

Flickr and a citizen science website help in recording a sawfly species range expansion

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Female parasitic woodwasp, Orussus minutus species. Credit: Michael Skvarla

Social network Flickr and citizen science website BugGuide have helped scientists to expand the known range of a rarely collected parasitic woodwasp, native to the eastern United States. Partially thanks to the two online photograph platforms, now the species' distribution now stretches hundreds of miles west of previous records. Previously known from only



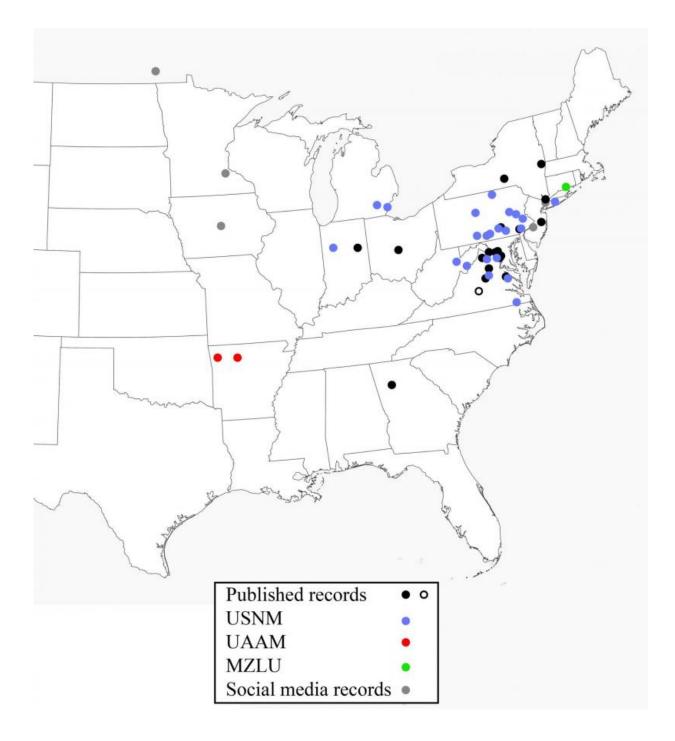
50 specimens mainly from the Northeast, now the species was discovered in the Ozark Mountains by researchers from the University of Arkansas. Their study is published it in the open access journal *Biodiversity Data Journal*.

Spurred on by the find, Michael Skvarla, a Ph.D. candidate at the university, contacted retired sawfly expert David Smith who alerted him to a hundred unpublished specimens housed in the United States National Entomology Collection at the Smithsonian, many of which were collected as bycatch in surveys that targeted invasive <u>species</u> like <u>emerald ash borer</u> and Asian longhorned beetle. Additional specimens from Iowa, Minnesota, and Manitoba, which also represent significant western range expansions, were found after users posted photos of the species on the social network Flickr and the <u>citizen science</u> website BugGuide.

"We used two resources - photos on social media and bycatch from large trapping surveys - which are often underutilized and I was really happy we could work both of them into the paper," said Skvarla, the lead author. "This work highlights their utility, as well as the importance of maintaining biological collections like the U.S. National Collection and continuing to collect in undersampled regions like the Ozark Mountains."

Parasitic woodwasps attack the immature stages of longhorned beetles, jewel beetles, and other woodwasps which bore into wood and have long fascinated entomologists because of this parasitoid nature, which is unique among woodwasps, and rarity in collections. The Arkansas specimens, which belong to the species *Orussus minutus* and motivated the initial research into the group, were collected as part of a larger survey of the insect fauna around the <u>Buffalo National River</u>.





A map of new and previously published records. Credit: Michael Skvarla



More information: Skvarla, M.J., Tripodi, A., Szalanski, A., Dowling, A.P.G. 2015. New records of Orussus minutus Middlekauff, 1983 (Hymenoptera: Orussidae) represent a significant western range expansion. *Biodiversity Data Journal*, 3: e35793. DOI: 10.3897/BDJ.3.e5793

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