

PEST PREVENTION TRAINING

An advanced education program for those on the front lines protecting Hawai'i

Black Velvet Leatherleaf Slug

Belocaulus spp

Not known to be present in Hawai'i

The black leatherleaf slug is a jet-black slug that reaches a length of just over 2 inches. They are a known carrier of the parasite that causes rat lungworm.



Two Belocaulus angustipes slugs mating.



Impacts

- Agriculture:
 - o This species has an apparent lack of host specificity and consumes a wide variety of plants including grasses and other tender plants.
 - This species has been recorded feeding on both living and decayed leaves
- Health:
 - Species of this slug family (Verconicellidae family) have been found to carry several nematode parasites, including Angiostrongylus cantonensis (rat lungworm), Angiostonflyus costaricensis, and Angiostongylus. malaysiensis. A cantonensis can cause symptoms similar to meningitis in humans including headache, stiff neck, tingling or painful feelings in the skin, low grade fever, nausea, and vomiting.



Identification

- Can measure up to 55 mm [approx. 2.2 in] when fully extended.
- It is usually jet black in color with similarly colored tentacles.
- There is a pale, inconspicuous tan stripe down the center of the back, which may not be visible. The mantle extends over the entire length of the body. The dorsal surface of the mantle may appear velvety or wrinkled.
- This species is small and will weigh no more than 1.2 grams.
- Visual signs of Belocaulus slugs can include chewing or rasping damage to plants, presence of eggs, juveniles and adults, mucus and slime trails, and/or ribbon like feces.







Black Velvet Leatherleaf Slug

Belocaulus spp

Not known to be present in Hawai'i



Vectors/Commodities

- Agricultural commodities, plant shipments, cargo. This slug was introduced into the United States on plants from South America, most likely from Brazil or Argentina.
- Found in greenhouses and nurseries, specifically under potted plants, where it is likely to move with the nursery stock. *Belocaulus angustipes* is known to burrow into the soft soil and enter the root balls of plants through the drainage holes in the bottom of plant containers.



Distribution

- Native Range: South America
- Introduced Range:
- United States (limited detection in south and southeastern states: TX, OK, LA, MS, AL, FL, SC).
- Central America (Honduras)
- South America (Argentina, Brazil, Paraguay and Colombia)



Belocaulus angustipes adult.



Best Managment Practices

- Consider pest distribution when sourcing plant material.
- Inspect property and new material for slugs, eggs and slug damage.
- Report suspect slugs to 643pest.org, or by phone to 643-PEST (7378).



Belocaulus angustipes adult with lighter color variation.



Selected References:

- APHIS Black Leatherleaf Slug Info: https://www.jaxshells.org/pdfs/slew.pdf
- Texas Invasive Species Institute: http://www.tsusinvasives.org/home/database/belocaulus-angustipes
- Purdue Belocaulus spp Factsheet: http://download.ceris.purdue.edu/file/2550
- <u>CTAHR Rat Lungworm Management: https://www.ctahr.hawaii.edu/uhmg/news/V20-RatLungWorm-2017.pdf</u>
- Terrestrial Mollusk ID Tool: http://idtools.org/id/mollusc/index.php

This material was made possible, in part, by a Cooperative Agreement from the United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS). Itmay not necessarily express APHIS's views.



Learn

plantpono.org/pest-prevention-training/



