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TRI-OLOGY

A PUBLICATION FROM THE DIVISION OF PLANT INDUSTRY, BUREAU OF ENTOMOLOGY, NEMATOLOGY, AND PLANT PATHOLOGY

Division Director, Trevor R. Smith, Ph.D.

BOTANY

Providing information about plants: native, exotic, protected and weedy

ENTOMOLOGY

Identifying arthropods, taxonomic research and curating collections

NEMATOLOGY

Providing certification programs and diagnoses of plant problems

PLANT PATHOLOGY

Offering plant disease diagnoses and information

Florida Department of Agriculture and Consumer Services • Division of Plant Industry

***Herpetogramma stramineata* (Hampson), a crambid moth, a new Continental USA record**
Photo by James Hayden, FDACS-DPI.

ABOUT TRI-OLOGY

The Florida Department of Agriculture and Consumer Services-Division of Plant Industry's (FDACS-DPI) Bureau of Entomology, Nematology, and Plant Pathology (ENPP), including the Botany Section, produces TRI-OLOGY four times a year, covering three months of activity in each issue.

The report includes detection activities from nursery plant inspections, routine and emergency program surveys, and requests for identification of plants and pests from the public. Samples are also occasionally sent from other states or countries for identification or diagnosis.

HOW TO CITE TRI-OLOGY

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ACKNOWLEDGEMENTS

The editors would like to acknowledge the work of all those who contributed information and explanations by providing data, photographs or text, and by carefully reading early drafts.

We welcome your suggestions for improvement of TRI-OLOGY. Please feel free to contact the helpline with your comments at 1-888-397-1517.

Thank you,

Gregory Hodges, Ph.D.
Editor
Assistant Director, Division of Plant Industry

Patti J. Anderson, Ph.D.
Managing Editor
Botanist, Division of Plant Industry

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***Antigonon leptopus*, coral vine or queen's wreath.**
Photo by Lisa Tyler, FDACS-DPI

HIGHLIGHTS

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2 ***Afeda*** **sp., a cosmopterigid moth, a new Continental USA record.** One specimen was collected in a suction trap in Coral Gables, Florida in July 2022, and specimens of both sexes were subsequently collected in the same trap in September 2023.

3 ***Meloidogyne javanica*** **(Trueb, 1885) Chitwood, 1949**, was found infecting the roots of strawberry (*Fragaria* × *ananassa*), **a new Host record.**

4 ***Burkholderia glumae***, **a new Host record,** was found on *Philodendron* sp. (family Araceae) at a nursery in Lake County, Florida.

1 - *Habenaria floribunda*, toothpetal false reinorchid.
Photo by Naoki Takebayashi, Wikipedia

2 - *Afeda* sp., a cosmopterigid moth.
Photo by James Hayden, FDACS-DPI

3 - Winterstar™ ('FL 05-107') strawberry. Healthy plants and fruit in a field.
Photo by Craig K. Chandler, UF/IFAS

4 - *Burkholderia glumae* on *Philodendron*.
Photo by Vishal Negi, FDACS-DPI

BOTANY

Compiled by Patti J. Anderson, Ph.D. and Alex de la Paz, B.S.

The Botany section of the Division of Plant Industry identifies plants for regulatory purposes as well as for other governmental agencies and private individuals. The section maintains a reference herbarium with over 18,000 plants and 1,400 vials of seeds.

QUARTERLY ACTIVITY REPORT

	OCT - DEC	2023 - YEAR TO DATE
Samples Submitted by Other DPI Sections	1,351	**5,666**
Samples Submitted for Botanical Identification Only	251	**1,385**
Total Samples Submitted	1,602	**7,051**
Specimens Added to the Herbarium	170	**1,013**

Some of the samples submitted recently are described below.

1 ***Antigonon leptopus* Hooker & Arnnott (coral vine; queen's jewels),** from a genus of four tropical American species of woody vines (lianas) in the plant family Polygonaceae. This species is native to Mexico and Central America but has been cultivated and naturalized elsewhere. In Florida, it is found in at least 35 counties on disturbed sites and hammock edges from the Keys to the western panhandle. The species is listed by the Florida Invasive Species Council (formerly Florida Exotic Pest Plant Council or FLEPPC) as Invasive Species-Category II, but it is not regulated as a noxious weed. This perennial, woody vine climbs by tendrils and is planted as an ornamental, especially to cover trellises and fences, but it has escaped to cover trees and shrubs in natural areas. The vine can grow to 15 m long and produces an underground tuber, reportedly used as a food in some countries. The leaves are ovate, cordate (heart-shaped) or triangular and often pubescent along the veins but sometimes over the entire leaf surface. The inflorescence is a branched, drooping cluster of pink or (rarely) white flowers. Individual flowers have five similar floral (perianth) parts of the same color, not distinctly separated into whorls of sepals and petals, although the three outer segments are larger than the two inner ones. There are usually eight stamens, with filaments fused to form a tube, and three curved styles. The perianth parts persist on ripened fruits. *Antigonon leptopus* was documented for the first time in Duval County this quarter. (Duval County; LIST 10302023-11300; Lisa Tyler; 30 October 2023.) (Wunderlin and Hansen 2011; Wunderlin et al. 2017; Antigonon Endl. | Plants of the World Online | Kew Science [accessed 12 January 2024]; Antigonon -

1a - *Antigonon leptopus*, coral vine, close view of flower showing eight stamens fused basally forming a staminal tube surrounding three unexpanded stigmas and styles.
Photo by G.D. Carr, Global Invasive Species Database

1b - *Antigonon leptopus*, coral vine, fruit with persistent flower parts and seeds with flower parts removed.
Photo from Shutterstock

FNA (floranorthamerica.org) [accessed 16 January 2024]; CoeAnderson1997.pdf (ethnobiology.org) [accessed 12 January 2024]; GISD (iucngisd.org) [accessed 16 January 2024].)

2 ***Habenaria floribunda*** **Lindl. (toothpetal false reinorchid)**, from a genus of about 600 species of herbs from tropical and subtropical areas around the world, in the plant family Orchidaceae. This species is native to Florida, the West Indies, Mexico, Central America and South America, where it grows in rich, moist, hardwood hammocks; mesic to wet pine flatwoods; dome swamps and floodplain forests. In Florida, it is found throughout most of the peninsula from Duval, Bradford, Alachua and Levy counties south to Miami-Dade County. It is one of the most commonly seen terrestrial orchid species in Florida and typically blooms in fall through winter (September-February). Plants are perennial herbs up to 1 m (3 feet and 3 inches) tall with several elliptic to lanceolate, glossy green leaves arranged along the stem. The inflorescence is a terminal raceme of a few to many yellowish-green flowers. The lip (labellum) of the flower is linear to linear-oblong with the lateral lobes greatly reduced and the middle lobe appearing hastate-auriculate. The slender nectar spur is cylindric to prominently clavate (club-shaped). The pale flower color, long nectar spur and unpleasant musky fragrance of this flower suggest it is pollinated by moths. Fruits are dehiscent, ellipsoid capsules full of numerous tiny seeds. (Flagler County; LIST 11022023-11434; Jennifer Hesse; 1 November 2023.) (Cheviak, 2002; Weakley and Southeastern Flora Team, 2023; Wunderlin and Hansen, 2011).

