

New *Megaselia* fly inspires the invention of innovative method for streamlined descriptions

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Megaselia shadeae is the new species, which inspired the search of a new streamlined description method. Credit: Inna Strazhnik

Scientists from the Natural History Museum of Los Angeles describe a new distinctive fly species of the highly diverse genus *Megaselia*. The study published in the *Biodiversity Data Journal* proposes an innovative method for streamlining *Megaselia* species descriptions to save hours of literature reviews and comparisons.

The new species, *M. shadeae*, is easily distinguished by a large, central, pigmented and bubble-like wing spot. The description is part of the the Zurquí All Diptera Biodiversity Inventory (ZADBI) project, and represents the first of an incredible number of new phorid fly species to be described from this one Costa Rican cloud forest site.

The genus *Megaselia* is extremely rich in species and has been characterized as an "open-ended taxon" due to its diversity and the complexity in describing [new species](#). This single genus contains about half of the species of the Phoridae family, a majority of which are hitherto undescribed.

"In our work on the ZADBI Project and beyond, we have spent countless hours sorting through tens of thousands of worldwide *Megaselia* specimens," explains Emily A. Hartop about the difficulties describing *Megaselia* species. "Recognized morphotypes are keyed and compared to published *Megaselia* descriptions in the world literature. The process can be extremely time consuming and often involves reading dozens of descriptions for each specimen you are attempting to key."

Scanning descriptions day in and day out, dealing with so many specimens and species of *Megaselia*, the authors came to rely upon certain characters (and essentially disregard others) for their identifications. If a specimen matched (or came close to) the key characters of a description, actual specimens were consulted for a definitive diagnosis.

It was realized that a streamlined and standardized character set for this group that easily pared down potential matches and heavily utilized visual aides for diagnosis (rather than highly variable verbose descriptions) would facilitate not only identification of known species, but description of new ones as well. The method is described in more detail in the study titled "The tip of the iceberg: a distinctive new spotted-

wing *Megaselia* species (Diptera: Phoridae) from a tropical [cloud forest](#) survey and a new, streamlined method for *Megaselia* descriptions".

"It is our hope that the streamlined presentation of [species](#) data presented here will help stimulate rapid and abundant descriptions of unknown fauna as well as facilitating the identification of unknowns." summarizes Hartop.

More information: Hartop E, Brown B (2014) The tip of the iceberg: a distinctive new spotted-wing *Megaselia* species (Diptera: Phoridae) from a tropical cloud forest survey and a new, streamlined method for *Megaselia* descriptions. *Biodiversity Data Journal* 2: e4093. [DOI: 10.3897/BDJ.2.e4093](#)

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