



Oval pigtoe (*Pleurobema pyriforme*) 37 mm (1½ inches). Sawhatchee Creek, Early Co., Georgia. Photo by Jason Wisniewski, GA DNR.

Common Name: OVAL PIGTOE

Scientific Name: *Pleurobema pyriforme* Lea

Other Commonly Used Names: none

Previously Used Scientific Names: none

Family: Unionidae

Rarity Ranks: G2/S2

State Legal Status: Endangered

Federal Legal Status: Endangered

Description: Shell profile is elliptical to oval in outline and the shell is moderately inflated with a maximum length of approximately 65 mm (2⅝ inches). Anterior margin broadly rounded and posterior margin is bluntly pointed to round. Ventral margin is straight to broadly rounded. Umbos positioned slightly anterior to the middle of the shell and elevated above hingeline. Posterior ridge is rounded with a steep posterior slope. The periostracum is yellow to dark brown, sometimes with several dark rays present. Dark and prominent growth rings often present

on surface of the shell. Pseudocardinal teeth are compressed and angled anteriorly. Lateral teeth long and straight or slightly curved. Umbo cavity shallow. Nacre color varies from white to salmon.

Similar Species: Little spectaclecase (*Villosa lienosa*) and downy rainbow (*Villosa villosa*). The oval pigtoe can be distinguished from the little spectaclecase by umbo sculpture, which tends to consist of concentric rings for the oval pigtoe while the little spectaclecase typically has double-looped sculpturing. The oval pigtoe differs from the downy rainbow in that the posterior terminus of the oval pigtoe tends to be below the midline of the shell whereas the downy rainbow terminates at the midline and typically has prominent rays.

Habitat: Typically occupies small streams to large rivers with moderate flow and sand or gravel substrates.

Diet: The diets of unionids are poorly understood but are believed to consist of algae and/or bacteria. Some studies suggest that diets may change throughout the life of a unionid with juveniles collecting organic materials from the substrate through pedal feeding and then developing the ability to filter feed during adulthood.

Life History: Gravid females were found during late June. Glochidia of this species successfully transformed on the sailfin shiner (*Pteronotropsis hypselopterus*) and the eastern mosquitofish (*Gambusia holbrooki*). However, it is likely that other fishes can successfully transform glochidia of the oval pigtoe as the sailfin shiner does not occur throughout the entire range of this unionid, and it is unlikely that the eastern mosquitofish frequently comes in contact with this unionid.

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 of Georgia's unionids is lacking, sampling during periods when closely related species are spawning or brooding may increase probability of detection.

Range: This species is endemic to the Apalachicola River basin of Alabama, Florida, and Georgia. Historically, this species was known from the Chipola, Apalachicola, Chattahoochee, and Flint Rivers and their tributaries. In Georgia, this species is currently restricted to Sawhatchee Creek in the Chattahoochee River basin, Spring Creek, and the Flint River and its tributaries upstream to Line Creek near Peachtree City, Georgia.

Threats: Habitat fragmentation may isolate populations and prevent fish movement, limiting the distribution of host fishes carrying glochidia. Additionally, construction of impoundments may further fragment populations and inundate suitable habitat. Excessive water withdrawals in the Lower Flint River basin coupled with severe drought could result in the extirpation of this species from Georgia. Excess sedimentation due to inadequate riparian buffer zones also covers suitable habitat and potentially suffocate individuals.

Georgia Conservation Status: The oval pigtoe is known from Chickasawhatchee Creek in the vicinity of Chickasawhatchee and Elmodel Wildlife Management Areas in Georgia. However, 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: Design of a sampling protocol to assess the status of rare species in the Apalachicola, Chattahoochee, and Flint River basins was identified as a high management priority in the 2005 Georgia Wildlife Action Plan. Furthermore, technical team members also recommended that a population viability analysis be done for the oval pigtoe. Suitable but unoccupied, habitats appear to be relatively abundant in the basin, which may provide an opportunity to recover this species using re-introduction/augmentation techniques. However, prior to the initiation of any reintroduction/augmentation activities, studies of the effective population size should be completed to ensure that the genetic integrity of the species is not compromised by this management activity.