2 - *Habenaria floribunda*, toothpetal false reinorchid.
Photo by Michael Meisenburg, Atlas of Florida Plants

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BOTANY IDENTIFICATION TABLE

The following table provides information about new county records submitted in the reported quarter. The table is organized alphabetically by collector name. The full version with more complete data is downloadable as a PDF or an Excel spreadsheet also organized by collector name, except new county records are listed first.

COLLECTOR NAME	COLLECTOR 2	LIST NUMBER	RECEIVED DATE	PLANT NAME	COUNTY
Alicia Velazquez		10897	10/20/2023	*Odontonema cuspidatum*	Hernando
Andres Cabrera		11449	11/3/2023	*Gloriosa superba*	Orange
Angi Hutcherson		12429	12/8/2023	*Ardisia crenata*	Columbia
Chase Groninger		10369	10/6/2023	*Equisetum hyemale* var. *affine*	Brevard
Chase Groninger		10253	10/4/2023	*Erigeron strigosus*	Brevard
Chase Groninger		10372	10/6/2023	*Pseudosasa japonica*	Brevard
Cynthia Blattenberger		10325	10/6/2023	*Ipomoea indica*	Pasco
Deann Hansen		12718	12/18/2023	*Vitex trifolia*	Putnam
Jeffrey Eickwort		10402	10/5/2023	*Cuscuta compacta*	Putnam
Jennifer Hesse	Diane Mccoll, Randi Shreve	12556	12/12/2023	*Eustoma exaltatum*	Volusia
Jennifer Hesse	Randi Shreve	11007	10/24/2023	*Bromelia pinguin*	Flagler
Jennifer Hesse	Randi Shreve	11012	10/24/2023	*Syngonium podophyllum*	Flagler
Jennifer Hesse		11294	11/1/2023	*Barleria cristata*	Volusia
Jennifer Hesse		11784	11/16/2023	*Bignonia capreolata*	Flagler
Jennifer Hesse		11818	11/16/2023	*Cenchrus purpureus*	Flagler
Jennifer Hesse		11423	11/6/2023	*Ceratopteris thalictroides*	Flagler
Jennifer Hesse		11785	11/16/2023	*Elaeagnus pungens*	Flagler
Jennifer Hesse		10065	10/2/2023	*Euthamia caroliniana*	Flagler
Jennifer Hesse		10185	10/3/2023	*Ficus pumila*	Flagler
Jennifer Hesse		11434	11/6/2023	*Habenaria floribunda*	Flagler
Jennifer Hesse		10177	10/3/2023	*Ipomoea cairica*	Volusia
Jennifer Hesse		11011	10/24/2023	*Koelreuteria elegans* ssp. *formosana*	Flagler
Jennifer Hesse		10614	10/13/2023	*Lagerstroemia indica*	Flagler
Jennifer Hesse		11783	11/16/2023	*Ligustrum japonicum*	Flagler
Jennifer Hesse		11426	11/6/2023	*Nephrolepis brownii*	Flagler
Jennifer Hesse		12101	11/30/2023	*Phoenix reclinata*	Volusia
Jennifer Hesse		11781	11/16/2023	*Podocarpus macrophyllus*	Flagler
Jennifer Hesse		11281	11/1/2023	*Senna pendula* var. *glabrata*	Volusia
Jennifer Hesse		11010	10/24/2023	*Tradescantia zebrina*	Flagler
Jennifer Hesse		11009	10/24/2023	*Tripsacum dactyloides*	Flagler
Jennifer McKeever	Jesse Krok	11847	11/17/2023	*Emilia praetermissa*	Seminole
Jennifer McKeever		10115	10/9/2023	*Solanum seaforthianum*	Orange
Lisa Blakey	Patricia McGill	11071	10/27/2023	*Eugenia uniflora*	Hendry
Lisa Blakey	Patricia McGill	11070	10/27/2023	*Syzygium cumini*	Hendry
Lisa Tyler		11300	10/31/2023	*Antigonon leptopus*	Duval
Lisa Tyler		11299	10/31/2023	*Koelreuteria elegans* ssp. *formosana*	Duval
Mark Laurint		11760	11/15/2023	*Hedychium coronarium*	St. Johns
Mark Zenoble	This was an Entomology Sample, but also a NCR for Botany.	11165	10/30/2023	*Imperata cylindrica*	Broward
Mary Graham		10406	10/10/2023	*Ageratum conyzoides*	Glades
Mary Graham		10407	10/10/2023	*Peperomia pellucida*	Glades
Patricia McGill		11774	11/17/2023	*Eriobotrya japonica*	Lee
Patricia McGill		11055	10/27/2023	*Sansevieria hyacinthoides*	Hendry
Randi Shreve	Diane Mccoll	10151	10/3/2023	*Smilax glauca*	St. Johns
Randi Shreve		12411	12/8/2023	*Quercus laevis*	Flagler
Rook Barrios		11123	10/26/2023	*Quercus virginiana*	Taylor
Sam Hart	Kelly Douglas	11517	11/7/2023	*Kalanchoe x houghtonii*	Levy
Shanelle Mulrooney		10131	10/3/2023	*Jasminum multiflorum*	Pasco

ENTOMOLOGY

Compiled by Susan E. Halbert, Ph.D.

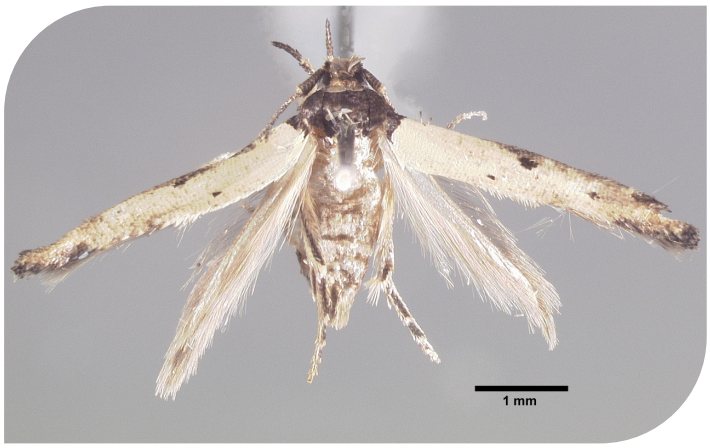
The Entomology Section provides the division's plant protection specialists and other customers with accurate identifications of arthropods. This section also builds and maintains the arthropod reference and research collection (the Florida State Collection of Arthropods with over 12.5 million specimens), and investigates the biology, biological control and taxonomy of arthropods.

