as many," Philips said. "Caterpillars on the host plant, the milkweed? I don't see as many."

He recalls nighttime drives to his family's cabin in Ontario as a kid, having to stop and clean bugs off of the windshield.

“Now? You don’t get that,” he said.

A study published by the journal Nature in 2022 established links between areas impacted by climate change and heavy agricultural use and declining insect populations. The study found that insect populations had declined by as much as 50% in those areas, and the amount of species present had been cut by 27%.

Philips said a diverse insect population is a component of a healthy and functional ecosystem.

“You lose the insects? Not good,” Philips said. “Fewer insects? Fewer birds. Fewer insects? Fewer bats ... It’s like you’re pulling up the foundation stones, and you’re not just pulling up one or two, you’re pulling out a whole pile.”

Yet another part of his work is providing government organizations with data on where new species have been discovered in the hopes of protecting the land.

“Here’s where we’ve got some really unique diversity. Consider saving it or putting (in) a park, trying to conserve part of it,” Philips said. “Don’t let it get developed into farmland or grape fields for wine, stuff like that.”

The prospect of finding never-before-seen species in the lab is what propels Philips forward. He has become more selective in what he chooses to study, since there simply isn’t enough time to get to every insect.

“Insects, they’re so bloody diverse and fascinating; at my stage in my career, you soon realize you don’t have much time and there’s just too much out there,” Philips said. “So many insects, too little time.”