



Golden Sands
Resource Conservation
& Development Council, Inc.



Aquatic Invasive Species Quick Guide

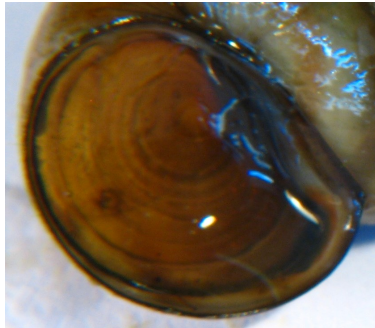
Banded Mystery Snail (*Viviparus georgianus* Lea)

Description: The banded mystery snail is a member of the family Viviparidae. Snails in this family give birth to live young, complete with shells. The shell is up to 1.5 inches tall, and 1-1.5 inches wide. Horizontal brown bands on the shell are visible from outside or inside the shell. A sturdy operculum is able to seal off the shell when the snail feels threatened. A typical life span is 3 years for males and 4 years for females. Mass die-offs of mature banded mystery snails are common in early spring after reproduction. Banded mystery snails occupy silt, marl, muck, and sand substrates.

North American Distribution: Southeastern U.S., lower Mississippi River, the Great Lakes states, northeastern U.S., and Quebec.



The banded mystery snail is usually about an inch tall and has distinct horizontal bands.



Banded mystery snails have a tough plate called an operculum covering the shell opening.

Dispersal Vectors: Banded mystery snails are native to the southeastern U.S. They were first documented in the Great Lakes basin in 1867 when 200 banded mystery snails were intentionally released by a civilian into the Hudson River drainage. Introductions have probably also occurred via the aquarium trade.

Ecological Impacts: Primarily grazes on diatoms, green algae, and fish eggs, but it is also capable of filter-feeding. First- and second-year individuals may be consumed by turtles, fish, and crayfish. Banded mystery snails have been documented at densities as high as 864 individuals per square meter. This species probably competes for food and resources with native snail species, but no serious negative impacts have been documented in its introduced range. It has been identified as an intermediate host to multiple trematode parasites, which have been involved in waterfowl die-offs in the Upper Mississippi River area.

Control Options: Manual removal of banded mystery snails is possible, but probably impractical in most situations.

Several chemical pesticides have been used to control snails in aquaculture ponds, but the banded mystery snail's thick operculum makes it less susceptible to these chemicals. Since most native snails do not have an operculum to seal off their shell, these native species are much more susceptible to pesticides.

An effective biological control agent is not known at this time.



A mass die-off of mature banded mystery snails.

Additional Information:

Eckblad, J.W. and M.H. Shealy, Jr. 1972. Predation on largemouth bass embryos by the pond snail *Viviparus georgianus*. Transactions of the American Fisheries Society. 101 (4): 734-738.

Kipp, R.M., A.J. Benson, J. Larson, and A. Fusaro. 2013. *Viviparus georgianus*. USGS Nonindigenous Aquatic Species Database, Gainesville, FL. <http://nas.er.usgs.gov/queries/factsheet.aspx?SpeciesID=1047> Revision Date: 3/12/2013

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