	OCT - DEC	2023 - YEAR TO DATE
Samples Submitted	1,496	**6,495**
Lots Identified	2,519	**9,992**

1 ***Scolothrips asura* Ramakrishna & Margabhandu, six-spotted thrips, a new Hemisphere record.** Thrips species in the genus *Scolothrips*, commonly known as six-spotted thrips, are a well-known group of mite predators. The most recent review of *Scolothrips* (Mound, 2011) accepts 14 species in the genus, two of which, *S. sexmaculatus* (Pergrande) and *S. pallidus* (Beach), have been previously reported from Florida (Diffie et al., 2008). *Scolothrips asura* is an Oriental and Australian species easily distinguished from *S. sexmaculatus* and *S. pallidus* by having the metathoracic striae unbranched and running longitudinally; whereas in the former species, the striae are reticulate and run transversally. This adventive species was thought to be restricted to Taiwan, Thailand, Japan and Northern Australia (Mound, 2011). The material of *S. asura* submitted for identification was collected on *Pittosporum campbellii* infested with the spider mite *Tetranychus urticae* Koch. The sample contained similar numbers of *S. asura* and *S. sexmaculatus*. (Collier County; 11302023-12207; Scott Krueger; 28 November 2023) (Dr. Felipe Soto-Adames.)

2 ***Afeda* sp., a cosmopterigid moth, a new Continental USA record.** One specimen was collected in a suction trap in Coral Gables, Florida, in July 2022, and specimens of both sexes were subsequently collected in the same trap in September 2023. Older specimens have not been found in the Florida State Collection of Arthropods. *Afeda* Hodges includes *A. biloba* Hodges in the Florida Keys and a second undescribed species also known in South Florida (Weekley, 2000). Key characters of *Afeda* are the absence of raised scales on the wings, and the absence of the uncus and the presence of large chaetae on the distal ends of the valvae in the male genitalia (Hodges, 1978). The new species has beige-colored forewings and asymmetrical genitalia. The immature stages of *A. biloba* and the present species are not known, but the larvae of the second undescribed species inhabit galls induced by tanaostigmatid wasps on *Pithecellobium keyense* Britton ex Britton & Rose. All three species have pointed ovipositors apparently adapted for piercing, so the present species also may be predicted to oviposit in galls. This species probably originated from the Caribbean region or elsewhere in the

1 - *Scolothrips asura*, six spotted thrips.
Photo by Dale Traficante, FDACS-DPI



2 - *Afeda* sp., a cosmopterigid moth.
Photo by James Hayden, FDACS-DPI

Neotropics, which is home to a rich diversity of chrysopeleiine cosmopterigids and is not predicted to be a pest. (Miami-Dade County; E3867-03-08042022-07099; Mary Yong Cong; 27 July 2022; Miami-Dade County; E4941-02-09142023-09401; Mary Yong Cong; 1 September 2023; and Miami-Dade County; E5268-03-09272023-09979; Mary Yong Cong; 15 September 2023.) (Dr. James E. Hayden.)

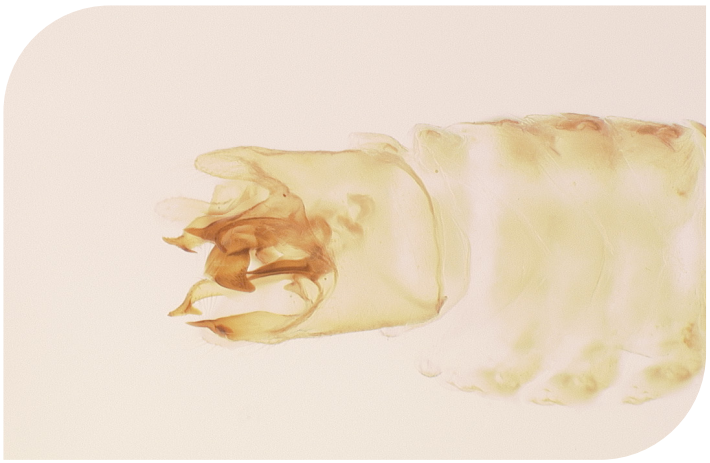
3 ***Herpetogramma stramineata*** **(Hampson), a crambid moth, a new Continental USA record.** One male moth, identified as *Herpetogramma stramineata* (Hampson), was collected in a Jackson trap in South Miami near agricultural fields. Although it superficially resembles United States native species of *Herpetogramma* Lederer, dissection of the genitalia revealed different internal structures. Its genitalia and COI barcode sequence (Ratnasingham and Hebert, 2007) match specimens of *Herpetogramma stramineata* from Guanacaste, Costa Rica (Janzen and Hallwachs, 2009). The adult was compared to a photograph of the type specimen at The Natural History Museum, London, from southern Mexico. This species also occurs in Belize, Guatemala, Panama, Trinidad, French Guiana, Ecuador, Guyana and Puerto Rico based on specimens in the National Museum of Natural History (Washington, D.C.), the Florida Museum of Natural History and sequences in BOLD (Ratnasingham and Hebert, 2007). It has been reared on species of *Mikania* Willd. (Asteraceae) (Janzen and Hallwachs, 2009). (Miami-Dade County; E6156-01-11092023-11674; Miguel Justiz, USDA-APHIS-PPQ; 6 November 2023.) (Dr. James E. Hayden, Matthew R. Moore and Dr. M. Alma Solis, USDA-ARS.)

4 ***Phrictopyga contorta*** **(Muir), a delphacid planthopper, a new Continental USA record.** This delphacid planthopper is known from the Neotropics, with confirmed records in Jamaica, Puerto Rico and Brazil. The male genitalia are diagnostic for the species. Nothing is known about its biology, but species in the same genus are reported from grasses. Florida's single specimen was detected in a short suction trap (6 feet high) in an Immokalee experimental citrus grove, although colonization of citrus itself seems unlikely, and this species is not reported as a pest. (Collier County; E5279-02-09272023-10009; Monica Triana, University of Florida/IFAS Southwest Florida Research & Education Center; 11 September 2023.) (Dr. Susan E. Halbert and Dr. Charles R. Bartlett, University of Delaware.)

