

TRI-OLOGY

A PUBLICATION OF THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, DIVISION OF PLANT INDUSTRY
ADAM H. PUTNAM, COMMISSIONER TREVOR R. SMITH, DIVISION DIRECTOR

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DPI's Bureau of Entomology, Nematology and Plant Pathology (the botany section is included in this bureau) produces TRI-OLOGY six times a year, covering two 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.



Dialeurolonga species, possibly an undescribed whitefly.
Photograph courtesy of Ian C. Stocks, DPI.



Sansevieria trifasciata (bowstring hemp)
Photograph courtesy of Jeffrey W. Lotz, DPI



Pouzolzia zeylanica (Pouzol's bush)
Photograph courtesy of Bob Upcavage, [Atlas of Florida Vascular Plants](http://AtlasofFloridaVascularPlants.com)



Cephaleuros virescens (algal leaf spot) sporangia forming from sporangio-phore.
Photograph courtesy of Cesar Calderon, USDA APHIS PPQ, Bugwood.org

Highlights

Following are a few of the notable entries from this volume of TRI-OLOGY. These entries are reports of interesting plants or unusual pests, some of which may be problematic. See Section Reports for complete information.

***Dialeurolonga* species, possibly an undescribed whitefly.** For over 50 years, specimens of an unidentified and possibly undescribed species of whitefly have been collected sporadically from counties in South Florida, occurring exclusively on seagrape.

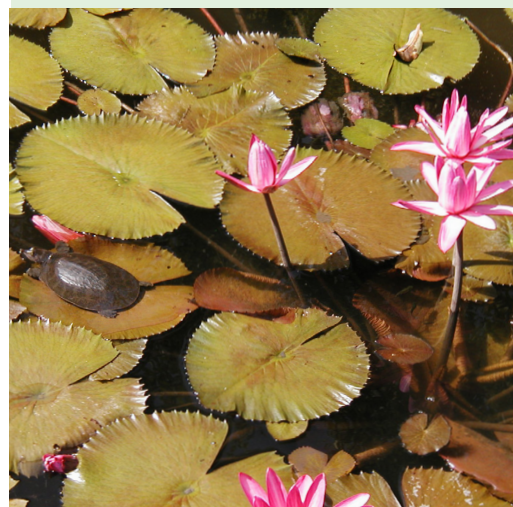
***Rotylenchulus reniformis* Linford & Oliveira, 1940, the reniform nematode, and *Scutellonema brachyurus* (Steiner, 1938) Andrassy, 1958, a spiral nematode,** were detected in the roots of snake plant, *Sansevieria trifasciata*. Populations of reniform nematode are commonly found in roots of this ornamental, especially in South Florida. Recently, a combined infestation of reniform and spiral nematodes was detected in a Central Florida nursery.

***Pouzolzia zeylanica* (L.) Benn. (Pouzol's bush),** a weedy species in the Nettle family, Urticaceae, notorious for plants with stinging hairs, is covered with hairs that are non-stinging. *Pouzolzia zeylanica* is a herbaceous perennial with a woody base.

***Cephaleuros virescens* (algal leaf spot, a parasitic alga that grows on the living leaves and stems) was found on *Ficus lyrata* (fiddle leaf fig) at a residence in Palm Beach County.** This alga is a common problem in Florida's nursery industry as well as in the natural environment.

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Photograph courtesy of Patti J. Anderson, DPI.

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We welcome your suggestions for improvement of TRI-OLOGY. Please feel free to contact me or [Dr. Patti Anderson](#) with your comments.

[Dr. Greg Hodges](#), Editor,
Assistant Director, DPI



Botany Section

Compiled by [Patti J. Anderson, Ph.D.](#)

This section identifies plants for the Division of Plant Industry, as well as for other governmental agencies and private individuals. The Botany Section maintains a reference herbarium with over 12,000 plants and nearly 1,450 vials of seeds.

