**Introduction**

In Florida, there are three native and two introduced species of snails, belonging to five different families, that are known to feed on other snails. In addition, several introduced species of the Subulinidae are considered carnivorous, but little is known of their biology, and identification is difficult.

The best known of the Florida predatory snails is the rosy wolfsnail, *Euglandina rosea* (Férussac 1821), which was exported to Hawaii and other areas (Mead 1961) in vain attempts to control the giant African snail, (*Achatina fulica* Bowdich 1821). A Mediterranean snail, the decollate snail, *Rumina decollata* (Linnaeus 1758), is much heralded today (Fisher et al. 1980) in California as an effective biological control agent of the brown garden snail, *Cornu aspersum* (Müller 1774). Relatively little is known of the other three species of snail-eating snails, two of which are less than 10 mm long. All of these Florida predaceous snails are easy to identify and the following account summarizes what is known of their distributions, identification, and habits.

**Euglandina rosea** (Ferussac 1821)  
(Family Spiraxidae)—Rosywolf Snail

**Identification**

The shell is large, up to 76 mm in height and 27.5 mm in diameter, is thick and has prominent growth lines. The shape of the shell is fusiform with a narrow ovate-lunate aperture and a truncated columella. Typically, the shell color is brownish-pink. Adults measure 7–10 cm in length.

![Figure 1. The rosy wolfsnail, *Euglandina rosea* (Férrussac 1821).](University_of_Florida)

**Distribution**

In the United States: Alabama, Florida, Georgia, Hawaii, Louisiana, Mississippi, South Carolina, and southeastern Texas. It is widespread in Florida, including the Keys. It is widespread, but usually found singly in hardwood forests, roadsides, and urban gardens (Hubricht 1985).
Snail-Eating Snails of Florida, Gastropoda

Comments
Although feeding in Achatina was observed, as well as on the Asian tramp snail, Bradybaena similaris (Férussac 1821) and native tree snails (Hart 1978), no real control was achieved. The snail reproduced rapidly in Hawaii and, by 1958, 12,000 snails were harvested for release in other Hawaiian Islands, New Guinea, Okinawa, Palau Islands, Philippines, and the Bonin Islands. Chiu and Chou (1962) gave details of the biology of Euglandina in Taiwan. Individuals live up to 24 months and adults lay 25 to 35 eggs in a shallow pocket in the soil. These hatch after 30 to 40 days. In Taiwan, Euglandina consumed as many as 350 Achatina during its lifetime. Euglandina rosea is now considered invasive in Hawaii as it has caused the extinction of eight native snail species.

*Rumina decollata* (Linnaeus 1758) (Family Subulinidae)—The Decollate Snail

Identification
The adult shell is large, being up to 45 mm in height and 14 mm in diameter. It only retains four to seven whorls in adulthood, the other eight to 10 whorls being lost. The shell is perforate, glossy and sculptured with prominent axial growth lines and fine spiral striae. The columella is straight, its lip margin reflexed but the outer lip is simple. The shell color is pinkish brown. It is not easily confused with any other snail in Florida.

Distribution
Native to the Mediterranean area, but introduced widely in the United States, Bermuda, and Mexico. It is widespread, but localized, in the Sun Belt from California east to Florida and north along the Atlantic coast to Pennsylvania. Very localized populations in Florida are known from Pensacola (Dundee 1970), Miami, Key Vaca, and Marathon.

Comments
This snail was long considered a minor plant pest (Brantlinger 1953), although recognized as omnivorous. In California (Fisher et al. 1980), studies showed this snail is
an effective predator of half-grown brown garden snails in particular and, like the brown garden snail, prospered only in cultivated habitats with frequent irrigation. It is thought that rodents limit the feral spread of the snails. Decollate snails will feed on new sprouts, old leaves, especially those in contact with the soil, and fallen bruised fruit. Their value in controlling the brown garden snail is considered to outweigh their minor pest attributes in California. These snails are ground dwellers, living among leaves, and sometimes burrowing in the upper one inch of soil (Fisher et al. 1980).

**Haplotrema concavum (Say, 1821), (Family Haplotrematidae)—The Gray Lancetooth**

**Identification**

The shell is large, 10 to 22 mm in diameter and 5 to 10 mm in height, and depressed with 5 to 5 ½ whorls. The whorls are convex with deeply impressed sutures. The umbilicus is broadly open, about ½ shell diameter. The shell is moderately strong, glossy, and smooth except for irregular axial striations and occasional fine spiral incised lines. The aperture is round to lunate. The parietal callus is yellowish, usually with a thickened edge. The shell color is white to very pale brown (dead) or greenish-white to light yellow (alive).

**Distribution**

Southern Canada to the Gulf States and west to eastern Nebraska and Oklahoma (Hubricht 1985). In Florida, it is presently known only from counties bordering the Apalachicola River.

*Figure 6. The gray lancetooth, *Haplotrema concavum* (Say 1821).*
*Credits: Bill Frank, www.jaxshells.org*

**Huttonella bicolor (Hutton, 1834), (Family Streptaxidae)—The Two-Toned Gulella**

**Identification**

The shell is small, 5 to 7.5 mm in height and 1.5 to 2.0 mm in diameter), elongate and sturdy. Shell color is very pale brown to white; live specimens are bright orange due to body color. Shell sculpture is smooth, except at sutures where axial ribs are present. Well-developed axial ribs are present behind apertural lip and in the umbilical region. Aperture with four prominent teeth.

**Distribution**

Introduced from Orient (Burch 1962) or southern Africa (Dundee 1974). Widespread in the Caribbean region. In the United States, apart from Florida, it is also known from Louisiana, Mississippi, South Carolina, and Texas (Dundee 1974). It is also found in Brazil, Nicaragua, Australia (northern territory), and the Pacific area.
Snail-Eating Snails of Florida, Gastropoda

This snail is apparently an effective predator of *Subulina octona* (Bruguière 1798) (Mead 1961) and pupillids (Dundee and Baerwald 1984). In Florida, the presence of four apertural teeth is diagnostic except for some tiny species of Pupillidae which are distinguished by their ovate or pupate shapes.

**Varicella gracillima floridana**

*Pilsbry 1907 (Family Oleacinidae)*

**Identification**

The shell is small, (6 to 8 mm in height and 1.5 to 1.7 mm in diameter), elongate, somewhat scariform and thin. The whorls number 8 to 8 ½, and are convex with deeply impressed sutures. Shell sculpture is distinctive with about 25 straight, narrow axial ribs, between which are six to eight fine axial striae. The shell is imperforate, the aperture ovate, and the outer lip slightly sigmoid, arching forward at middle but receding at base. The columella is straight and slightly calloused. Shell color is pale brown.

**Distribution**

Collected only from the Florida Keys and the Miami area. The subspecies *Varicella gracillima gracillima* (Pfeiffer 1851) occurs in Western Cuba (Pilsbry 1946).

**Comments**

These snails live under leaf litter, logs and rocks, usually in hardwood hammocks. No studies have been made of their biology, but Burch (1962) implied they are predatory on other snails.

**Selected References**


