

REPRODUCTIVE BIOLOGY AND HOST FISHES OF FOUR UNIONIDS FROM THE LAKE PONTCHARTRAIN BASIN, LOUISIANA, U.S.A.

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ABSTRACT

Host fishes, fecundity estimates, and gravid periods were identified for four species of freshwater mussels from the Lake Pontchartrain basin, Louisiana. Two of the mussel species have broad distributions both in the Mississippi River and elsewhere in Louisiana: *Villosa lienosa* (Conrad, 1834) and *Lampsilis teres* (Rafinesque, 1820). The other two species have more restricted distributions: *Quadrula refulgens* (Lea, 1868) and *Lampsilis ornata* (Conrad, 1835). *Lampsilis ornata* is listed as a species of concern in Louisiana. Of the 23 species of fishes tested as potential hosts, we found 4 previously unknown hosts for *Villosa lienosa*: *Lepomis megalotis*, *Lepomis humilis*, *Lepomis microlophus* and *Lepomis cyanellus*, and confirmed 2 previously documented: *Lepomis macrochirus* and *Micropterus salmoides*. *Villosa lienosa* was gravid from April until June and had an estimated fecundity of 38,562 + 3,073 glochidia/female. For *Lampsilis ornata* we established a host relationship with *Luxilus chrysocephalus*, and confirmed *Micropterus salmoides* as a host. *Lampsilis ornata* was gravid from February until April and had a fecundity estimate of 451,214 + 27,239 glochidia/female. *Lampsilis teres* was gravid from April until September and had a fecundity estimate of 407,333 + 24,727 glochidia/female. We confirmed three hosts for *L. teres*: *Micropterus salmoides*, *Pomoxis annularis*, and *Lepomis humilis*, and identified two new hosts: *Lepomis microlophus* and *Notropis venustus*. Only a single *Quadrula refulgens* was found gravid in late June and its fecundity was estimated at 32,450 glochidia and a host was identified as *Pylodictis olivaris*.

KEY WORDS mussels, host fish, Lake Pontchartrain