



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





Pygmaeoborus cubensis, a bark beetle.
Photo by Andrew Johnson, University of Florida School of Forest Resources and Conservation

ABOUT TRI-LOGY

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-LOGY 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-LOGY

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We welcome your suggestions for improvement of TRI-LOGY. Please feel free to contact the [helpline](#) with your comments at 1-888-397-1517.

Thank you,

Gregory Hodges, Ph.D.

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Cover Photo

Hamelia patens var. *patens* (firebush).
Photo by John Park, [Atlas of Florida Plants](#)



HIGHLIGHTS



1 *Hamelia patens* Jacq., (firebush), is native to Florida, the West Indies, Mexico, Central America and South America. After the native firebush became a popular plant for Florida gardeners, another firebush was introduced from South Africa, called African firebush. Horticultural researchers were interested in learning more about the introduction because all other species in this genus are from the Americas. Studies of herbarium specimens, plant morphology and DNA evidence confirmed there are two varieties of this species, one of which is native to Mexico and was introduced to Europe and Africa, then re-introduced to the United States.



1 - *Hamelia patens* var. *glabra* (African firebush).
Photo by Obsidian Soul, [Wikimedia](#)

2 *Tainarys myracrodru* Burckhardt & Queiroz, a psyllid, a new Continental USA record. This psyllid was described from Brazil and was abundant in trap samples from the state of São Paulo. This collection consists of a single specimen in a trap sample, so the host in Florida is not yet known.



2 - *Tainarys myracrodru*, a psyllid.
Photo by Jade Allen, DPI

3 *Aphelenchoides pseudogoodeyi* Oliveira et al. 2019, a species new to science, was detected on senescent strawberry (*Fragaria x ananassa*) leaves in Plant City, Florida and reared on fungus cultures of *Monilinia fructicola*.

4 *Ragnhildiana pseudotithoniae* U. Braun, C. Nakash., Videira & Crous (tithonia leaf spot) new Continental USA record, was identified on *Tithonia diversifolia* at the University of Florida. *Ragnhildiana pseudotithoniae* causes circular spot lesions surrounded by yellow halos, visible on both upper and lower leaf surfaces of infected plants.



3 - *Fragaria x ananassa* (garden strawberry).
Photo by Betty Cai, [Wikipedia](#)



4 - *Ragnhildiana pseudotithoniae* (tithonia leaf spot) found on *Tithonia diversifolia* in Alachua County.
Photo by Hector Urbina, DPI





BOTANY

Compiled by Patti J. Anderson, Ph.D.

This section identifies plants for the division, as well as for other governmental agencies and private individuals. The Botany Section maintains a reference herbarium with over 13,000 plants and 1,400 vials of seeds.

QUARTERLY ACTIVITY REPORT

	JULY - SEPT	2019 - YEAR TO DATE
Samples Submitted by Other DPI Sections	1,659	5,010
Samples Submitted for Botanical Identification Only	191	830
Total Samples Submitted	2,850	5,840
Specimens Added to the Herbarium	197	469

Some of the samples received for identification are discussed below:

1 *Hamelia patens* Jacq., (firebush), from a genus of 16 species native to tropical America, in the plant family Rubiaceae. This species, native to Florida, the West Indies, Mexico, Central America and South America, is a shrub, 3-7 m tall, with opposite or whorled, elliptic, obovate or lanceolate leaves. The inflorescence is a terminal cyme with 20-50 flowers. Corollas are tubular, yellow-orange to red-orange, with five lobes. Fruits are about 8x6 mm and turn deep purple-black when mature. This species has become a familiar landscape plant in Florida, especially valued as an easy to grow shrub for butterfly gardens. After the native firebush became a popular plant for Florida gardeners, another firebush was introduced from South Africa, called African firebush. Horticultural researchers were interested in learning more about the introduction because all other species in this genus are from the Americas. Studies of herbarium specimens, plant morphology and DNA evidence confirmed there are two varieties of the species. *Hamelia patens* var. *patens* is native to Florida and can be recognized by usually having pubescent, opposite leaves (two per node) and flowers with pubescent, red or red-orange corollas. *Hamelia patens* var. *glabra* is native to Mexico, Central America and South America, but not Florida, and was introduced to Europe and Africa, then re-introduced to the United States. This variety has smaller, shiny, glabrous, whorled leaves (three to four per node), a more compact growth habit and flowers with yellow to yellow-orange corollas. Although it is not native to Florida, it is well adapted to our landscapes and often thought to be superior by nursery



1a - *Hamelia patens* var. *patens* (firebush).
Photo by John Park, [Atlas of Florida Plants](#)



1b - *Hamelia patens* var. *glabra* (African firebush).
Photo by Obsidian Soul, [Wikimedia](#)



owners as a drought-tolerant, long-flowering ornamental shrub. (Citrus County; B2019-735; Nora Marquez; 13 August 2019.) (Elias and Pooler 2004; Huxley 1992; Mabberly 2017; Wunderlin and Hansen 2011; <http://florida.plantatlas.usf.edu/Plant.aspx?id=2723> [accessed 10 September 2019]; <https://www.floridanativenurseries.org/info/plants/the-hamelia-mess/> [accessed 10 September 2019])

2 *Ipomoea violacea* L. (**beach moonflower**), from a genus of about 600 species, native to tropical and warm temperate regions, in the plant family Convolvulaceae. This species is a glabrous, twining, perennial vine with milky sap. Stems can grow to be 5–10 m long, often with a woody base. Leaf petioles are 3–16 cm long and have a gland on both sides near the base of the leaf blade. The blade is 5–16 cm long, with a deeply cordate base and acuminate apex. Inflorescences are axillary, each with one to three (occasionally four) flowers. Flowers open nocturnally, presumably to be pollinated by night-flying moths. The sepals are rounded apically, with the outer two shorter than the inner three and the apex obtuse or emarginate. The white corolla is salverform, with green or yellowish fold lines. The tube is 9–12 cm long and the limb is 6–7 cm across. The five white stamens and the pistil are not exerted beyond the corolla tube, as they are in other species. The stigma is two-lobed. Fruits are pale brown, ovoid to more or less globose, glabrous capsules, containing four black, roughly 10 mm long, densely tomentose seeds with long sericeous hairs on their edges that might help keep them afloat. Aptly named beach moonflowers grow on beaches, coastal strands and in thickets near the beach. The two new county records received this quarter are from Martin and St. Lucie counties on Florida's east coast, while most other vouchers of the species are from the west coast from Pinellas and Hillsborough counties southward to Collier County. The species is also recorded in Miami-Dade County and the Florida Keys.