Selected References:

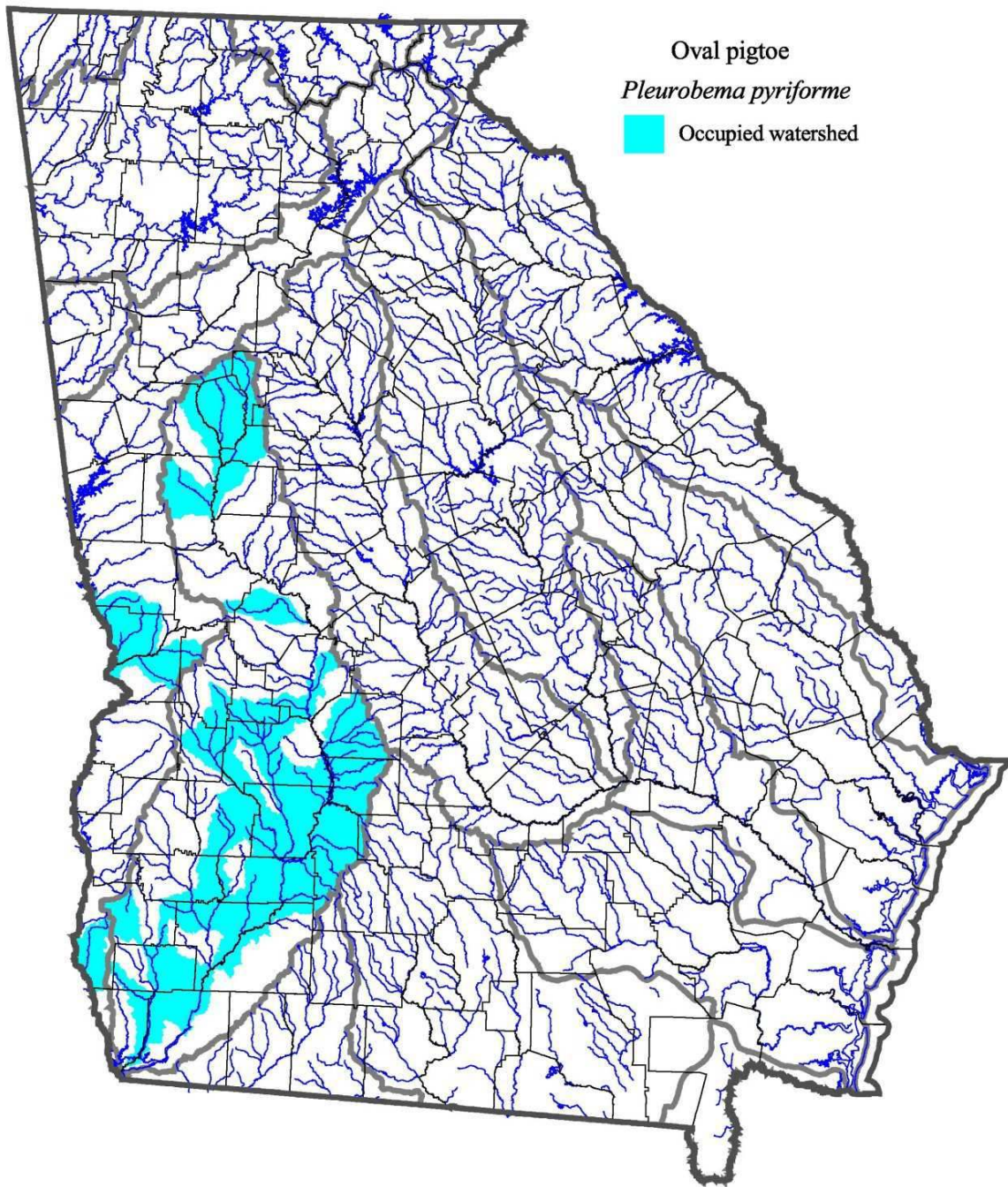
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Watersheds (Huc 10) with known occurrences. Streams, county lines, and major river basin boundaries are also shown. Map generated from GADNR (Nongame Conservation Section) data on January 26, 2009.