UF | IFAS Extension
UNIVERSITY of FLORIDA

Turfgrass Pests and Management

FLORIDA FIRST DETECTOR

Turfgrass Insect & Mite Pests

Hunting billbug

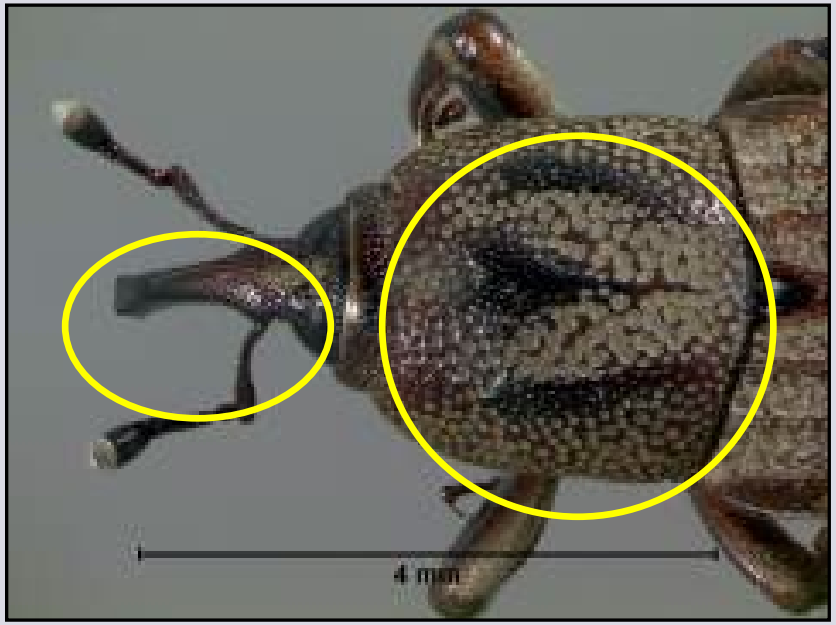
Southern chinch bug

Tuttle mealybug

Photo Credit: Bruce, CA; GetRather.com; CABI; Lyle Buss, UF; Donald Hobern

Hunting billbug

- Adult has a Y-shaped area just behind the head with a parenthesis-like marking
- The adult is 6 to 11 mm in length
- Larvae are legless



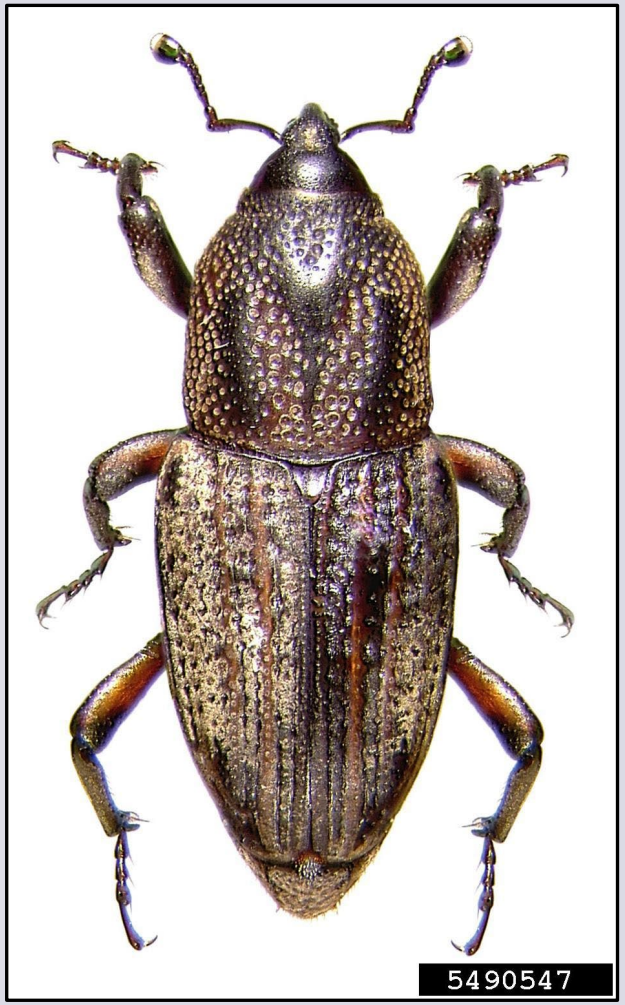


Photo Credit: David Shetlar, Ohio State University

Hunting Billbug Damage

- Adult feeds on the leaves and stem
- Larvae feed on plant crowns and roots
- The first instar larvae feed inside the stem
- Later stages feed on the outside of the stem

Photo Credit: William Kuh, Virginia Cooperative Extension, www.paceturf.org/gallery/detail/billbug-grub2

