



Fat threeridge (*Amblema neislerii*) 75 mm (3 inches).  
Apalachicola River, Gulf Co., Florida. Photo by Jason  
Wisniewski. GA DNR.

**Common Name:** FAT THREERIDGE

**Scientific Name:** *Amblema neislerii* Lea

**Other Commonly Used Names:** none

**Previously Used Scientific Names:** none

**Family:** Unionidae

**Rarity Ranks:** G1/S1

**State Legal Status:** Endangered

**Federal Legal Status:** Endangered

**Description:** Shell is thick and heavy and quadrate to rounded in profile, rarely exceeding 100 mm ( $3\frac{3}{8}$  inches) in length. Periostracum dark brown to black with 7 - 9 parallel plications positioned horizontally across the shell. Valves typically inflated with 2 heavy pseudocardinal teeth in the left and one heavy tooth in the right. Umbo pocket shallow and nacre typically white.

**Similar Species:** In the Apalachicola, Chattahoochee, Flint Rivers (ACF) basin, fat threeridge and the washboard (*Megaloniaias nervosa*) occur in the same place and habitat but can be distinguished from one another as the plications in the fat threeridge tend to be more parallel to

the ventral margin of the shell and lack additional sculpturing near the disk. The fat threeridge tends to be relatively inflated compared to washboards of similar sizes. The washboard may also have a dorsal wing, often becoming less apparent in larger individuals.

**Habitat:** Fat threeridge typically occupies small to large rivers with moderate current and sandy to silty substrates.

**Diet:** Adults are known to eat earthworms, but likely consume other invertebrates as well. Larvae eat a variety of aquatic invertebrates, especially crustaceans such as amphipods and isopods. Captive larvae readily eat small tadpoles and may also do so in the wild.

**Life History:** Mature glochidia of the fat threeridge were collected in early June. Successful transformation of glochidia occurred in 10 - 14 days on the weed shiner (*Notropis texanus*), bluegill (*Lepomis macrochirus*), redear sunfish (*L. microlophus*), largemouth bass (*Micropterus salmoides*), and blackbanded darter (*Percina nigrofasciata*).

**Survey Recommendations:** Surveyors should consider sampling during periods when female individuals are spawning or brooding as this species may have higher detection rates during this period. However, since basic life history information for many Georgia unionids is lacking, sampling during periods when closely related species are spawning or brooding may increase probability of detection. A complete survey of the mainstem Flint River is needed to better understand the current status and distribution of the species in Georgia. This survey will also allow managers to determine if suitable habitat exists for future reintroduction/augmentation projects.

**Range:** Historically occurring in the Apalachicola, Flint, and Chipola Rivers of Florida and Georgia. Within the Flint River of Georgia, this species was once known from Baker, Decatur, Dougherty, Macon, and Mitchell Counties. Surveys conducted during the early 1990's found the fat threeridge at only 11 of 324 sites surveyed in the ACF basin. No sites surveyed in Georgia had live individuals and only relict shells were collected within Lake Seminole near Bainbridge. In 2006 and 2007, surveyors sampling the Flint River at State Route 37 in Baker County found several individuals, marking the first time the species has been collected live in Georgia since 1988.

**Threats:** Insufficient water flow in the lower Flint River basin may be impacting undiscovered populations that occur in some creeks in the basin. Excess sedimentation due to inadequate riparian buffer zones covers suitable habitat and could potentially suffocate mussels. Direct and indirect competition by the introduced flathead catfish may be reducing native mussel populations through direct consumption of mussels and their host fishes.

**Georgia Conservation Status:** The fat threeridge is not known to occur on any state properties in Georgia. Unlike terrestrial species, the occurrence of an aquatic species on state or federal lands may not eliminate habitat degradation due to the influences of upstream and downstream disturbances.

**Conservation and Management Recommendations:** Techniques for captive propagation of this species should be explored in the event that captive rearing becomes a viable option for recovering this species. However, prior to initiating any reintroduction/augmentation projects for the fat threeridge, the effective population size of the Flint River population should be examined to ensure that these actions would not negatively affect the genetic integrity of the population.