5 ***Dinumma deponens*** **Walker, an erebid moth, a new Florida State record.** One male moth of this conspicuous species was collected at light in a survey of a natural area adjacent to a suburban environment. Originating from Southeast Asia, *D. deponens* was first collected in the United States in North Georgia in 2012 (Adams et al., 2013). Now in 25 states, this species spread quickly northward and westward, but its movement southward has been curiously slow. It was photographed in Tallahassee in 2018 and 2019 but not verified with a captured specimen. This is the first collected specimen and provides evidence it is advancing into peninsular Florida. In Asia, larvae have been recorded feeding on *Albizia julibrissin* Durazz. (mimosa or silk tree). No damage has been reported in the United States yet. Mimosa trees occur southward into the central counties of Florida. *Dinumma deponens* is not known to feed on other *Albizia* species, but if it does, it could potentially range into southern Florida. (Alachua County; E5951-01-10302023-11277; Robert A. Belmont, FSCA Research Associate;

3 - *Herpetogramma stramineata*, a crambid moth.
Photo by James Hayden, FDACS-DPI

4a - *Phrictopyga contorta* specimen collected in suction trap in Immokalee.
Abdomen removed to prepare male genitalia.
Photo by Solomon V. Hendrix, University of Delaware

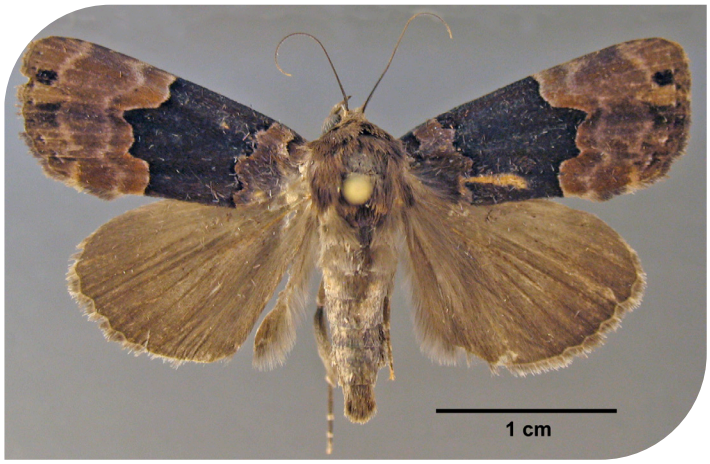


4b - Male genitalia of *Phrictopyga contorta* specimen collected in suction trap in Immokalee.
Photo by Susan Halbert, FDACS-DPI

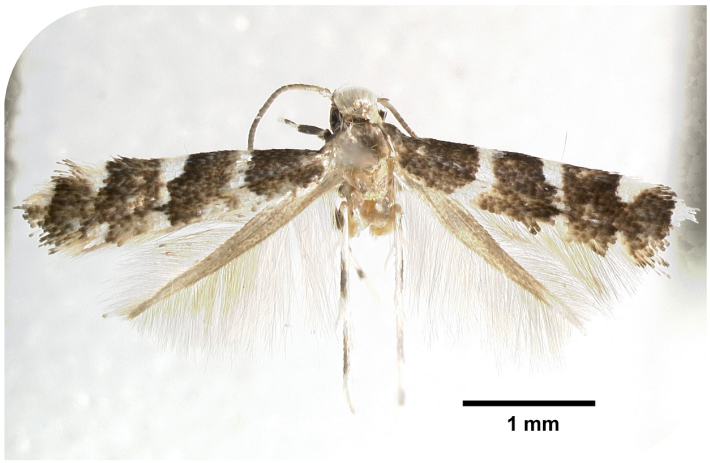
12 June 2023.) (Dr. James E. Hayden and Dr. James K. Adams, Dalton State College.)

6 ***Marmara salictella*** **Clemens, willow stem miner, a new Florida State record.** This micro-moth is native to the eastern United States, but it has not been detected previously in Florida. The caterpillars of *M. salictella* mine in the bark of willows (*Salix*). Three specimens were collected at light in a survey of a state park. Bark mines on willow stems were also observed in the environment. Although this species feeds only on the willow family (Salicaceae), it is related to *M. gulosa* Guillén and Davis, the citrus peelminer, a polyphagous pest native to the West Coast. Dissection or DNA sequencing are useful to distinguish the species. (Alachua County; E5640-01-10132023-10668 and E5646-05-10132023-10674; Isabelle Atchia, Jonathan Bremer, Kevin Burnette, Ariana Gaskin, James Hayden, Hannah Kiefer, Catherine Nance and Erin Powell; 7 October 2023.) (Dr. James E. Hayden.)

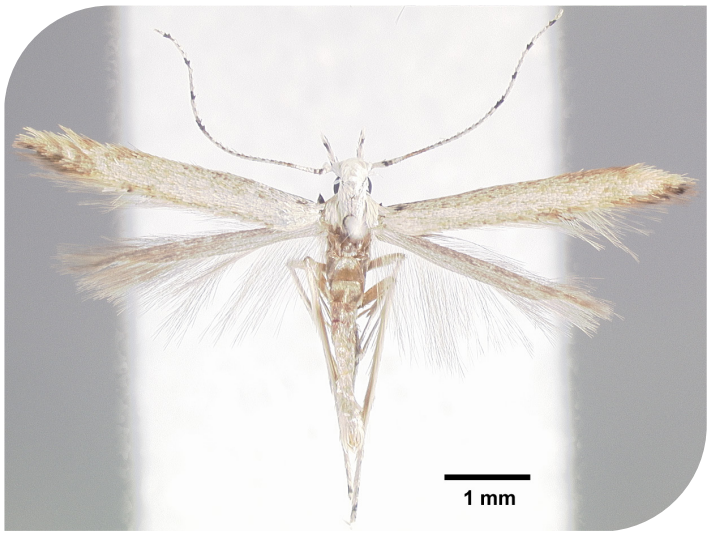
7 ***Stereomita andropogonis*** **Braun, a gelechiid moth, a new Florida State record.** This micro-moth is native to the eastern United States, but like many micro-moths, it has not been detected previously in Florida. The caterpillars of *S. andropogonis* feed on flowers of little bluestem (*Schizachyrium scoparium* (Michx.) Nash). Seven specimens were collected at light in a survey of a state park. (Alachua County; E5636-01-10132023-10663, E5640-05-10132023-10668, E5646-04-10132023-10674 and E5649-03-10132023-10677; Isabelle Atchia, Jonathan Bremer, Kevin Burnette, Ariana Gaskin, James Hayden, Hannah Kiefer, Catherine Nance and Erin Powell; 7 October 2023.) (Dr. James E. Hayden.)



5 - *Dinumma deponens*, an erebid moth.
Photo by James Hayden, FDACS-DPI



6 - *Marmara salictella*, willow stem miner.
Photo by Sidney Bennett, FDACS-DPI



7 - *Stereomita andropogonis*, a gelechiid moth.
Photo by Sidney Bennett, FDACS-DPI

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ENTOMOLOGY SPECIMEN REPORT

Following are tables with entries for records of new hosts or new geographical areas for samples identified in the current volume's reporting period as well as samples of special interest. An abbreviated table, with all the new records, but less detail about them, is presented in the body of this web page and another version with more complete data is downloadable as a PDF or an Excel spreadsheet.

The tables are organized alphabetically by plant host if the specimen has a plant host. Some arthropod specimens are not collected on plants and are not necessarily plant pests. In the table below, those entries with no plant information included are organized by arthropod name.

