ENTOMOLOGY CIRCULAR NO. 209
DECEMBER 1979

FLA. DEPT. AGRIC. & CONSUMER SERV.
DIVISION OF PLANT INDUSTRY

THE MILK SNAIL IN FLORIDA (GASTROPODA: HELICIDAE)[1]

LIONEL A. STANGE[2]

INTRODUCTION: The milk snail, Otala lactea (Müller), belongs to that economically dreaded family Helicidae which contains plant feeders or pests and most of the edible snails consumed with delight in some Mediterranean countries. Although Rust (1914) tried to promote it and other helicid snails as food in this country, snail food fanciers today are relatively few in this country (Dees, 1970). This snail has been called by other names such as the Spanish snail, milky snail, and by California newspapers, the "African striped snail", and by entrepreneurs who have promoted them as house pets, the "bejewelled creeping beauty" (Mead, 1971). Another common use of this snail has been as fish bait (Ingram, 1952). No wonder this naturally inept migrant snail has turned up in so many places! It was first noticed in Florida in 1931 at Pass-a-Grille (van der Schalie,1938) apparently as an escapee from a curio dealer there who had obtained a series from Morocco. It still persists there today and in a few other areas of Pinellas County, apparently causing little damage but locally abundant enough to cause homeowners concern.

SURVEY AND DETECTION: This snail is easily seen due to its relatively large size and conspicuous white, or gray-white, color, often with considerable chocolate-brown banding (Fig. 2). It likes sunny open areas and is especially noticeable after rain storms. Search should be directed in plant mats, looking on stems, under leaves, and on the ground (especially on rocks). Favored plants seem to be wandering Jew, crinum lily, and castorbean. One should look above ground because these snails may be on walls, tree trunks, and even poles. The solid shells persist a fairly long time so that dead snails may predominate.

Fig. 1. Otala lactea (Müller). Pale form.

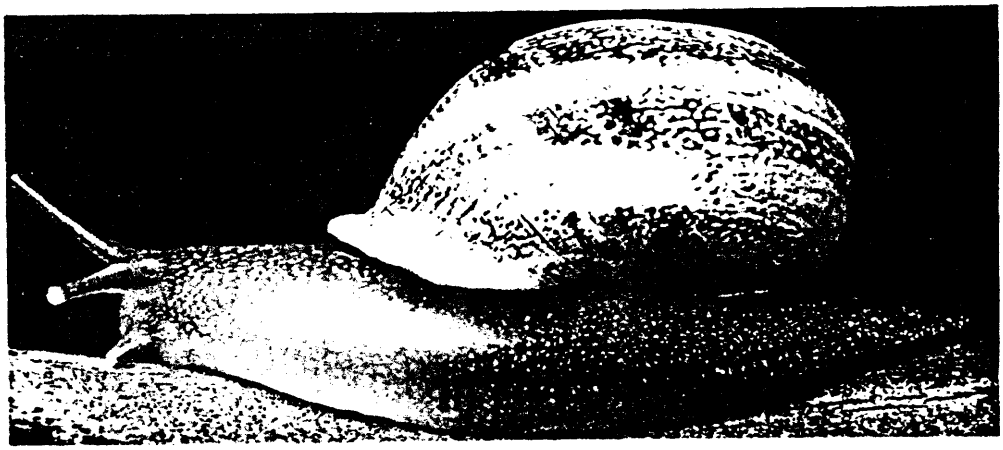

Fig. 2. Otala lactea (Müller).Banded form.

[1]Contribution No. 465, Bureau of Entomology

[2]Taxonomic Entomologist, Div. Plant Ind., P. O. Box 1269, Gainesville, FL 32602

DESCRIPTION: Shell wider than high (diameter 1 1/16-1 3/8 inches (28-36mm), height 5/8-3/4 inches (16-20mm), 5 well-rounded whorls (Fig.1), aperture ovate-lunate, with lip widely reflected in adults, imperforate, minutely dented with nearly continuous fine, impressed spiral lines. Shell whitish with considerable variation in color, ranging from plain white to 5 dark chocolate-brown spiral bands flecked with white; lip and aperture liver-brown to almost black, sometimes white; adult shell hard and difficult to crush with fingers; body of animal gray-white, with darker gray on dorsum especially anterior end and eye tentacles.

BIOLOGY: Number of eggs laid varies between 40 and 100 (average 66 in California), 2 clutches per month in warm weather (Gammon, 1943). Eggs deposited in pockets dug in loose soil (Grimm,1964). Adapted to arid conditions, aestivating on rocks, trees, etc., forming multiple epiphragms with body deeply retracted (second epiphragm far down in shell). Responds to high humidity (75%) and low temperatures and is active after rains. Adapts well to vacant lots. Plant feeders preferring (in Florida) crinum lilies and wandering Jew (Zebrina pendula Schnizl.). Has been found on Amaryllis leaves (Grimm, 1964), castorbean, and papaya (van der Schalie, 1938), and teaweed (Sida carpinifolia L.f.) (new Florida record).

ECONOMIC IMPORTANCE AND CONTROL: No serious damage has been reported in Florida, but it has pest status in California (Gammon, 1943; Smith, 1959; Hanna, 1966). Has been intercepted many times on anise, broccoli, cabbage, cauliflower, celery, lettuce, Swiss chard, etc. (Dundee, 1974). It was observed scraping crinum lily leaves at Pass-a-Grille by Stange (1979) but not causing important damage. Recommended controls are Mesurol bait and metaldehyde dusts, sprays, or baits.

DISTRIBUTION: Native to Morocco, Algeria, southern Spain, and the Canary Islands. Introduced to South America (Argentina), Cuba, Jamaica, and the United States. Although found in food markets in many states,established colonies are in the southern half of the country; Arizona (Mead, 1971), California (Hanna, 1966), Texas (Jackson, 1944), Mississippi (Hubricht, 1963), Georgia (Pilsbry, 1939), and Florida (Friedl & Bayne, 1965; Henderson, 1936; van der Schalie, 1938). All Florida records are from Pinellas County (Cabbage Key, Long Key, Mullet Key, Mud Key, Pass-a-Grille, Tierra Verde, St. Petersburg Beach). A 1979 survey indicates presence at Pass-a-Grille, and St. Petersburg Beach but only dead shells found at Tierra Verde.

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