

SYMPATRIC SPECIES OF *ELLIPTIO* LIVING IN THE ST. JOHNS RIVER,
FLORIDA

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Specimens of *Elliptio monroensis* (Lea, 1843), *Elliptio aheneus* (Lea, 1843), and *Elliptio jayensis* (Lea, 1838) were collected living together in the western margin of the St. Johns River, just below the highway 192 bridge, west of Melbourne, Brevard County, Florida, on the occasion of the A. M. U. field trip, July 20, 1971.

Elliptio monroensis (Lea) is the member of the typical *E. crassidens* group endemic in the St. Johns River. To the northward, the larger *E. dariensis* (Lea) is known only from the Altamaha River System. Still further to the north, this typical group is represented by *Elliptio waccamawensis* (Lea), from Lake Waccamaw, North Carolina.

Elliptio aheneus (Lea) is the Florida species of the group until recently called the group of *Elliptio productus* (Conrad). Northward, in the Altamaha River, it is replaced by the most elongate of all *Elliptio*, *E. shepardianus* (Lea). This group of elongated species includes *Elliptio angustatus* (Lea, 1831), which occurs in both South and North Carolina, and northward as far as the Schuylkill River near Philadelphia. The dark species *E. angustatus* is completely biologically separate from the golden, sand-dwelling *Elliptio lanceolatus* (Lea, 1828). The true species *E. lanceolatus* is known only from five river systems in Maryland, Virginia, and North Carolina.

Unio buddianus Lea was also named in 1843 from

the St. Johns River System. However, *Elliptio jayensis* (Lea, 1838) is the earliest name for the extremely common, variable, and widespread peninsular Florida species often called "*buckleyi*". Both Simpson in 1900, and Ortmann in 1912, said that these two named forms so ran together that they were undoubtedly one single species. When we look for relatives, we find that *Elliptio opacatus* (Crosse & Fisher), from Lake Catemaceo, southern Vera Cruz, Mexico, is very similar in appearance and reproductive characters to *Elliptio jayensis* (Lea).

On the date of collection, July 20, 1971, one female of each of the three *Elliptio* species in the St. Johns River was partly gravid, with eggs in the lower part of the outer gills. All three were beginning their short (tachytictic) period of reproduction. Therefore they belong to the Family Amblemidae, subfamily Ambleminae, and tribe Pleurobemini, carrying glochidia only in the outer gills. I cannot believe that these three species of the single genus *Elliptio* should be assigned to three separate subfamilies, viz. Pleurobeminae Hannibal, 1912; Elliptioninae Modell, 1942; and Popenaiadinae Heard & Guckert, 1971.

We are fortunate to have such a clear sympatric record. These three *Elliptio* species have been living together, yet maintaining their separate genetic distinction from the time of Isaac Lea's descriptions almost exactly 130 years ago.

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