Some of the samples received for identification are discussed below:

***Pouzolzia zeylanica* (L.) Benn. (Pouzolz's bush)**, from a genus of 36 species found in tropical and warm regions. Urticaceae. This weedy species in the Nettle family, notorious for plants with stinging hairs, is covered with hairs that are non-stinging. *Pouzolzia zeylanica* is a herbaceous perennial with a woody base (suffrutescent) and grows to a height of up to .5 meters. The stem and leaves are stigose to pilose (variably hairy) with leaves that can be both opposite and alternate along the stem. The leaf blades are papery, ovate to lanceolate with entire margins, three obvious veins arising from the leaf base and round cystoliths of calcium carbonate. The flowers are borne in axillary clusters with both staminate (male) and carpellate (female) flowers found in each inflorescence. Both types of flowers are small and inconspicuous with four sepals and no petals. The dry fruit is a shiny, black achene, .9 to 1.2 mm long, enclosed in a ribbed, persistent calyx. This species is originally from Asia, but has been introduced to Florida and is found in about 20 scattered counties of the peninsula along roadsides, old fields and other disturbed areas. Extracts of the plant have been used as medicine in traditional cultures, and laboratory studies of its chemistry are on-going. (Brevard County; 2015-787; Glen R. Bupp; 14 December 2015 and Brevard County; 2015-803; Glen R. Bupp; 21 December 2015.) (Wilmot-Dear, C.M. and I. Friis 2004; Wunderlin and Hansen 2016; http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=233500994 [accessed 8 January 2016]; http://keys.trin.org.au/key-server/data/0e0f0504-0103-430d-8004-060d07080d04/media/Html/taxon/Pouzolzia_zeylanica.htm [accessed 8 January 2016].

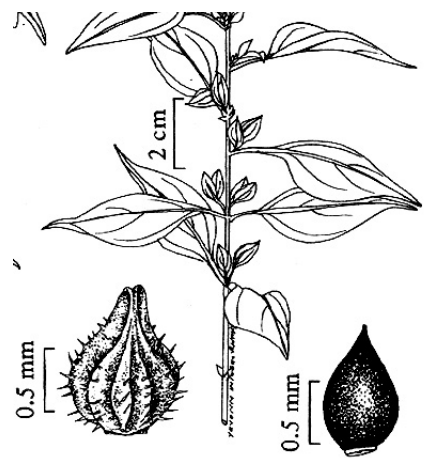
***Tetrapanax papyrifer* (Hooker) K. Koch (ricepaper plant)**, from a genus of only one species. Araliaceae. A vigorously rhizomatous shrub, growing to 4 m tall, and evergreen in mild climates. The stems are upright and sparsely branched, with the huge leaves clustered at the top, as in a palm. The leaves themselves are palmately lobed, up to 50 cm across, and covered with a dense whitish pubescence when young. The hairs persist on the lower surface, giving a bicolored effect in a breeze. The whitish flowers are borne in ballshaped umbels, and these in turn are arranged in large and showy panicles. The plants usually start to bloom in January in northern Florida but these samples arrived in December, in full bloom. In China, Rice paper was originally made from the pith of these plants and it is the source of a traditional medicine. Today, the plant is used primarily as an ornamental, and because it is relatively drought tolerant, it is suitable for xeriscapes. With its bold leaves and large inflorescences, it can be spectacular, but it spreads too vigorously for many gardens. It is thought to be native to Taiwan; in Florida, it has escaped cultivation and has been found in over 10 counties scattered around the state. (Marion County; B2015-788; Shelly M. Wayte; 15 December 2015, Putnam County; B2015-791; Sol F. Looker; 16 December 2015 and B2015-801; Sol F. Looker; 18 December 2015.) (Mabberley 2008; Staples and Herbst 2005; Wunderlin and Hansen 2011; <http://flora.huh.harvard.edu/china/PDF/PDF13/Tetrapanax.pdf> [accessed 6 January 2016]

Sample Submissions

	November December	Year to date
Samples submitted by other DPI sections	753	6,216
Samples submitted for botanical identification only	79	805
Total samples submitted	832	7,021
Specimens added to the herbarium	161	602



Pouzolzia zeylanica (Pouzolz's bush)
Photograph courtesy of Bob Upcavage, [Atlas of Florida Vascular Plants](#).