PLANT SPECIES	PLANT COMMON NAME	ARTHROPOD GENUS AND SPECIES	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
Abies fraseri	Christmas tree	*Adelges piceae*	balsam woolly adelgid	Caleb Poock	Regulatory significant
Abies fraseri	Christmas tree	*Aspidiotus cryptomeriae*	cryptomeria scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Aspidiotus cryptomeriae*	cryptomeria scale	Twylah Morelli	Regulatory significant
Abies fraseri	Wreath	*Aspidiotus cryptomeriae*	cryptomeria scale	Brandon Di Lella & K-9	Regulatory significant
Abies fraseri	Christmas tree	*Aspidiotus cryptomeriae*	armored scale	Chase Groninger	Regulatory significant
Abies fraseri	Christmas tree	*Aspidiotus cryptomeriae*	armored scale	Paola Ramos Perez	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Caleb Poock	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Logan Cutts	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Paola Ramos Perez	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Paola Ramos Perez	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Paola Ramos Perez	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Karianne Rivera & K-9	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Mark Zenoble	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Mark Zenoble	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Nicole Casuso, Jason Stanley, Mileydis Vargas, James Durrell, Hannah Wagner, Edward Cayia, Justin Anto, Dyrana Russell, Logan Cutts, Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Nicole Casuso, Jason Stanley, Mileydis Vargas, James Durrell, Hannah Wagner, Edward Cayia, Justin Anto, Dyrana Russell, Logan Cutts, Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Nicole Casuso, Jason Stanley, Mileydis Vargas, James Durrell, Hannah Wagner, Edward Cayia, Justin Anto, Dyrana Russell, Logan Cutts, Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant

PLANT SPECIES	PLANT COMMON NAME	ARTHROPOD GENUS AND SPECIES	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Jesse Krok, Jennifer McKeever	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Elhansville Hector, Keith Zugar	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Elhansville Hector, Keith Zugar	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Elhansville Hector, Keith Zugar	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Elhansville Hector, Keith Zugar	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Elhansville Hector, Keith Zugar	Regulatory significant
Abies fraseri	Wreath	*Fiorinia externa*	elongate hemlock scale	Brandon Di Lella & K-9	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Chase Groninger	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Twylah Morelli	Regulatory significant
Abies fraseri	Christmas tree	*Fiorinia externa*	elongate hemlock scale	Paola Ramos Perez	Regulatory significant
Abies fraseri	Christmas tree	*Popillia japonica*	Japanese beetle	Noemi Negron	Regulatory significant
Aleurites moluccanus	candlenut tree, Indian walnut, candleberry	*Fiorinia phantasma*	phantasma scale	Mark Zenoble	New Florida host record
Aleurites moluccanus	candlenut tree, Indian walnut, candleberry	*Pseudaulacaspis pentagona*	white peach scale	Mark Zenoble	New Florida host record
Amaranthus australis	waterhemp	*Herpetogramma bipunctalis*	Southern beet webworm	Alexander Tasi	New Florida host record
Andropogon sp.	grass	*Saccharosydne saccharivora*	West Indian cane fly	Erin Powell, Catherine Nance, Susan Halbert	First in county
Apium graveolens	celery	*Lygus hesperus*	western lygus bug	Jakira Davis, Justin Anto	Regulatory significant
Asclepias curassavica	butterfly milkweed, scarlet milkweed, bloodflower	*Leucothrips furcatus*	thrips	Mark Zenoble	New Florida host record
Beta vulgaris	common beet	*Ceratagallia californica*	leafhopper	Jakira Davis, Justin Anto	Regulatory significant
Beta vulgaris	common beet	*Ceratagallia longula*	leafhopper	Jakira Davis, Justin Anto	Regulatory significant
Beta vulgaris	Swiss chard	*Liriomyza langei*	California pea leafminer	Jakira Davis, Justin Anto	Regulatory significant
Brassica oleracea	broccoli	*Liriomyza langei*	California pea leafminer	Jakira Davis, Justin Anto	Regulatory significant
Brassica oleracea	cauliflower	*Liriomyza langei*	California pea leafminer	Jakira Davis, Justin Anto	Regulatory significant
Brassica rapa	mizuna	*Lygus hesperus*	western lygus bug	John Zito	Regulatory significant
Buxus microphylla	Japanese boxwood	*Monarthropalpus flavus*	boxwood leafminer	Twylah Morelli	Regulatory significant
Capsicum annuum	bell pepper	*Bactericera cockerelli*	potato psyllid	Sam Hart	Regulatory significant
Capsicum annuum	bell pepper	*Epiphyas postvittana*	light brown apple moth	Keith Zugar	Regulatory significant
Capsicum annuum	pepper	*Rhinacloa forticornis*	western plant bug	Jakira Davis, Justin Anto	Regulatory significant
Cenchrus spinifex	coastal sandbur	*Telenomus scaber*	parasitic wasp	Mark Zenoble	First in county
Chromolaena odorata	Jack-in-the-bush, Christmasbush, Siam weed	*Kurtomathrips morilli*	thrips	Edgardo Luiggi, Christine Zamora	First in county; New Florida host record
Citrus sp.	citrus	*Aphis citricidus*	brown citrus aphid	Michael Bentley	Significant find
Cucurbita sp.	pumpkin	*Ceratagallia* sp.	leafhopper	Logan Cutts	Regulatory significant
Ehretia microphylla	Philippine tea	*Fiorinia phantasma*	phantasmscale	Wai Yeung Cheng	New Florida host record

