

## **Camaenidae (Snails) of Florida, *Zachrysia provisoria*, *Caracolus marginellus* (Mollusca: Pulmonata)<sup>1</sup>**

Kurt Auffenberg and Lionel A. Stange<sup>2</sup>

### **Introduction**

The Camaenidae is a diverse family of snails found throughout much of the tropics. The greatest diversity occurs in eastern Asia and the Australasian region. Many species are also known from Central and South America and some Caribbean Islands. Two introduced species, *Zachrysia provisoria* (Pfeiffer 1858) and *Caracolus marginellus* (Gmelin), occur in Florida. These Cuban species were purposefully released in Miami during the early 20th Century by Charles T. Simpson (Clapp 1919; Pilsbry 1939). The presence of viable populations of *Z. provisoria* in south Florida has been recognized for many years. *Caracolus marginellus* has recently been rediscovered in the Miami area.

### ***Zachrysia provisoria***

Shell medium-sized (25 to 30 mm width), globose in shape; four to five rapidly expanding whorls, body whorl increasing in size more than those of the spire; no umbilicus; sculptured with fairly regular, strong, retractively curved axial ribs; body whorl descends greatly near aperture; base swollen,



**Figure 1.** Dorsal view of the snail *Zachrysia provisoria* (Pfeiffer). Credits: Paul M. Choate University of Florida

fairly smooth and shining; apertural lip thickened within, slightly reflected; prominent protuberance or buttress on basal lip near columellar insertion; fresh specimens with rich, dark tan periostracum, sometimes with light brown axial streaks; apertural lip and columella white.

*Z. provisoria* cannot be confused with any other species in south Florida due to its large size and strongly ribbed shell sculpture. In addition to the populations in Florida, *Z. provisoria* (sometimes assigned as a synonym or subspecies of *Z. auricoma*

1. This document is EENY-118 (originally published as DPI Entomology Circular No. 356), one of a series of Featured Creatures from the Entomology and Nematology Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Published: November 1999. Revised: May 2004. Reviewed March 2008. This document is also available on Featured Creatures Website at <http://creatures.ifas.ufl.edu>. Please visit the EDIS Website at <http://edis.ifas.ufl.edu>.
2. Kurt Auffenberg, Florida Museum of Natural History, and Lionel A. Stange, Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Gainesville, FL.

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. U.S. Department of Agriculture, Cooperative Extension Service, University of Florida, IFAS, Florida A. & M. University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Larry Arrington, Dean



**Figure 2.** Lateral view of the snail *Zachrysis provisoria* (Pfeiller). Credits: Paul M. Choate University of Florida

(Ferussac 1821)) has also been introduced in the Bahamas, Puerto Rico and the Virgin Islands. In Florida it has been found in Broward, Collier, Dade, Hillsborough, Monroe, Palm Beach, and Pinellas counties (University of Florida (UF) Collections). It lives among leaf litter and among ornamental plantings.

*Z. provisoria* is a voracious herbivore and causes significant damage to ornamental plants in south Florida.

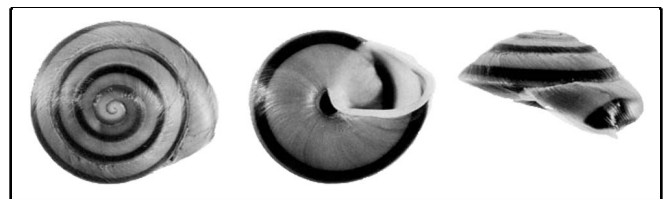
### ***Caracolus marginellus***

Shell large (35 to 45 mm), lenticular or depressed-trochoid in shape; sharply keeled at periphery of body whorl; five to six gradually expanding whorls; base slightly swollen, umbilical area slightly concave, umbilicus occasionally closed by reflected columellar lip; shell sculpture relatively smooth with irregular growth lines; body whorl descends almost vertically just before aperture; apertural lip greatly thickened within, reflected backward, protracted upward and backward at periphery; thickened parietal callus; columella short and stout; fresh specimens with tan periostracum, usually eroded from spire; dark brown and light brown to white bands of variable width and color intensity; peripheral keel usually white; apertural lip, columella, and parietal callus white, rose, or brownish in color.

*C. marginellus* is a very distinctive species and cannot be confused with other species occurring in Florida due to its large size and banded color pattern. Although the introduction was first recorded by

Clapp (1919), the presence of viable populations of this large species remained unknown until it was rediscovered in 1991 (Auffenberg and Stange). It has since been collected from several localities near the former Charles T. Simpson residence at Lemon City, Little River, Dade County (UF Collections). Specimens were collected in leaf litter and on the trunks of the palm, *Ptychosperma elegans* (R. Br.) Blume.

*C. marginellus* has been observed feeding on fallen calabash flowers and the algae growing on palm trunks. This species is not considered to be an agricultural pest.



**Figure 3.** Three views of the snail *Caracolus marginellus* (Gmelin). Credits: Division of Plant Industry

### **Selected References**

Auffenberg, K. and L.A. Stange. 1993. New records of the Cuban land snail, *Caracolus marginellus* (Gmelin, 1791), in Dade County, Florida. *Malacological Review*.

Clapp, G.H. 1919. Cuban mollusks colonized in Florida. *The Nautilus* 32 (3): 104- 105.

Pilsbry, H.A. 1939. Land mollusca of North America (north of Mexico). *The Academy of Natural Sciences of Philadelphia, Monograph No. 3, Vol. 1* (1): 1-573.