Although Linnaeus gave this plant the name *Ipomoea violacea*, suggesting the color purple, the flower, as described above, is white. This botanical curiosity has led to confusion and misidentification of the plant as *I. alba*, a related, white-flowered species. Linnaeus might be excused because he based his name on botanical literature available to him at the time, but no physical specimens are found in his herbarium. These two species can perhaps most easily be distinguished by their sepals. *Ipomoea alba* sepals have acute tips with tail-like extensions, while *I. violacea* sepals have rounded tips. To complicate matters, the species was later described as *I. tricolor*, but according to the rules of naming plants, the first published name has priority when a species is accidentally described by more than one author. The potential for confusion increases with the advent of horticultural varieties that differ from the species in flower color. Among the cultivars of our white-flowered *I. violacea* are 'Heavenly Blue' and 'Wedding Bells' described as dark sky blue and rose-lavender, respectively. This complicated story provides an example of the importance of having a complete physical sample when identifying a plant species. (St. Lucie County; B2019-662; Jeanie Frechette and Teresa Ortelli; 16 July 2019 and Martin County; B2019-661; Teresa Ortelli and Jeanie Frechette; 16 July 2019.) (Acevedo-Rodriguez 2005; Correll and Correll 1982; Der Marderosian 1965; Godfrey and Wooten 1981; Wunderlin *et al.* 2019.)



2a - *Ipomoea violacea* (beach moonflower).
Photo by Keith Bradley, [Atlas of Florida Plants](#)



2b - *Ipomoea alba* (tropical moonflower).
Photo by Jim Tear, [Atlas of Florida Plants](#)



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BOTANY IDENTIFICATION TABLE

The following table provides information about **new county** records submitted in the current volume's time period. 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.

NEW RECORD	COLLECTOR NAME	COUNTY	SAMPLE NUMBER	COLLECTION DATE	GENUS	SPECIES
	Abby Bartlett	Sumter	B2019-695	7/29/2019	<i>Zephyranthes</i>	<i>grandiflora</i>
	Jeanie Frechette and Teresa Ortell	St. Lucie	B2019-662	7/16/2019	<i>Ipomoea</i>	<i>violacea</i>
	Melanie Cain	Putnam	B2019-806	9/17/2019	<i>Arachis</i>	<i>glabrata</i>
	Melanie Cain	Putnam	B2019-807	9/17/2019	<i>Carica</i>	<i>papaya</i>
	Melanie Cain	Flagler	B2019-808	9/17/2019	<i>Ipomoea</i>	<i>batatas</i>
	Melanie Cain	St. Johns	B2019-770	8/27/2019	<i>Ipomoea</i>	<i>pes-caprae</i>
	Melanie Cain	Putnam	B2019-805	9/17/2019	<i>Ipomoea</i>	<i>quamoclit</i>
	Nora Marquez	Lake	B2019-704	8/5/2019	<i>Costus</i>	<i>pulverulentus</i>
	Nora Marquez	Citrus	B2019-735	8/13/2019	<i>Hamelia</i>	<i>patens</i>
	Nora Marquez	Lake	B2019-780	8/30/2019	<i>Zingiber</i>	<i>zerumbet</i>
	Nora Marquez and Abby Bartlett	Putnam	B2019-722	8/7/2019	<i>Clerodendrum</i>	<i>indicum</i>
	Nora Marquez and Abby Bartlett	Putnam	B2019-717	8/7/2019	<i>Emilia</i>	<i>sonchifolia</i>
	Teresa Ortell and Jeanie Frechette	Martin	B2019-661	7/16/2019	<i>Ipomoea</i>	<i>violacea</i>
	Terrence Williams	Osceola	B2019-700	7/31/2019	<i>Carya</i>	<i>glabra</i>





ENTOMOLOGY

Compiled by Susan E. Halbert, Ph.D.

This section provides the division's plant protection specialists and other customers with accurate identifications of arthropods. The entomology section also builds and maintains the arthropod reference and research collection (the Florida State Collection of Arthropods (FSCA) with over 10 million specimens) and investigates the biology, biological control and taxonomy of arthropods.

QUARTERLY ACTIVITY REPORT

	JULY - SEPT	2019 - YEAR TO DATE
Samples Submitted	1,723	5,412
Lots Identified	2,390	7,636
Specimens Identified	18,027	71,662

1 *Gnathoraptus mandibularis* Bright, a bark beetle, a new Continental USA record. *Gnathoraptus mandibularis* has been collected across multiple sites in South Florida. This species was described this year (2019), from light trapping in the Caribbean island of Grenada. It can be distinguished from the similar *Araptus dentifrons* by the large size, from *Gnathotrichus* by the enlarged mandibles and from *Monarthrum* by the evenly rounded declivity without spines or granules. The biology of this genus is unknown. One specimen was collected from *Funastrum clausum* (Apocynaceae) (M. Deyrup, pers. comm.), and similar species in the genus *Araptus* are also collected from Apocynaceae vines. Specimens were compared to paratypes and photos of the holotype. This species is likely to feed only on dead vines and is not known as a pest. (Hillsborough County; E2019-4333, F. Marcos Parilla, Customs and Border Patrol; 16 April 2019.) (Dr. Andrew Johnson, University of Florida School of Forest Resources and Conservation, and Krystal Ashman.)

2 *Pygmaeoborus cubensis* Bright, a bark beetle, a new Continental USA record. *Pygmaeoborus cubensis* has been collected from two localities in Florida. The monotypic genus was also described this year. This species is diagnosed by its small size, elongate body, elytra with sparse white scales and distinctive truncate antennal club with sutures only on its apical third. The biology, host and whether it is a pest are unknown. Specimens were compared to photos of the holotype. (Collier County; E2019-4332; Jose Rincon, CAPS; 15 October 2013.) (Dr. Andrew Johnson, University of Florida School of Forest Resources and Conservation, and Krystal Ashman.)



1 - *Gnathoraptus mandibularis*, a bark beetle.

Photo by Andrew Johnson, University of Florida School of Forest Resources and Conservation



2 - *Pygmaeoborus cubensis*, a bark beetle.

Photo by Andrew Johnson, University of Florida School of Forest Resources and Conservation

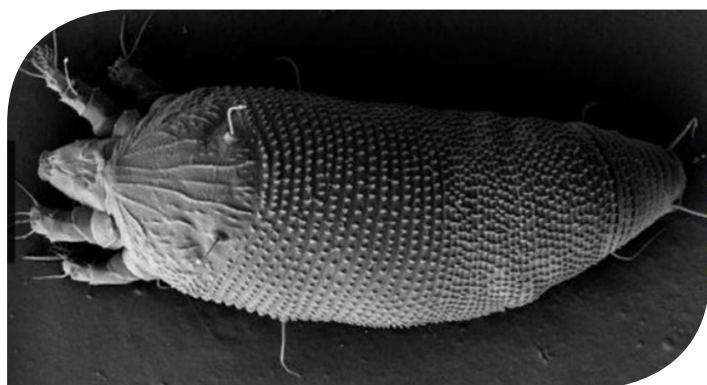


3 *Tainarys myracrodru* Burckhardt & Queiroz, a psyllid, a new Continental USA record. This psyllid was described from Brazil and was abundant in trap samples from the State of São Paulo. This collection consists of a single specimen in a trap sample, so the host in Florida is not yet known. The reported Brazilian host plants do not occur in Florida. Dr. Daniel Burckhardt, Natural History Museum, Basel, Switzerland, suggested that Brazilian pepper, poison ivy or sumac are possibilities. Mango, also Anacardiaceae, was not infested in Brazil. (Polk County; E2019-4857; Kenneth Branch and Robinson Lawrence; 22 August 2019.) (Dr. Susan Halbert.)