PLANT SPECIES	PLANT COMMON NAME	ARTHROPOD GENUS AND SPECIES	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
Eragrostis sp.	grass	*Blissus minutus*	chinch bug	Susan Halbert	First in county
Eriobotrya japonica	loquat	*Spodoptera pulchella*	Caribbean armyworm	Cynthia Blattenberger	First in county
Eryngium foetidum	Mexican cilantro	*Insignorthezia insignis*	greenhouse ortheziid	Mark Zenoble	New Florida host record
Eucalyptus sp.	eucalyptus	*Paropsis* sp.	chrysomelid beetle	Brandon Di Lella & K-9	Regulatory significant
Ficus benjamina	weeping fig, Benjamin fig, Java fig, Chinese weeping banyan	*Pseudococcus odermatti*	mealybug	Mark Zenoble	New Florida host record
Foeniculum vulgare	fennel	*Cavariella aegopodii*	carrot aphid	Jakira Davis, Justin Anto	Regulatory significant
Foeniculum vulgare	fennel	*Lygus elisus*	pale legume bug	Jakira Davis, Justin Anto	Regulatory significant
Fragaria x *ananassa*	strawberry	*Lygus* sp.	western lygus bug	Jakira Davis, Justin Anto	Regulatory significant
Fragaria x *ananassa*	strawberry	*Lygus* sp.	western lygus bug	Jakira Davis, Justin Anto	Regulatory significant
Fragaria x *ananassa*	strawberry	*Prytanes confusa*	seed bug	Jakira Davis, Justin Anto	Regulatory significant
Gardenia jasminoides	gardenia, Cape jasmine	*Thrips parvispinus*	short spine thrips	Homeowner	First in county
Ipomoea batatas	sweet potato	*Phenacoccus sisymbriifolium*	mealybug	Victoria Benjamin, Alexander Tasi	New Florida host record
Jasminum fluminense	Brazilian jasmine, Azores jasmine, jazmin de trapo	*Petrusa epilepsis*	seagrape flatid planthopper	Mark Zenoble	New Florida host record
Lactuca sativa	green leaf lettuce	*Acyrthosiphon lactucae*	lettuce aphid	Chase Groninger	Regulatory significant
Lactuca sativa	lettuce	*Acyrthosiphon lactucae*	lettuce aphid	Jakira Davis, Justin Anto	Regulatory significant
Lactuca sativa	lettuce	*Autographa californica*	alfalfa looper	Jakira Davis, Justin Anto	Regulatory significant
Lactuca sativa	lettuce	*Brachycaudus rumexicolens*	aphid	Jakira Davis, Justin Anto	Regulatory significant
Lactuca sativa	lettuce	*Ceratagallia californica*	leafhopper	Jakira Davis, Justin Anto	Regulatory significant
Lactuca sativa	green leaf lettuce	*Ceratagallia californica*	leafhopper	Logan Cutts	Regulatory significant
Lactuca sativa	romaine hearts	*Ceratagallia californica*	leafhopper	Cheryl Jones, Twylah Morelli, Justin Anto, Dyrana Russell, Brad Danner, Leroy Whilby, Krystal Ashman, Ariana Gaskin, Logan Cutts	Regulatory significant
Lactuca sativa	baby head tuscan mix	*Ceratagallia californica*	leafhopper	Cheryl Jones, Twylah Morelli, Justin Anto, Dyrana Russell, Brad Danner, Leroy Whilby, Krystal Ashman, Ariana Gaskin, Logan Cutts	Regulatory significant
Lactuca sativa	lettuce	*Ceratagallia longula*	leafhopper	Jakira Davis, Justin Anto	Regulatory significant
Lactuca sativa	romaine hearts	*Cixius cultus*	cixiid planthopper	Cheryl Jones, Twylah Morelli, Justin Anto, Dyrana Russell, Brad Danner, Leroy Whilby, Krystal Ashman, Ariana Gaskin, Logan Cutts	Regulatory significant
Lactuca sativa	romaine hearts	*Liriomyza langei*	California pea leafminer	Cheryl Jones, Twylah Morelli, Justin Anto, Dyrana Russell, Brad Danner, Leroy Whilby, Krystal Ashman, Ariana Gaskin, Logan Cutts	Regulatory significant
Lactuca sativa	lettuce	*Liriomyza langei*	California pea leafminer	Jakira Davis, Justin Anto	Regulatory significant
Lactuca sativa	lettuce	*Lygus elisus*	pale legume bug	Jakira Davis, Justin Anto	Regulatory significant
Lactuca sativa	iceberg lettuce	*Lygus elisus*	pale legume bug	Cheryl Jones, Twylah Morelli, Justin Anto, Dyrana Russell, Brad Danner, Leroy Whilby, Krystal Ashman, Ariana Gaskin, Logan Cutts	Regulatory significant
Lactuca sativa	romaine hearts	*Lygus elisus*	pale legume bug	Logan Cutts	Regulatory significant
Lactuca sativa	romaine lettuce	*Lygus hesperus*	western lygus bug	Logan Cutts	Regulatory significant
Lactuca sativa	romaine lettuce	*Nasonovia ribisnigri*	currant-lettuce aphid	Lindsey Larrimore	Regulatory significant
Lactuca sativa	lettuce	*Nasonovia ribisnigri*	currant-lettuce aphid	Jakira Davis, Justin Anto	Regulatory significant

PLANT SPECIES	PLANT COMMON NAME	ARTHROPOD GENUS AND SPECIES	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
Lactuca sativa	green leaf lettuce	*Nasonovia ribisnigri*	currant-lettuce aphid	Chase Groninger	Regulatory significant
Lactuca sativa	lettuce	*Nasonovia ribisnigri*	currant-lettuce aphid	Jakira Davis, Justin Anto	Regulatory significant
Lactuca sativa	romaine hearts	*Nasonovia ribisnigri*	currant-lettuce aphid	Logan Cutts	Regulatory significant
Lactuca sativa	romaine hearts	*Nasonovia ribisnigri*	currant-lettuce aphid	Cheryl Jones, Twylah Morelli, Justin Anto, Dyrana Russell, Brad Danner, Leroy Whilby, Krystal Ashman, Ariana Gaskin, Logan Cutts	Regulatory significant
Lactuca sativa	processed romaine leaves	*Nasonovia ribisnigri*	currant-lettuce aphid	Cheryl Jones, Twylah Morelli, Justin Anto, Dyrana Russell, Brad Danner, Leroy Whilby, Krystal Ashman, Ariana Gaskin, Logan Cutts	Regulatory significant
Lactuca sativa	romaine lettuce	*Pemphigus bursarius*	lettuce root aphid	Logan Cutts	Regulatory significant
Lantana sp.	lantana	*Frankliniella gossypiana*	thrips	Angi Hutcherson	New Florida host record
Lantana strigocamara	lantana	*Ophiomyia camarae*	agromyzid fly	Caleb Poock	First in county
Liquidambar styraciflua	sweetgum	*Neopinnaspis harperi*	armored scale	Caroline Pride	First in county
Magnolia sp.	magnolia	*Leptoglossus fulvicornis*	leaf-footed bug	Shanelle Mulrooney	First in county
Mangifera indica	mango	*Spodoptera pulchella*	Caribbean armyworm	Robert Longtin	First in county
mixed	mixed weedy turf	*Parallaxis guzmani*	leafhopper	Mark Zenoble	First in county
multiple	multiple landscape plants	*Prokelisia marginata*	delphacid planthopper	Lisa Tyler	First in county
Orthosia scoparia	leafless swallowwort	*Aphis nerii*	oleander aphid	Kelly Douglas, Larry Violett, Paola Ramos Perez, Rook Barrios, Janie Echols, Michael Bentley, Angi Hutcherson, Sam Hart	New Florida host record
Persea americana	avocado	*Herpetogramma stramineata*	crambid moth	Miguel Justiz	New Continental USA record
Philodendron sp.	philodendron	*Phalacrococcus howertoni*	croton scale	Noemi Negron, Caroline Pride	New Florida host record
Physalis philadelphica	tomatillo	*Bactericera cockerelli*	potato psyllid	Jakira Davis, Justin Anto	Regulatory significant
Pinus strobus	eastern white pine	*Chionaspis pinifoliae*	pine needle scale	Noemi Negron, Alexander Tasi	Regulatory significant
Pittosporum campbellii	cheesewood	*Aphis spiraecola*	spirea aphid	Scott Krueger	New Florida host record
Pittosporum campbellii	cheesewood	*Scolothrips asura*	thrips	Scott Krueger	New Western Hemisphere record
Podocarpus macrophyllus	Japanese yew	*Argyrotaenia amatana*	pondapple leafroller	Douglas Caldwell	New Florida host record
Quercus sp.	oak	*Dendrocoris humeralis*	stink bug	Noemi Negron	First in county
Rubus cuneifolius	sand blackberry, sand bramble, American bramble	*Phylloplecta tripunctata*	blackberry psyllid	Emily Martin	First in county
Rubus sp.	raspberry	*Amphorophora agathonica*	large American raspberry aphid	Jakira Davis, Justin Anto	Regulatory significant
Rubus sp.	raspberry	*Amphorophora agathonica*	large American raspberry aphid	Jeanie Frechette, Alexander Tasi	Regulatory significant
Rubus sp.	raspberry	*Rhinacloa forticornis*	western plant bug	Jakira Davis, Justin Anto	Regulatory significant
Solanum melongena	eggplant	*Phenacoccus sisymbriifolium*	mealybug	Victoria Benjamin, Alexander Tasi	New Florida host record
Solanum quitoense	naranjilla, Quito orange, lulo	*Arvelius albopunctatus*	tomato stink bug	Victoria Benjamin, Alexander Tasi	New Florida host record
Tabernaemontana divaricata	crape jasmine, crape gardenia, pinwheel jasmine	*Fiorinia phantasma*	phantasma scale	Caleb Poock	New Florida host record; First in county
Tillandsia usneoides	Spanish moss	*Graminorthezia tillandsiae*	Spanish moss ortheziid	Jennifer McKeever	First in county
Urochloa mutica	Para grass, California grass, buffalo grass, Scotch grass, Carib grass	*Gampsocoris decorus*	neotropical stilt bug	Mark Zenoble	First in county

