

The Giant African Land Snail

(Lissachatina fulica)



Photo: Yuri Yashin, achatina.ru, www.bugwood.org, #1265024



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The Giant African Land Snail

Adult

- Invasive mollusk
- Established in Florida and under eradication in Miami-Dade County.



- Live snails in this genus are specifically prohibited from both interstate movement and importation into the U.S.

Photo: Yuri Yashin, achatina.ru, www.bugwood.org, #1265024

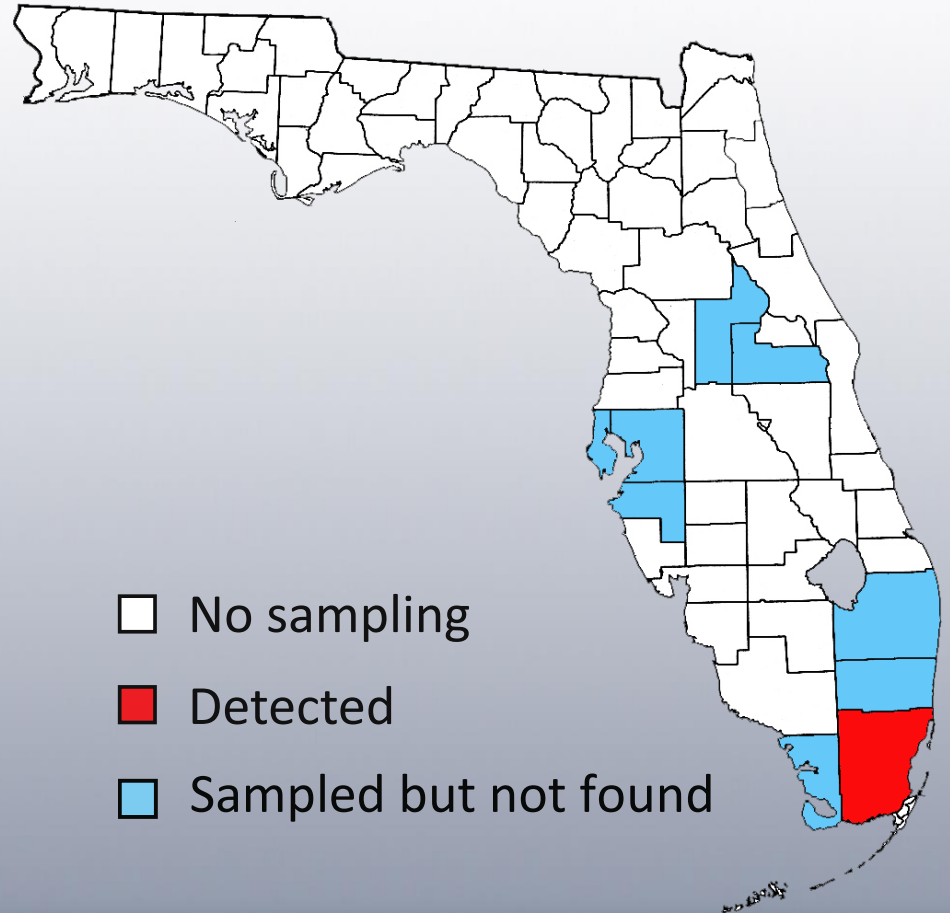


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Distribution in Florida

- Populations in Miami-Dade Co.
- Active eradication effort
- Report suspected sightings to:
(888) 397-1517