Pouzolzia zeylanica (Pouzolz's bush) Note the ribbed calyx and smooth black achene.
Illustration from [Flora of North America](#)

References

- Mabberley, D.J. 2008.** Mabberley's plant-book: a portable dictionary of plants, their classification and uses, 3rd edition. Cambridge University Press, New York, New York. 1,021 p.
- Staples, G.W. and D.R. Herbst. 2005.** A tropical garden flora: plants cultivated in the Hawaiian Islands and other tropical places. Bishop Museum Press, Honolulu, Hawaii. 908 p.
- Wilmot-Dear, C.M. and I. Friis. 2004.** The Old World species of *Pouzolzia* (Urticaceae, tribus Boehmerieae). A taxonomic revision. *Nordic Journal of Botany* 24: 5–111.
- Wunderlin, R.P. and B.F. Hansen. 2016.** Flora of Florida, Volume III. University Press of Florida, Gainesville, Florida. 328 p.
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Tetrapanax papyrifer (ricepaper plant) Leaf
Photograph courtesy of [Hectonichus](#)



Tetrapanax papyrifer (ricepaper plant) inflorescence
Photograph courtesy of [KENPEI photo.](#)

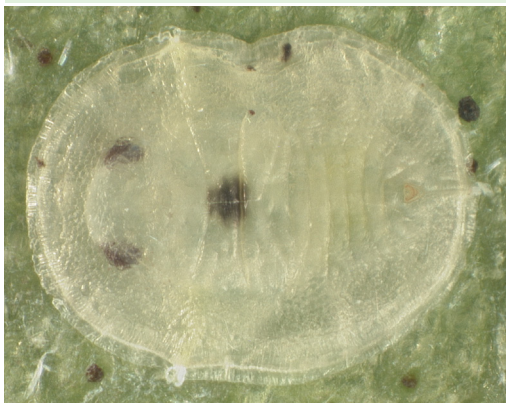
The following table provides information about samples identified as new county records during the time period of the current issue.

Another table with information about all samples identified during this time is downloadable as a [PDF](#) or an [Excel](#) spreadsheet. The table is organized alphabetically by collector name, with new county records listed first.

New Record	1st Collector Name	Additional Collectors	Plant Species	County
*	Glen Bupp		<i>Pouzolzia zeylanica</i> (L.) Benn.	Brevard
*	Kaleigh Hire		<i>Imperata cylindrica</i> (L.) P. Beauv.	St. Johns
*	Kelly K. Douglas		<i>Lygodium japonicum</i> (Thunb.) Sw.	Taylor
*	Linda G. McRay		<i>Clerodendrum x speciosum</i> Dombrain	Pinellas
*	Mark R. Terrell		<i>Cleome gynandra</i> L.	Hendry
*	Scott Tedford, DEP		<i>Hygrophila polysperma</i> (Roxb.) T. Anderson	Martin
*	Shelly M. Wayte	Cheryl A. Jones	<i>Tetrapanax papyrifer</i> (Hooker) K. Koch	Marion

Sample/Specimen Submissions

November	
Samples Submitted	402
Specimens Identified	12,672
December	
Samples Submitted	414
Specimens Identified	20,627
Year to Date	
Samples Submitted	6,853
Specimens Identified	135,373



Dialeurolonga sp., possibly an undescribed whitefly
Photograph courtesy of Ian C. Stocks, DPI



Eupteryx decemnotata, Ligurian leafhopper
Photograph courtesy of Alessandra Rung, California Department of Food and Agriculture



Fiorinia externa, elongate hemlock scale
Photograph courtesy of Ian C. Stocks, DPI

Entomology Section

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 with over 9 million specimens), and investigates the biology, biological control and taxonomy of arthropods.