3 - *Tainarys myracrodru*, a psyllid.
Photo by Jade Allen, DPI

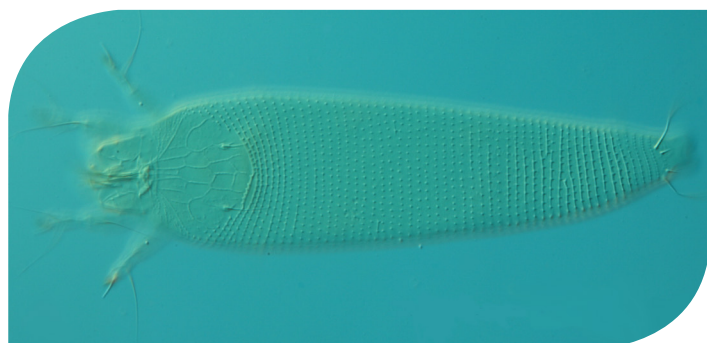
4 *Eriophyes eremus* Druciarek & Lewandowski, an eriophyoid mite, a new Florida State record. This species was described from Israel as recently as 2016. However, the existence of this mite has been known for some time. James W. Amrine of West Virginia University has collected this species from various locations throughout the eastern United States since the 1990s. There is no record of this mite causing any damage to its host, *Rosa* spp. (Gadsden County; E2019-4523; Bradley Danner, David Davison, Kelly Douglas, Michael Bentley, Morgan Byron and Robert Leahy; 14 August 2019.) (Dr. Samuel Bolton.)



4 - *Eriophyes eremus*, an eriophyoid mite.
Photo by Gary Baughan and Ronald Ochoa, USDA-ARS

5 *Monelliopsis bisselli* Quednau, a hickory aphid, a new Florida State record. This is the first Florida find of a species known to be native to other states, including Georgia. It is not known to be a pest and is probably native to Florida. (Polk County; E2019-5047; Kenneth Branch and Robinson Lawrence; 5 September 2019.) (Dr. Susan Halbert.)

6 *Phyllocoptes fructiphilus* Keifer, an eriophyoid mite, a new Florida State record. This species, which is host-specific to *Rosa* spp., is the vector of Rose Rosette Virus (RRV). This mite is widely distributed across the United States but has not been found in Florida until now. At the time of writing, RRV has not been detected in the plants shown to be positive for this mite. In the absence of the virus, the mite appears to have caused no noticeable damage or symptoms. (Leon County; E2019-3312; James Brannin; 14 February 2019.) (Dr. Samuel Bolton.)



6 - *Phyllocoptes fructiphilus*, an eriophyoid mite.
Photo by Samuel Bolton, DPI

7 *Psix tunetanus* (Mineo & Szabó), a scelionid wasp, a new Florida State record. This species is a parasitoid wasp that attacks the eggs of stink bugs. This wasp is native throughout Africa and the Middle East and has become established in Mexico, the western United States and South America, but has not been found in Florida until now. (Miami-Dade County; E2019-4855; Felipe Soto-Adames, Jodi Hansen, Mary Yong-Cong, Muhammad 'Zee' Ahmed, Susan Halbert and Taylor Smith; 28 August 2019.) (Dr. Elijah Talamas.)

8 *Tinocallis saltans* (Nevsky), an elm aphid, a new Florida State record. This Asian species has been known from the western United States since 1986 when it appeared in Idaho in suction trap samples. For several years after the initial find, it was seen in very high numbers. We have only a single specimen from Florida, collected from a trap, so the Florida host is not known. The host in the West is *Ulmus pumila*, but other Florida species of *Ulmus* could be infested. *Ulmus pumila* can occur as far south as Central Florida. Winged forms of these aphids have a dark thorax and a bright yellow abdomen. As the name suggests, they jump readily. (Polk County; E2019-4857; Kenneth Branch and Robinson Lawrence; 22 August 2019.) (Dr. Susan Halbert.)



7 - *Psix tunetanus* (Mineo & Szabó).
Photo by Elijah Talamas, DPI



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 time 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 [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 that have no plant information included are organized by arthropod name.

PLANT SPECIES	PLANT COMMON NAME	ARTHROPOD GENUS AND SPECIES	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
<i>Acer palmatum</i>	Japanese maple	<i>Salina wolcottii</i>	green grass springtail	Abby Bartlett	NEW FLORIDA COUNTY RECORD
<i>Averrhoa carambola</i>	carambola; starfruit	undetermined	minute pirate bug	Harry Morrison, Mary Sellers	NEW FLORIDA COUNTY RECORD
<i>Bidens alba</i>	beggarticks, romerillo, Spanish needle	<i>Ferrisia malvastra</i>	mealybug	Nora Marquez	NEW FLORIDA COUNTY RECORD
<i>Bischofia javanica</i>	bishopwood tree; Java wood; toog	<i>Metalectra</i> sp. cf. <i>quadrisignata</i>	fungus moth	Antonio Demien	NEW FLORIDA COUNTY RECORD
<i>Brassica oleracea</i>	broccoli, cauliflower	<i>Delia radicum</i>	cabbage root fly	Brian Alford, Catherine White, Dyrana Russell, Eric Dougherty, Logan Cutts, Samuel Hart, Scott Curry	REGULATORY SIGNIFICANT
<i>Brassica rapa</i>	pe-tsai, Chinese cabbage, napa cabbage	<i>Delia radicum</i>	cabbage root fly	Catherine White, Dyrana Russell, Logan Cutts	REGULATORY SIGNIFICANT
<i>Brassica rapa</i>	pak-choi, bok-choi, pak-choy, bok-choy, Chinese mustard, celery mustard	<i>Lygus hesperus</i>	western lygus bug	Catherine White	REGULATORY SIGNIFICANT
<i>Brassica rapa</i>	pe-tsai, Chinese cabbage, napa cabbage	<i>Lygus</i> sp.	lygus bug	Catherine White, Dyrana Russell, Logan Cutts	REGULATORY SIGNIFICANT
<i>Camellia japonica</i>	common camellia	<i>Aleurodothrips fasciapennis</i>	thrips	Matthew Borden	NEW FLORIDA COUNTY RECORD
<i>Camellia</i> sp.	camellia	<i>Vanduzee segmentata</i>	treehopper	Samuel Hart	NEW FLORIDA HOST RECORD
<i>Cannabis sativa</i>	hemp	<i>Caliothrips phaseoli</i>	thrips	Felipe Soto-Adames, Minjin Hao, Muhammad 'Zee' Ahmed, Susan Halbert	NEW FLORIDA COUNTY RECORD
<i>Cannabis sativa</i>	hemp	<i>Phorodon cannabis</i>	hemp aphid	Brian Alford, Kelly Douglas, Samuel Hart	REGULATORY SIGNIFICANT
<i>Cannabis sativa</i>	hemp	<i>Psix tunetanus</i>	parasitic wasp	Felipe Soto-Adames, Jodi Hansen, Mary Yong-Cong, Muhammad 'Zee' Ahmed, Susan Halbert, Taylor Smith	NEW FLORIDA STATE RECORD
<i>Cannabis sativa</i>	hemp	<i>Seira brasiliiana</i>	springtail	Felipe Soto-Adames, Minjin Hao, Muhammad 'Zee' Ahmed, Susan Halbert	NEW FLORIDA COUNTY RECORD
<i>Cannabis sativa</i>	hemp	<i>Seira dowlingi</i>	springtail	Felipe Soto-Adames, Minjin Hao, Muhammad 'Zee' Ahmed, Susan Halbert	NEW FLORIDA COUNTY RECORD
<i>Capsicum annuum</i>	pepper	<i>Bactericera cockerelli</i>	potato psyllid	Jeanie Frechette	REGULATORY SIGNIFICANT
<i>Capsicum annuum</i>	pepper	<i>Bactericera cockerelli</i>	potato psyllid	Jeanie Frechette	REGULATORY SIGNIFICANT
<i>Capsicum annuum</i>	pepper	<i>Bactericera cockerelli</i>	potato psyllid	Tavia Gordon	REGULATORY SIGNIFICANT
<i>Carya alba</i>	mockernut hickory	<i>Hyalochloria unicolor</i>	mirid bug	John McVay	NEW FLORIDA HOST RECORD
<i>Carya alba</i>	mockernut hickory	<i>Monellia hispida</i>	aphid	John McVay	NEW FLORIDA COUNTY RECORD
<i>Chamaedorea</i> sp.	chamaedorea palm	<i>Chaetanaphothrips orchidii</i>	orchid thrips	Mary Sellers	NEW FLORIDA COUNTY RECORD
<i>Citrus reticulata</i>	tangerine, mandarin	<i>Heteromeria nitida</i>	clusiid fly	Victor Reaume	NEW FLORIDA COUNTY RECORD
<i>Citrus sinensis</i>	sweet orange, navel orange	<i>Idioderma virescens</i>	treehopper	Diane McColl	NEW FLORIDA COUNTY RECORD
<i>Citrus sinensis</i>	sweet orange, navel orange	<i>Nipaecoccus viridis</i>	mealybug	Jason Johnson	NEW FLORIDA COUNTY RECORD
<i>Citrus</i> sp.	citrus	<i>Nipaecoccus viridis</i>	mealybug	Lauren Diepenbrock	NEW FLORIDA COUNTY RECORD
<i>Citrus</i> sp.	citrus	<i>Nipaecoccus viridis</i>	mealybug	Maria Turrubiardez, Selina Estrada, Virginia Villarreal	NEW FLORIDA COUNTY RECORD