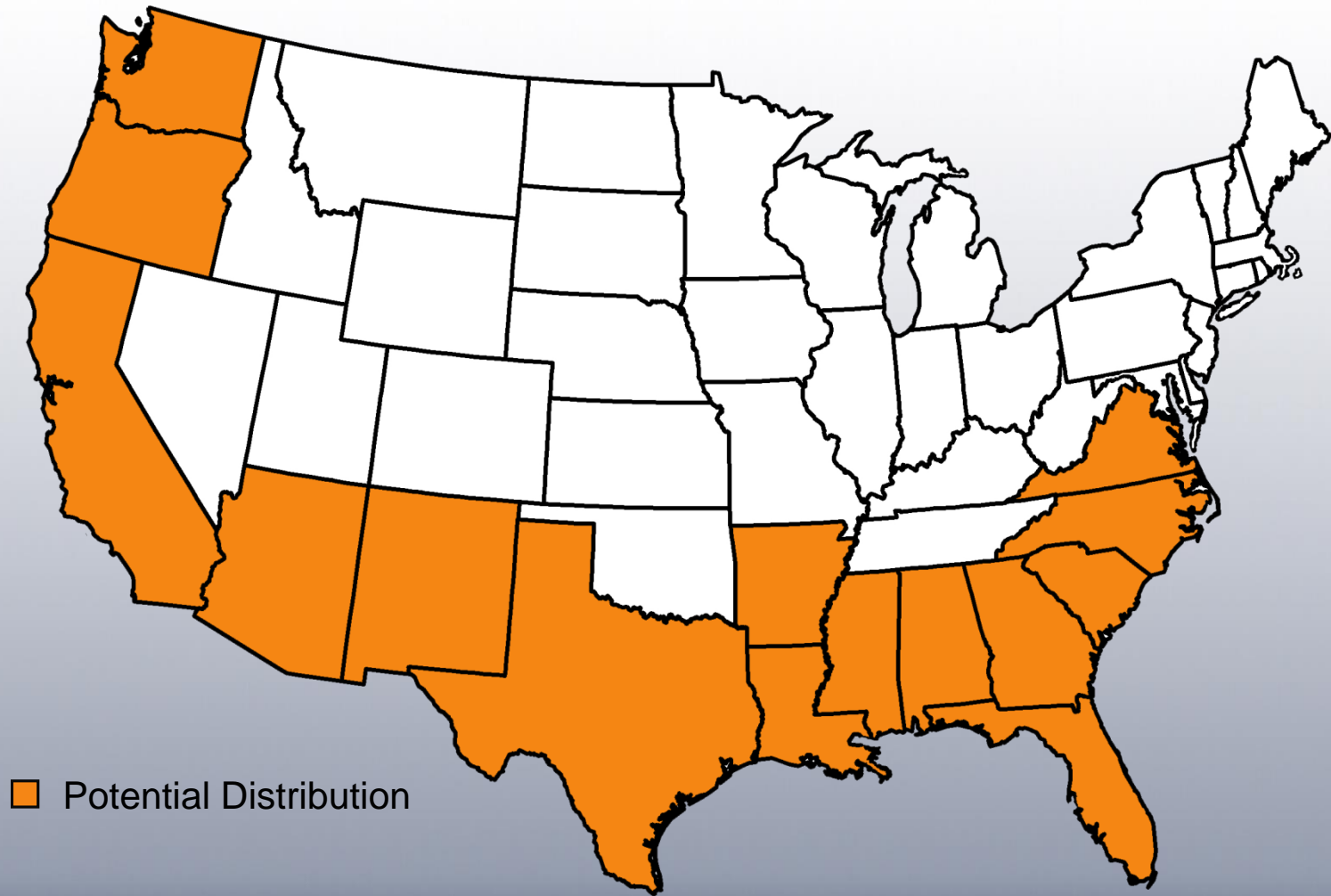
Map courtesy of Florida Department of Agriculture and Consumer Services



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Potential U.S. Range



■ Potential Distribution

Map based on http://www.aphis.usda.gov/import_export/plants/manuals/emergency/downloads/nprg_gas.pdf



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Susceptible Plants



Photos: Top Row - Charles T. Bryson, USDA Agricultural Research Service, www.bugwood.org, #1116132; #1197011; Forest & Kim Starr, Starr Environmental, www.bugwood.org, #5420178; Bottom Row - Howard F. Schwartz, Colorado State University, www.bugwood.org, #5365883; #5363704; - M.E. Bartolo, www.bugwood.org, #5359190



