Bradybaena similaris

Rang, 1831

FAMILY BRADYBAENIDAE

Current Risk Status in Fiji:
Medium - High

Body Type:
Snail with fully developed rounded shell

Size:
Adult shell diameter ~14 mm, shell height ~ 11 mm

USP Introduced Land Snails of the Fiji Islands Fact Sheet Series, No. 2

Manaaki Whenua Landcare Research

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CONSERVATION INTERNATIONAL Pacific Islands

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Special points of interest:

- *Bradybaena similaris* is common in suburban gardens. It can be found in large numbers particularly during extended periods of cool, rainy weather.
- *B. similaris* is a well documented agricultural pest and considered to be particularly problematic in cucurbit (= melons and gourds such as cucumber and pumpkin) crops.
- *Bradybaena similaris* is not considered invasive in Fiji because it is normally only found in disturbed areas.

Description & Distribution

Description

The head of the living *Bradybaena similaris* (Rang, 1831) is round with two long, dark tentacles, each with a simple eye at the tip. A shorter set of tentacles lie closer to the mouth. The adult shell is round and coiled, consisting of five whorls. The shell apex is broadly rounded (helicoid) and ventrally a distinct umbilicus is visible. The shell aperture lip is slightly flared. This species is polymorphic as banded and non-banded, yellow and brown morphs have been documented (Stanisic 1998). Once the animals die the shell leaches of colour and becomes white or dirty translucent pale cream.

Source and location of photographs:
G. Brodie (Suva, Viti Levu)

Distribution

Bradybaena similaris is native to Asia and considered to be widely distributed by human commerce (Barker *et al*. 2005). In Fiji this species is very common in Suva and known from many other areas of Viti Levu. Also reported on the islands of Mana, Ovalau, Matuku and Lakeba (Barker *et al*. 2005). It is found in several other Pacific island areas including the Cook Islands (McCormack 2007), New Caledonia, Vanuatu, Guam and Samoa (Cowie 2001).

Habitat & Behaviour

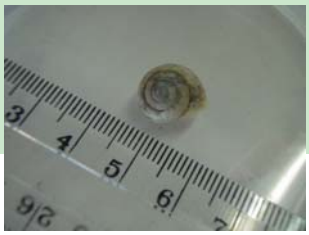
Habitat

In Fiji, *Bradybaena similaris* is most reported from disturbed lowland to highland areas (Barker *et al.* 2005). The species is also common in well-shaded areas of suburban gardens, including the gardens of USP's Laucala campus.

Behaviour

Bradybaena similaris is often found on the ground (terrestrial) but can also climb onto vegetation (arboreal). Like most land snails *B. similaris* is nocturnally active and can be found "resting" in groups during the day (gregarious). Because of its high dispersal ability, *B. similaris* is often referred to as the Asian tramp snail.





Biology

The life history of *Bradybaena similaris* is characterized by a combination of short lifespan, early sexual maturity, and few reproductive events, with a huge reproductive effort in each event and high mortality in the first reproduction (Carvalho *et al.* 2008). This species is an "r-strategist" meaning that they mature and reproduce quickly with little to no parental care. Leahy (1984) reported that breeding and nest building in Brazil occurs in the wet season (October to January). Nests are excavated just under the surface in moist soil. Less than 20 eggs are laid per nest and eggs hatch in ~15 days. Eggs are considered relatively resistant to desiccation. *B. similaris* can function as both a male and female i.e. it is a hermaphrodite (Leahy 1984).

Threats & Similar Species

Threats

Bradybaena similaris is a cosmopolitan pest feeding on ornamental plants in many subtropical and tropical areas (Leahy 1984). Lee (1973) reported this species as a serious agricultural pest in Hong Kong, feeding mainly on Chinese white cabbage, flowering cabbage, watercress and beans. Documented in Australia as an agricultural pest (Stanisic 1998) and considered to be particularly problematic in cucurbit (= melons and gourds such as cucumber and pumpkin) crops. May occur in large numbers so that animals and their faecal matter hinder clean harvesting of produce. *B. similaris* can also serve as an intermediate host for several serious parasites including the infamous rat lung worm that can be harmful to humans, the trematode *Postharmostomum gallinum* which infects domestic chickens (Amato & Bezerra 1992), and *Eurytrema coelomaticum* a fluke of ruminants such as cattle. The latter parasite can cause losses in milk and meat production (Lapage 1958).

Similar Species

Very similar in shell shape to *Quantula striata,* which is much larger (adult shell diameter ~ 25 mm, shell height ~ 16 mm). The shell of adult *Q. striata* is also a much deeper reddish brown on the upper surface and has six shell whorls, while *Bradybaena similaris* has five. The umbilicus of *B. similaris* is also more distinctly rounded.

Further Reading

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