

INFLATED SPIKE

Elliptio purpurella

Order: Unionoida

Family: Unionidae

FNAI Ranks: G2/S2

U.S. Status: none

FL Status: none



Description: A medium-sized bivalve mollusk reaching a length of 3.5 inches (90 mm). Shell moderately thick or thin, smooth (including posterior slope, which lacks corrugations), elongate, oval to elliptical, moderately inflated, with broad umbo near anterior end and slightly elevated above hinge line; dorsal margin straight to slightly convex, ventral margin usually straight to slightly convex. Adults typically dark brown to black; small individuals may have dark green rays. Internally, cavity of umbo wide and shallow; inner lining of valves (nacre) purple, sometimes salmon-tinted in umbo cavity; pseudocardinal teeth moderately thick, triangular, 2 in left valve, 1 in right valve; lateral teeth moderately long to short, thin, and straight to slightly curved (Williams et al. 2014).

Similar Species: Multiple species of *Elliptio* share at least part of their Florida range with *E. purpurella*, and all are similar in general appearance. *E. arctata* has a more compressed shell than *E. purpurella*, and a bluish-white nacre in contrast to the usually purple nacre of the latter. The more inflated, thinner shell and purple nacre also help to distinguish *E. purpurella* from *E. fumata* and *E. pullata* (Williams et al. 2014). Because many mussels are similar externally, and individual variation can be extensive (especially in this genus), identity should always be confirmed by an expert.

Habitat: Main channels of rivers and large tributary creeks; typically occurs in moderate currents on sandy, gravel, and rubble substrates.

Seasonal Occurrence: Present at sites year-round.

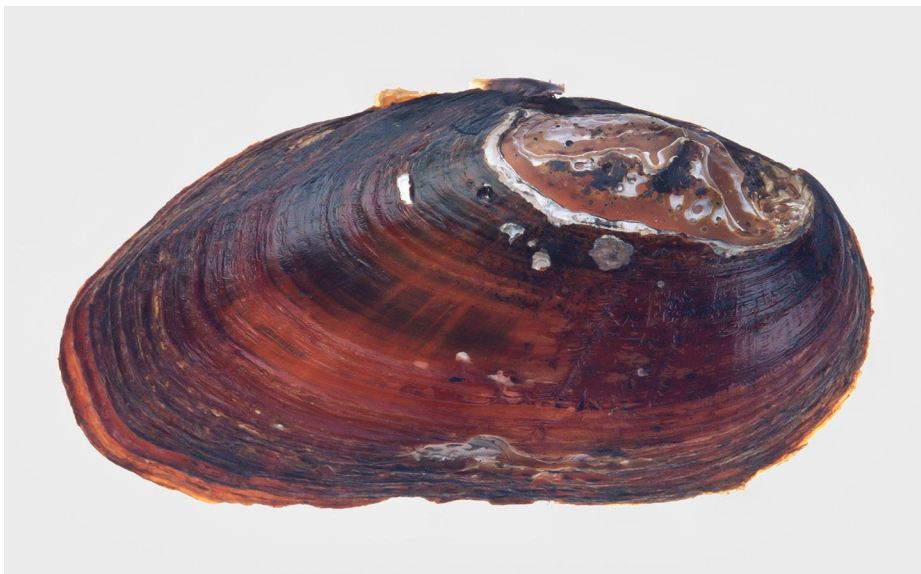
Florida Distribution: This species is known from three major adjacent river drainages in the central panhandle: Choctawhatchee, Apalachicola/Chipola, and Ochlockonee.

Range-wide Distribution: All three drainages from which the species is known, but particularly the Apalachicola, extend northward into Alabama and Georgia.

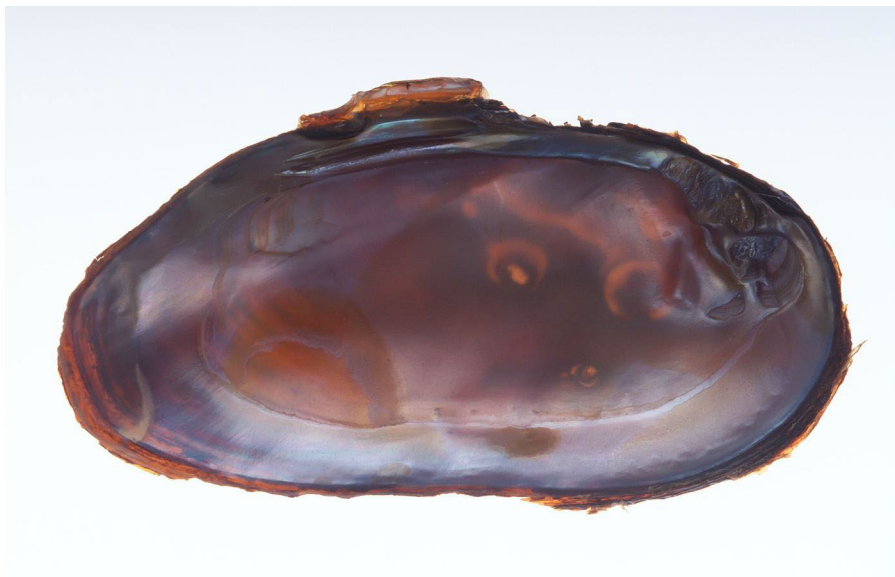
Conservation Status: Like many of Florida's native freshwater mussels, *E. purpurella* has almost certainly declined throughout its range, including Florida. Though generally uncommon, it presumably remains extant throughout its Florida range (Williams et al. 2014). Substantial portions of the floodplains of all three river systems within its state range are publicly owned, but the systems still faces multiple threats from habitat degradation and pollution, excess water withdrawal in Georgia (Apalachicola drainage), and the introduced Asian clam (*Corbicula fluminea*).

Protection and Management: Protect the Choctawhatchee, Chipola, and Ochlockonee river drainages from pollution, siltation, impoundment, and other disturbance. Monitor and attempt to control Asian clam. Protect forests along floodplains and at least 150 ft (ca. 50 m) of adjoining uplands from timber harvest, livestock, and development. Situate roads at least 0.25 mi. (0.4 km) from heads of all tributaries, and even more on steep slopes. Use silt fencing and vegetation to control runoff and siltation at all stream crossings, especially during construction and maintenance. Prohibit dredging and further damming of streams and rivers. Avoid introduction of non-native invertebrates, especially zebra mussel. Use and maintain sewer systems rather than septic tanks and stream-dumping for management of waste water. Ban use of agricultural pesticides on porous soils near streams. Identify and maintain fish populations that serve as mussel larval hosts.

References: Brim Box and Williams 2000, Williams et al. 2014.



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