PLANT SPECIES	PLANT COMMON NAME	ARTHROPOD GENUS AND SPECIES	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
<i>Citrus</i> sp.	citrus	<i>Nipaecoccus viridis</i>	mealybug	Scott Krueger	NEW FLORIDA COUNTY RECORD
<i>Citrus</i> sp.	citrus	<i>Rodolia cardinalis</i>	ladybird beetle	Russell Mizell III	NEW FLORIDA COUNTY RECORD
<i>Citrus x paradisi</i>	grapefruit	<i>Dikrella maculata</i>	leafhopper	Diane McColl	NEW FLORIDA COUNTY RECORD
<i>Colocasia esculenta</i>	dasheen; wild taro; taro	<i>Tarophagus colocasiae</i>	taro planthopper	Melanie Cain	NEW FLORIDA COUNTY RECORD
<i>Colocasia esculenta</i>	dasheen; wild taro; taro	<i>Tarophagus colocasiae</i>	taro planthopper	Diane McColl, Melanie Cain	NEW FLORIDA COUNTY RECORD
<i>Coriandrum sativum</i>	coriander, cilantro, Chinese parsley, ngo	<i>Aufeius impressicollis</i>	scentless plant bug	Catherine White, Dyrana Russell, Logan Cutts	REGULATORY SIGNIFICANT
<i>Dioscorea bulbifera</i>	air potato; potato yam; air yam	<i>Metcalfa pruinosa</i>	flatid planthopper	Larry 'Mo' Violet, Mary Jane Echols	NEW FLORIDA COUNTY RECORD
<i>Eriobotrya japonica</i>	loquat, Japanese plum	<i>Erythroneura octonotata</i>	leafhopper	Diane McColl	NEW FLORIDA COUNTY RECORD
<i>Foeniculum vulgare</i>	fennel	<i>Lygus hesperus</i>	western lygus bug	Eric Dougherty	REGULATORY SIGNIFICANT
<i>Fragaria x ananassa</i>	garden strawberry	<i>Lygus</i> sp.	lygus bug	Catherine White, Dyrana Russell, Logan Cutts	REGULATORY SIGNIFICANT
<i>Fragaria x ananassa</i>	garden strawberry	<i>Lygus</i> sp.	lygus bug	Catherine White, Dyrana Russell, Logan Cutts	REGULATORY SIGNIFICANT
<i>Fragaria x ananassa</i>	garden strawberry	<i>Lygus</i> sp.	lygus bug	Catherine White, Dyrana Russell, Logan Cutts	REGULATORY SIGNIFICANT
<i>Fragaria x ananassa</i>	garden strawberry	<i>Lygus</i> sp.	lygus bug	Catherine White	REGULATORY SIGNIFICANT
<i>Gardenia jasminoides</i>	gardenia	<i>Nipaecoccus viridis</i>	mealybug	Abby Bartlett	NEW FLORIDA COUNTY RECORD
<i>Gardenia jasminoides</i>	gardenia	<i>Thrips florum</i>	thrips	Kelly Douglas, Larry Smith	NEW FLORIDA COUNTY RECORD
<i>Humulus lupulus</i>	common hop	<i>Corythucha gossypii</i>	cotton lace bug	Hugh Smith	NEW FLORIDA HOST RECORD
<i>Ilex cornuta</i>	dwarf Burford holly	<i>Fiorinia proboscidea</i>	armored scale	Matthew Borden	NEW FLORIDA COUNTY RECORD
<i>Lactuca sativa</i>	lettuce	<i>Hyadaphis foeniculi</i>	honeysuckle aphid	Catherine White, Dyrana Russell, Logan Cutts	REGULATORY SIGNIFICANT
<i>Lactuca sativa</i>	lettuce	<i>Liriomyza langei</i>	California pea leafminer	Eric Dougherty, Scott Curry	REGULATORY SIGNIFICANT
<i>Lactuca sativa</i>	lettuce	<i>Liriomyza langei</i>	California pea leafminer	Catherine White	REGULATORY SIGNIFICANT
<i>Lactuca sativa</i>	lettuce	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Eric Dougherty	REGULATORY SIGNIFICANT
<i>Lactuca sativa</i>	lettuce	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Eric Dougherty, Scott Curry	REGULATORY SIGNIFICANT
<i>Lactuca sativa</i>	lettuce	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Eric Dougherty, Scott Curry	REGULATORY SIGNIFICANT
<i>Lactuca sativa</i>	lettuce	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Catherine White	REGULATORY SIGNIFICANT
<i>Lactuca sativa</i>	lettuce	<i>Rhopalus tigrinus</i>	scentless plant bug	Eric Dougherty, Scott Curry	REGULATORY SIGNIFICANT
<i>Lactuca sativa</i>	lettuce	<i>Spodoptera praefica</i>	western yellowstriped armyworm	Eric Cohen	REGULATORY SIGNIFICANT
<i>Litchi chinensis</i>	litchi, leechiee	<i>Aceria litchii</i>	lychee erinose mite	Walter Golden	NEW FLORIDA COUNTY RECORD
<i>Litchi chinensis</i>	litchi, leechiee	<i>Thysanofiorinia leei</i>	leei litchi scale	Jake Farnum	NEW FLORIDA COUNTY RECORD
<i>Mangifera indica</i>	mango	<i>Belionota prasina</i>	jewel beetle	Krystal Ashman, Kyle Schnepf	NEW FLORIDA COUNTY RECORD
<i>Physalis philadelphica</i>	Mexican groundcherry; husk tomato; tomatillo	<i>Bactericera cockerelli</i>	potato psyllid	Catherine White, Dyrana Russell, Logan Cutts	REGULATORY SIGNIFICANT
<i>Psidium guajava</i>	common guava; apple guava	<i>Melormenis basalis</i>	Puerto Rican planthopper	Martha Bennett	NEW FLORIDA COUNTY RECORD
<i>Psychotria nervosa</i>	wild-coffee, seminole balsamo	<i>Dysmicoccus radinovskiy</i>	mealybug	Edward Putland	NEW FLORIDA COUNTY RECORD
<i>Quercus</i> sp.	oak	<i>Sargus elegans</i>	soldier fly	Victor Reaume	NEW FLORIDA COUNTY RECORD
<i>Quercus</i> sp.	oak	<i>Telamona</i> sp. nr. <i>ampelopsidis</i>	treehopper	Diane McColl	NEW FLORIDA COUNTY RECORD
<i>Rosa</i> sp.	rose	<i>Eriophyes eremus</i>	eriophyid mite	Bradley Danner, David Davison, Kelly Douglas, Michael Bentley, Morgan Byron, Robert Leahy	NEW FLORIDA STATE RECORD
<i>Rosa</i> sp.	rose	<i>Phyllocoptes fructiphilus</i>	eriophyid mite	James Brannin	NEW FLORIDA STATE RECORD



