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New State Record and Range Extension for *Mycterus youngi* Pollock (Coleoptera: Mycteridae)—But Is It Really Rare?

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Abstract

Mycterus youngi Pollock (Coleoptera: Mycteridae) was described from Wisconsin and “L.S” (presumed to indicate along Lake Superior). All but one of the specimens in the type series were collected between 1947 and 1949. Herein, three females of *M. youngi* are reported from Michigan, between 1910 and 1940. A discussion of possible implications of the few, and largely old collection dates is provided.

Keywords: *Mycterus youngi*, Michigan, state record, rarity

Pollock (2012) described *Mycterus youngi* based on seven Wisconsin specimens and two individuals labeled “L.S” only. The latter two specimens, one male and one female, were presumed to have been collected along Lake Superior but had no specific location data and were not provided with collection dates. All but one of the dated specimens in the type series were collected between 1947 and 1949.

While examining undetermined mycterids from the Great Lakes region, two females of *M. youngi* from the Albert J. Cook Collection (Michigan State University: MSUC) and a single female from the Museum of Zoology (University of Michigan: UMMZ) were discovered. These three females are the first Michigan records for this presumably rare species, and by extension the first distributional data points outside Wisconsin (Fig. 1). One specimen was collected from Sanilac County, 4 July [19]28 (MSUC). The second specimen is labeled Atlanta, [Montmorency Co.] MI, 7 July 1940 (MSUC). The third new state record is labeled Mershon Ex.[pedition], Charity Is., Mich. [Arenac County] 17–30 June 1910 (UMMZ).

Ruthven (1911) provided a brief overview of the Mershon Expedition made by the University of Michigan, Museum of Zoology to the Charity Islands and listed A. W. Andrews as the survey member largely responsible for Coleoptera. In addition to Ruthven’s summary, notes and an overview map of the islands in Saginaw Bay, Lake Huron were also provided by Wood (1911) and an ecological overview and preliminary account of the Coleoptera survey were provided by Andrews (1911). Andrews also stated that his actual

June visitation dates were 19–26 June (label indicates 17–30 June).

None of the known *M. youngi* specimens aside from a single “flight-intercept trap in sandy barrens” record in the original description (see below) provide any indication of how the specimens were collected and very few plant associations have been provided for any adult *Mycterus* species from North America. Hopping (1935) and Pollock (2002) recorded the western species from flowers of *Ceanothus* (Rhamnaceae) and *Yucca* (Asparagaceae); Pollock (2002) added *Daucus* (Apiaceae), presumably the naturalized and widespread Queen Anne’s lace, *Daucus carota* Linnaeus, on which I have collected *Mycterus scaber* Haldeman in the northern lower peninsula of Michigan. I also have a specimen of *M. scaber* taken on flowers of *Spirea* (Rosaceae) in Quebec, Canada. Adult flight intervals per available collection event label data, excluding the interval associated with the flight intercept trap record (see comments below) and the interval indicated for the “Charity Island” specimen, range from 4 July to 4 August, with mid- to late July being the most common. The collection dates are certainly congruent with the flowering of *D. carota* and several species of *Spirea* in the Great Lakes region.

Even less is known about the microhabitat and food resource requirements of mycterid larvae. Not a single larval association has been confirmed for any North American *Mycterus* species. Larvae presumed to be those of the largely European *Mycterus curculionoides* (Fabricius) were collected beneath bark of *Pinus* sp. (Crowson and Viedma 1964) and this subcortical behavior is consistent with what little is known about larvae of the

