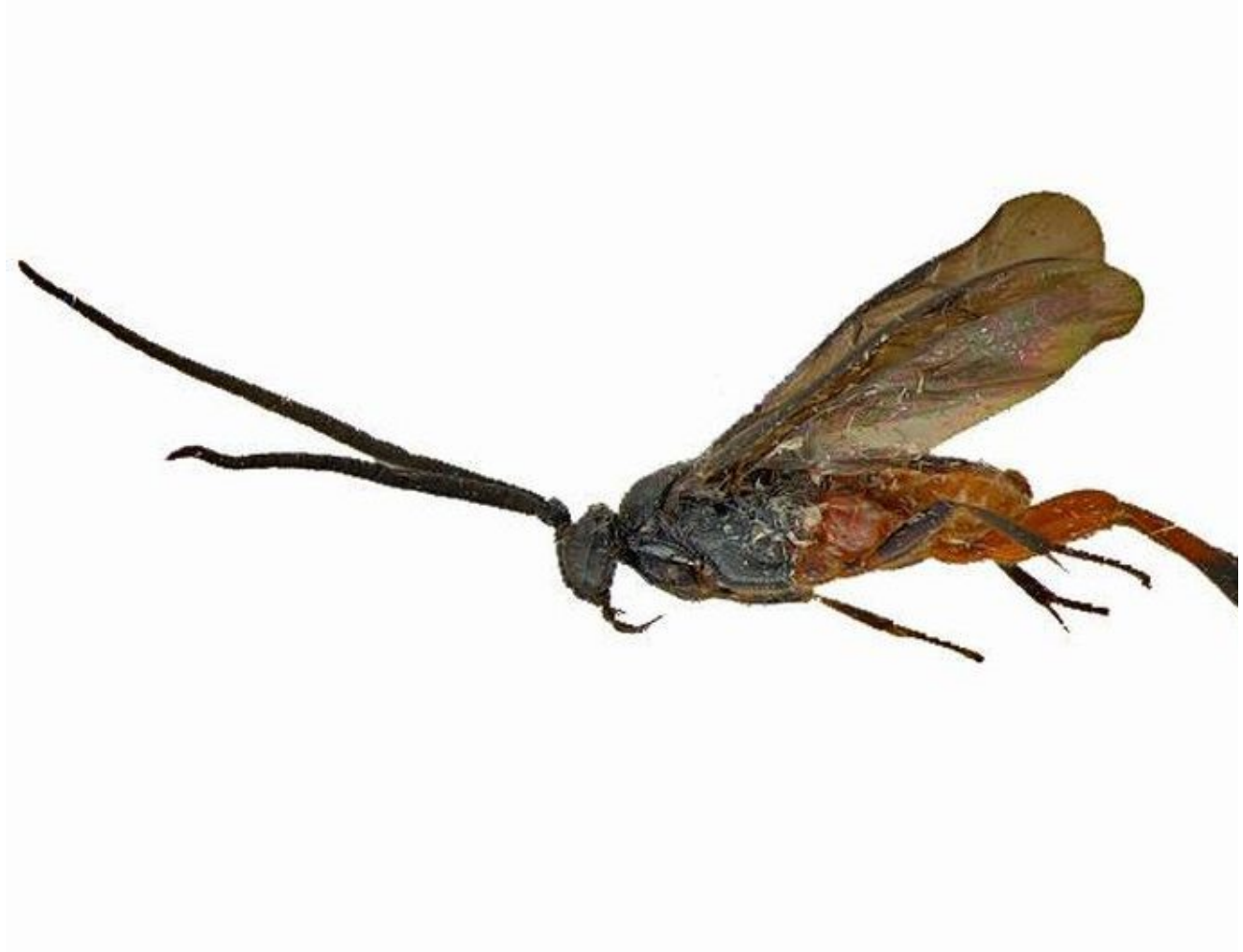


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Nameless Insects roam the Archbold Biological Station

By ARCHBOLD BIOLOGICAL STATION

May 6, 2020



Microgaster archboldensis collected at Archbold by Dr. Mark Deyrup, Archbold Entomologist.

STEPHANIE LEON PHOTO

For hundreds of years naturalists have been busily discovering, describing, and naming the many plants and animals that share our world. In spite of these centuries of dedication the task is incomplete. Many species remain to be discovered and named, even in such well-explored places as Florida. The main reason for this is the mind-boggling number of different kinds of small animals, especially insects.

A resident of Highlands County strolling through the backyard is never going to see a species of bird unknown to science, but there is a good possibility that some small insect buzzing by has never been discovered, described or named by a biologist. "It's not that biologists are bored by bugs," says Mark Deyrup, emeritus entomologist at Archbold Biological Station. "We all think it's exciting to discover a never-before-seen species. The catch is that one would never know a species was unknown unless one can recognize all the similar species that are already known. This requires a level of expertise way beyond nerdiness."

For the would-be namer of new insect species it gets worse. In order to give a name to a new species of insect it must first be described in enough detail that it is unlikely to be confused with any similar species. This requires not only keen attention to detail but also a grasp of an arcane vocabulary pertaining to the insect group in question. Whole paragraphs may be filled with such descriptive phrases as "flagellum with three rows of placodes," or "subscutellar sulcus with 5-6 costulae," or "metasoma with T 1-3 reddish-orange, T 4+ orange-yellow, hypopygium mostly yellow to yellow-white."

These phrases are taken directly from Jose Fernandez-Triana's 2018 description of a new predatory wasp, *Microgaster archboldensis*, found at the Archbold Biological Station. "Far from being needlessly obscure," says Deyrup, "Fernandez-Triana's description of this wasp is a model of brevity and clarity, easily understood by anybody familiar with this group of wasps. The number of people with such skills, however, is quite small."

The wasp, *Microgaster archboldensis* belongs to a huge group of small predatory wasps that includes more than 1,400 described species and probably thousands of additional species still to be discovered and described. These wasps attack caterpillars, and many species have been studied as enemies of caterpillars that damage crops. Observant gardeners might notice large caterpillars covered with white cocoons of developing wasps;

photos of such a caterpillar can be found by looking up the name *Cotesia* on Google Images. Most species, however, are not so conspicuous. The reason why there are so many species of these little predators is that most species are highly specialized, efficiently zeroing in on one kind of caterpillar or several kinds found in a special situation.

“Small caterpillar-hunting wasps are the beneficial guided missiles of the insect world,” says Deyrup. “It might be thanks to their appetite for caterpillars that there are uneaten leaves on trees in forests, and healthy blooming wildflowers in meadows and roadsides. Some of these wasps, however, we can’t thank by name, because they are still nameless.”

A Moody