***Dialeurolonga* species, possibly an undescribed whitefly.** For over 50 years, specimens of an unidentified and possibly undescribed species of whitefly have been collected sporadically from counties in South Florida, occurring exclusively on seagrape (*Coccoloba uvifera*). Slides in the FSCA slide collection bear the genus name "*Pealius* sp.," a large genus with several species known from Florida. However, it is much more likely to be in the genus *Dialeurolonga*, which is primarily an Asian and African-Malagasian genus, with no species known from the United States. *Dialeurolonga* species resemble species of *Pealius* and *Dialeurodes*. There are currently 44 species assigned to *Dialeurolonga*, and it will take additional time and examination of type slides of other species to determine if the species in Florida is known or undescribed. (Palm Beach County; E2015-5651; Matthew M. Miller; 28 September 2015 and Palm Beach County; E2015-5949; Matthew M. Miller; 19 October 2015.) (Dr. Ian C. Stocks.)

***Eupteryx decemnotata*, Ligurian leafhopper, truck interdiction, dog detection.** This Old World leafhopper was intercepted in Florida on topiary rosemary (*Rosmarinus officinalis*) plants from California in 2008, which was the first Western Hemisphere record for the pest of mint and its relatives. We have continued to intercept Ligurian leafhoppers from California, but there is no indication that the pest has established in Florida. In December 2015, the pest was intercepted on rosemary plants at the interdiction station in Pensacola and by a detector dog in Miami (Escambia County; E2015-6502; Mary Ann Flores; 3 December 2015 and Miami-Dade County; E2015-6562; Ives Lopez and K-9; 8 December 2015.) (Dr. Susan E. Halbert.)

***Fiorinia externa*, elongate hemlock scale, multiple interceptions.** Christmas trees imported during the holiday season occasionally harbor unwelcome visitors, such as spiders, snails and aphids. For the last few years, Fraser fir trees (*Abies fraseri*) grown in North Carolina have often been infested with elongate hemlock scale, an armored scale that is native to Asia. This species has become established throughout the temperate eastern United States and has occasionally been a major pest of hemlock and other conifer species. The scale. (First of 20 records for 2015: Duval County; E2015-6391; Lisa M. Hassell; 20 November 2015.) (Dr. Ian C. Stocks.)

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

Plant Name	Plant Common Name	Arthropod	Arthropod Common Name	County	Records
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Duval	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Duval	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Duval	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Miami-Dade	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	St. Johns	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	St. Johns	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	St. Johns	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Doral	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Duval	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Duval	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Duval	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Duval	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Duval	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	St. Johns	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	St. Johns	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Monroe	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Nassau	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Duval	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Duval	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Duval	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Duval	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Fiorinia externa</i>	an armored scale	Broward	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Hemiberlesia ithacae</i>	hemlock scale	Duval	REGULATORY INCIDENT
<i>Abies fraseri</i>	Fraser's fir, southern balsam fir	<i>Xanthochilus saturnius</i>	Mediterranean seed bug	Escambia	TRUCK INTERDICTION
<i>Acacia baileyana</i>	cootamundra wattle	<i>Acizzia</i> sp.	a psyllid	Miami-Dade	REGULATORY INCIDENT
<i>Agave</i> sp.		<i>Paracoccus gillianae</i>	a mealybug	Orange	REGULATORY INCIDENT
<i>Buxus sempervirens</i>	common box	<i>Monarthropalpus flavus</i>	Boxwood leaf miner	Escambia	TRUCK INTERDICTION
<i>Capsicum annuum</i>	pepper	<i>Bactericera cockerelli</i>	potato psyllid	Escambia	TRUCK INTERDICTION
<i>Celtis laevigata</i>	hackberry; sugarberry	<i>Toxotrypana curvicauda</i>	papaya fruit fly	Glades	COUNTY
<i>Citrus sinensis</i>	sweet orange	<i>Ocyptamus cubanus</i>	a flower fly	Clay	COUNTY
<i>Colocasia esculenta</i>	dasheen; wild taro; taro	<i>Tarophagus colocasiae</i>	a taro planthopper	Marion	COUNTY
<i>Eucalyptus pulverulenta</i>	eucalyptus	<i>Ctenarytaina</i> sp.	a eucalyptus psyllid	Escambia	TRUCK INTERDICTION
<i>Hylocereus undatus</i>	nightblooming cactus, dragon fruit, queen of the night, pitaya	<i>Aphis craccivora</i>	cowpea aphid	Miami-Dade	HOST
<i>Lactuca sativa</i>	lettuce, romaine lettuce, leaf lettuce	<i>Ceratagallia californica</i>	a leafhopper	Suwannee	TRUCK INTERDICTION
<i>Lactuca sativa</i>	lettuce, romaine lettuce, leaf lettuce	<i>Ceratagallia californica</i>	a leafhopper	Escambia	TRUCK INTERDICTION
<i>Lactuca sativa</i>	lettuce, romaine lettuce, leaf lettuce	<i>Ceratagallia californica</i>	a leafhopper	Suwannee	TRUCK INTERDICTION
<i>Lactuca sativa</i>	lettuce, romaine lettuce, leaf lettuce	<i>Liriomyza langei</i>	California pea leafminer	Suwannee	TRUCK INTERDICTION
<i>Lactuca sativa</i>	lettuce, romaine lettuce, leaf lettuce	<i>Lygus elisus</i>	pale legume bug	Escambia	TRUCK INTERDICTION

