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TRI-OLOGY

A PUBLICATION FROM THE DIVISION OF PLANT INDUSTRY, BUREAU OF ENTOMOLOGY, NEMATODOLOGY, 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



Brunerella magnifica
 Photograph by Andy Boring, DPI

ABOUT TRI-OLGY

The Florida Department of Agriculture and Consumer Services Division of Plant Industry's Bureau of Entomology, Nematology, and Plant Pathology (ENPP), including the Botany Section, produces TRI-OLGY 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-OLGY

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

Thank you,

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TABLE OF CONTENTS

	HIGHLIGHTS	03
Noteworthy examples from the diagnostic groups throughout the ENPP Bureau.		
	BOTANY	04
Quarterly activity reports from Botany and selected plant identification samples.		
	ENTOMOLOGY	08
Quarterly activity reports from Entomology and samples reported as new introductions or interceptions.		
	NEMATOLOGY	15
Quarterly activity reports from Nematology and descriptions of nematodes of special interest.		
	PLANT PATHOLOGY	18
Quarterly activity reports from Plant Pathology and selected identified plant pest and disease samples.		
	FROM THE EDITOR	21
Articles of interest that vary in subject matter.		

Cover Photo

Antigonon leptopus Hooker & Arnott, coral vine; queen's jewels
 Photograph by C.T. Johansson, [wikimedia](#)



HIGHLIGHTS



1 *Tridax procumbens* L. (**coatbuttons**), is a species listed as a federal noxious weed. It is native to Mexico and tropical America, but has become naturalized elsewhere. In Florida, it is in the central and southern peninsula and Leon County. This quarter, it was documented for the first time in Putnam, Sumter and Citrus counties.



1 - *Tridax procumbens*, coatbuttons.
Photography from Shutterstock

2 *Meloidoderita whittoni* (Sledge & Christie, 1962) comb. n., a tylenchuloid nematode, was detected in the roots of the forest tree, *Liquidambar styraciflua* (sweetgum). Sweetgum is a native tree in hardwood forests throughout warm and temperate areas of North America. In Florida, this tree can be infested by tylenchuloid nematodes, sedentary semi-endoparasites of feeder roots. Among these tylenchuloids, *Meloidoderita whittoni* is the most common species found parasitizing the tree in central and north Florida forests.



2 - *Meloidoderita whittoni*, a tylenchuloid nematode.
Photography by A. Troccoli, CNR-IPSP

3 *Botryosphaeria dothidea* (Moug.) Ces. & De Not. (**stem dieback**) was identified on a dead twig of *Olea europaea* L. (olive) collected at an agriculture research center in Suwannee County. This is the first report of *B. dothidea* on olives in Florida. Previous reports of *B. dothidea* in Florida occurred on blueberries, *Citrus* spp., crab apples, grapes and peaches.



3 - *Botryosphaeria dothidea*, stem dieback.
Canker stem lesions produced by pycnidia on *Olea europaea* twig.
Photograph by Hector Urbina, DPI

4 *Myzus fataunae* Shinji, **pilea aphid**, a new Western Hemisphere record. Minute aphids were found on *Pilea cadierei* (aluminum plant) and other species of *Pilea* at a nursery that produces plants for dish gardens. Prior to their discovery in Florida, these aphids were known only from Japan and Korea.



4 - *Myzus fataunae*, pilea aphid.
Close view on plant stem.
Photograph by Lyle J. Buss, University of Florida





BOTANY

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 13,000 plants and 1,400 vials of seeds.

QUARTERLY ACTIVITY REPORT

	JULY - SEPTEMBER	2018 - YEAR TO DATE
Samples submitted by other DPI sections	1,531	4,744
Samples submitted for botanical identification only	298	814
Total samples submitted	2,260	5,558
Specimens added to the Herbarium	100	238

Some of the samples received for identification are discussed below:

1 *Antigonon leptopus* Hooker & Arnott (coral vine; queen's jewels), from a genus of three to six 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 frequently found on hammock margins and disturbed sites from the Keys to the western panhandle. This species is listed by the Florida Exotic Pest Plant Council (FLEPPC) as Invasive Species-Category II (*i.e.*, invasive exotics that have increased in abundance or frequency, but have not yet altered Florida plant communities by displacing native species or changing ecological functions), but it is not regulated as a noxious weed. This vine can be herbaceous or woody and grow to 15 m long. 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 sometimes white flowers. The vine climbs by tendrils and is planted as an ornamental to cover trellises or fences but has escaped to clamber over trees and shrubs in natural areas. The species was documented for the first time in three new counties this quarter. (Putnam County; B2018-599; Nora V. Marquez; 27 July 2018; Citrus County; B2018-659; Nora V. Marquez; 21 August 2018 and Volusia County; B2018-726; Melanie Cain; 6 September 2018.) (Mabberley 2017; Wunderlin and Hansen 2011; Wunderlin *et al.* 2017; <https://plants.ifas.ufl.edu/plant-directory/antigonon-leptopus/> [accessed 19 October 2018].)



