

August 2017

A Milliped New to Michigan (Pselaphognatha: Polyxenus)

James R. Brice
Eastern Michigan University

Michael T. Barbour
Eastern Michigan University

Follow this and additional works at: <https://scholar.valpo.edu/tgle>



Part of the [Entomology Commons](#)

Recommended Citation

Brice, James R. and Barbour, Michael T. 2017. "A Milliped New to Michigan (Pselaphognatha: Polyxenus)," *The Great Lakes Entomologist*, vol 6 (3)
DOI: <https://doi.org/10.22543/0090-0222.1184>
Available at: <https://scholar.valpo.edu/tgle/vol6/iss3/3>

This Peer-Review Article is brought to you for free and open access by the Department of Biology at ValpoScholar. It has been accepted for inclusion in *The Great Lakes Entomologist* by an authorized administrator of ValpoScholar. For more information, please contact a ValpoScholar staff member at scholar@valpo.edu.

A MILLIPED NEW TO MICHIGAN (PSELAPHOGNATHA: *POLYXENUS*)James R. Brice and Michael T. Barbour¹Department of Biology, Eastern Michigan University,
Ypsilanti, Michigan 48197

The authors wish to report the finding of representatives of the genus *Polyxenus* for the first time in Michigan (Fig. 1). In Bert M. Johnson's survey (1954) of the millipedes of Michigan, no members of the subclass Pselaphognatha were reported.

During the period of September through October 1970, the authors collected over 40 specimens of *Polyxenus* and observed over 100 in the field. All of the specimens were found in a mature pine stand in Ypsilanti Township.

The animals were typically located under the loose bark of fallen pine trees. One such log harbored over 70 specimens of this diminutive milliped. It is interesting to note that this particular log rested about eight inches above the floor of the woods and was quite dry to the touch; yet it was apparent from the number of exuviae and live specimens found that it had been colonized by *Polyxenus* for some time. This dry condition is certainly in contrast to the moist environment that is generally occupied by diplopods.

We made several gut smears and found organic matter of an undetermined origin. Also found in the smears were numerous gregarines in several stages of their life cycle. Schomann, in his excellent work on *Polyxenus lagurus* (1956), mentions these parasites as a common inhabitant of the gut.

The animals were grayish-brown in color with distinctive white caudal bristles and were both immature and adult. Those specimens collected ranged in length from 1 mm to 4 mm. These measurements are similar to those obtained by Bollman (1893). Each



Fig. 1. *Polyxenus* in natural habitat.

¹Present addresses: 121 N. California Ave., Mundelein, Illinois 60060 and 918-A, N. Milwaukee Ave., Libertyville, Illinois 60048.

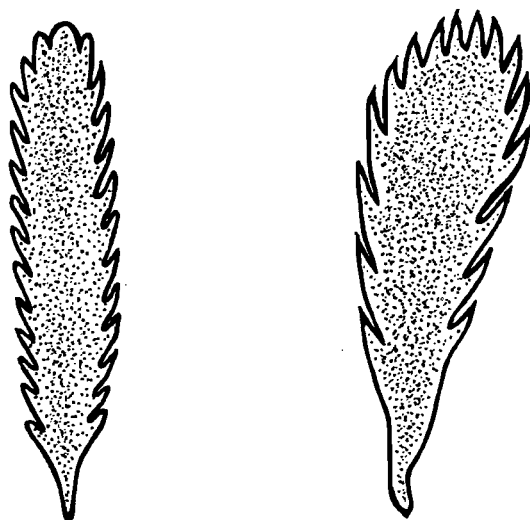


Fig. 2. Body bristles on *Polyxenus*.



Fig. 3. Different types of caudal bristles noted on *Polyxenus*.



Fig. 4. Head of *Polyxenus* with antennae and vertigial crown.

individual was profusely clad with bristles of a serrated type (Fig. 2) which were clumped on fleshy mounds laterally, and in rows dorsally. The caudal bristles were of several types as shown in Fig. 3.

Pierce (1940) divides the instars of *Polyxenus* into various larval stages based upon the number of pairs of legs. The first stage, upon hatching, has three pairs of legs, one pair per somite. The anamorphic development of *Polyxenus* dictates the addition of two pairs of legs per diplosomite with each moult until the adult stage with thirteen pairs of legs is reached. The immature specimens had either five or nine pairs of legs.

After a diligent search of the literature, the authors have reached the tentative conclusion that the specimens discovered may represent a hitherto undescribed species. The basis for this conclusion is the excessive length of the antennae which extend beyond the vertigial crown (Fig. 4) as well as six different types of caudal bristles, some of which are not mentioned in the literature.

LITERATURE CITED

- Bollman, C. H. 1893. The Myriapods of North America. U.S. Nat. Mus. Bull. 46.
 Johnson, B. M. 1954. The Millipedes of Michigan. Pap. Mich. Acad. Sci., Arts and Letters 39:241-252.
 Pierce, D. W. 1940. A rare Myriapod from Anacapa Island compared with two Texas species. Bull. S. Calif. Acad. Sci. 29(2):158-167.
 Schomann, K. 1956. Zur Biologie von *Polyxenus lagurus* L. Zool. Jahrb., Abt. Syst. Geogr. Biol. 84(2-3):195-256.