Atlantic pigtoe (*Fusconaia masoni*) 36 mm (1⅜ inches). Tar River, North Carolina. Photo by Jason Wisniewski, GA DNR. Specimen provided by the McClung Museum courtesy of Gerry Dinkins.

Common Name: ATLANTIC PIGTOE

Scientific Name: *Fusconaia masoni* Conrad

Other Commonly Used Names: none

Previously Used Scientific Names: none

Family: Unionidae

Rarity Ranks: G2/S1

State Legal Status: Endangered

Federal Legal Status: none

Description: Shell profile is sub-rhomboidal and rarely exceeds 50 mm (2 inches) in length. The umbo is positioned slightly anterior of middle of valves and is elevated well above the hingeline. Anterior margin round while posterior margin typically truncate. Posterior ridge is

prominent. Periostracum is yellow to dark brown and clothlike. Nacre color typically white. Individuals occurring in headwater streams tend to be more elongate.

Similar Species: None

Habitat: The preferred habitat for this species is coarse sand and gravel at the downstream end of riffles. This species is rarely found in substrates of fine sand and silt or mud.

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 though pedal feeding and then developing the ability to filter feed during adulthood.

Life History: Gravid individuals have been found during late June. The bluegill (*Lepomis macrochirus*) and shield darter (*Percina peltata*) successfully transformed glochidia of this species.

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. Although no live individuals have been collected in Georgia, it is possible that the species may still persist. The Ogeechee River harbors relatively large populations of native unionids, which may hinder the detection of this species. Continued survey efforts in this basin will help to determine if this species persists in the basin. Survey data for the Brier Creek sub-watershed is lacking, therefore the Atlantic pigtoe may persist in Brier Creek.

Range: This species historically occurred from the James River basin in Virginia south to the Ogeechee River basin of Georgia. In Georgia, this species was historically collected from the type locality and from Mill Race in the Brier Creek sub-basin (Savannah River basin) in Burke County. Within the Ogeechee River basin, this species was historically collected from the Ogeechee River in Warren and Screven counties, as well as the outfall of Magnolia Springs in Jenkins County, and the Ogeechee River in Screven County. The Atlantic pigtoe was last collected in Georgia during a 1991 survey of the Ogeechee River Basin. Only four live individuals were collected from Williamson Swamp Creek near Bartow in Jefferson County despite extensive searches throughout the entire basin. In 2004 and 2007, surveys of historical locations yielded no live individuals. Additionally, several suspected specimens were collected from the mainstem Savannah River in Summer 2006. However, the identities of these specimens are being examined to confirm their identities.

Threats: Currently, the Ogeechee River basin of Georgia is experiencing substantial development and timber removal along the banks. Excess sedimentation due to inadequate riparian buffer zones, development, and agriculture covers suitable habitat and could potentially suffocate mussels. Poor agricultural practices may also cause eutrophication and degrade water quality.

Georgia Conservation Status: The Atlantic pigtoe 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: Examination of the basic life history was identified as a top research priority needed for the conservation of this species during the 2005 Georgia Wildlife Action Plan. Understanding the basic life history of this species will provide the foundation upon which all other research and conservation actions should be built. Several hosts for this species have been identified. However it is likely that host fish use of individuals in the Ogeechee and Savannah River basins may differ, as these basins are the extreme southern range of the species. The Atlantic pigtoe has undergone a dramatic decline across its entire historical range. In 2008, the U.S. Fish and Wildlife Service proposed to elevate the Atlantic pigtoe to candidate status for listing under the U.S. Endangered Species Act. Increasing survey efforts for this species in Georgia is a critical step in the future management of this species throughout its range due to the fact that the Ogeechee River basin represents the extreme southern extent of the range of the Atlantic pigtoe.

