

## IDENTIFICATION AND DISTRIBUTION OF *BAETISCA* NYMPHS (EPHEMEROPTERA: BAETISCIDAE) IN WISCONSIN<sup>1</sup>

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### ABSTRACT

Nymphs of three species of *Baetisca* (Ephemeroptera: Baetiscidae) have been collected in Wisconsin. *Baetisca laurentina* was most abundant, occurring in a wide variety of streams and occasionally in impoundments. *Baetisca obesa* was uncommon and occurred only in two large rivers, while *B. lacustris* was somewhat more common and inhabited medium to large streams. Except for a few nymphs of *B. lacustris* that were collected from Green Bay on Lake Michigan, no *Baetisca* nymphs were found within 100 km of Lake Michigan.

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In 1981 Pescador and Berner completed a thorough study of the genus *Baetisca* in North America. They synonymized *Baetisca bajkovi* Neave, 1934 with *Baetisca lacustris* McDunnough, 1932 and provided the first key to nymphs of all species in North America. Only three species are known from the Great Lakes region, while seven more occur farther east or in the southeastern United States. Nymphs of species in the Great Lakes region can now be easily identified through characters provided in the key below.

Identification of nymphs in 286 collections provides insight into the apparent distribution of *Baetisca* in Wisconsin (Fig. 1). All species were most commonly found along margins of streams or impoundments in areas of reduced current and a substrate containing a mixture of sand, silt, and detritus. None of the species were collected from counties within 100 km of Lake Michigan (Fig. 1), probably because streams in this part of Wisconsin lack the silt-sand substrate. An exception was the three nymphs of *B. lacustris* that were collected from the shore of Chambers Island to the west of Door County in Lake Michigan's Green Bay, and they represent the only truly lentic collections, although a few *B. laurentina* McDunnough, 1932 and *B. obesa* (Say, 1843) were collected from impoundments. The most abundant and widely distributed species was *B. laurentina*, with 1325 nymphs being collected from a variety of small and large streams. Only 55 *B. obesa* nymphs were found, and all of them came from two very large rivers, the Wisconsin and the St. Croix. The 112 *B. lacustris* nymphs were collected mostly from medium to large rivers.

Most nymphs were collected from October through May, and often there was a large disparity in size among individuals in each collection. Large, mature nymphs were collected from late April through June, suggesting that emergence of all species occurred mostly in May and early June. No nymphs were found in July, and only very small nymphs were present in August. By September many nymphs were large enough to identify and by late October some nymphs of *B. lacustris* and *B. laurentina* were 6 mm long (excluding tail filaments). *Baetisca obesa* nymphs, however, did not reach a length of 4 mm until late November and early December.

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Key to Nymphs of *Baetisca* in Wisconsin  
and other Great Lakes States

1. Dorsal spines absent from mesonotal carapace; covered dorsally and ventrally with distinctly separated freckle-like spots ..... *lacustris*
- 1'. Dorsal spines present on posterior of mesonotal carapace (small in younger nymphs); pigmentation consists of blotches and irregularly spaced spots of various sizes that often coalesce ..... 2
- 2(1'). Frontal projection inconspicuous, projecting about 1/3 length of an eye; ventral margin of mesonotal carapace with a brown border; venter with numerous irregular-sized dark spots ..... *laurentina*
- 2'. Bilobed frontal projection prominent, projecting a distance equal to length of an eye; ventral margin of mesonotal carapace without a dark border; venter mostly devoid of dark spots, but with a large dark spot laterally on first 5 abdominal sterna ..... *obesa*

LITERATURE CITED

- Pescador, M. L. and L. Berner. 1981. The mayfly family Baetiscidae (Ephemeroptera). Part II Biosystematics of the genus *Baetisca*. Trans. Amer. Entomol. Soc. 107:163-228.

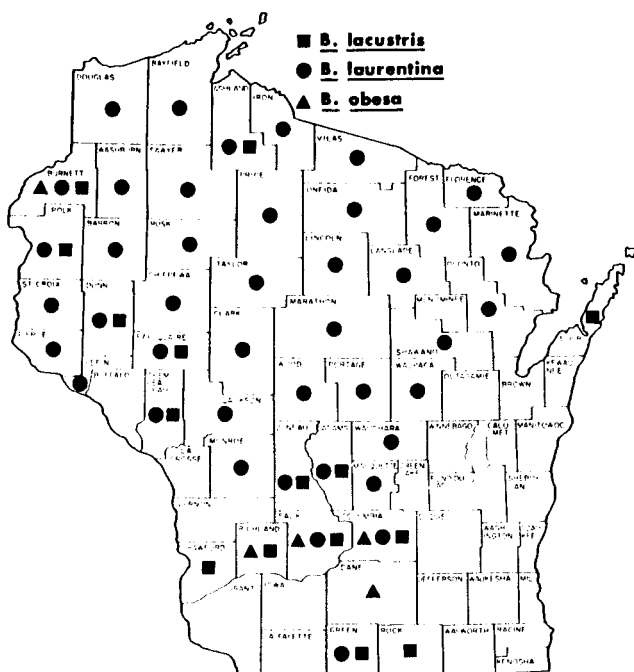


Fig. 1. County collection records of *Baetisca* in Wisconsin.