**Selected References:**

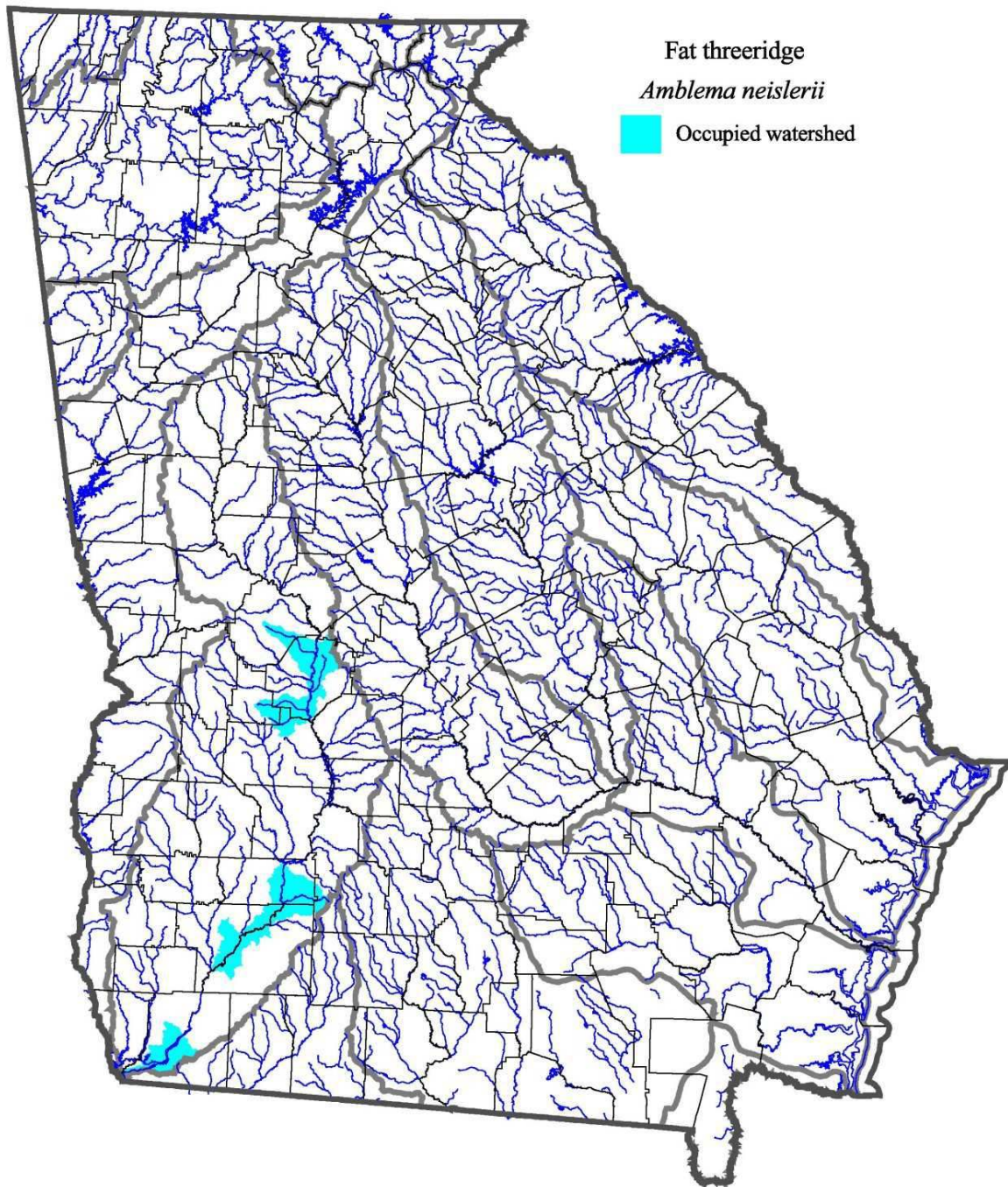
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Watersheds (Huc 10) with known occurrences. Streams, county lines, and major river basin boundaries are also shown. Map generated from GADNR (Nongame Conservation Section) data on January 26, 2009.