PLANT SPECIES	PLANT COMMON NAME	ARTHROPOD GENUS AND SPECIES	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
<i>Rosa</i> sp.	rose	<i>Scirtothrips dorsalis</i>	chilli thrips	Bradley Danner, David Davison, Kelly Douglas, Michael Bentley, Morgan Byron, Robert Leahy	NEW FLORIDA COUNTY RECORD
<i>Rosa</i> sp.	rose	<i>Scolothrips sexmaculatus</i>	thrips	Bradley Danner, David Davison, Kelly Douglas, Michael Bentley, Morgan Byron, Robert Leahy	NEW FLORIDA COUNTY RECORD
<i>Rubus</i> sp.	raspberry	<i>Amphorophora agathonica</i>	large American raspberry aphid	Alexander Tasi	REGULATORY SIGNIFICANT
<i>Rubus</i> sp.	raspberry	<i>Rhinachloa forticornis</i>	plant bug	Alexander Tasi	REGULATORY SIGNIFICANT
<i>Salix caroliniana</i>	coastal plain willow; carolina willow	<i>Chaitophorus minutus</i>	aphid	Alexander Tasi	NEW FLORIDA COUNTY RECORD
<i>Tripsacum dactyloides</i>	eastern gamagrass, Fakahatchee grass	<i>Calx cubensis</i>	common Cuban calx	Susan Halbert	NEW FLORIDA COUNTY RECORD
<i>Viburnum</i> sp.		<i>Metalectra</i> sp. cf. <i>quadrisignata</i>	fungus moth	Susan Youngblood	NEW FLORIDA COUNTY RECORD
		<i>Achatina fulica</i>	giant African land snail	Paul Skelley	REGULATORY INCIDENT
		<i>Acizzia</i> sp.	psyllid	Julien Beuzelin	NEW FLORIDA COUNTY RECORD
		<i>Apsectus hispidus</i>	dermestid beetle	Catherine White, Dyrana Russell, Logan Cutts	NEW FLORIDA COUNTY RECORD
		<i>Curtara insularis</i>	ringspot leafhopper	Catherine White, Dyrana Russell, Logan Cutts	NEW FLORIDA COUNTY RECORD
		<i>Gnathoraptus mandibularis</i>	bark beetle	F. Marcos Parilla	NEW US CONTINENTAL RECORD
		<i>Goes variegatus</i>	long horned beetle	Logan Cutts	NEW FLORIDA COUNTY RECORD
		<i>Gymnaspis aechmeae</i>	flyspeck scale	Mary Jane Echols	NEW FLORIDA COUNTY RECORD
		<i>Heliria cornutula</i>	treehopper	Morgan Byron, Robert Leahy	NEW FLORIDA COUNTY RECORD
		<i>Helix aspersa</i>	brown garden snail	Paul Skelley	REGULATORY INCIDENT
		<i>Helix pomatia</i>	escargot	Paul Skelley	REGULATORY INCIDENT
		<i>Helix pomatia</i>	escargot	Michael Roman	REGULATORY SIGNIFICANT
		<i>Hylesinus aculeatus</i>	bark beetle	Douglas Restom-Gaskill	NEW FLORIDA COUNTY RECORD
		<i>Lissachatina fulica</i>	giant African land snail	Dawn Cermak, Laura Ureta	REGULATORY SIGNIFICANT
		<i>Monelliopsis bisselli</i>	hickory aphid	Kenneth Branch, Robinson Lawrence	NEW FLORIDA STATE RECORD
		<i>Osmopleura chamaeropsis</i>	longhorn beetle	Alexander Tasi	NEW FLORIDA COUNTY RECORD
		<i>Palpita persimilis</i>	olive shootworm moth	James Hayden	NEW FLORIDA COUNTY RECORD
		<i>Patara albida</i>	derbid planthopper	Monica Triana	NEW FLORIDA COUNTY RECORD
		<i>Pnirontis infirma</i>	assassin bug	Monica Triana	NEW FLORIDA COUNTY RECORD
		<i>Pygmaeoborus cubensis</i>	bark beetle	Jose Rincon	NEW US CONTINENTAL RECORD
		<i>Spartocera batatas</i>	giant sweet potato bug	Mark Terrell	NEW FLORIDA COUNTY RECORD
		<i>Tainarys myracrodru</i>	psyllid	Kenneth Branch, Robinson Lawrence	NEW US CONTINENTAL RECORD
		<i>Tinocallis saltans</i>	elm aphid	Kenneth Branch, Robinson Lawrence	NEW FLORIDA STATE RECORD
		<i>Tropidosteptes illitus</i>	mirid bug	Catherine White, Dyrana Russell, Logan Cutts	REGULATORY SIGNIFICANT
		<i>Vryburgina trionymoides</i>	mealybug	Catherine White, Dyrana Russell, Logan Cutts	REGULATORY SIGNIFICANT
		<i>Zaprius indianus</i>	African fig fly	Homeowner	NEW FLORIDA COUNTY RECORD





NEMATOTOLOGY

Compiled by Renato Inserra, Ph.D., Clemen Oliveira, M.S., Janete Brito, Ph.D.,
Sai Qiu, M.S., Silvia Vau, Ph.D. and Johan Desaegeer, 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

