ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Invertebrate Abstract **Element Code:** IMGAS29010
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Rumina decollata*
COMMON NAME: Decollate snail
SYNONYMS: *Helix decollata, Stenogyra decollata, Bulimus decollatus, Bulimus multilatus, Orbitina incomparabilis, Orbitina truncatella*
FAMILY: Subulinidae

AUTHOR, PLACE OF PUBLICATION: *Helix decollata* Linné, C. 1758. Systema Naturae, 10th ed., vol. 1. 824 pp. Laurentii Salvii: Holmiae [Stockholm, Sweden].

TYPE LOCALITY: Originally described from Southern and Eastern Europe without precise type locality.

TYPE SPECIMEN: Unknown

TAXONOMIC UNIQUENESS: There are five other genera within the Subulinidae family, containing eleven species. *Rumina decollata* is the only species within its genus. *Lamellaxis gracilis* is the only other species within this family occurring in Arizona.

DESCRIPTION: *Rumina decollata* may grow up to 45 mm in length and 14mm in diameter. The shell is narrowly rimate, cylindric or cylindric-tapering, truncate, and closed by a spiral convex plug at the summit. It is thin, irregularly striate, usually showing some spiral lines or vertical punctures. Adult shells are pale yellow, whitish, or pinkish brown in color. The shells of the young are light brown. Typically 4-6 whorls remain in adults. The aperture is ovate and the outer lip is simple, more or less thickened within. The columnella is vertical and nearly straight. As the shell grows, the tip becomes brittle and often becomes irregularly broken (Gulf States Marine Fisheries Commission, 1999).

AIDS TO IDENTIFICATION: *Rumina decollata* and *Lamellaxis gracilis* may appear similar as juveniles but can be easily distinguished as adults. The most distinguishing characteristic of the adult Decollate Snail is the brittle or broken (decollated) shell tip that *L. gracilis* does

ILLUSTRATIONS: Color photo (Paul M. Choate *in* http://edis.ifas.ufl.edu/IN523)
Color photo (*In* http://www.ipm.ucdavis.edu/PMG/NE/decollate_snail.html)

TOTAL RANGE: The Decollate Snail is native to portions of southern Europe, northern Africa, and western Asia that border the Mediterranean Sea (Gulf States Marine Fisheries Commission, 1999). Introduced widely in the United States, Bermuda and Mexico. Widespread but localized in the Sun Belt from California to Florida and north along the Atlantic coast to Pennsylvania. Very localized populations in Florida are known from Pensacola, Miami and Key Vaca (University of Florida, 2001).

RANGE WITHIN ARIZONA: Yuma, Phoenix, Tempe, Mesa, Florence, and Tucson, AZ. (Bequaert and Miller, 1973).

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Decollate snails are nocturnal, predaceous land snails native to the Mediterranean with a life span of 1 to 1 ½ years. They are known as the Decollate Snail because at a length of about 10mm, the top 3 to 3.5 whorls of the shell are broken off, with the shell becoming "decollate". Unconfirmed reports sustain that the snail bangs its upper whorls violently against hard objects to aid in decollation. A calcareous septum, resembling the protoconch, is formed as a cover for the top of the broken shell. Decollation has been reported to be advantageous because it provides increased mobility, a reduction in shell weight, and enhances resistance to desiccation (Gulf State Marine Fisheries Commission, 1999).

Rumina decollata can tolerate several months without water and go dormant during periods of high temperatures and low relative humidity. During cold weather they burrow into the soil, often to considerable depths. They spend the winter burrowed into moist, well-drained soil, but will not survive in areas where temperatures remain below freezing for long. Decollate snails are active mainly at night or after rainfall. During the day they are found in the upper inch of the soil, in leaf mulch, or under rocks. In the evening they come out to hunt. They track their prey by following the slime trails produced by brown garden snails or slugs (Gulf State Marine Fisheries Commission, 1999).

REPRODUCTION: The Decollate Snail is hermaphroditic. Both self-fertilization and cross-fertilization have been reported for this species. They begin reproductive behavior at approximately 10 months of age. Eggs are typically produced from February to June and September to November in the Gulf Coast area. A Decollate Snail lays about 500 eggs during its lifetime. Nests consist of shallow depressions in the soil. Eggs measure approximately 2 mm in diameter and are deposited individually, but close enough so that they form clusters. The incubation period may range from 10 days to 30 days (Gulf States marine Fisheries Commission, 1999).

FOOD HABITS: Decollate snails are omnivorous, feeding mostly on other snails, slugs, and worms, as well as decaying plant material.

Despite the fact that this snail will eat plant matter, Fisher (1974), as cited by Gulf States Marine Fisheries Commission (1999), did not believe decollate snails were a source of any considerable damage to plants under natural conditions.

HABITAT: The snails live in litter on the soil. They do not move great distances from their home range. Dundee (1986), as cited by The Gulf States Marine Fisheries Commission (1999), noted marked specimens in New Orleans, Louisiana did not move more than 25 inches from their point of release over a period of six months.

ELEVATION:

PLANT COMMUNITY:

POPULATION TRENDS:

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: None

MANAGEMENT FACTORS: This is an exotic species that may negatively impact native snails and slugs through direct predation.

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP:

SOURCES OF FURTHER INFORMATION

REFERENCES:

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MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION: In citrus, establishment and proper maintenance of Decollate Snail populations has been shown to permanently reduce brown garden snail populations to insignificant levels in 4 to 10 years. The best time to introduce and establish decollate snails in California is during warm, damp weather in the early spring. Introductions of this snail are permitted only in certain San Joaquin Valley and southern California county locations (they are illegal in other areas as they may affect native snail and slug populations) (University of California, 2003). It is thought that rodents limit the feral spread of the snails. Their value in controlling the brown garden snail is considered to outweigh their minor pest attributes in California.

Introduced from the Mediterranean area; the first record in the U.S. was from North Carolina in 1813 (Bequaert and Miller, 1973).

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