1a - *Antigonon leptopus* (coral vine) infestation.
Photograph by Shirley Denton, [Atlas of Florida Plants](#)



1b - *Antigonon leptopus* (coral vine) leaf and flowers.
Photograph by Dan Clark, [Invasive.org](#)



2 *Paederia foetida* L. (skunkvine), from a genus of 30 tropical lianas in the plant family Rubiaceae. This noxious weed is native to temperate and tropical Asia. In Florida, it has escaped from cultivation and is frequently found in hammocks and on disturbed sites in counties scattered through the peninsula and the panhandle. In the rest of the United States, it occurs in Hawaii, Texas, Louisiana, Georgia and the Carolinas. *Paederia foetida* (skunkvine) and its close relative, *P. cruddasiana* (sewervine), are very similar aggressive, fast-growing vines. Both vines can trail over the ground or climb high up in trees forming thick, tangled masses of vegetation, killing trees and understory plants, but sewervine has been found only in Broward and Miami-Dade counties within Florida. The vines can reach over 30 feet in length and can produce roots at nodes along the stem. The leaves are opposite or whorled, with a disagreeable (skunklike) odor when crushed. The leaf blades are variable, but usually lobed or cordate (heart shaped) at base and have a flap of tissue (interpertiolear stipule) between the two leaves at each node. The small flowers are pinkish-white, grayish-pink or pale purple in color with a darker purplish-red throat. The corolla shape is tubular with five short lobes. The outside of the flower tube is densely hairy. The fruit is a shiny brown, pea-sized, spherical capsule. Skunkvine is included by FLEPPC in its 2017 list of invasive species as Category I (species that are proven to be invading and disrupting native plant communities). The following samples submitted this quarter represent new county records. (Lake County; B2018-622; Nora V. Marquez; 6 August 2018 and Manatee County; B2018-769; Susan B. Youngblood; 18 September 2018.) (Langeland *et al.* 2008; <https://www.fleppc.org/list/list.htm> [accessed 23 October 2018].)



2 - *Paederia foetida* L. (skunkvine) flowers and leaves. Photograph by Denis Girard, [Atlas of Florida Plants](#)

3 *Tridax procumbens* L. (coatbuttons), from a genus of about 30 species native to the Americas, especially Mexico, in the plant family Compositae/Asteraceae. This species is listed as a federal noxious weed. It is native to Mexico and tropical America but has become naturalized elsewhere. In Florida, it is found mainly in the central and southern peninsula and Leon County where it grows in vacant lots and along roadsides, as well as in lawns, nursery containers and sidewalk cracks. This quarter it was documented for the first time in Putnam, Sumter and Citrus counties. *Tridax procumbens* is a troubling weed of various crops in South Asia, several Pacific islands and tropical Africa, but it is not yet a serious weed in North America. This herbaceous plant has opposite leaves, growing along the ground without rooting at the nodes. The variable leaves may be arrow-shaped or ovate and often lobed or coarsely toothed. The flowering heads are usually borne singly, with three to eight non-overlapping, creamy yellow (sometimes white or purplish) three-lobed, daisy-like ray florets and 40–80 yellow disc florets. The fruit is a dry, single-seeded achene with a feathery crown (pappus). (Putnam County; B2018-593; Nora V. Marquez; 27 July 2018; Sumter County; B2018-680; Abby L. Bartlett and Jessica Begley; 24 August 2018 and Citrus County; B2018-752; Nora V. Marquez; 11 September 2018.) (<https://www.invasive.org/browse/subinfo.cfm?sub=4554> [accessed 29 October 2018]; http://keys.trin.org.au/key-server/data/0e0f0504-0103-430d-8004-060d07080d04/media/Html/taxon/Tridax_procumbens.htm [accessed 29 October 2018].)