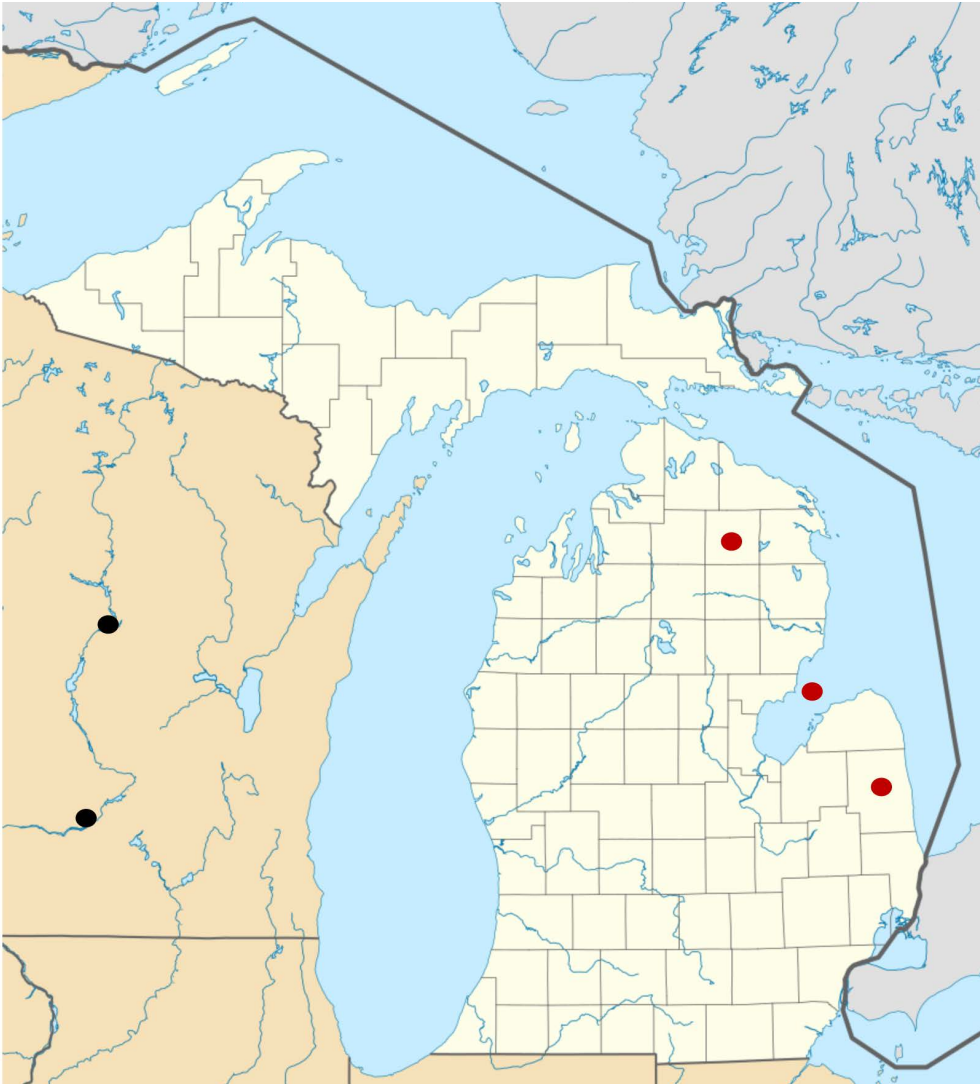


Figure 1. Distribution of *Mycterus youngi* Pollock: previous (WI: black dots) and new (MI: red dots) records.

related *Lacconotus* species (Lawrence 1991; personal observations) as well as other euryptine Mycteridae (Pollock 2010).

It is immediately striking that 11 of the 12 known specimens of *M. youngi* came from the 39-year interval between 1910 and 1949. The single outlier is a paratype male¹ recov-

¹ I should, for sake of clarity, also note a typographical error (Pollock 2012, p. 25) in the reported locality data. “USA: WI: Iowa Co. Area Pines-Sand Barrens SNA” should read: USA: WI: Iowa Co. Arena Pines-Sand Barrens SNA [The village of Arena is located just south-southeast of the state natural area].

ered from a flight intercept trap 18 years ago (23 June–1 July 2001). These observations beg fundamental questions regarding rarity, vulnerability and extinction risk. Fattorini et al. (2013) provided an overview of “measuring insect rarity” and its contribution to conservation and management. Unfortunately, many of the putatively critical traits they discussed relative to extinction risk (mobility, trophic level, food resource specificity of larvae and adults, other behavioral factors) are virtually unknown for *M. youngi*.

Considering the new Michigan records, the gross geographical range of *M. youngi* would not appear to support a claim of rarity.

From what little is known about resource requirements, it is likely that larvae are saproxylic on coarse woody debris. While such microhabitats would seem to be abundant and not contributing to a case in support of rarity for *M. youngi*, shrinking undisturbed forests and intense forest management provide some cause for concern (Grove 2002, Milberg et al. 2014). Evidence suggests that adults are pollenivorous. *Daucus*, *Spirea* and other mid- to late summer cantharophilous flowers are not at all uncommon in the Great Lakes region, thus precluding adult feeding and potential pre-mating aggregation sites from consideration with respect to possible rarity.

Is *M. youngi* really “rare”? Natural history collections hold the planet’s accumulated historical knowledge relating to biological diversity (Lane 1996, Kemp 2015). Our best regional entomological collections indicate that, if nothing else, *M. youngi* has been rarely collected. But is it rare—is it vulnerable—is it threatened? Perhaps this is merely a case of sampling bias. Then again, there is a plethora of collection records for insects associated with flowers. Pollock (2002) indicated that adults of *Mycterus*, “can be very abundant” on flowers. Perhaps this is another case of being in just the right place at just the right time? An invitation—a challenge.

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