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Identification: Eggs



Photos: *Top left* – Lyle Buss, Department of Entomology and Nematology, University of Florida; *Bottom left* - David Robinson, USDA-APHIS-PPQ; *Right* - Yuri Yashin, achatina.ru, www.bugwood.org, #1265029



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Identification: Juveniles



“Truncated Columella”

“Outer lip”



Juveniles among rocks

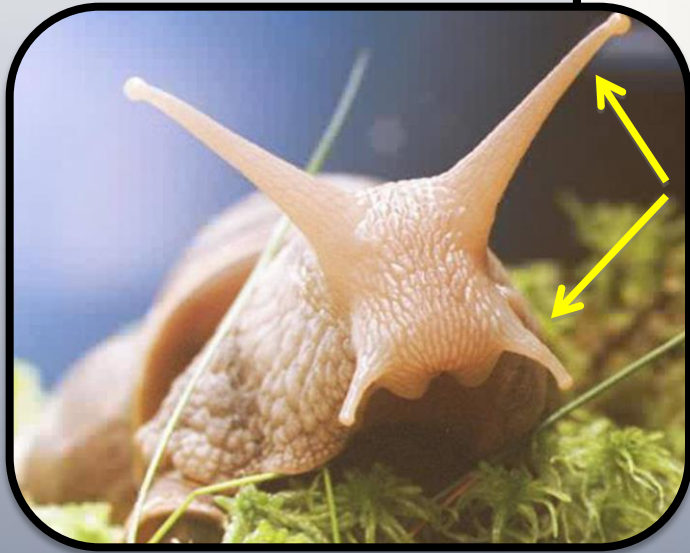
Photos: *Left and middle* - Lyle Buss, Department of Entomology and Nematology, University of Florida
Right top and bottom - Florida Department of Agriculture and Consumer Services, Division of Plant Industry



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Identification: Adults



Whorls

2 pair of tentacles

Photos: *Left* - Lyle Buss, Department of Entomology and Nematology, University of Florida; *Right* - Yuri Yashin, achatina.ru, www.bugwood.org, #1265024



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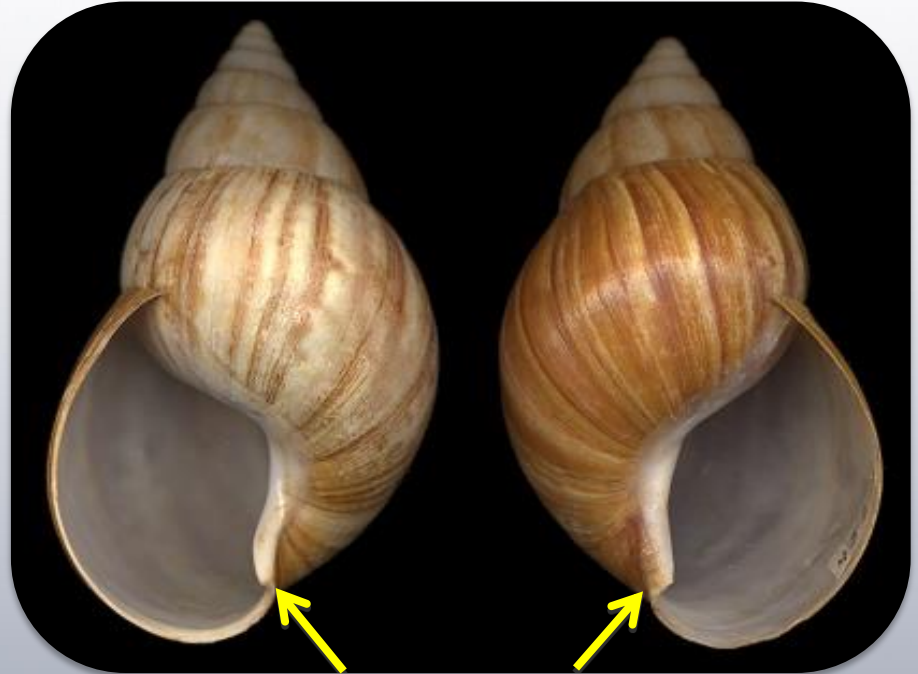
Identification