3 - *Tridax procumbens* L. (coatbuttons) flowers. Photograph by Roger Hammer, [Atlas of Florida Plants](#)



REFERENCES

- Langeland, K.A., H.M. Cherry, C.M. McCormick and K.A. Craddock Burks. 2008.** Nonnative plants in Florida's natural areas. The University of Florida, IFAS Communications Services, Gainesville, Florida. 193 p.
- Mabberley, D.J. 2017.** Mabberley's plant-book: a portable dictionary of plants, their classification and uses, 4th edition. Cambridge University Press, New York, New York. 1,102 p.
- Wunderlin, R.P. and B.F. Hansen. 2011.** Guide to the vascular plants of Florida, 3rd edition. University Press of Florida, Gainesville, Florida. 783 p.
- Wunderlin, R.P., B.F. Hansen and A.R. Franck. 2017.** Flora of Florida, Volume IV: Dicotyledons, Combretaceae through Amaranthaceae. University Press of Florida, Gainesville, Florida. 384 p.



🔍 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 1	COLLECTOR 2	COUNTY	SAMPLE NUMBER	COLLECTION DATE	GENUS	SPECIES
🔍	Abby L. Bartlett	Jessica Begley	Sumter	B2018-679	Aug 24, 2018	<i>Cleome</i>	<i>rutidosperma</i>
🔍	Abby L. Bartlett	Tamika Varela	Sumter	B2018-568	Jul 20, 2018	<i>Commelina</i>	<i>benghalensis</i>
🔍	Abby L. Bartlett		Sumter	B2018-767	Sep 18, 2018	<i>Mirabilis</i>	<i>jalapa</i>
🔍	Abby L. Bartlett		Sumter	B2018-776	Sep 20, 2018	<i>Pueraria</i>	<i>montana</i> var. <i>lobata</i>
🔍	Abby L. Bartlett		Lake	B2018-542	Jul 13, 2018	<i>Rottboellia</i>	<i>cochinchinensis</i>
🔍	Abby L. Bartlett		Lake	B2018-541	Jul 13, 2018	<i>Solanum</i>	<i>viarum</i>
🔍	Abby L. Bartlett	Jessica Begley	Sumter	B2018-680	Aug 24, 2018	<i>Tridax</i>	<i>procumbens</i>
🔍	Alexander Tasi		Indian River	B2018-773	Sep 18, 2018	<i>Cynanchum</i>	<i>angustifolium</i>
🔍	David St. John		Manatee	B2018-627	Aug 6, 2018	<i>Sideroxylon</i>	<i>salicifolium</i>
🔍	Larry L. Violet		Sumter	B2018-642	Aug 15, 2018	<i>Mirabilis</i>	<i>jalapa</i>
🔍	Melanie Cain		Volusia	B2018-726	Sep 6, 2018	<i>Antigonon</i>	<i>leptopus</i>
🔍	Melanie Cain		Lake	B2018-565	Jul 17, 2018	<i>Eriobotrya</i>	<i>japonica</i>
🔍	Melanie Cain		Flagler	B2018-585	Jul 24, 2018	<i>Uniola</i>	<i>paniculata</i>
🔍	Nora V. Marquez		Citrus	B2018-612	Jul 31, 2018	<i>Abrus</i>	<i>precatorius</i>
🔍	Nora V. Marquez		Lake	B2018-540	Jul 13, 2018	<i>Agave</i>	<i>americana</i>
