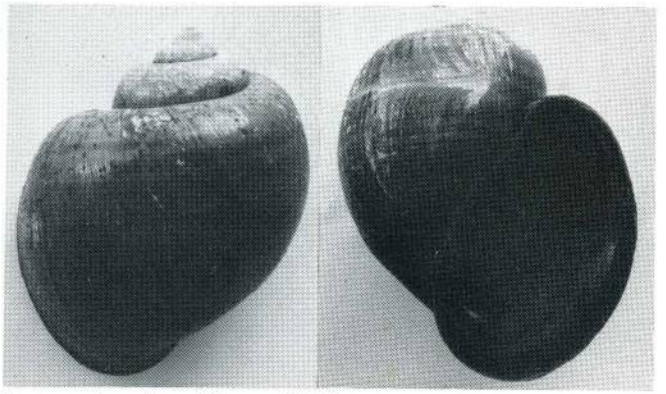
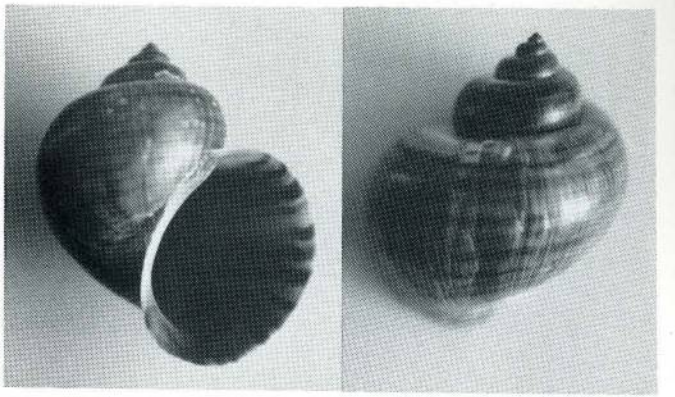


Pomacea haustrum (Reeve, 1858).



Pomacea bridgesi (Reeve, 1856).

Photos by the author

A COMPARISON OF THREE SPECIES OF POMACEA AND THEIR SPAWN

by Beatrice E. Winner

Pomacea paludosa (Say, 1829), commonly called the Florida Apple Snail, has other species that resemble it. Through my interest in egg masses I discovered that the egg masses differ within the genus.

In May, 1988, Carole Marshall of Lake Worth, Florida brought me some egg masses, along with the snail that laid them, which she found in an inert canal in Hypoluxo. They were unfamiliar to me and I wanted some specimens to photograph, so we returned to the canal and collected more eggs and snails for study.

The shell resembled *Pomacea paludosa*, but the eggs were different. Dr. Fred Thompson, of Gainesville, Florida, identified it as *Pomacea bridgesi* (Reeve, 1856), a Brazilian species introduced into South Florida in Monroe, Dade, Broward, and Palm Beach Counties.

The eggs of *P. bridgesi* are pink, calcified, extremely fragile, and attached to each other on all sides. The animal is a uniform tan, and the shells are 40-60mm in height. One egg mass, according to Carole, was laid on a plant stem above the water level in her pail.

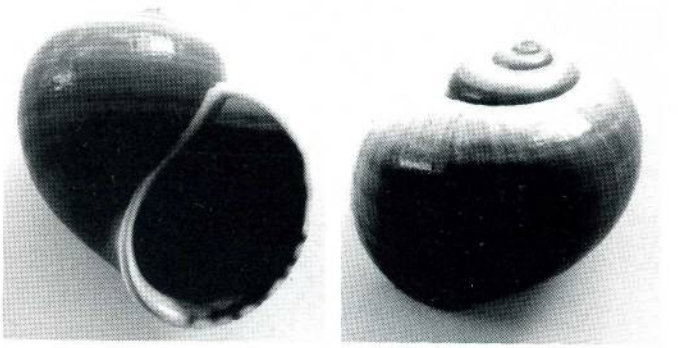
P. paludosa eggs are also pink, but each egg in a clutch is laid individually, attached to a stalk, and they are less fragile. The shells are from 40-70mm in height and the animals are black.

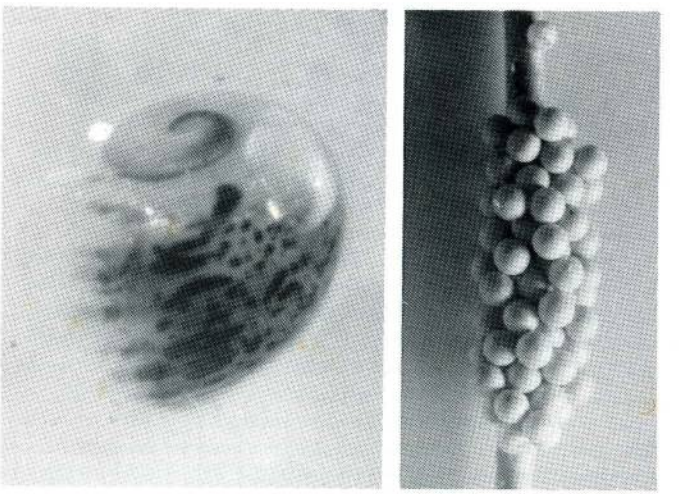
The Apple Snail, *P. paludosa*, occurs from extreme southeastern Alabama, and Georgia, down through the Florida peninsula, and also occurs naturally in Cuba. According to Dr. Thompson it is incorrectly reported in the literature that man introduced it into Florida. There are fossil specimens in the Florida Museum of Natural History to show that it has existed continuously in the Florida peninsula since the Pliocene era.