Selected References:

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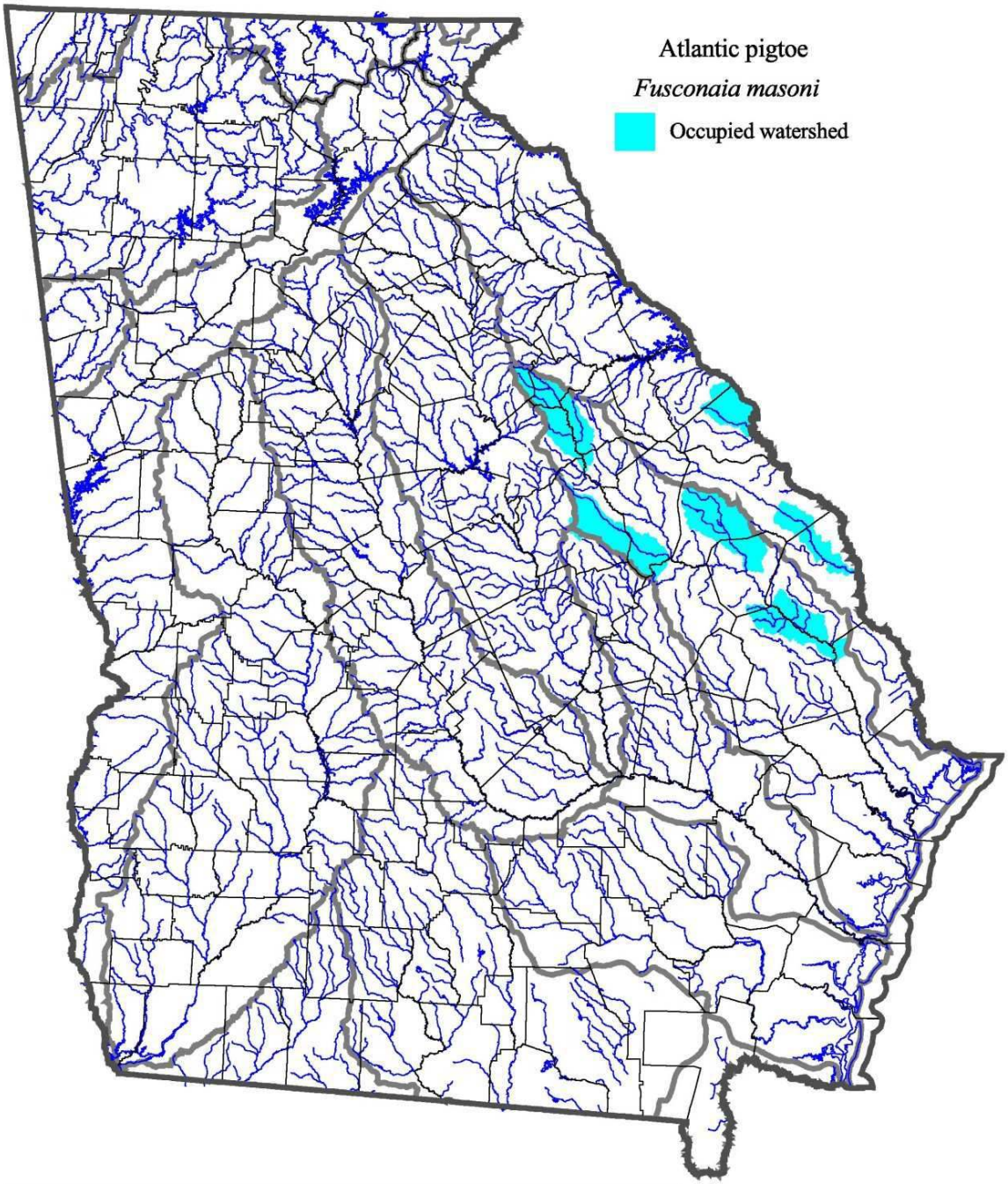

Watersheds (Huc 10) with known occurrences. Streams, county lines, and major river basin boundaries are also shown. Map generated from GADNR (Nongame Conservation Section) data on January 26, 2009.