🔍	Nora V. Marquez		Putnam	B2018-599	Jul 27, 2018	<i>Antigonon</i>	<i>leptopus</i>
🔍	Nora V. Marquez		Citrus	B2018-659	Aug 21, 2018	<i>Antigonon</i>	<i>leptopus</i>
🔍	Nora V. Marquez		Hernando	B2018-660	Aug 22, 2018	<i>Clematis</i>	<i>terniflora</i>
🔍	Nora V. Marquez		Hernando	B2018-662	Aug 22, 2018	<i>Commelina</i>	<i>benghalensis</i>
🔍	Nora V. Marquez		Hernando	B2018-757	Sep 12, 2018	<i>Cuscuta</i>	<i>pentagona</i>
🔍	Nora V. Marquez		Lake	B2018-578	Jul 24, 2018	<i>Dioscorea</i>	<i>alata</i>
🔍	Nora V. Marquez		Putnam	B2018-598	Jul 27, 2018	<i>Dioscorea</i>	<i>alata</i>
🔍	Nora V. Marquez		Citrus	B2018-611	Jul 31, 2018	<i>Dioscorea</i>	<i>alata</i>
🔍	Nora V. Marquez	Tamika Varela	Sumter	B2018-569	Jul 20, 2018	<i>Eriobotrya</i>	<i>japonica</i>
🔍	Nora V. Marquez		Hernando	B2018-661	Aug 22, 2018	<i>Gloriosa</i>	<i>superba</i>
🔍	Nora V. Marquez		Citrus	B2018-753	Sep 11, 2018	<i>Indigofera</i>	<i>spicata</i>
🔍	Nora V. Marquez		Hernando	B2018-758	Sep 12, 2018	<i>Indigofera</i>	<i>spicata</i>
🔍	Nora V. Marquez		Lake	B2018-622	Aug 6, 2018	<i>Paederia</i>	<i>foetida</i>
🔍	Nora V. Marquez		Putnam	B2018-594	Jul 27, 2018	<i>Paspalum</i>	<i>notatum</i>
🔍	Nora V. Marquez		Lake	B2018-802	Sep 25, 2018	<i>Plumbago</i>	<i>auriculata</i>
🔍	Nora V. Marquez		Lake	B2018-801	Sep 24, 2018	<i>Sphagneticola</i>	<i>trilobata</i>
🔍	Nora V. Marquez		Lake	B2018-623	Aug 6, 2018	<i>Tradescantia</i>	<i>zebrina</i>
🔍	Nora V. Marquez		Citrus	B2018-658	Aug 21, 2018	<i>Triadica</i>	<i>sebifera</i>
🔍	Nora V. Marquez		Putnam	B2018-593	Jul 27, 2018	<i>Tridax</i>	<i>procumbens</i>
🔍	Nora V. Marquez		Citrus	B2018-752	Sep 11, 2018	<i>Tridax</i>	<i>procumbens</i>
🔍	Sallie H. Simmons		Palm Beach	B2018-807	Sep 25, 2018	<i>Cissus</i>	<i>verticillata</i>
🔍	Susan B. Youngblood		Manatee	B2018-769	Sep 18, 2018	<i>Paederia</i>	<i>foetida</i>
🔍	Tamika Varela		Lake	B2018-535	Jul 6, 2018	<i>Casuarina</i>	<i>cunninghamiana</i>
🔍	Tamika Varela	Abby L. Bartlett	Sumter	B2018-573	Jul 20, 2018	<i>Ipomoea</i>	<i>quamoclit</i>
🔍	Tamika Varela		Lake	B2018-558	Jul 17, 2018	<i>Sansevieria</i>	<i>hyacinthoides</i>
🔍	Terri Jones, USDA		Hendry	B2018-724	Sep 6, 2018	<i>Commelina</i>	<i>benghalensis</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 with over 10 million specimens), and investigates the biology, biological control, and taxonomy of arthropods.