PLANT SPECIES	PLANT COMMON NAME	ARTHROPOD GENUS AND SPECIES	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
Vaccinium myrsinites	shiny blueberry, low bush blueberry	*Lecanodiaspis prosopidis*	common pit scale	Daniel Roueche	First in county
		Afeda sp.	beige and gray afeda	Mary Yong Cong	New Continental USA record
		Bakerella sp.	delphacid planthopper	Krystal Ashman	First in county
		Balclutha jafara	leafhopper	Joseph Hanus, James Bouie	First in county
		Barce fraterna	thread-legged assassin bug	Monica Triana	First in county
		Chabula acamasalis	margaroniine snout moth	Lawrence Hribar	First in county
		Curalium sp.	ruby bug	Krystal Ashman, Robert Leahy	First in county
		Curalium sp.	ruby bug	Robert Leahy	First in county
		Curtara insularis	ringspot leafhopper	Rook Barrios	First in county
		Dinumma deponens	erebid moth	Robert A. Belmont	New Florida record
		Emesaya brevipennis	thread-legged assassin bug	Krystal Ashman, Robert Leahy	First in county
		Esperanza texana	broadheaded bug	Monica Triana	First in county
		Flavoclypeus nigrifacies	delphacid planthopper	Scott Weihman	First in county
		Fulvius anthocoroides	mirid plant bug	Robert Cahal	First in county
		Glauce sp. 2	gelechiid moth	Isabelle Atchia, Jonathan Bremer, Kevin Burnette, Ariana Gaskin, Catherine Nance, Erin Powell, Hannah Kiefer, James Hayden	First in county
		Haldorus furcatus	leafhopper	Joseph Hanus, James Bouie	First in county
		Hydrometra barei	water measurer	Monica Triana	First in county
		Marmara salictella	willow twig miner	Isabelle Atchia, Jonathan Bremer, Kevin Burnette, Ariana Gaskin, Catherine Nance, Erin Powell, Hannah Kiefer, James Hayden	New Florida record
		Mesovelia amoena	water treader	Monica Triana	First in county
		Neortholomus jamaicensis	seed bug	Krystal Ashman, Robert Leahy	First in county
		Niditinea sabroskyi	bird nest moth	Pest control operator	First in county
		Passandrophloeus sp.	laemophloeid beetle	Robert Leahy	First in county
		Phrictopyga contorta	delphacid planthopper	Monica Triana	New Continental USA record
		Ploiaria hirticornis	thread-legged assassin bug	Monica Triana	First in county
		Rheumatobates minutus	water strider	Monica Triana	First in county
		Stereomita andropogonis	gelechiid moth	Isabelle Atchia, Jonathan Bremer, Kevin Burnette, Ariana Gaskin, Catherine Nance, Erin Powell, Hannah Kiefer, James Hayden	New Florida record
		Stromatium longicorne	longhorn beetle	Julie Nieuwenhuis	Regulatory significant
		Trichosiphonaphis polygonifoliae	Persicariaphid	Julien Beuzelin, Donna Larsen	First in county
		Tropicanus costomaculatus	leafhopper	Monica Triana	First in county

NEMATOLOGY

Compiled by Clemen J. Oliveira, Ph.D.; Gabrieli Riva, M.S.; Janete A. Brito, Ph.D.;
Ruimim Xue, M.S. and Johan A. Desaeger, Ph.D.

This section analyzes soil and plant samples for nematodes, conducts pest detection surveys and provides diagnoses of plant problems, in addition to completing identification of plant parasitic nematodes involved in regulatory and certification programs. State of Florida statutes and rules mandate the predominant regulatory activities of the section. Analyses of plant and soil samples include those from in-state programs, plant shipments originating in Florida destined for other states and countries, as well as samples intercepted in Florida from outside the United States.

QUARTERLY ACTIVITY REPORT

	OCT - DEC	2023 - YEAR TO DATE
Morphological Identifications	2,654	**14,080**
Molecular Identifications *	268	**1,196**

* The majority of these analyses involved root-knot nematode species.

1a – *Meloidogyne javanica*, root-knot nematode, infected strawberry (*Fragaria × ananassa* Winterstar™). Root systems of strawberry plant showing root galling.
Photo by Clemen Oliveira, Gulf Coast Research and Education Center (GCREC), University of Florida.

Nematode of Special Interest

1 ***Meloidogyne javanica*** (Trueb, 1885) Chitwood, 1949, was found infecting the roots of strawberry (*Fragaria × ananassa*), **a new Host record.** (Hillsborough County; 01192024-00409; Gabrielle Riva, University of Florida; 25 January 2023.)

Strawberry (*Fragaria × ananassa*) is native to temperate regions; however, it has been produced in tropical areas and as a seasonal crop, including in Florida, during winter months. Root galls resembling those induced by root-knot nematodes (*Meloidogyne* spp.) were observed in declining strawberry plants of the cultivar, Winterstar™ ('FL 05-107'), growing in a certified organic research site in Hillsborough County, Florida. Nematode species identification was performed at the Nematology Laboratory, Gulf Coast Research and Education Center (GCREC), University of Florida, Wimauma, Florida, in collaboration with the Nematode Diagnostic Laboratory, Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, Florida, (FDACS-DPI). By using morphology of the female perineal patterns (Chitwood, 1949; Jepson, 1987), biochemical analyses (esterase and malate dehydrogenase) (Brito et al., 2008; 2021), and DNA sequencing (NAD5-F/NAD5-R) (Janssen et al., 2016), nematologists identified the species. This species identification was confirmed using a SCAR (sequence characterized amplified region) primer set (Fjav/Rjav) (Zijlstra et al., 2000). Isozyme analyses, EST= J3, specific for *M. javanica* and MDH=N1, as well as the morphology of female perineal patterns and the Fjav/Rjav primer set agreed with data previously reported for *M. javanica* found infecting other plant species in Florida and in other regions of the world. The newly obtained DNA sequences using NAD5-F/NAD5-R (OQ474970 – OQ474972) were compared with those available in the GenBank using BLAST and showed

100% identity with other populations of *M. javanica* reported from Polk County, Florida (OM418745 – OM418749) and the complete mitochondrial genome of *M. javanica* (NC026556).