Carol also brought another *Pomacea* to my attention, a much larger snail that lays green eggs. Intrigued by these green eggs, I purchased, from the pet shop where Carole found them, both the snails and the green eggs they had laid on the side of the aquarium. These eggs, also extremely fragile, are attached to each other like *P. bridgesi*, but are larger. The snails are still alive at this writing, and some of the green eggs have hatched. I was convinced that this large snail had laid the eggs since the young hatched with a green apex, unlike other *Pomacea* species. This green color faded away as they grew. The animal is black like *P. paludosa*.

Shell collector John Spangler found this species in 1981 at Lake Osborn, Florida. He showed slides of the snail with its green eggs at a club meeting not long ago, but did not know its name. One of the largest in his collection measures 105mm. The largest in my aquarium is 90mm.

Several specimens collected by Carole Marshall were sent to Dr. Thompson, who identified them as *P. haustrum* (Reeve, 1858), and said, "*P. haustrum* has not been recorded in the United States." Ranging from eastern Peru and northern Bolivia, perhaps through adjacent Brazil, it may be known under several synonyms.



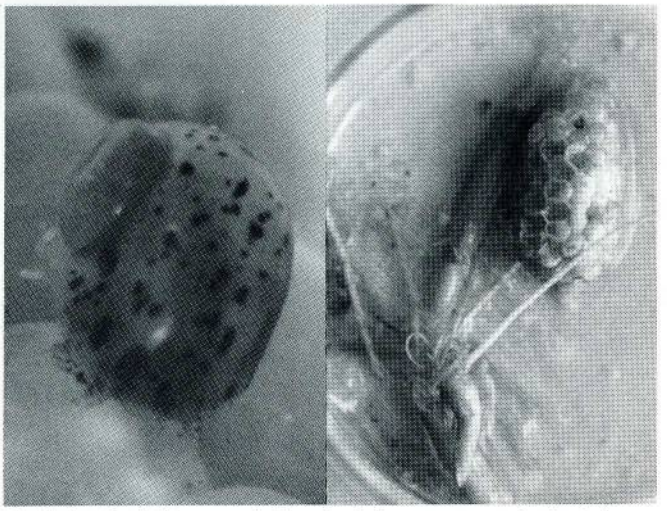


Newly hatched *Pomacea paludosa* and pink egg mass.

Obvious differences in shell morphology also separate the three species: *P. bridgesi* has a high spire, *P. paludosa*, has a low spire, while the very large shell of *P. haustrum* has a moderate spire and deeply channelled suture. These differences can be seen in the newly hatched young.

The *Pomacea*, members of the family Ampullariidae, have smooth, moderately strong shells and belong to the order Mesogastropoda. Found in all worldwide tropical and subtropical regions except Australia, these operculate snails are capable of both aquatic and aerial

* Beatrice Winner, 342 Southwind Drive #101, North Palm Beach, FL 33408, is the author of **A Field Guide to Molluscan Spawn**, V.1.



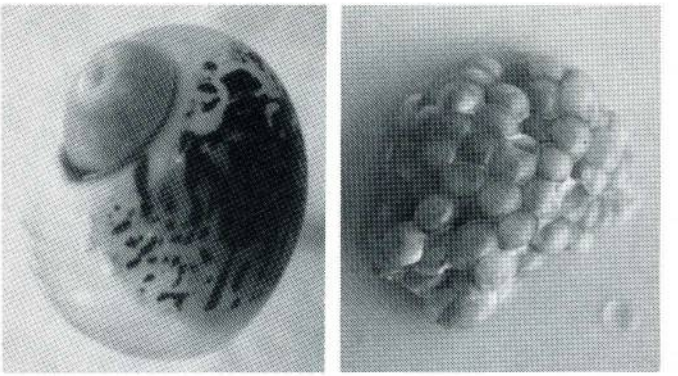
Newly hatched *Pomacea bridgesi*, pink egg mass and plant stem.

respiration. *Pomacea* are bisexual like most operculates, reproducing by cross-fertilization.

Pomacea, I have been informed, are most active at night, and are capable of aestivation by burrowing in the mud when marshes begin to dry. (*Pomacea* species in my aquarium are also active at night.) Their size seems to vary in different areas, due to drought, inconsistent water levels, availability of food, and number of predators.

References:

Burch, J.B. 1989. North American Freshwater Snails. Malacological Publications, Hamburg, Michigan. 364p.



Newly hatched *Pomacea haustrum* with green apex, and green egg mass.

Clench, W.J., and R.D. Turner. 1956. Freshwater mollusks of Alabama, Georgia, and Florida from the Escambia to the Suwanee River. Bull. Florida State Museum, 1(3): 97-239.

Emerson, W.K., and M.K. Jacobson, 1976. The American Museum of Natural History Guide to Shells, Land, Freshwater and Marine, from Nova Scotia to Florida. Alfred A. Knopf, New York. xvii + 482.

Fretter, V. 1984. Prosobranchs. p. 1-45 *in* Tompa, A.S., N.H. Verdonk, and J.A.M. van den Biggelaar, eds., The Mollusca, V.7, Reproduction. Academic Press, Inc. New York. 486 p.

Hyman, L.H. 1967. The Invertebrates. Vol. 6, Mollusca I, Aplacophora, Polyplacophora, Monoplacophora, Gastropoda: The Coelomate Bilateria. McGraw-Hill, New York. viii + 792p.

Kushlan, J.A. 1975. Population changes of the apple snail, *Pomacea paludosa*, in the southern Everglades. The Nautilus 89(1): 21-23.

Thompson, F.G. 1984. Freshwater snails of Florida. A manual for identification. University of Florida Press, Gainesville, Florida. 94p.