Plant Name	Plant Common Name	Arthropod	Arthropod Common Name	County	Records
<i>Lactuca sativa</i>	lettuce, romaine lettuce, leaf lettuce	<i>Lygus elisus</i>	pale legume bug	Escambia	TRUCK INTERDICTION
<i>Lactuca sativa</i>	lettuce, romaine lettuce, leaf lettuce	<i>Polistes aurifer</i>	golden paper wasp	Suwannee	TRUCK INTERDICTION
<i>Passiflora</i> sp.	passionflower	<i>Disonychia quinquelineata</i>	five-striped flea beetle	Broward	COUNTY
<i>Pennisetum purpureum</i>	elephant grass; napier grass; Merker grass	<i>Leptodictya tabida</i>	sugarcane lacebug	Hillsborough	HOST
<i>Phoenix dactylifera</i>	date palm	<i>Phoenicococcus marlatti</i>	red date scale	Duval	REGULATORY INCIDENT
<i>Phoenix</i> sp.		<i>Raoiella indica</i>	red palm mite	Polk	COUNTY
<i>Pinus elliotii</i>	slash pine	<i>Xyleborinus andrewesi</i>	a scolytid beetle	Brevard	COUNTY
<i>Pinus</i> sp.	pine	<i>Coccotrypes aciculatus</i>	a scolytid beetle	Sarasota	COUNTY
<i>Pinus</i> sp.	pine	<i>Xylosandrus amputatus</i>	a scolytid beetle	Hamilton	COUNTY
<i>Quercus shumardii</i>	Shumard oak	<i>Coccotrypes aciculatus</i>	a scolytid beetle	Orange	COUNTY
<i>Quercus</i> sp.	oak	<i>Anatrachyntis simplex</i>	false pink bollworm	Highlands	COUNTY
<i>Quercus</i> sp.	oak	<i>Euwallacea fornicatus</i>	tea shot hole borer	Sarasota	COUNTY
<i>Quercus</i> sp.	oak	<i>Sphenophorus marinus</i>	a billbug	Suwannee	COUNTY
<i>Quercus virginiana</i>	live oak	<i>Coccotrypes aciculatus</i>	a scolytid beetle	St. Lucie	COUNTY
<i>Quercus virginiana</i>	live oak	<i>Coccotrypes aciculatus</i>	a scolytid beetle	Brevard	COUNTY
<i>Ricinus communis</i>	castorbean	<i>Oebalus ypsilon</i>	a rice stink bug	Highlands	COUNTY
<i>Rosmarinus officinalis</i>	rosemary	<i>Eupteryx decemnotata</i>	Ligurian leafhopper	Escambia	TRUCK INTERDICTION
<i>Rosmarinus officinalis</i>	rosemary	<i>Eupteryx decemnotata</i>	Ligurian leafhopper	Miami-Dade	REGULATORY INCIDENT
<i>Senna</i> sp.		<i>Vanduzeeia segmentata</i>	a treehopper	Palm Beach	COUNTY
<i>Senna surattensis</i>	glossy shower	<i>Vanduzeeia segmentata</i>	a treehopper	Palm Beach	HOST
<i>Smilax</i> sp.	greenbrier	<i>Digitivalva clarkei</i>	an acrolepiid moth	Putnam	COUNTY
<i>Stenotaphrum secundatum</i>	St. Augustine grass	<i>Lissachatina fulica</i>	giant African land snail	Miami-Dade	QUARANTINABLE PEST
<i>Stenotaphrum secundatum</i>	St. Augustine grass	<i>Lissachatina fulica</i>	giant African land snail	Miami-Dade	QUARANTINABLE PEST
		<i>Chorrera extrincica</i>	a pyralid moth	Miami-Dade	COUNTY
		<i>Delphacodes recurvata</i>	a delphacid planthopper	Collier	COUNTY
		<i>Dryadula</i> sp.	a dancing moth	Broward	COUNTY
		<i>Pareuidella spatulata</i>	a delphacid planthopper	Collier	COUNTY
		<i>Phoenicococcus marlatti</i>	red date scale	Escambia	TRUCK INTERDICTION
		<i>Phoenicococcus marlatti</i>	red date scale	Escambia	TRUCK INTERDICTION
		<i>Synaptonecta issa</i>	a water boatman	Collier	COUNTY