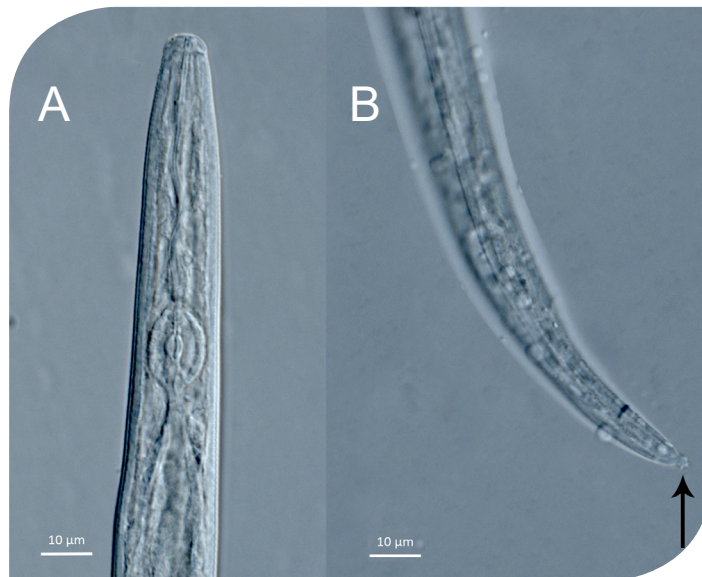
	JULY - SEPT	2019 - YEAR TO DATE
Morphological Identifications	3,703	11,622
Molecular Identifications *	301	1,121
Total Identifications	4,004	12,743

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

Nematode of Special Interest

1 *Aphelenchoides pseudogoodeyi* Oliveira *et al.* 2019, a species new to science, was detected on senescent strawberry (*Fragaria x ananassa*) leaves in Plant City, Florida, and reared on fungus cultures of *Monilinia fruticola* (Hillsborough County; N18-01001; Clemen Oliveira; 10 April 2018).

In recent years, infestations of the foliar nematode *Aphelenchoides besseyi* have been reported in strawberry fields in Central Florida. Nematode-infected strawberry plants appeared dwarfed with crinkled and distorted leaves and low numbers of flowers (Desaegeer and Noling 2017). The results of nematode surveys indicated that the infested fields were localized in the Plant City area of Hillsborough County, where numerous strawberry samples were collected for nematological analysis. These analyses revealed that other species of *Aphelenchoides* in addition to *A. besseyi* were associated on declining strawberry plants. One of these species was found on senescent strawberry leaves. Biological and taxonomic studies of this foliar nematode indicated it belongs



1 - *Aphelenchoides pseudogoodeyi* female. A) Anterior end B) Posterior portion of the body showing a mucro with three short processes in the terminal part of the tail (arrowed).

Photo by Silvia Vau and Scott Burton, DPI.

to a new species of *Aphelenchoides* that has been characterized morphologically and molecularly and described with the name of *Aphelenchoides pseudogoodeyi* (Oliveira *et al.* 2019). This species has been reared successfully in cultures of the fungus *Monilinia fruticola*. In host studies, *A. pseudogoodeyi* infected neither strawberry nor gerbera daisy. Penetration of *A. pseudogoodeyi* into the mesophyll of soybean leaves was observed when pieces of filter paper containing specimens of the nematode were attached to soybean leaves. The portion of the leaves in contact with the filter paper became discolored and reddish. However, the lesions did not expand outside the area in contact with the filter paper. In these experiments, high population levels of the nematode were observed on desiccated leaves of both senescent strawberries and soybeans infected by the fungi *Colletotrichum* spp., *Fusarium* spp. and *Trichoderma* spp., the preferred source of nutrient for the nematode. The results of these studies show *A. pseudogoodeyi* does not have the phytoparasitic abilities of economically important foliar nematodes such as *A. besseyi*. This new species is mainly mycetophagous.



REFERENCES

Desaeger, J. and Noling, J. (2017). Foliar and bud nematodes in Florida strawberries. (ENY-068). Gainesville: University of Florida Institute of Food and Agricultural Science. <https://edis.ifas.ufl.edu/pdffiles/IN/IN118400.pdf> [accessed 11 October 2019].

Oliveira, C. J., Subbotin, S. A., Álvarez-Ortega, S., Desaeger, J., Brito, J. A., Xavier, K. V., Freitas, L. G., Vau, S. and Inserra, R. N. (2019). Morphological and molecular characterization of two Florida populations of foliar nematodes (*Aphelenchoides* spp.) isolated from strawberry with the description of *Aphelenchoides pseudogoodeyi* sp. n. (Nematoda: Aphelenchoididae) and notes on their bionomics. <https://apsjournals.apsnet.org/doi/10.1094/PDIS-04-19-0752-RE> [accessed 11 October 2019].

COLLECTORS

Collectors submitting five or more samples processed for nematological analysis during July - Sept 2019.

COLLECTOR NAME	SAMPLES PROCESSED
Alford, Brian	58
Anderson, James	14
Areingdale, Ricardo	10
Bentley, Michael	36
Bloom, Richard	122
Boyar, Jillian	244
Burgos, Frank	400
Clanton, Keith	130
Dougherty, Eric	14
Landress, Craig	6
McMahan, Michael	47
Nolen, Ashley	12
Rojas, Eric	554
Russell, Dyrana	28
Serviss, Jennifer	6
Spriggs, Charles	524
St. John, Dave	25
Taylor, Donald	12
Williams, Kevin	159
Wolfe, David	116
Youngblood, Susan	16
Yu, Wangze	12

SAMPLES FOR MORPHOLOGICAL ANALYSIS

	JULY - SEPT	2019 - YEAR TO DATE
Multistate Certification for National and International Export	1,965	6,168
California Certification	414	1,263
Pre-movement (Citrus Nursery Certification)	36	174
Site or Pit Approval (Citrus Nursery and Other Certifications)	40	152

OTHER PURPOSES

	JULY - SEPT	2019 - YEAR TO DATE
Identifications (Other Organisms)	0	1
Nematology Investigation	0	0
Plant Problems	79	136
Intrastate Survey, Random	157	496
Total	2,691	8,390

SAMPLES FOR MOLECULAR ANALYSIS

	JULY - SEPT	2019 - YEAR TO DATE
Regulatory Purposes	190	601
Other Purposes	0	0
Identifications	111	520
Surveys	0	0
Total	301	1,121



PLANT PATHOLOGY

Compiled by Hector Urbina, Ph.D.; Jodi Hansen, M.S.; Taylor Smith, B.S.;
Kishore Dey, Ph.D.; Callie Jones, and Maria Velez Climent, M.S.

