



Euglandina rosea (Férussac, 1821)

FAMILY SPIRAXIDAE

Current Risk Status for Fiji:
Very High

Body Type:
Snail with fully developed shell

Size:
The adult shell is usually 5 – 8 cm in height and ~ 2 cm in diameter



USP Introduced Land
Snails of the Fiji
Islands Fact Sheet
Series, No. 10



Manaaki Whenua
Landcare Research



Direct funding from the Critical Ecosystem Partnership Fund (CEPF) and a USP FSTE Grant is gratefully acknowledged.

Special points of interest:

- *Euglandina rosea* is a voracious predator that has decimated native snail populations in many Pacific islands.
- To date *Euglandina rosea* has NOT become established in Fiji. It would be an environmental disaster if *Euglandina rosea* was introduced to Fiji either intentionally or accidentally.
- Following strict quarantine regulations is vitally important to keep this species out of Fiji.

Description & Distribution

Description

The rosy wolf snail *Euglandina rosea* (Férussac, 1821) is a relatively large terrestrial snail with a long and slender body-shape. The well developed shell is pinkish brown and almost translucent. The shell has four whorls and numerous distinct vertical ridges that can be seen with the naked eye. The body of the living animal is uniformly ginger-brown and the “neck” region is noticeably elongated. A distinct groove runs along the upper mid-line of the “neck” region. In comparison to other species the front anterior edges of the foot (labial palps) are very large and protrude distinctly on either side of the head. Two sets of tentacles are present, with the eyes located on the first and longest pair.

Distribution

Euglandina rosea is native to the south-eastern United States and has been introduced to many areas including Kiribati, French



Source and location of photographs:
B. Frank (Florida, USA) & T. Ross

Polynesia, American Samoa, New Caledonia, Vanuatu, Solomon Islands, Palau, Guam, Northern Mariana Islands, Papua New Guinea, Japan, Hong Kong, Taiwan, North Borneo, Madagascar, Seychelles, Mauritius, Reunion Islands, India, Andaman Islands, Sri Lanka, the Bahamas and Bermuda (GISD 2011). *E. rosea* is **not currently established in Fiji**, New Zealand or Australia.

Habitat

Euglandina rosea is normally found singularly in a wide variety of habitats including natural forest, planted forest, rural disturbed areas, shrub lands and urban areas (GISD 2011). In the past the

species has been deliberately introduced by humans as a biological control agent for the major agricultural pest *Achatina fulica* but this practice has now been formally condemned by the IUCN.

If you find this snail in Fiji please report it urgently to the Biosecurity Authority of Fiji: Phone Suva 3312512.

FIJI LAND SNAILS



T. ROSS

Biology & Behaviour

Biology

Euglandina rosea is a carnivorous species and a voracious predator, hunting and eating other snails and slugs. It possesses chemical receptors that are used to track snail prey by following their mucus trails. The species is commonly referred to as the “Rosy Wolf Snail” or “Cannibal Snail”.

Behaviour

In comparison to other snails *E. rosea* moves relatively fast. It is an active predator, hunting and ingesting small invertebrates including smaller snails. *E. rosea* can consume small snail species whole, while larger specimens are maneuvered in such a way that their soft parts are exposed for easier extraction.

Threats & Similar Species

Threats

Euglandina rosea is listed as one of the world’s top 100 invasive species (GISD 2011). It is a very high quarantine risk for Fiji because its large size and carnivorous feeding behaviour makes it an extremely high risk to native fauna (as a predator). *E. rosea* was deliberately introduced to several oceanic islands to control (in theory) the Giant African Snail [*Achatina fulica*] and other snail pest species. Since its introduction to these islands, *E. rosea* has been linked to extinctions and declines of native snail species in every area where it has been introduced

(Kinzie 1992, Cowie 1998, Loope 2002).

Similar Species

Euglandina rosea is similar in size and shape to several of Fiji’s endemic *Placostylus* snail species. However, in living animals, *E. rosea* has a very distinct elongate neck in comparison to *Placostylus*. *E. rosea* also has very obvious, extremely large elongated labial palps either side of the mouth, and the shell has distinct vertical ridges that can be seen with the naked eye. *Placostylus* also differs in that it has a distinct lip to the shell aperture in adults that *E. rosea* does not possess.

Further Reading

- Barker, G.M. & Efford, M. (2004). Predatory gastropods as natural enemies of terrestrial gastropods and other invertebrates. Pp. 279-403 In: Barker, G.M. (ed.), *Natural Enemies of Terrestrial Molluscs*. CABI Publishing, Wallingford.
- Cook, A. (1983). Feeding by the carnivorous snail *Euglandina* Ferussac. *Journal of Molluscan Studies*, Supplement 12A: 32-35.
- Cowie, R.H. (1998). Patterns of introduction of non-indigenous non-marine snails and slugs in the Hawaiian Islands. *Biodiversity and Conservation*, 7: 349-368.
- Cowie, R.H. (2001). Can snails ever be effective and safe biocontrol agents? *International Journal of Pest Management*, 47: 23-40.
- GISD. (2011). <http://www.issg.org/database>. Accessed February 1st, 2011.

- Griffiths, O., Cook, A. & Wells, S.M. (1993). The diet of the carnivorous snail *Euglandina rosea* in Mauritius and its implications for threatened island gastropod faunas. *Journal of Zoology*, 229: 79-89.
- Hadfield, M.G. & Hopper, D. (1994). A toxic bait for *Euglandina rosea*. Tentacle – Newsletter of the IUCN Species Survival Commission Mollusc Specialist Group 4: 7-8.
- Kinzie, R.A. (1992). Predation by the introduced carnivorous snail *Euglandina rosea* (Ferussac) on endemic aquatic lymnaeid snails in Hawaii. *Biological Conservation*, 60: 149-155.
- Loope, L.L. (2002). The effect of introduced *Euglandina* snail on endemic snails of Moorea, French Polynesia. US Geological Survey Publications.

How to Cite:

Brodie, G. & Barker, G.M. 2012. *Euglandina rosea* (Férussac, 1821). Family Spiraxidae. 'USP Introduced Land Snails of the Fiji Islands Fact Sheet Series', No. 10.

For Further Information Contact:

Dr Gilianne Brodie, Biology Division, USP, Suva, Fiji Islands. Phone: 679 3232876, Email: brodie_g@usp.ac.fj