

THE NORTHERN EXTENSION OF THE RANGE OF *ANODONTA*
SUBORBICULATA SAY (BIVALVIA: UNIONIDAE)

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ABSTRACT

The naiad mollusk, Anodonta suborbiculata Say, 1831, has apparently never been reported alive in the Mississippi River main stem north of Fairport, Iowa (River Mile 463). During 1977 two live specimens were collected in Bluff Slough, at La Crosse, Wisconsin. Because of the obvious age difference in these specimens, reproduction in the area seems likely. Three other living naiad species and four dead naiad species were also collected from this site.

The naiad mollusk *Anodonta suborbiculata* Say, 1831, popularly known as the Heel-Splitter or Flat Floater, has apparently never been reported alive from the Mississippi River main stem above Fairport, Iowa (River Mile 463) (Coker, 1919), nor in the Illinois River north of Peoria Lake (Danglade, 1914).

Witter (1883), in reporting on the mollusca of Muscatine County (Iowa), stated that *A. suborbiculata* was "common or even abundant, in Keokuk Lake, and lakes along Cedar (River), especially the lake on the west bank of Cedar, a half-mile below Moscow" (Iowa). Studies of the Mississippi River since the 1920's have not reported this species (Dr. M. M. Ellis (summarized by van der Schalie and van der Schalie, 1950), Dawley (1947), Coon et al. (1977), Havlik and Stansbery (1978), Fuller (1978), Perry (1979) and Havlik and Marking (1981)).

Apparently *A. suborbiculata* was never found in Wisconsin (Baker, 1928, and H. Mathiak, per. comm., Horicon, Wisconsin). Several studies of the Mississippi, Minnesota River and Black Rivers by the author have not revealed this species.

During June 1977 two live specimens of *A. suborbiculata* were taken from Bluff Slough, Pool 8 of the Mississippi River at La Crosse, Wisconsin. This 90-meter-wide side channel, at Mississippi River Mile 695, was being investigated by the author as part of an environmental assessment for a sewer line to be constructed under the Slough by the city of La Crosse.

The two living specimens, about 5 and 8 years of age, were in 1.5 meters of water on a sand bar that also contained some soft to firm mud, about 15 meters downstream from the proposed sewer line. Because of the obvious age and size difference, reproduction in the area seems likely, at least on a limited basis. One specimen is in the Ohio State University Museum of Zoology, Columbus, Ohio 43210 (OSUM:1977:398:42780).

Other naiad species collected alive at this site included *Anodonta grandis corpulenta* Cooper, 1834, *Amblyma plicata plicata* (Say, 1817) and *Fusconia flava* (Rafinesque, 1820). Dead specimens were found of *Lampsilis radiata luteola* (Lamarck, 1819) and *L. ventricosa* (Barnes, 1823); sub-fossil specimens were found of *Lasmigona complanata* (Barnes, 1823) and *Leptodea fragilis* (Rafinesque, 1820). No rare or endangered species were found.

Very few recent records exist for this species in the Upper Mississippi River. Two additional Wisconsin records for *A. suborbiculata* in the Mississippi River backwaters have been reported. A single fresh-dead specimen was found August 1978 at Mississippi River Mile 637.4, Pool 10, on the shore of an area known as Big Lake, 3.2 kilometers north of Prairie du Chien, Wisconsin (James Theler, per. comm. Dept. of Anthropology, University of Wisconsin-Madison, Madison, Wisconsin). Theler also found several other fresh-dead *A. suborbiculata* in the same general area June 1980. These specimens are all at The Ohio State University Museum of Zoology.

Fresh-dead shells of *A. suborbiculata* were found in 1976 in a then dried-up, small pond on the southern tip of Arsenal Island bordering Sylvan Slough, and in two other locations in Sylvan Slough in 1977 at Rock Island, Illinois, Mississippi River Mile 482.8 (Thomas Freitag, per. comm., Rock Island District, Corps of Engineers, Rock Island, Illinois).

Four recently-dead shells were found in 1978 in water 0.75 meters deep in about a 2 hectare pond, about 10.4 kilometers NW of Muscatine, Iowa (Michael Knott, per. comm., Stanley Consultants, Inc., Muscatine, Iowa).

Apparently this species is more common in the Upper Mississippi River than formerly believed, but the favored habitat makes collection difficult.

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