

Leatherleaf slugs

Sarasinula spp.

Present in Hawai'i

Leatherleaf slugs are both an ornamental pest and a human health threat since they carry the parasite that causes rat lungworm. Control efforts reduce damage and lessen the likelihood of spread to uninfested areas.



Sarasinula plebeia on *Phaseolus* spp. (bean) in Honduras (Frank Peairs, Colorado State University, Bugwood.org).



Impacts

- A nocturnal slug that prefers disturbed habitats including backyards, gardens, and cultivated areas. This slug is oviparous, with clutches averaging 37 eggs. The slugs lay one to two clutches per year but can have as many as four.
- Species of this family have been found to carry several nematode parasites that threaten human health, including *Angiostrongylus cantonensis* (rat lungworm), *A. costaricensis*, and *A. malaysiensis*.



Identification

- A relatively large shell-less slug that can reach almost 3 inches (7.62 cm) in length. The upper surface (notum) is leathery and can sometimes appear pitted.
- The notum color is generally light to dark mottled brown with no pale stripe. Like all members of its family, a mantle cavity is absent. *Sarasinula plebeia* has a gray notum with randomly placed minute dark marks weighing an average of 3 grams.



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Vectors/Commodities

- This species was introduced into Hawaii in the 1970s. Anecdotal observations suggest that the decline of another pest slug, *Laevicaulis alte*, in Hawai'i has coincided with the introduction of *Sarasinula plebeia*.
- The population of this species continues to increase in Hawaii and can cause severe damage to flowers and foliage. This species is a concern to Hawaii's potted-foliage growers as this species can infest the commodity.



Distribution

- New introductions of terrestrial mollusks will likely be related to commerce and human-assisted movement. Known microhabitats:
- Discarded wooden boards and planks, fallen trees, logs, and branches;
- Damp leaf litter (not wet or soggy), compost piles, and rubbish heaps; and Under flower pots, planters, rubber mats, tires and other items in contact with the soil.



Sarasinula plebeia (Fischer) from the West Indian island of Guadeloupe (From Robinson and Hollingsworth, 2004).



Best Management Practices

- Local control efforts prevent the spread from Hawaii and help protect the nursery industry and community from further impacts.
- BOLO: Be on the lookout! Routine nursery surveys are a proactive way to detect the presence of new pests.
- Search in heavily vegetated areas near where feeding damage has been observed, under debris, rocks, pots, and other areas where slugs/snails seek refuge.
- Trapping cannot be used alone but can be used to supplement visual surveying. Traps are not species-specific and will attract non-target species, including non-mollusks. Trap placement can occur in the same areas that visual surveys occur.
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- Manage slug and snail populations by limiting the number of places slugs and snail can hide in. Remove unnecessary groundcover, cut back vegetation, and remove unnecessary items stored in contact with the ground.
- NOTE FOR WEB: DO NOT INCLUDE REPORT INFORMATION FOR THIS SPECIES AS IT IS NATURALIZED



Selected References:

- USDA Animal and Plant Health Inspection Service: <http://download.ceris.purdue.edu/file/2558>
- UH College of Tropical Horticulture and Human Resources <https://www.ctahr.hawaii.edu/oc/freepubs/pdf/FST-39.pdf>

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