Nematology Section

Compiled by [Renato N. Inserra, Ph.D.](#), [Jason D. Stanley, M.S.](#), [Janete A. Brito, Ph.D.](#) and [Charles L. Spriggs](#)

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.

Nematodes of Special Interest

Rotylenchulus reniformis Linford & Oliveira, 1940, the reniform nematode, and *Scutellonema brachyurus* (Steiner, 1938) Andrassy, 1958, a spiral nematode, were detected in the roots of snake plant, *Sansevieria trifasciata* Prain. (Lake County, N15-01326, Charles L. Spriggs, 8 December 2015.)

Sansevierias are perennial, rhizomatous herbs native to subtropical and tropical Africa and South Asia. They include species with elongated leaves that are used commercially for the production of strong, waterproof fibers known as bowstring hemp. *Sansevieria trifasciata* (bowstring hemp, snake plant), a durable outdoor and indoor ornamental, is the most common *Sansevieria* species grown in Florida. It tolerates soil nutrient imbalances and nematode infestations. Populations of the reniform nematode are commonly found in roots of this ornamental, especially in South Florida. Recently, a combined infestation of reniform and spiral nematodes was detected in a Central Florida nursery. Infested plants did not show evident symptoms of decline; however, numerous specimens of these two nematodes were found in the roots and associated soil. The lack of damaging symptoms in nematode infested snake plants encourages the introduction of regulatory nematodes, such as the reniform nematode, in nurseries using asymptomatic snake plants for propagation. Testing sansevierias for the presence of regulatory nematodes with appropriate nematological analyses is an effective, preventative phytosanitary measure that should be considered by nursery owners to avoid the introduction of nematodes from *Sansevieria*.