QUARTERLY ACTIVITY REPORT

JULY- SEPTEMBER

Samples submitted	1,651
Lots identified	2,310
Specimens identified	18,160

2018 - YEAR TO DATE

Samples submitted	5,196
Lots identified	6,947
Specimens identified	41,005

1 *Myzus fataunae* Shinji, (pilea aphid), a new Western Hemisphere record. Minute aphids were found on *Pilea cadierei* (aluminum plant) and other species of *Pilea* at a nursery that produces plants for dish gardens. The adult, wingless forms are distinctly bi-colored with the anterior part much darker than the posterior part of the body. Adult aphids are only about 1 mm long and difficult to see if the infestation is light. However, in high numbers, they can cause significant damage, especially leaf drop and honeydew soiling. Prior to their discovery in Florida, these aphids were known only from Japan and Korea. *Pilea pumila* var. *hamaoi*, native to Asia, is used as a vegetable. *Pilea pumila* is also native to North America, but it is not cultivated. Imported cultivars used for culinary purposes constitute a possible pathway for the introduction of the aphids. The host range in Florida is yet to be determined, but the aphids could potentially infest weedy *Pilea* and other plants in the family Urticaceae.

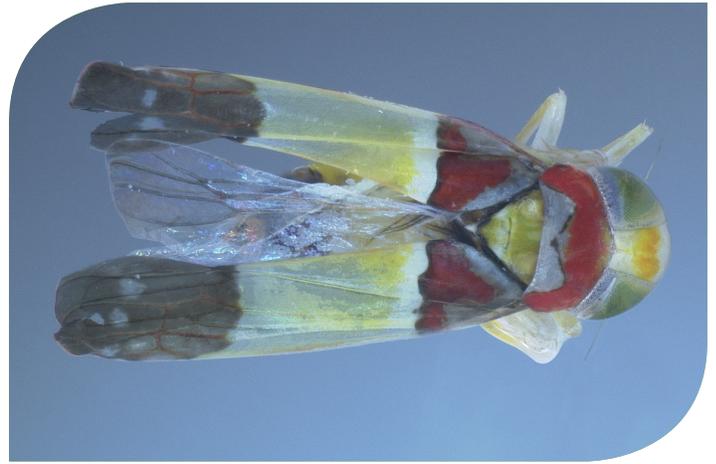
The aphid was described as *Fatauna*, after having supposedly been found on *Fatoua* (Moraceae), but the original identification of the plant could be suspect. There have been no subsequent records on *Fatoua*, and *Fatoua* and some species of *Pilea* are superficially similar in appearance. The aphid could become a nuisance pest in ornamental dish garden cultivation, but it is not likely to become a pest of major crops due to its limited host associations. (Seminole County; E2018-4544; Jesse M. Krok; 22 August 2018.) (Dr. Susan E. Halbert and Katherine E. O. Fairbanks.)



1 - *Myzus fataunae*, pilea aphid.
Close view on plant stem.
Photograph by Lyle J. Buss, University of Florida



2 *Brunerella magnifica* Young (bourreria leafhopper), a new Continental USA record. A tiny, colorful leafhopper was collected from a residential area in Key Largo. It was determined to be the bourreria leafhopper, previously recorded only from Cuba and Mexico. *Bourreria succulenta*, an endangered native plant, is the only known host, so this species is unlikely to become a pest in Florida. (Monroe County; E2018-4083; Olga Garcia, USDA/APHIS/PPQ; 31 July 2018.) (Dr. Christopher H. Dietrich, Illinois Natural History Survey and Dr. Susan E. Halbert.)



2 - *Brunerella magnifica*, bourreria leafhopper.
Photograph by Andy Boring, DPI

3 *Cardiacephala modesta* (Cresson), a stilt-legged fly, a new North American and Continental USA record. This fly was known previously from Guatemala and Colombia, where it occurs in lowland tropical forest. Nothing is recorded of its biology. The genus comprises 31 species occurring in the Neotropics. Many of the flies resemble ants. Adults are attracted to dung, and immature stages feed in decaying vegetation. In Redland, during June and July, a total of 24 specimens were collected on a single property in McPhail traps in place as part of the monitoring survey for an oriental fruit fly eradication program. (Miami-Dade County; E2018-3621; Miguel Justiz and Olga Garcia, USDA; 12 June 2017.) (Dr. Gary J Steck.)



3 - *Cardiacephala modesta*, a stilt-legged fly.
Photograph by Gary J. Steck, DPI

4 *Dacne picta* Crotch (a pleasing fungus beetle), a new Continental record. Two recent collections of this species in different states were submitted on nearly the same day, both indicating establishment in the wild and representing a continental record. The first submission came by email from Marc F. DiGirolomo, U.S. Forest Service, who found two specimens while monitoring nitidulid beetle traps in a large cemetery in Brooklyn, New York (DiGirolomo 2018). The second submission was a picture posted on BugGuide.net by Preston Chappell (2018) of specimens from a park in Peachtree Corners, Georgia. Chappell returned to the site to provide specimens of the beetle and host fungus for confirmation by DPI. *Dacne picta* is a species known from eastern Asia that can be a stored product pest on dried mushrooms. The beetle has been intercepted in several countries world-wide over the years (Lawrence 1988; Savory 1995; pers. comm. Max Barclay, United Kingdom) and may be established in Hawaii (Ford 1955, Boyle 1963). Except for the possibility of Hawaii, there has been no prior evidence of this species being established in the wild outside of its native range, but it now appears to be established in the eastern United States. There is no indication this beetle will pose a problem to the fresh mushroom industry, but it is expected to continue to be an occasional problem in various dried mushrooms. (Gwinnett County, Georgia; E2018-4410; Preston Chappell, amateur naturalist; 21 August 2018.) (Dr. Paul E. Skelley.)



