

Newly discovered assassin bug was incognito, but now it's incognita

December 23 2014



Sinea incognita, an assassin bug that was previously believed to be the same species as *Sinea complexa*. Credit: Entomological Society of America

Sometimes new insect species are discovered in the wild, and sometimes they are discovered in the drawers of old museum collections. Then there are those that are discovered by accident, which is how Dr. J. E.

McPherson, professor emeritus at Southern Illinois University, discovered a new species of assassin bug.

In 2006, Dr. McPherson was working with colleagues on a key to the nymphs of three midwestern [species](#) of [assassin bug](#) in the genus *Sinea* (i.e., *S. complexa*, *S. diadema*, and *S. spinipes*). To test their key for accuracy, they asked several others to check it by comparing it with insects in their collections or laboratories. All of them found the key to be satisfactory, except for one—Dr. Scott Bundy from New Mexico State University, who found discrepancies in specimens that had been collected in New Mexico and identified as *S. complexa*.

"Jay asked me to review his key because he knew I had been rearing a species of *Sinea* in New Mexico," said Dr. Bundy. "When my bugs would not key out properly, I assumed there was just an error in the key. I then sent him some western specimens, and he saw that they actually were two different species."

As it turned out, Dr. Bundy's specimens were indeed *Sinea complexa*. However, the Midwestern species, which is very similar to *S. complexa*, was new to science but had remained undiscovered until now.

"I have named this species *S. incognita* to indicate that it has remained hidden for over 100 years as *S. complexa*, to which it is closely related," Dr. McPherson wrote.

Since its original description, scientists had believed *S. complexa* and *S. incognita* to be a single species that was found from California to Missouri and Illinois. This long-time hidden identity is responsible for the new bug's specific epithet.



Prothoracic legs of *S. incognita* (top), *S. complexa* (middle), and *S. integra* (bottom). Notice the difference in thickness of the femora. Credit: Entomological Society of America

The two species also are separated by geography as *Sinea complexa* occurs in the western and southwestern United States south into Mexico, whereas *Sinea incognita* occurs from Maryland south to Georgia and west to Kansas and Texas.

The new species—*Sinea incognita*—is described in the *Annals of the Entomological Society of America* in an article that also explains the

differences between it and its close relatives, the aforementioned *S. complexa* and another called *S. integra*, which is found from Arizona and Texas south through Mexico to, at least, Guatemala and Honduras.

The easiest way to tell the difference between the three species is by looking at the femora of their front legs. The femur of *S. incognita* is big and round on one end, but is much narrower on the other—kind of like a caveman's club. The femur of *S. complexa* is similar, but the big end is not as large, making it look more like a baseball bat. Finally, the femur of *S. integra* is nearly the same size on both ends, making it look more like a stickball bat.

These and other differences are described in detail, along with photos of the species, in the *Annals* article.

More information: "Sinea incognita McPherson, a New Species of Assassin Bug from America North of Mexico, with Designations of Lectotypes and Paralectotypes for *Sinea complexa* and *Sinea integra* and Analysis and Comparison of the Three Species (Hemiptera: Heteroptera: Reduviidae: Harpactorinae)," December 23, 2014.

[aesa.oxfordjournals.org/lookup ... /10.1093/aesa/sau003](https://aesa.oxfordjournals.org/lookup.../10.1093/aesa/sau003)

Provided by Entomological Society of America

Citation: Newly discovered assassin bug was incognito, but now it's incognita (2014, December 23) retrieved 25 April 2024 from <https://phys.org/news/2014-12-newly-assassin-bug-incognito-incognita.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.