

The Problem:

Raillietiella orientalis is an invasive lung parasite that poses a significant threat to wildlife in the southeastern United States. Known to infect at least 18 species of native snakes and one species of lizard, this parasite exhibits alarming adaptability, swiftly expanding its geographic range, and readily switching between host taxa. *R. orientalis* can cause severe lesions of the lungs, pneumonia, sepsis, and has been related to several mortality events and population declines in various native snake species.

How it started:

This invasion has infiltrated native herpetofauna populations concurrent with the establishment of Burmese pythons in South Florida. There is a likelihood that other invasive species in Florida, such as tegus and tokays, have also served as introduction pathways. Due to its ability to infect a wide range of host taxa, *Raillietiella orientalis* can persist in landscapes and readily expand into new environments. Human activities, particularly trade and travel, likely contribute to the global spread of this parasite.

Reporting Information:

If you find a snake dead in habitat or on the road with potential pentastomes crawling out of its mouth, please snap a picture (as close as you can get!). If you find a moribund or dead snake or other herpetofauna species, snap a picture, take information down and contact the Herp Disease Alert System!



SLAM:

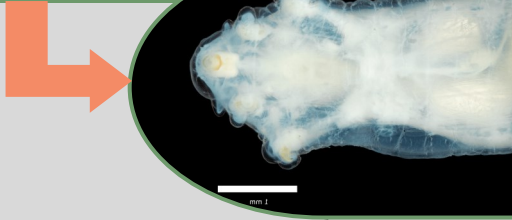
IG: SLAM.Conservation
Facebook: SLAM.Facebook
SLAM.Conservation@gmail.com
<https://invasionscience.ufl.edu/slam/>

Authors: Jenna Palmisano and Paul Evans



SNAKE
LUNGWORM
ALLIANCE
MONITORING

Raillietiella orientalis



Eastern Mudsnake (*Farancia abacura*)
Photo courtesy of Dane Conley



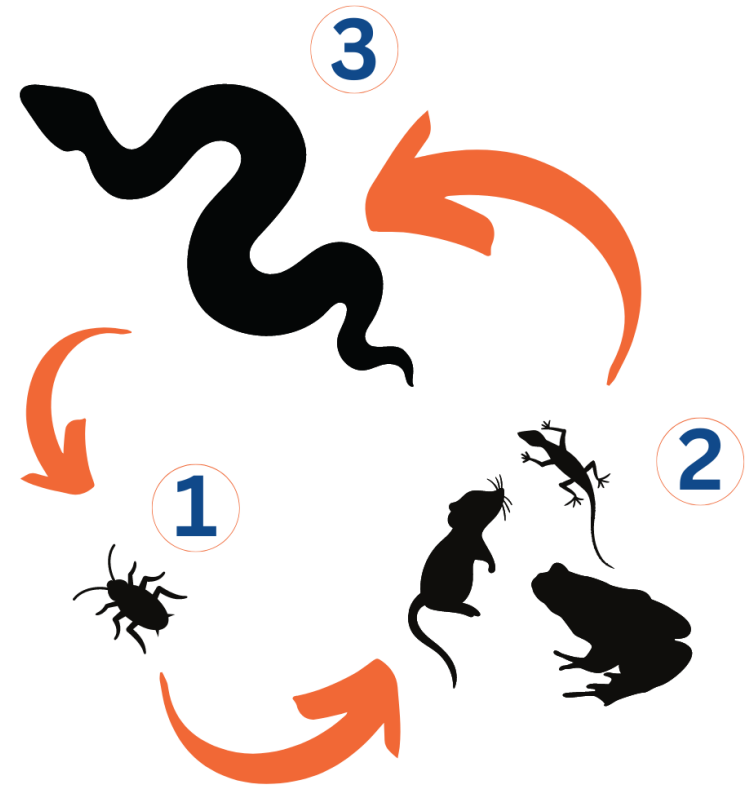
Dusky pygmy rattlesnake (*Sistrurus miliarius*)
Photo courtesy of Jenna Noel Palmisano



Eastern Indigo snake (*Drymarchon couperi*)
Photo courtesy of Ben Stegenga

The life cycle of *Raillietiella orientalis* in Florida can be broken into three progressive steps:

1. Eggs are ingested through feces by invertebrates (i.e. cockroaches)
2. Here they mature to a larval stage and eventually get passed along to smaller vertebrates such as toads, mammals and lizards
3. Snake pentastomes are transferred to their final snake host when the snake preys upon an infected intermediate host (i.e. a frog or mammal)



Want to Help?

If you are interested in becoming a member of SLAM, reach out and we will get the appropriate protocols and contact information to you. It is important to keep our native snakes wild and healthy!

Necessary Research

We need to continue to track spread of R.O infection in the pet trade and wild populations of intermediate and definitive hosts, determine the best biosecurity practices, and assess the lethal and sublethal impacts of infection.