4 - *Dacne picta*, a pleasing fungus beetle.
Whole body.
Photograph by Paul E. Skelley, DPI.



5 *Lepidocyrtus vireticulus* Mari Mutt (springtail), a new Continental USA Record. The genus *Lepidocyrtus* includes some 240 species, distributed mainly throughout the Northern Hemisphere. Eighteen species of *Lepidocyrtus* have been reported from North America, but only four of them are known from Florida. Members of this genus are generalist feeders, and their intestines are often filled with fungal hypha or pollen. None of the species are known to be plant pests. *Lepidocyrtus vireticulus* was originally described from Puerto Rico, and this is the first time it is reported from a locality outside of Puerto Rico. (Miami-Dade County; E2018-3962; Jake M. Farnum; 12 July 2018.) (Dr. Felipe N. Soto-Adames.)

6 *Trogolaphysa riopedrensis* Mari Mutt (springtail), a new Continental USA Record. Some 78 species have been assigned to the genus *Trogolaphysa*. All members of this genus are tropical and are distributed mainly throughout the Americas, from central Mexico south to northern Argentina, the Caribbean and Africa. *Trogolaphysa* has never been reported from North America north of the Rio Grande, although some of the southwestern United States cave systems may harbor cave adapted forms belonging to this genus. The original distribution of *Trogolaphysa riopedrensis* is a mystery. The species was described from Puerto Rico, from leaf litter samples obtained at the botanical garden in Rio Piedras, but very few specimens have been collected from the island in general. Provided the species was collected among exotic plants, it has been suggested the populations in Puerto Rico are the result of a recent introduction. The presence of *T. riopedrensis* in south Florida adds to the mystery. It is possible south Florida is part of the original range distribution for this species, and it was introduced to Puerto Rico from Florida. Members of this genus are generalist feeders and their intestines are often filled with fungal hypha, the remains of other arthropods or soil. None of the species are known to be plant pests. (Miami-Dade County; E2018-3962; Jake M. Farnum; 12 July 2018.) (Dr. Felipe N. Soto-Adames.)



5 - *Lepidocyrtus vireticulus*, springtail.
Habitus adult.
Photograph by Felipe N. Soto-Adames, DPI



6 - *Trogolaphysa riopedrensis*, springtail.
Habitus adult.
Photograph by Felipe N. Soto-Adames, DPI

REFERENCES

- Boyle, W.W. 1963.** *Dacne picta* Crotch in Hawaii, with notes on morphology and mode of entry from Japan (Coleoptera: Erotylidae). Proceedings of the Hawaiian Entomological Society 18: 235-236.
- Chappell, P. 2018.** *Dacne picta* Crotch. Available on BugGuide. <https://bugguide.net/node/view/1578459/bgimage> [accessed 21 August 2018].
- DiGirolomo, M.F. 2018.** *Dacne picta* Crotch. Available on BugGuide. <https://bugguide.net/node/view/1578459/bgimage> [accessed 21 August 2018].
- Ford, E.J., Jr. 1955.** Notes and exhibitions. Proceeding of the Hawaiian Entomological Society 15: 388.
- Lawrence, J.F. 1988.** Notes on the classification of some Australian Cucujoidea (Coleoptera). Journal of the Australian Entomological Society 27: 53-54.
- Savory, W.E. 1995.** *Dacne picta* Crotch: A recently introduced pest of stored, dried shiitake mushrooms (Coleoptera: Erotylidae). Pan-Pacific Entomologist 71: 87-91.



🔍 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. 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, the entries with no plant information included are organized by arthropod.

