

The Ohio Shrimp, *Macrobrachium ohione* (Palaemonidae), in the Lower Ohio River of Illinois

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ABSTRACT

Until about the 1930s, the Ohio shrimp, *Macrobrachium ohione*, was common in the Mississippi River between Chester and Cairo, and also occurred in the Ohio and lower Wabash rivers bordering southern Illinois, but since then, the species declined sharply in abundance. Two specimens were captured in May 2001 from the Ohio River at Joppa, Massac Co., Illinois, and represent the first *M. ohione* collected in the Ohio River in over 50 years.

The Ohio shrimp, *Macrobrachium ohione*, was described from specimens collected in the Ohio River at Cannelton, Indiana (Smith, 1874) and occurs in the Mississippi River basin, Gulf Coast drainages, and also in some Atlantic coast drainages from Virginia to Georgia (Hedgpeth, 1949; Holthuis, 1952; Hobbs and Massmann, 1952). The Ohio shrimp formerly was abundant in the Mississippi River as far north as Chester, Illinois (and possibly St. Louis, Missouri) and in the Ohio River as far upstream as southeastern Ohio (Forbes, 1876; Hay, 1892; McCormick, 1934; Hedgpeth, 1949) but has declined in abundance drastically after the 1930s (Page, 1985). There has been only one record of the Ohio shrimp in the Wabash River bordering Illinois dated 1892, and the only record from the Ohio River of Illinois was from Shawneetown in southeastern Illinois (Hedgpeth, 1949; Page, 1985). The former Shawneetown along the Ohio River in Illinois was named Old Shawneetown after Shawneetown was moved 5 km to the northwest following the flood of 1937. More recently, Ohio shrimp have been collected in portions of the Mississippi River along Missouri and Illinois as far north as Grand Tower, Jackson County, Illinois (Taylor, 1992; Conaway and Hrabik, 1997), indicating that the species was increasing in numbers, was recolonizing northern portions of its former range, or was overlooked earlier because sampling methods were ineffective. Bowles et al. (2000) reviewed the distributions and status of all six native species of *Macrobrachium* in the U.S. There have been no recent records of the Ohio shrimp anywhere in the Ohio River basin reported in the literature.

We collected two specimens of *M. ohione* from the Ohio River at the Joppa boat ramp in the town of Joppa, Massac Co., Illinois, using a minnow trap (shrimp measurements: total length = 45.0 mm, carapace length = 18.8 mm, 12 May 2001 and total length = 45.0

mm, carapace length = 18.4 mm, 19 May 2001). The minnow trap was baited with an 85 g can of catfood with several holes punched through the can and was set over rip rap 1-2 m from the bank approximately 30 m downstream of the boat ramp. Duration of sets varied and fluctuating water levels make it difficult to identify actual trap depth at time of capture. Both specimens were deposited in the Illinois Natural History Survey Crustacean Collection (catalog numbers INHS 8643, 8644). These specimens represent the only records from the entire Ohio River basin since at least 1949 and appear to be the only extant specimens from the Ohio River based on specimen information in the literature (Schmitt, 1933; McCormick, 1934; Hedgpeth, 1947, 1949; Holthuis, 1952).

The capture of these specimens was incidental and occurred over microhabitat (rip-rap) that is difficult to sample using gear (seines and minnow fyke nets) typically effective for *M. ohione* at localities in the Mississippi River (Conaway and Hrabik, 1997; authors, pers. obs.). Previous efforts throughout the year targeting crayfishes and fishes with seines in the same area and adjacent areas more conducive to seines failed to produce any Ohio shrimp.

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