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 *Ragnhildiana pseudotithoniae* U. Braun, C. Nakash., Videira & Crous (tithonia leaf spot), a new Continental USA record, was identified on *Tithonia diversifolia* (Hemsl.) A.Gray at the University of Florida in Gainesville, Florida. *Ragnhildiana pseudotithoniae* (Mycosphaerellaceae, Capnodiales) causes circular spot lesions surrounded by yellow halos, visible on both upper and lower leaf surfaces. This leaf spot was known to occur on *T. diversifolia* only in Thailand, where it was originally described as *Passalora pseudotithoniae* Crous & Cheew. Two other species in the family Mycosphaerellaceae have been reported on *Tithonia*. They are *Passalora stromatica* A.F. Fernandes & R.W. Barreto in Brazil and *Passalora tithoniae* U. Braun & Crous reported in 15 countries, mainly in Asia and South America. *Passalora tithoniae* and *R. pseudotithoniae* are almost indistinguishable morphologically, in that both species produce cylindrical conidia and abundant, unbranched, brown conidiophores on the leaf. The identification of *R. pseudotithoniae* was carried out through molecular analysis using PCR amplification of the ITS and LSU loci and megaBLAST searches, as well as through morphological and cultural characteristics. The ability of tithonia to tolerate heat and produce flowers and seeds throughout the year allow it to invade disturbed areas in tropical and subtropical regions. Due to the invasiveness of tithonia, *R. pseudotithoniae* has been considered as a biocontrol agent against it. This is the first report of *R. pseudotithoniae* occurring on tithonia in the United States. (Alachua County; 2019-100655; Robert Leahy, USDA/CAPS; 28 June 2019.)

REFERENCES

- CABI. (2019).** *Tithonia diversifolia* (tithonia). In: *Invasive Species Compendium*. Wallingford, UK: CAB International. www.cabi.org/isc [accessed 29 October 2019].
- Crous P.W., et al. (2013).** Fungal Planet description sheets 194. *Persoonia* 31: 260-261.
- Farr, D.F. and Rossman, A.Y.** Fungal Databases, U.S. National Fungus Collections, ARS, USDA. <https://nt.ars-grin.gov/fungal-databases/> [accessed 14 October 2019].
- Fernandez, A., Miranda, B.E.C., Duarte, L.L. and Barreto, R.W. (2013).** *Passalora stromatica* sp. nov. associated with leaf spots of *Tithonia diversifolia* in Brazil. *IMA Fungus* 4, 201-204.



1 - *Ragnhildiana pseudotithoniae* (tithonia leaf spot) found on *Tithonia diversifolia* in Alachua County.
Photo by Hector Urbina, DPI

QUARTERLY ACTIVITY REPORT

	JULY - SEPT	2019 - YEAR TO DATE
Budwood Samples	0	0
Citrus black spot	12	256
Citrus canker	125	316
Citrus greening / HLB	48	1,379
Honeybees	1	2
Interdictions	19	83
Laurel wilt	3	7
Pathology, general	713	1,852
Soil	89	175
Sudden oak death	0	2
Sweet orange scab-like disease	1	7
Texas phoenix palm decline	2	112
Water	2	3
Miscellaneous	7	12
Totals	1,022	4,206



🔍 PLANT PATHOLOGY IDENTIFICATION TABLE

The following table provides information about samples identified between July-September 2019. 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
<i>Adansonia digitata</i>	baobab	<i>Badnavirus</i> sp. nov.	virus	botanical garden	100903	Lee	Walter Golden	7/23/2019	new species
<i>Adansonia digitata</i>	baobab	<i>Badnavirus</i> sp. nov.	virus	botanical garden	101141	Lee	Walter Golden	8/22/2019	Continental, new species
<i>Ageratina jucunda</i>	hammock snakeroot	<i>Ragnhildiana perfoliati</i>	fungus	nature preserve	99514	Duval	Robert Leahy, Brad Danner, Morgan Byron	12/4/2018	host
<i>Cannabis sativa</i>	industrial hemp	<i>Cercospora</i> cfr. <i>beticola</i>	fungus	UF/IFAS Mid-Florida Research and Education Center	100812	Orange	Lance Osborne, Serena Stornaiuolo, Anthony Puppelo	7/24/2019	host
<i>Cannabis sativa</i>	industrial hemp	<i>Cladosporium</i> cfr. <i>angulosum</i>	fungus	UF/IFAS Mid-Florida Research and Education Center	100812	Orange	Serena Stornaiuolo, Anthony Puppelo	7/24/2019	host
<i>Cannabis sativa</i>	industrial hemp	<i>Rhizoctonia</i> sp.	fungus	UF/IFAS Tropical Research and Education Center	101237	Miami-Dade	Taylor Smith, Jodi Hansen	8/28/2019	host
<i>Cannabis sativa</i>	industrial hemp	<i>Sclerotium rolfsii</i>	fungus	IFAS Tropical Research and Education Center	101240	Miami-Dade	Taylor Smith, Jodi Hansen	8/28/2019	host
<i>Colocasia esculenta</i>	taro	<i>Badnavirus Taro Bacilliform CH virus</i>	virus	business landscape	101217	Alachua	Kishore Dey, Maria Velez-Climent	8/29/2019	Continental/State/County (reported from Hawaii)
<i>Ficus</i> sp.	fig	<i>Stagonosporopsis</i> sp.	fungus	USDA Subtropical Research Station	100993	Miami-Dade	Juan Menendez Torres	8/7/2019	host
<i>Gossypium hirsutum</i>	cotton	<i>Polerovirus Cotton leafroll dwarf virus</i>	virus	plantation	100918	Duval	Robert Leahy, Morgan Byron		
<i>Gossypium hirsutum</i>	Marie Galante cotton	<i>Polerovirus Cotton leafroll dwarf virus</i>	virus	roadside	101139	Lafayette	Robert Leahy, Morgan Byron, Sarah Furgeson	8/22/2019	county
<i>Gossypium</i> sp.	cotton	<i>Polerovirus Cotton leafroll dwarf virus</i>	virus	farm	100679	Jefferson	Michael Bentley	7/2/2019	county
<i>Gossypium</i> sp.	cotton	<i>Polerovirus Cotton leafroll dwarf virus</i>	virus	farm	100711	Gadsden	Michael Bentley	7/9/2019	county
<i>Gossypium</i> sp.	cotton	<i>Polerovirus Cotton leafroll dwarf virus</i>	virus	farm	100873	Jackson	Robert Leahy, Morgan Byron	7/24/2019	county
<i>Gossypium</i> sp.	cotton	<i>Polerovirus Cotton leafroll dwarf virus</i>	virus	farm	100977	Alachua	Kelly Douglas	8/5/2019	county



