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**THE OCCURRENCE OF *DITYLUS CAERULEUS*
IN MICHIGAN (COLEOPTERA: OEDEMERIDAE),
WITH OBSERVATIONS ON ITS RANGE**

Daniel K. Young¹

ABSTRACT

The oedemerid beetle, *Ditylus caeruleus*, is recorded for the first time from Marquette County, Michigan. Bionomical data associated with the specimens represent the first such information for this species. Eight additional new Michigan county records for the species are also reported, including the first specimens from the Lower Peninsula. The distributional range of *caeruleus* is highly correlated with the Great Lakes, the St. Lawrence River, and coastal Maine. Implications of this distribution pattern relating to possible development of larvae in driftwood and the potential significance of rafting as a dispersal mechanism are also discussed.

Nearctic species of *Ditylus* include *gracilis* LeConte, *quadricollis* LeConte, and *caeruleus* (Randall). The first two species occur in the western United States from montane regions of central and northern California, north through Oregon, Washington, British Columbia, and Alaska (Horn 1896, Arnett 1951). Specimens of *quadricollis* have also been recorded from Idaho and Montana. Guppy (1948) reported that larvae of *quadricollis* develop in old, wet logs of red cedar, *Thuja plicata*. Rozen's (1960) material came from Douglas fir, *Pseudotsuga menziesii*, Engelmann spruce, *Picea engelmannii* and "cedar pole." I have larvae of this species from Idaho which were associated with Douglas fir in a red-rotten stage of decay.

Ditylus caeruleus was described by Randall (1838) from Hallowell, Maine. It has been recorded from the Great Lakes region (Minnesota, Wisconsin, Michigan, Ontario), through the northeast along the St. Lawrence River and major tributaries (New York, New Hampshire, Maine). The only published Michigan records for *D. caeruleus* are Escanaba and "Eagle Har[bor?]" (Arnett 1951: 294). No dates were included with these specimens, and virtually nothing has ever been published regarding the bionomics of the species.

I discovered five specimens of *caeruleus* in a collection of assorted heteromorous Coleoptera from the Huron Mountain Club, Marquette County, Michigan. They were collected between 1981 and 1983 and were taken from 20 June to 5 July. Two specimens (1-VII-1981) and (5-VII-1981) were taken from waveline beach drift on Conway Bay; two June records were associated with Malaise traps. According to the collector, four of the five specimens were, "associated with well-drained (sandy glacial lake bed) sites with mixed hemlock - white pine - white spruce - red oak - yellow birch type growth" (D. C. L. Gosling, in litt.). Although 3-4 oedemerid

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Figure 1. Michigan records for *Ditylus caeruleus* (Randall): ▲ = new records, ● = published records (Arnett 1951).

species should occur within the boundaries of the Huron Mountain Club, none were reported by Andrews (1929).

Examinations of the oedemerid holdings at Michigan State University (MSUC) and the University of Michigan Museum of Zoology (UMMZ) yielded additional records for this poorly known species (Fig. 1). These include the following Upper Peninsula counties: Chippewa (UMMZ), Iron (UMMZ), Mackinac (UMMZ), and Schoolcraft (UMMZ). In the Lower Peninsula, new records include Cheboygan (UMMZ), Iosco (MSUC), Oakland (MUSC) and Sanilac (UMMZ) counties. Specimens were collected from 30 May to 27 July.

Except for the Iron County specimen, every Michigan record is within approxi-

mately 25 miles or less of the Great Lakes shoreline. For all practical purposes, the same may also be said of the Iron County specimen since the Brule and Menominee rivers are large tributaries which link Iron County with Lake Michigan. Reviewing Arnett's (1951) distributional records for *caeruleus*, it is striking to note that the same pattern exists for its entire range as superimposed on the Great Lakes, the St. Lawrence River, and the Atlantic coast. Recalling that wet logs have been cited as habitats for larvae of *quadricollis*, and that two of the Michigan adult *caeruleus* were collected from waveline beach drift, it would be interesting to examine driftwood as a potential microhabitat for *caeruleus* larvae. In fact, with no obvious evidence to the contrary, it is quite possible that *caeruleus* is a species with low vagility, in which case rafting on or within driftwood could be highly significant as has been documented for another oedemerid, *Nacerdes melanura* (L.) (Arnett 1951: 286, Balsbaugh, et al. 1979, Morris 1980).

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