Sansevieria trifasciata (bowstring hemp)
Photography courtesy of Jeffrey W. Lotz, DPI

Sample Submissions

	November December	Year to date
Morphological Identifications	1,086	10,860
Molecular Identifications	632	1,201
Total Samples Submitted	1,718	12,061

Certification and Regulatory Samples

	November December	Year to date
Multistate Certification for National and International Export	736	7,903
California Certification	225	1,782
Pre- movement (Citrus Nursery Certification)	6	278
Site or Pit Approval (Citrus Nursery and Other Certifications)	25	159

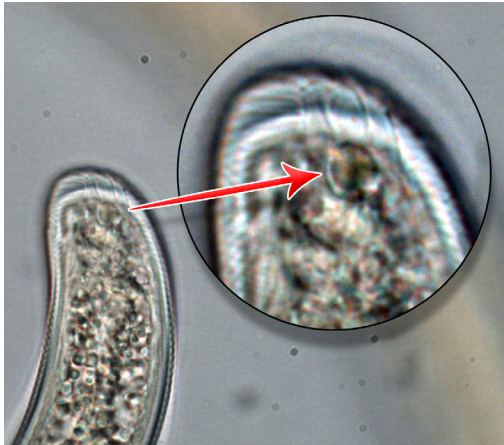
Other Samples

	November December	Year to date
Identifications (invertebrate)	1	14
Plant Problems	12	118
Intrastate Survey, Random	81	606
Molecular Identifications*	632	1,201

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



Scutellonema brachyurus female. A) entire body.
Photography courtesy of Jason D. Stanley, DPI



Scutellonema brachyurus female. B) Terminal portion of the tail showing the large scutellum (a chemoreceptor sensory organ) indicated by an arrow.
Photography courtesy of Jason D. Stanley, DPI



Swollen female of the reniform nematode *Rotylenchulus reniformis*. Scale bar = 50 μm.
Photography courtesy of Renato N. Inserra, DPI

References

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Plant Pathology Section

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The Plant Pathology section provides plant disease diagnostic services for 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.

Cephaleuros virescens (algal leaf spot, a parasitic alga that grows on the living leaves and stems) was found on *Ficus lyrata* (fiddle leaf fig) at a residence in Palm Beach County. This alga is a common problem in Florida's nursery industry as well as in the natural environment. This fall, weather conditions were ideal for increasing algal spore production with usually high temperatures, humidity, and rainfall.

Symptoms of this disease include superficial reddish or pale green, raised, netlike circular leaf spots on the upper surface of leaves. When conditions are favorable for sporangiophore (algal spore forming structure) formation, the leaf spots are reddish. The spots remain pale green when sporangia are not produced. In addition to leaves, the alga can infect twigs and branches and result in girdling lesions. Superficial cell damage to branch tissue can make the host plant more susceptible to fungal infection. Although algal leaf spot is predominantly an aesthetic issue, some infestations may warrant treatment with a copper fungicide. Cultural strategies may be sufficient to control this disease. Maintaining plant vigor through proper irrigation and fertilization, pruning overhead trees around diseased plants to help lower humidity levels, and raking up fallen infected leaves are also important for managing this disease. (Palm Beach County; P2015-87152; Richard G. Tordi; 29 December 2015.)

References

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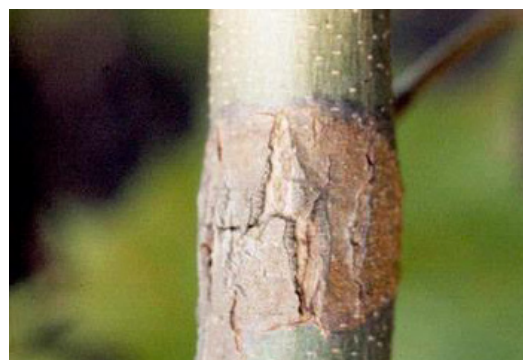
Cephaleuros virescens (algal leaf spot) sporangia forming from sporangiophore. Photograph courtesy of Cesar Calderon, USDA APHIS PPQ, Bugwood.org

