'Bigfoot of ants' found (again)

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Amblyopone oregonensis. Image credit: Antweb.

(PhysOrg.com) -- Stop the presses: Bigfoot was spotted in Cary! It's probably not the Bigfoot you know, that 8-foot-tall beast also known as Sasquatch. Instead, it's the Bigfoot of ants, a species of ant so rarely seen that it makes blue moons seem common.

This ant Bigfoot was unknown until more than 60 years ago, when it was discovered by a biologist in Concord, N.C., and named as a new species by an eminent Harvard University biologist in 1949. It then disappeared until an NC State doctoral student in biology, Benoit Guenard, found a pair of ants under a rock outside his apartment complex in Cary, on a warm January day.

Unaware he'd unearthed the legendary ant species, Guenard photographed the two ants and then gently placed them back under the

rock, so they could make their way back to their queen.

No one has reported seeing the Bigfoot ants since.

A new species

In the late 1940s, a biologist named D. L. Wray found some ants within the ant genus *Amblyopone* around Concord, N.C. These ants, content to eat centipedes and live hidden underground or under leaves and rocks, had two known species in North America when Wray made his discovery – *Amblyopone oregonensis*, which live predominantly in northwestern North America and *Amblyopone pallipes*, which live nearly everywhere else across the continent.

At least one of the ants collected by Wray in Concord was *Amblyopone pallipes*, as would be expected. But one of the ants didn't look like the others – it had a rounder head, a smaller set of toothlike projections near its mandibles than in other species, and other differences. Wray's find came to the attention of one of the fathers of modern ant biology, Bill Brown, who worked at Harvard. Based solely on this one dead ant from Concord, Brown named a new species – *Amblyopone trigonignatha*.

In ant-study circles, though, many have since questioned Brown's judgment. Maybe what he had named was a mutant – a weird individual of the common species of *Amblyopone*. In subsequent years, no one could find a single *Amblyopone trigonignatha* ant; it seemed nothing more than a pipe dream, a red-headed stepchild of the more common *Amblyopone pallipes* species.

Until, that is, NC State's Guenard found a few slow-moving ants outside his apartment complex.

Messin' with Sasquatch

Guenard doesn't take ants lightly. A specialist in ant ecology who studies under Dr. Rob Dunn, Guenard has spent hundreds of hours creating maps of every known ant genus in the world. It's a "click on an ant genus and a map pops up to show you where it lives" project that takes constant vigilance and a whole lot of knowledge and attention to detail. But when he saw the ants outside his apartment, Guenard didn't collect them. Maybe it was the warm (for January) day. Maybe he was feeling especially magnanimous. Maybe he wanted to spare his neighbors an exterminator's bill. But instead of collecting the Bigfoot of ants, all Guenard took was some photographs.

At least, he says now with a wry smile, the photos were in focus.

Those pictures, though, revealed something interesting. Recently, an ant blogger – such people do exist – appropriately named Alex Wild found something unusual while trolling through Guenard's online photos of the ants of North Carolina. Channeling the Harvard biologist Bill Brown, he saw individual ants that did not look like *Amblyopone pallipes* but instead looked like Brown's rare ant, *Amblyopone trigonignatha*.

Wild sent an e-mail to Guenard and copied another ant specialist, Brian Fisher, at the California Academy of Sciences. Fisher concluded that the photos, indeed, captured Bigfoot.

Calling all myrmecologists

So Guenard renews the call to all myrmecologists – those who undertake the scientific study of ants – and any other naturalists, particularly those living in the Piedmont regions of North Carolina, Georgia and South Carolina, to look for more of what is still North America's rarest ant.

Guenard, and the ant-studying community, still have lots of questions about the Bigfoot of ants. Why is this particular ant so hard to find? Why it is different from other species of the same genus? Why does it seem to be relatively active during the cool months of the year?

As can be expected, Guenard has spent an inordinate amount of his time looking for Bigfoot in the past few weeks.

So far he's had no luck finding *Amblyopone trigonignatha*. But he and an ant-collecting colleague did find two big colonies of the *Proceratium silaceum* ant, which feeds only on the eggs of spiders.

Don't worry, he collected them.

Provided by North Carolina State University