Hunting Billbug Damage

- Early phase of damage: Dead spots about 2-3 in diameter
- Late phase: large, irregular patches of dead and damaged turf
- The grass can be rolled back like a carpet

Photo Credit: Frank Tedescucci, Mesa Verde CC, CA; T. Billeisen, NC State

Hunting Billbug Management

Scouting for Billbugs: Soil Cores Test

Photo Credit: Douglas Richmond, Purdue University; https://napervilleccgrounds.blogspot.com/2012/07/bluegrass-billbug.html; www.paceturf.org/gallery/detail/billbug-damage-on-kikuyugrass2

Billbug management

1) Cultural Control: Proper selection of turfgrass cultivars, Proper mowing, fertilization, irrigation
2) Biological control: Nematodes (*Steinernema*, *Heterorhabditis*)
3) Chemical: Preventive Control & Curative Strategy
    - 10 larvae/ft^2
    - Adult control (contact insecticides)
    - Larval control (systemic insecticides)

Photo Credit: Peggy Greb, USDA

Southern Chinch Bug

- Adult: 6 mm in length
- Straw-like mouthparts
- Preferred host is St. Augustine Grass

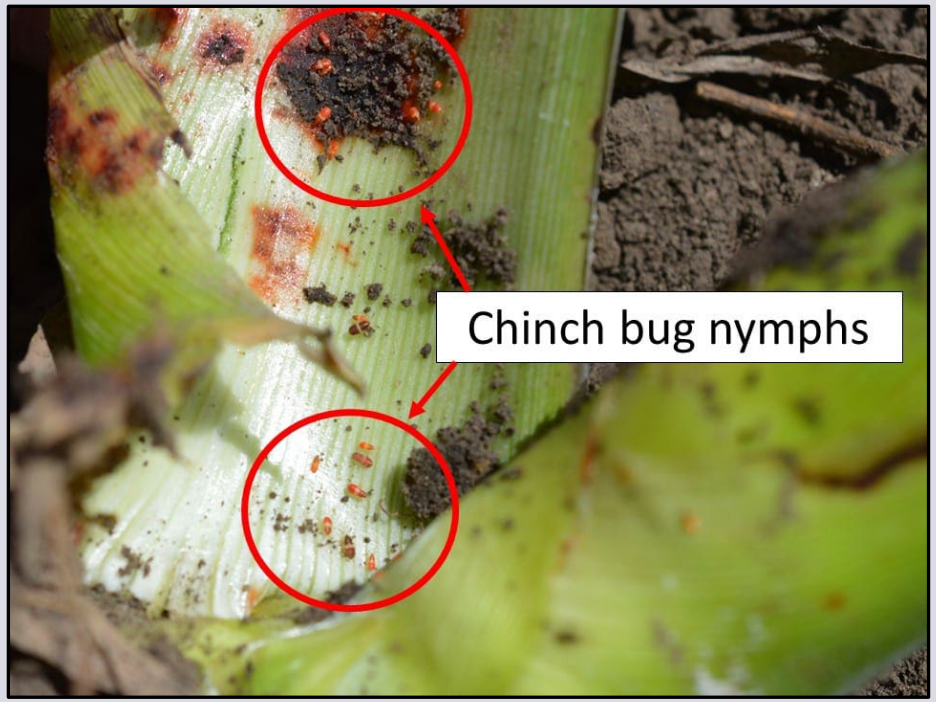


Photo Credit: Dr. Jeff Whitworth and Dr. Holly Davis, Kansas State University; Ron Strahan, LSU AgCenter

Southern Chinch Bug Damage

- Grass blades turn yellow, then reddish brown
- Chinch bug-damaged turf remains firmly anchored by the roots

Photo Credit: Ron Strahan, LSU AgCenter

Monitoring: Flotation Method

Photo Credit: www.factsfacts.com/MyHomeRepair/ChinchBugs/

Chinch Bug Management: Cultural

Using resistant SA grass cultivars like FX-10, Captiva, Floralawn, Palmetto

Proper mowing: 3”- 4” tall, no more than 1/3 cut during mowing

Irrigation: Water stress = greater pest pressure

Fertilization: More nitrogen = more egg production

Chinch Bug management: Chemical

- Insecticidal resistance
- Avoiding multiple applications of the same insecticide
- Rotating chemical products

Tuttle Mealybug (Rice Mealybug)

- Bermuda and zoysia
- First reported in Orange County in 2011
- Now widespread in Florida
- Dieback symptoms

Photo Credit: Lyle Buss,UF/IFAS

Tuttle Mealybug Management: Cultural

- **Field Sanitation:** Remove grass clippings and plant debris to minimize potential hiding spots and reduce mealybug populations.
- **Maintain Healthy Turf:** Focus on cultural practices like proper fertilization, mowing, and irrigation to promote dense, healthy turf and reduce mealybug outbreaks.
- **Thatch Management:** Regularly remove thatch using a verticutter or vertical mower to prevent mealybugs from hiding and avoiding insecticides.

