The Recently-Described Ant-Like Leaf Beetle Elonus gruberi (Coleoptera: Aderidae) in Michigan

Daniel R. Swanson
Aderidae is a family of small-bodied beetles (1–4 mm in the Nearctic Region) that contains members typically encountered on the underside of broad-leaved angiosperms (Chandler 2002). The family, a comparatively small one among Coleoptera, is represented by approximately 11 genera and 50+ species in North America north of Mexico, although the family is global in its distribution and much more diverse in the tropics (Chandler 2002). Prior to this note, seven species of Aderidae, distributed in three genera, were known to occur in Michigan (Ruesink et al. 2023).

Recently, two specimens of an ant-like leaf beetle, *Elonus gruberi* Gompel, 2017 (Coleoptera: Aderidae) were collected by the author in southwestern Michigan. Generic determination of the specimens was made using Chandler’s (2002) key, and the species was determined using Gompel’s (2017) key in the most recent revision of the genus. Collectively, these specimens are represented by the following label data:

**U.S.A.: MICHIGAN:** Barry Co., Middleville, Barlow Lake, nr. 1672 Heritage Bay Dr., 42.6764°N 85.5213°W, 240 m, ex. blacklight sheet, 4 July 2021, D. R. Swanson, #2021-004 [1♀] (Fig. 1); Kent Co., Wyoming, 3811 Cook Ct., suburban residence, 42.8950°N 85.7235°W, 200 m, ex. porch light at night, 4 July 2019, D. R. Swanson, #2019-004 [1♂]. Both specimens remain in the author’s personal collection (i.e., DRSC).

Given the recency of the species’ description, it was predicted that additional specimens of *E. gruberi* would be found in Michigan institutional collections (i.e., Albert J. Cook Arthropod Research Collection, Michigan State University, East Lansing [MSUC]; University of Michigan Museum of Zoology Insect Collection, Ann Arbor [UMMZ]) under previously-collected material identified as *Elonus basalis* (LeConte, 1855), the sister species from which *E. gruberi* was taxonomically split. This proved true, as seven Michiganian specimens of *E. gruberi*, were subsequently identified by Gary L. Parsons and William G. Ruesink in MSUC:

**U.S.A.: MICHIGAN:** Clare Co., 23–28 July 1959, R. R. Dreisbach [1♂]; Clinton Co., 1 mi N of Lansing, @ UV & white lights, 2 July 2002, G. L. Parsons [1♂1♀]; *idem*, 2 June 2004 [1♂]; *idem*, 26 June 2005 [1♂]; 2 mi N of Lansing, @ UV & white lights, 30 June 2005, G. L. Parsons [1♂]; Lake Co., Branch, ex. Malaise trap, 4 August 1976, R. L. Fischer [1♂]. The material from MSUC was communicated to the author by William G. Ruesink (pers. comm., 2023) and includes a determination label indicating identification by G. Parsons in 2023. No specimens of *E. gruberi* were found in UMMZ (Ruesink, pers. comm., 2023). It is unsurprising to find this species in Michigan, as Gompel’s (2017, Fig. 5) map shows the species known in northern Ohio and Indiana as well as southern Wisconsin. Its unreported status in Michigan can cer-
tainly be attributed to its recent description and morphological similarities to its sister species, *E. basalis*, with which it was clearly confounded. Indeed, review of specimens of *Elonus* Casey, 1895 identified prior to 2017 will likely reveal a less patchy, if not wider, distribution of *E. gruberi*.

*Elonus gruberi*, presently known only from the United States, has been previously recorded from the following states: Alabama, Arkansas, Delaware, Illinois (accidentally omitted from the Distribution subheading in Gompel 2017), Indiana, Iowa, Massachusetts, Mississippi, New Hampshire, Ohio, Pennsylvania, Texas, and Wisconsin (Gompel 2017). The widespread eastern Nearctic range is largely sympatric with its sister species, *E. basalis*. As noted above, the species is already known from Illinois, although the following record is added based on additional material in DRSC: U.S.A.: ILLINOIS: Champaign Co., Urbana, 2008 Boudreau Dr., suburban residence, 40.0929°N 88.2081°W, 230 m, ex. porch light on humid night, ca. 10:30 PM, 11 June 2018, D. R. Swanson, #2018-011 [1♂] (DRSC). No additional Illinoisan specimens of *E. gruberi* were found among the determined or undetermined Aderidae in the Illinois Natural History Survey Insect Collection (INHS).

The genus *Elonus* is recognized among genera of Aderidae found north of Mexico by the relatively larger body size (greater than 2 mm), deeply emarginate eyes, and the elytra with large (as wide as an ommatidium), flat-bottomed punctures and obliquely-laterally-directed interstitial setae (Werner 1990, Chandler 2002). As indicated in Gompel’s (2017) key, *E. gruberi* is easily distinguished from other species of *Elonus* in the eastern United States by the markings and pubescence of the elytra (see Fig. 1). The elytral markings are similar to other “pale-shouldered” species, except that the markings are distinctly separated or strongly V-concave medially (see Gompel 2017, Fig. 1, 4a–d). The white elytral pubescence is limited to the area adjacent to the suture, contrasting more extensive white pubescence over the disk of the elytra in both *E. basalis* and *Elonus hesperus* Werner, 1990 (see Gompel 2017, Fig. 4f, h, j). Two other species of *Elonus* have been recorded from Michigan, i.e., *E. basalis, Elonus nebulosus* (LeConte, 1875), both by Werner (1990). Gompel’s (2017) key will facilitate identification of the species of *Elonus* found in Michigan. Prior to Gompel’s (2017) revision, Werner (1990, 1992) provided the most recent taxonomic treatments of *Elonus* in the Nearctic Region.

All of the DRSC material presented herein was collected at lights at night. This method aligns with many instances of material reported in both Werner (1990) and Gompel (2017), collectively for both eastern and western Nearctic species, as well as the MSUC specimens recently collected from Clinton County. Both blacklight and incandescent white light appear to be attractive to members of *Elonus*.

Acknowledgments

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**Literature Cited**