In addition, a pathogenicity test performed in a greenhouse using 10,000 eggs from the original *M. javanica* population on Winterstar™ ('FL 05-107') transplants found galls on the strawberry plants (Gall index, GI = 4.1) with egg masses clearly visible outside of the roots, producing an average of 1,344 eggs/gram of fresh root and 9,201 ± 4,206 eggs/root system. No galls or egg masses were observed on non-inoculated plants. Tomato 'HM 1823' was used as a control for the viability of the inoculum and showed numerous galls and egg masses (GI=5.0). Because this nematode species is widespread in the state and commonly found infecting many crops and weed species in Florida, further studies are needed to determine the role of the strawberry cultivars in the infectivity of this nematode and the effect of the nematode on strawberry yield in Florida, as well as the phylogenetic relationship between the population found infecting Winterstar™ ('FL 05-107') and other populations of *M. javanica* found in Florida and different parts of the world. To our knowledge, this is the first report of *M. javanica* infecting strawberry in the United States (Oliveira et al., 2023).

1b - *Meloidogyne javanica*, root-knot nematode, infected strawberry (*Fragaria × ananassa* Winterstar™). Root systems of strawberry plant showing root galling.
Photo by Gabrielle Riva, Gulf Coast Research and Education Center (GCREC), University of Florida.

1c - *Meloidogyne javanica*, root-knot nematode, infected strawberry (*Fragaria × ananassa* Winterstar™). Non-inoculated and inoculated (with *M. javanica*) plants.
Photo by Gabrielle Riva, Gulf Coast Research and Education Center (GCREC), University of Florida.

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SAMPLES FOR MORPHOLOGICAL ANALYSIS

Certifications and Regulatory Purposes

	OCT - DEC	2023 - YEAR TO DATE
Multistate Certification involving California	1,126	3,902
Multistate Certification excluding California Certification	1,400	6,760
Citrus Certification (Citrus Nursery Certification, Site or Pit Approval)	54	186
Total	**2,580**	**10,848**

Other Purposes

	OCT - DEC	2023 - YEAR TO DATE
Identification (other organisms)	0	2
Interdiction Station (AIS)	30	146
Plant Problems	40	142
Survey	4	226
Total	74	**516**

SAMPLES FOR MOLECULAR ANALYSIS

	OCT - DEC	2023 - YEAR TO DATE
Regulatory Purposes	86	**476**
Other Purposes	0	**0**
Identifications	182	**720**
Surveys	0	**0**
Total	268	**1,196**

PLANT PATHOLOGY

Compiled by Jodi Hansen, M.S.; Hector Urbina, Ph.D.; Kishore Dey, Ph.D.;
Patricia Soria, M.S.; Claudia Paez, Ph.D. and Vishal Negi, Ph.D.

The Plant Pathology section provides plant disease diagnostic services for the department. The agency-wide goal of protecting the flora of Florida very often begins with accurate diagnoses of plant problems. Management recommendations are offered where appropriate and available. Our plant pathologists are dedicated to keeping informed about endemic plant diseases along with those diseases and disorders active outside Florida in order to be prepared for potential introductions of new pathogens to our area.

1 ***Burkholderia glumae*, a new Host record**, was found on *Philodendron* sp. (family Araceae) at a nursery in Lake County, Florida. The submitted samples exhibited symptoms similar to leaf blight, characterized by brown, water-soaked, necrotic lesions. *Burkholderia glumae* is recognized as the global causative agent of bacterial panicle blight in rice and has been previously identified from rice plants across the southern United States, including Louisiana, Arkansas, Texas and Mississippi (Nandakumar et al., 2009); however, this is the first time the bacterium has been identified in *Philodendron*. *Burkholderia glumae* is transmitted through the seeds, flowers, leaves and residue of crops. Locations with elevated temperatures and high humidity levels provide conditions conducive to proliferation of this pathogen. (Lake County; 09132023-09381; Mary Sellers; 13 September 2023.)

1a – *Burkholderia glumae* leaf blight symptoms on *Philodendron* sp.
Photo by Vishal Negi, FDACS-DPI

1b – *Burkholderia glumae* leaf blight symptoms on *Philodendron* sp.
Photo by Vishal Negi, FDACS-DPI

REFERENCES

Nandakumar, R., Shahjahan, A.K.M., Yuan, X.L., Dickstein, E.R., Groth, D.E., Clark, C.A., Cartwright, R.D. and Rush, M.C. (2009). *Burkholderia glumae* and *B. gladioli* cause bacterial panicle blight in rice in the southern United States. *Plant Disease,* 93: 896–905.

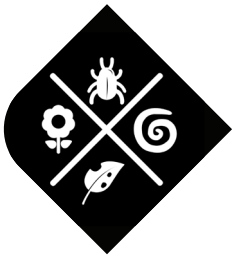
QUARTERLY ACTIVITY REPORT

	OCT - DEC	2023 - YEAR TO DATE
Citrus black spot	76	246
Citrus canker	188	707
Citrus greening / HLB	44	164
HLB certification for out-of-state shipping	2,227	8,071
Import inspections	31	37
Interdictions	70	331
Palm phytoplasma	2	21
Pathology, General	767	2,543
Soil	36	118
Totals	3,410	12,207

PLANT PATHOLOGY IDENTIFICATION TABLE

The following table provides information about samples identified between October-December 2023. The table is organized alphabetically by plant species, with new records listed on the right.

PLANT SPECIES	PLANT COMMON NAME	CAUSAL AGENT	DISEASE NAME	LOCATION TYPE	SPECIMEN NUMBER	COUNTY	COLLECTOR	DATE	NEW RECORDS
Agarista populifolia	pipestem, Florida hobblebush	*Parvodontia relampaga*	relampago blight	state forest	P2803-10052023-10382	Putnam	Jeffrey Eickwort	10/6/23	host
Citrus sinensis	Valencia sweet orange	*Phyllosticta citricarpa*	citrus black spot	citrus grove	P3544-12142023-12707	Manatee	Matthew Meise, Hector Urbina	12/18/23	county
Ficus benghalensis	banyan tree, Indian banyan, Bengal banyan	*Paramyrothecium roridum*	leaf blight	nursery	P3413-12052023-12324	Lake	Mary Sellers	12/5/23	host
Fragaria x *ananassa*	strawberry	*Fusarium oxysporum* f. sp. *vasinfectum*	wilt	nursery	P3284-11272023-12030	Alachua	owner	12/15/24	host



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