PLANT SPECIES	PLANT COMMON NAME	CAUSAL AGENT	DISEASE NAME	LOCATION TYPE	SPECIMEN NUMBER	COUNTY	COLLECTOR	DATE	NEW RECORDS
<i>Gymnocoronis spilanthoides</i>	gymnocoronis	<i>Potyvirus Bidens mottle virus</i>	virus	nursery	100095	Broward	Justin Anto	5/15/2019	host
<i>Hemianthus callitrichoides</i>	dwarf baby tears	<i>Colletotrichum</i> sp.	fungus	nursery	100773	Hillsborough	Jose Llanos	7/16/2019	host
<i>Hibiscus sabdariffa</i>	roselle	<i>Polerovirus Cotton leafroll dwarf virus</i>	virus	Agriculture center	100966	Duval	Robert Leahy, Morgan Byron	8/2/2019	host
<i>Hygrophila pinnatifida</i>	dwarf hygrophila	<i>Rhizoctonia</i> sp.	fungus	nursery	100779	Hillsborough	Jose Llanos	7/16/2019	host
<i>Jasminum nitidum</i>	star jasmine, angel wing jasmine	<i>Pelarspovirus Jasmine mosaic associated virus</i>	virus	Sea World	100229	Alachua	Kishore Dey	9/18/2019	State/ county
<i>Jasminum nitidum</i>	star jasmine, angel wing jasmine	<i>Pelarspovirus Jasmine virus H</i>	virus	Temple complex	100229	Alachua	Kishore Dey	9/18/2019	county
<i>Jasminum nitidum</i>	star jasmine, angel wing jasmine	<i>Pelarspovirus Jasmine virus H</i>	virus	Sea World	100736	Orange	Kishore Dey	7/6/2019	county
<i>Litchi chinensis</i>	lychee	<i>Moelleriella turbinata</i>	fungus	residential	100387	Palm Beach	William Churchill	6/12/2019	host
<i>Momordica charantia</i>	balsam pear, cundeamor, bitter melon; papailla	<i>Potyvirus Squash vein yellowing virus</i>	virus	roadside	100642	Miami-Dade	Olga Garcia	6/27/2019	state
<i>Morus rubra</i>	red mulberry	<i>Illavirus Prunus necrotic ringspot virus</i>	virus	nursery	100960	Alachua	Sam Hart/ Kishore Dey	7/25/2019	host
<i>Pilea cadierei</i>	aluminum-plant	<i>Fusarium solani</i>	fungus	nursery	100781	Hillsborough	Jose Llanos	7/16/2019	host
<i>Plumeria obtusa</i>	white frangipani	<i>Tobamovirus frangipani mosaic virus</i>	virus	Roadside	101100	Miami-Dade	Juan Menendez Torres	8/12/2019	country
<i>Plumeria</i> sp.	plumeria	<i>Tobamovirus frangipani mosaic virus</i>	virus	botanical garden	101283	Collier	Scott Krueger	9/16/2019	county/ host
<i>Plumeria</i> sp.	plumeria	<i>Tobamovirus frangipani mosaic virus</i>	virus	zoo	101326	Duval	Kishore Dey	8/26/2019	county
<i>Plumeria</i> sp.	plumeria	<i>Cucumovirus cucumber mosaic virus</i>	virus	zoo	101327	Duval	Kishore Dey	8/29/2019	host
<i>Psidium</i> sp.	guava	<i>Herpotrichia pinetorum</i>	fungus	nursery	100475	Duval	Lisa Tyler	6/19/2019	host
<i>Rhododendron</i> sp.	azalea	<i>Phyllosticta capitalensis</i>	fungus	nursery	101190	Lake	Abby Bartlett	8/27/2019	host
<i>Rhynchosia minima</i>	least snoutbean	<i>Begomovirus Cabbage leaf curl virus</i>	virus	roadside	100318	Miami-Dade	Olga Garcia	6/6/2019	state
<i>Tabebuia caraiba</i>	yellow trumpet tree	<i>Epicoccum sorghinum</i>	fungus	nursery	101206	Polk	Jacob Bryan	8/27/2019	host
<i>Tithonia diversifolia</i>	Mexican sunflower; tithonia; tree marigold	<i>Ragnhildiana pseudotithoniae</i>	fungus	garden center	100655	Alachua	Robert Leahy, Morgan Byron	6/28/2019	country
<i>Tridax procumbens</i>	coat buttons	<i>Puccinia emiliae</i>	fungus	business landscape	100567	Miami-Dade	Juan Aleman Martinez	6/27/2019	host





FROM THE EDITOR

By Patti J. Anderson, Ph.D.

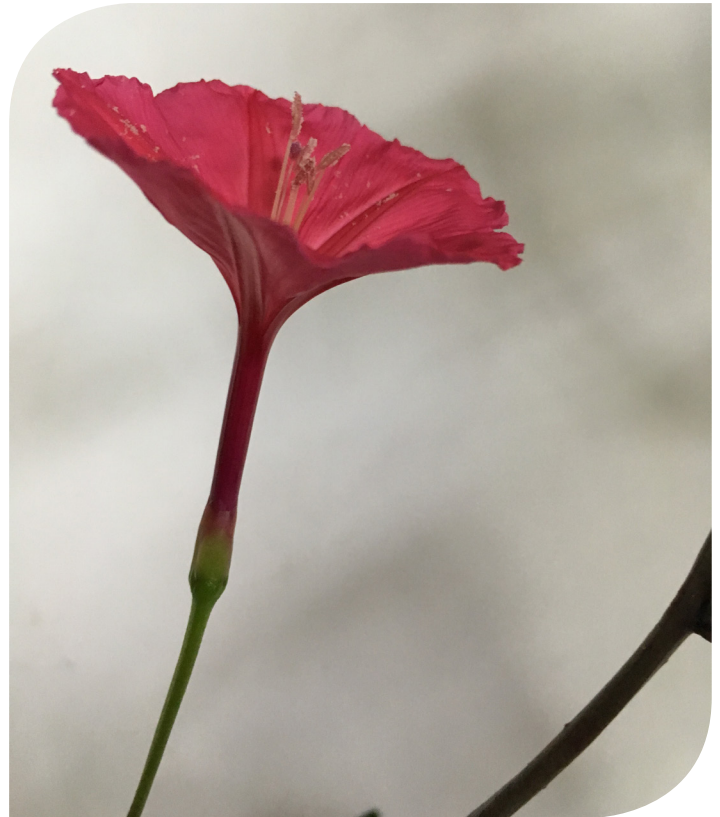
Inquiring minds want to know... how Florida protects endangered plant species!

This quarter, we have had questions about endangered plant species in Florida and how they are protected by the state. You might not be familiar with the state's rule 5B-40, regarding protections for Florida's native flora. This rule was developed

- To identify plants and protect them from unlawful harvesting on both public and privately-owned lands,
- To provide a procedure for restricted harvesting from the wild, to prevent exploitation or destruction and
- To encourage propagation.

This rule does not give our department authority over activities by the owners of private property or the building restrictions of cities and counties. However, our state regulates highway construction such that the Department of Transportation is required to look for endangered plants before projects begin.

Our protection for plant species is limited by state legislation, based on the traditions of private property following from English Common Law. In this tradition, there are differences in the ways animals and plants are understood to be protected by the English king and through his control, by the government. The king owned all wild animals because game animals could roam on and off his land, and the government (the king) restricted the ways animals could be harvested. Animals could not be taken from any land without the king's permission. Plants, not being able to move through the king's property, were considered part of the land—like soil or rocks—and were treated as property of landholders. In the United States, the Endangered Species Act of 1973 as amended reflects this distinction by providing that endangered animal species can't be taken, including killed, harmed or prevented from finding shelter, while plants can't be taken from federal land. Endangered plants on state and federal lands are protected in ways plants on private property are not.



Ipomoea microdactyla, wild-potato morning-glory; man-in-the-ground, an endangered species found in South Florida.
Photo by Patti Anderson, DPI

A permit, issued by DPI, is required to harvest endangered plants and plant parts from public lands and land not owned by the harvester. If a landowner intends to sell endangered species growing on his or her own property, a permit is also required, but plants can be destroyed on private property by the property owner without a permit. DPI makes every effort to facilitate the rescue of endangered plants when we are made aware of species in imminent danger. For more information, contact the DPI helpline at 1-888-397-1517.





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