Opening to the left



Opening to the right



"Left hand mutant"

Normal right hand opening

Photos:

Left - Lyle Buss, Department of Entomology and Nematology, University of Florida
Right - Harry Lee, Jacksonville, <http://www.jaxshells.org/817i.htm>



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Identification: Adult vs. juvenile shell pattern



juvenile

adults

Photo: Lyle Buss, Department of Entomology and Nematology, University of Florida



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Life Cycle

Eggs



Juveniles



Adults



Photos: (Left to Right) - David Robinson, USDA-APHIS-PPQ; Lyle Buss, Department of Entomology and Nematology, University of Florida; Florida Department of Agriculture and Consumer Services, Division of Plant Industry.



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Damage

- Eats agriculturally important plants
- Can be a vector of fungal plant pathogens
- Outcompetes native mollusks for food
- Can consume enough biomass to alter the nutrient cycle of the habitat
- Can eat the plaster off your house
- Can cause driving and mowing hazards

Snail in grass



Photo: Florida Department of Agriculture and Consumer Services, Division of Plant Industry



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Damage: Public health

The giant African land snail is a vector for:

- Rat lungworm, *Angiostrongylus cantonensis* (roundworm).
- *A. costaricensis* (roundworm).
- *Aeromonas hydrophila* (bacteria).

Sickness can be caused by drinking their slime.



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Monitoring



Photos: Florida Department of Agriculture and Consumer Services, Division of Plant Industry



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Similar Species Found in the U.S.



Lissachatina fulica



Drymaeus dormani



Drymaeus multilineatus



Euglandina rosea



Orthalicus floridensis

Photos: (Top left and center) - Lyle Buss, Department of Entomology and Nematology, University of Florida. (Top right) - <http://www.jaxshells.org/galleryt.htm>. (Bottom left) - <http://www.jaxshells.org/0572.htm>. (Bottom right) - <http://www.jaxshells.org/2586.htm>.



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Identification: LUCID snail and slug ID guide

The screenshot shows the 'Terrestrial Mollusc Key' website. On the left is a navigation menu with links: Home, About, Fact Sheets, Glossary, Gallery, Identification, Biology, Dissection, Key Use, and Begin Key. The main content area is titled 'Terrestrial Mollusc Key' and includes a search bar for 'Search Fact Sheets'. Below the title, there is a message: 'Please visit the System Requirements page for more information about the key options.' A 'Switch to java' button is visible. The interface is divided into two columns. The left column shows 'Features Available: 31' with two options: 'Coiled shell present' (checked) and 'Coiled shell absent' (unchecked). Below these are expandable sections for 'Snail body characters', 'Shell characters', and 'Tentacle characters'. The right column shows 'Entities Remaining: 54' with three images of mollusks: *Achatina achatina*, *Lissachatina fulica*, and *Archachatina marginata*. A 'Full-Screen' button is in the top right corner.

<http://idtools.org/id/mollusc>



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UF Extension Products for Florida Snail Management

Giant African Land Snail Junior Detectives

<http://www.freshfromflorida.com/Divisions-Offices/Plant-Industry/Pests-Diseases/Giant-African-Land-Snail/GALS-Junior-Detectives>

Looking for Giant African Land Snail



Photos: Florida Department of Agriculture and Consumer Services, Division of Plant Industry



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UF Extension Products for Florida Snail Management

- FDACS-Division of Plant Industry
<http://www.freshfromflorida.com/pi/gals/>
- UF Featured Creatures
http://entomology.ifas.ufl.edu/creatures/misc/gastro/terrestrial_snails.htm



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Collaborating Agencies

- U.S. Department of Agriculture Animal and Plant Health Inspection Service (USDA-APHIS)
- Cooperative Agricultural Pest Survey Program (CAPS)
- Florida Department of Agriculture and Consumer Services (FDACS)
- National Plant Diagnostic Network (NPDN)
- Sentinel Plant Network (SPN)
- Protect U.S.
- University of Florida Institute of Food and Agricultural Sciences (UF-IFAS)



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