Tuttle Mealybug Management: Chemical

- **Systemic Insecticides:** Use systemic insecticides that mealybugs ingest when feeding on plant sap; avoid contact-only insecticides.
- **Insecticide Rotation:** Rotate chemical classes between applications to prevent insecticide resistance.
- **Avoid Neonicotinoid Overuse:** Limit repeat use of neonicotinoids to reduce the risk of resistance.

Thank you!

References

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Reporting to UF/IFAS Faculty in Florida

- Local county extension office

https://sfyl.ifas.ufl.edu/find-your-local-office/

- Insect ID Lab - Dr. Lyle Buss

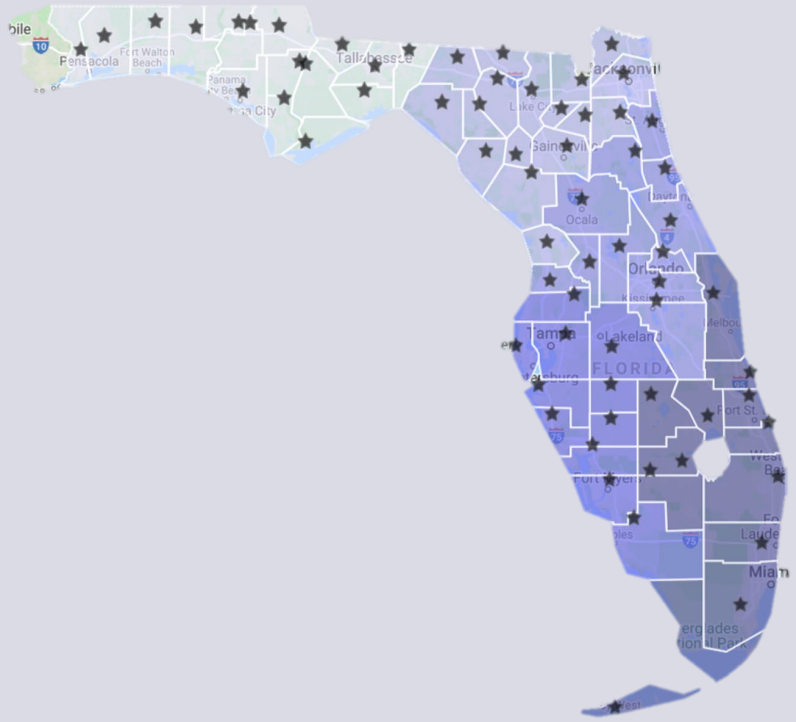
http://entnemdept.ufl.edu/insectid/

- Nematode Diagnostic Lab - Dr. Billy Crow

http://nematology.ifas.ufl.edu/assaylab/index.html

- Plant Diagnostic Center - Dr. Carrie Harmon

https://plantpath.ifas.ufl.edu/extension/plant-diagnostic-center/



Reporting to FDACS-DPI in Florida

Florida Department of Agriculture and Consumer Services (FDACS) - Division of Plant Industry (DPI)

- FDACS, DPI Responsibility
  - Announcing detection or establishment of new invasive species.
  - Reporting is a legal obligation under Florida Statute 581.091.
- Submission Form
  - http://forms.freshfromflorida.com/08400.pdf
  - https://www.fdacs.gov/Agriculture-Industry/Pests-and-Diseases/How-to-Submit-a-Sample-for-Identification

FDACS, DPI Contact

- Dr. Leroy Whilby, Bureau Chief-Entomology, Nematology and Plant Pathology
  - 352-395-4661
  - Leroy.whilby@freshfromflorida.com
- Dr. Paul Skelley, Assistant Chief-Entomology, Nematology and Plant Pathology
  - 352-395-4678
  - Paul.skelley@freshfromflorida.com
- Division of Plant Industry Hotline
  - 1-888-397-1517
  - DPIHelpline@FDACS.gov

Reporting using DDIS in Florida

Digital Diagnostic and Identification System (DDIS)

- Digital Diagnostic Collaboration
  - Extension agents
  - Laboratories
  - Clinics
  - Specialists
- https://ddis.ifas.ufl.edu/

Find More Information At:

https://entnemdept.ufl.edu/ffd/

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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)
- University of Florida Institute of Food and Agricultural Sciences (UF-IFAS)
- Protect U.S.

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