Sample Submissions

	November December	Year to date
Citrus Black Spot	17	48
Citrus Canker	73	1,068
Citrus Greening HLB	57	805
Honeybees	1	4
Interdictions	5	21
Laurel Wilt	16	104
Pathology, General	298	2,843
Soil	0	29
Sudden Oak Death	0	10
Sweet Orange Scab-Like Disease	1	2
Texas Phoenix Palm Decline	0	4
Water	0	0
Miscellaneous	0	18
Total	468	4,956



Cephaleuros virescens (algal leaf spot) leaf symptoms. Photograph courtesy of Holly Thornton, University of Georgia, Bugwood.org



Cephaleuros virescens (algal leaf spot) stem symptoms. Photograph courtesy of Florida Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Bugwood.org

Plant Species	Plant Common Name	Causal Agent	Disease Name	Location Type	Specimen #	County	Collector	Date	New Records	Comments
<i>Citrus meyeri</i>	meyer lemon	<i>Liberibacter asiaticus</i>	Huanglongbing	Farm	86898	Baker	M. Janie Echols	11/25/2015	county	Huanglongbing (HLB), also known as citrus greening, is a serious bacterial disease of citrus that attacks the vascular system of plants. The HLB bacteria is transmitted primarily by insect vectors (citrus psyllids), but can also be spread through movement of infected plant material.
<i>Citrus</i> sp.	citrus	<i>Liberibacter asiaticus</i>	Huanglongbing	Residence	86923	Levy	Robert M. Leahy, USDA/ CAPS; Bradley A. Danner, DPI/ CAPS	12/7/2015	county	Huanglongbing (HLB), also known as citrus greening, has spread to yet another county.
<i>Ficus lyrata</i>	fiddle-leaf fig	<i>Cephaleuros virescens</i>	algal leaf spot	Residence	87152	Palm Beach	Richard G. Tordi	12/29/2015		<i>Cephaleuros virescens</i> is the most frequently reported algal pathogen of higher plants worldwide and has the broadest host range among <i>Cephaleuros</i> species. Leaf spot symptoms can decrease the market value of nursery grown trees.
<i>Melaleuca</i> sp.	bottle brush	<i>Rhizoctonia</i> sp.	root and stem rot	Nursery	87073	Citrus	Stacey S. Simmons	12/15/2015		Poor soil conditions and over-watering allow fungi such as <i>Rhizoctonia</i> sp. to proliferate across the root structure.

Plant Species	Plant Common Name	Causal Agent	Disease Name	Location Type	Specimen #	County	Collector	Date	New Records	Comments
<i>Musa</i> sp.	banana	<i>Deightoniella torulosa</i>	leaf spot	Nursery	86913	Lee	Walter W. Golden	12/1/2015		Black spot of banana caused by the fungus <i>Deightoniella torulosa</i> is a leaf spotting disease occurring in many banana-growing areas of the world. The first symptom appears as tiny black spots near the leaf margin. As the disease progresses, the spots increase in size and are delimited by a black border surrounded by a yellow band. <i>D. torulosa</i> also causes a fruit disease of banana known as black-tip.
<i>Euphorbia millii</i>	crown-of-thorns	<i>Rhizoctonia</i> sp.	leaf blight	Nursery	87071	Lake	Mary C. Sellers	12/17/2015		<i>Euphorbia millii</i> (crown of thorns) is not especially susceptible to disease, but constantly moist soil can lead to fungal diseases such as <i>Rhizoctonia</i> sp.
<i>Ipomoea aquatica</i>	water spinach	<i>Coleosporium ipomoeae</i>	white rust	Farm	87132	Hillsborough	Joseph S. Hawk	12/28/2015		<i>Coleosporium ipomoeae</i> is a white rust fungus that is found mainly on sweet potatoes but can be found on other hosts, including water spinach. Like all rusts, this pathogen can be severely damaging.
<i>Pittosporum tobira</i>	variegated pittosporum	<i>Kutilakesa pironii</i>	stem gall	Nursery	87120	Clay	Sol F. Looker, Cheryl A. Jones	12/21/2015		<i>Kutilakesa pironii</i> , a wound pathogen on woody plants, can cause stem galling and cankers.