

TAPERED PIGTOE

Fusconaia burkei

(former name: *Quincuncina burkei*)

Order: Unionoida

Family: Unionidae

FNAI Ranks: G2/S1

U.S. Status: Threatened

FL Status: Threatened



Description: The tapered pigtoe is a small to medium-sized (length to 78 mm, ca. 3 inches) freshwater unionid mussel with a moderately thin to thick shell with sculpturing that is absent in other *Fusconaia*. Sculpture presents as raised chevrons dorsally, while the rest of the shell is corrugated. The shell can be compressed to moderately inflated and is oval to subtriangular in shape and about 30-50% as wide as long. The shell margins are characterized as follows: dorsal margin straight to slightly rounded, anterior margin rounded, posterior margin truncate to bluntly pointed, and ventral margin straight to convex. The posterior ridge is moderately sharp dorsally but rounded posteroventrally. The umbo is broad, elevated slightly above the hinge line, and marked by moderately thick ridges; the umbo cavity is wide and shallow to moderately deep. The shell commonly darkens with age, from yellow/olive brown, sometimes with dark green rays, to reddish brown, dark brown, or black; the inner surface (nacre) is white to bluish white and iridescent. Pseudocardinal teeth are small, moderately thick, and triangular, with one in the right valve and two in the left valve that are somewhat divergent; lateral teeth are moderately long and fairly straight, with two in the left valve and one in the right (Williams et al. 2008, Williams et al. 2014).

Similar Species: Unlike *Fusconaia escambia* in the Escambia and Yellow rivers, *F. burkei* in the Choctawhatchee River usually has some sculpturing on the shell. Several somewhat similar mussels can co-occur with *F. burkei* (Williams et al. 2008, Williams et al. 2014). Small *Elliptio mcmichaeli* (a large species) and *Elliptio crassidens* (a moderately large species) can be similar to *F. burkei*, but these *Elliptio* spp. do not have sculpturing on the shell disk and have larger pseudocardinal and lateral teeth. In addition, *E. mcmichaeli* is less inflated and *E. crassidens* is thicker shelled than *F. burkei*. *Medionidus acutissimus* resembles *F. burkei* but is less inflated and more elongated. *Pleurobema strodeanum* may resemble some *F.*

burkei that have little shell sculpturing, but close examination will show traces of sculpture along the posterior ridge and slope of *F. burkei*. Because of the large diversity and overall similarity of Florida mussels, species identities should be confirmed by an expert.

Habitat: *F. burkei* typically inhabits rivers and medium to large creeks with slow to moderate current and stable substrates of silty sand to sandy gravel. It is occasionally found in smaller creeks, sloughs, and floodplain lakes (Deyrup and Franz 1994, Williams et al. 2014).

Seasonal Occurrence: Adults are present in the substrate year-round. Females are short-term brooders and may be gravid from mid-March through July, although some individuals have been observed gravid in early September (Williams et al. 2014, Beaver et al. 2019).

Florida Distribution: This species inhabits the Choctawhatchee River system in the western panhandle (Williams et al. 2014).

Range-wide Distribution: *F. burkei* is endemic to the Choctawhatchee River drainage of southern Alabama and adjacent western Florida (Williams et al. 2008, Williams et al. 2014).

Conservation Status: Like many of Florida's native freshwater mussels, the tapered pigtoe has declined throughout its limited range. Though still extant in the Choctawhatchee River system, the species is generally uncommon (Williams et al. 2014). In 2012, the species was listed as federally threatened under the Endangered Species Act, with critical habitat designated in both states within its narrow range (USFWS 2012). Most of the Florida portion of the floodplain and part of its tributary Holmes Creek are in the Choctawhatchee River Water Management Area. Although this provides important protection, it does not prevent pollution from upstream sources, nor does it prevent impacts of invasive species such as the introduced Chinese basket clam (formerly Asian clam: FMCS 2025), *Corbicula fluminea*.

Protection and Management: Additional protection via acquisition or easement is needed for those portions of the Choctawhatchee River and Holmes Creek floodplains and adjacent uplands that remain private. Managing for viable populations of freshwater mussels requires focusing on the maintenance of high-quality waters and benthic habitats, as well as ample stream and river flows (damming, dredging, and excessive water consumption are strongly discouraged); this requires multi-state cooperation. Valuable tools include the establishment of buffers and streamside management zones for all agricultural, silvicultural, mining, and developmental activities, and elimination or reduction of invasive species (especially other bivalves) if possible. Monitoring programs should focus on water and benthic habitat quality, and population sizes and statuses of both mussels and their host fishes (potentially limited to the blacktail shiner, *Cyprinella venusta*: White et al. 2008) at all occupied sites. Additionally, it is important to promote responsible watershed land use practices by implementing aquatic habitat education programs for land use planners and resource managers, and to conduct periodic reevaluations of the effectiveness of habitat protection measures and watershed land use practices. Finally, for relatively small Gulf Coast rivers such as the Choctawhatchee, it is imperative to do everything possible to limit global warming and consequent sea level rise to limit saltwater intrusion and inundation of lower reaches.

References: Beaver et al. 2019; Deyrup and Franz 1994; Freshwater Mollusk Conservation Society (FMCS) 2025; U.S. Fish and Wildlife Service (USFWS) 2012; White et al. 2008; Williams et al. 2008, 2014.



Inner surface, same animal. Florida Fish and Wildlife Conservation Commission, Freshwater Mussel Conservation Program.



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