PLANT SCIENTIFIC NAME	ARTHROPOD	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
<i>Basella alba</i>	<i>Salina bidentata</i>	two-toothed grass springtail	resident	NEW FLORIDA COUNTY RECORD
<i>Bidens alba</i>	<i>Nysius tenellus</i>	a seed bug	Dawn Cermak	NEW FLORIDA COUNTY RECORD
<i>Boehmeria cylindrica</i>	<i>Protalebrella conica</i>	ghost Brazilian leafhopper	Charles "Andy" A. Boring, Katherine E. O. Fairbanks, Paul T. Corogin, Susan E. Halbert	NEW FLORIDA COUNTY RECORD, NEW FLORIDA HOST RECORD
<i>Boerhavia diffusa</i>	<i>Gynaikothrips uzeli</i>	weeping fig thrips	Dawn Cermak	NEW FLORIDA HOST RECORD
<i>Bourreria succulenta</i>	<i>Brunerella magnifica</i>	bourreria leafhopper	Olga Garcia	NEW FLORIDA HOST RECORD
<i>Brassica juncea</i>	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Catherine E. White, Dyrana N. Russell-Hughes, Logan Cutts	REGULATORY SIGNIFICANT
<i>Brassica oleracea</i>	<i>Caliothrips fasciatus</i>	bean thrips	Catherine E. White, Dyrana N. Russell-Hughes, Logan Cutts	REGULATORY SIGNIFICANT
<i>Brassica oleracea</i>	<i>Hypoponera</i> sp.	ponerine ant	Dyrana N. Russell-Hughes, Logan Cutts	REGULATORY SIGNIFICANT
<i>Brassica rapa</i>	<i>Cixius</i> sp.	a cixiid planthopper	Catherine E. White, Dyrana N. Russell-Hughes, Logan Cutts	REGULATORY SIGNIFICANT
<i>Callistemon viminalis</i>	<i>Trupanea eclipa</i>	a fruit fly	Abby L. Bartlett	NEW FLORIDA COUNTY RECORD
<i>Capsicum annuum</i>	<i>Bactericera cockerelli</i>	potato psyllid	Catherine E. White, Dyrana N. Russell-Hughes, Logan Cutts	REGULATORY SIGNIFICANT
<i>Capsicum</i> sp.	<i>Doldina interjugens</i>	an assassin bug	Kevin E. Everhart	NEW FLORIDA COUNTY RECORD
<i>Citrus aurantium</i>	<i>Parlatoria ziziphi</i>	black parlatoria scale	Olga Garcia, Susan E. Halbert, Thomas J. Henry	QUARANTINABLE PEST
<i>Citrus sinensis</i>	<i>Althos obscurator</i>	coreid bug	Ann S. Keenan	NEW FLORIDA COUNTY RECORD
<i>Citrus sinensis</i>	<i>Eubule spartocera</i>	a coreid bug	Grady K. Livingstone	NEW FLORIDA COUNTY RECORD
<i>Citrus sinensis</i>	<i>Homaemus proteus</i>	a scutellerid bug	Ann S. Keenan	NEW FLORIDA COUNTY RECORD
<i>Citrus sinensis</i>	<i>Salina celebensis</i>	Sulawesi grass springtail	Adriana Diaz	NEW FLORIDA COUNTY RECORD
<i>Citrus sinensis</i>	<i>Xenochaetina muscaria</i>	n/a	Rolando Figueroa-Vargas	NEW FLORIDA COUNTY RECORD
<i>Citrus</i> sp.	<i>Parlatoria ziziphi</i>	black parlatoria scale	Olga Garcia	QUARANTINABLE PEST
<i>Citrus</i> sp.	<i>Planococcus minor</i>	a mealybug	LeAnn M. West	NEW FLORIDA COUNTY RECORD
<i>Citrus</i> sp.	<i>Samea druschachalis</i>	a crambid moth	Charles (Mike) M. Twyford	NEW FLORIDA COUNTY RECORD
<i>Citrus x paradisi</i>	<i>Fiorinia proboscidaria</i>	an armored scale	Patricia Barker	QUARANTINABLE PEST



PLANT SCIENTIFIC NAME	ARTHROPOD	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
<i>Coccoloba diversifolia</i>	<i>Brunerella magnifica</i>	bourreria leafhopper	Olga Garcia	NEW USA CONTINENTAL RECORD
<i>Conocarpus erectus</i>	<i>Platynota rostrana</i>	eastern omnivorous leafroller	Scott D. Krueger	NEW FLORIDA HOST RECORD
<i>Elaeagnus pungens</i>	<i>Pelitropis rotulata</i>	a tropiduchid planthopper	Travis J. Streeter	NEW FLORIDA HOST RECORD
<i>Eugenia</i> sp.	<i>Katacephala</i> n. sp.	calyptranthes psyllid	Edward T. Putland	NEW FLORIDA COUNTY RECORD
<i>Ficus lyrata</i>	<i>Neoscona crucifera</i>	arboreal orbweaver	Lilliam H. Otero Pujol	NEW FLORIDA COUNTY RECORD
<i>Ficus microcarpa</i>	<i>Nipaecoccus nipae</i>	coconut mealybug	Alexander D. Tasi	NEW FLORIDA HOST RECORD
<i>Fraxinus pennsylvanica</i>	<i>Hylesinus aculeatus</i>	native ash bark beetle	Brian D. Saunders	NEW FLORIDA COUNTY RECORD
<i>Gymnocalycium mihanovichii</i>	<i>Spilococcus cactearum</i>	a mealybug	Alexander D. Tasi	REGULATORY SIGNIFICANT
<i>Hibiscus rosa-sinensis</i>	<i>Anthonomus testaceosquamosus</i>	hibiscus bud weevil	Lisa M. Hassell	QUARANTINABLE PEST
<i>Hibiscus rosa-sinensis</i>	<i>Anthonomus testaceosquamosus</i>	hibiscus bud weevil	Stephen R. Jenner	QUARANTINABLE PEST
<i>Hibiscus rosa-sinensis</i>	<i>Anthonomus testaceosquamosus</i>	hibiscus bud weevil	Lisa M. Hassell	QUARANTINABLE PEST
<i>Hibiscus rosa-sinensis</i>	<i>Anthonomus testaceosquamosus</i>	hibiscus bud weevil	Kenneth B. Ellis	QUARANTINABLE PEST
<i>Hibiscus rosa-sinensis</i>	<i>Anthonomus testaceosquamosus</i>	hibiscus bud weevil	Kenneth B. Ellis	QUARANTINABLE PEST
<i>Hibiscus rosa-sinensis</i>	<i>Anthonomus testaceosquamosus</i>	hibiscus bud weevil	Lisa M. Hassell	QUARANTINABLE PEST
<i>Hibiscus</i> sp.	<i>Anthonomus testaceosquamosus</i>	hibiscus bud weevil	Abby L. Bartlett	QUARANTINABLE PEST
<i>Ilex</i> sp.	<i>Pintalia vibex</i>	a cixiid planthopper	Danielle Y. Hutchinson	NEW FLORIDA COUNTY RECORD
<i>Ipomoea aquatica</i>	<i>Spodoptera dolichos</i>	sweetpotato armyworm	Patti J. Anderson	NEW FLORIDA HOST RECORD
<i>Lactuca sativa</i>	<i>Aphis helianthi</i>	sunflower aphid	Catherine E. White, Dyrana N. Russell-Hughes, Logan Cutts	REGULATORY SIGNIFICANT
<i>Lactuca sativa</i>	<i>Hylocurus hirtellus</i>	a bark beetle	Catherine E. White, Dyrana N. Russell-Hughes, Logan Cutts	REGULATORY SIGNIFICANT
<i>Lactuca sativa</i>	<i>Liriomyza langei</i>	California pea leafminer	Catherine E. White, Dyrana N. Russell-Hughes, Logan Cutts	REGULATORY SIGNIFICANT
<i>Lactuca sativa</i>	<i>Liriomyza langei</i>	California pea leafminer	Catherine E. White, Dyrana N. Russell-Hughes, Logan Cutts	REGULATORY SIGNIFICANT
<i>Lactuca sativa</i>	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Catherine E. White, Dyrana N. Russell-Hughes, Logan Cutts	REGULATORY SIGNIFICANT
<i>Litchi chinensis</i>	<i>Aceria litchii</i>	lychee erinose mite	Laura Ureta	NEW FLORIDA COUNTY RECORD
<i>Lysiloma latisiliquum</i>	<i>Rhinacloa pallidipes</i>	a plant bug	Olga Garcia	NEW FLORIDA HOST RECORD
<i>Lysiloma latisiliquum</i>	<i>Rhinacloa pallidipes</i>	predatory stink bug	Olga Garcia	NOTABLE FIND
<i>Magnolia grandiflora</i>	<i>Leptoglossus fulvicornis</i>	leaffooted bug	Nora V. Marquez	NEW FLORIDA COUNTY RECORD
<i>Mangifera indica</i>	<i>Phlyctaina irrigualis</i>	a leaf-litter moth	Juan Aleman-Martinez	NEW FLORIDA COUNTY RECORD
<i>Mangifera indica</i>	<i>Physoclypeus coquilletti</i>	a lauxaniid fly	Matthew R. Quenaudon	NEW FLORIDA COUNTY RECORD



PLANT SCIENTIFIC NAME	ARTHROPOD	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
<i>Myrcianthes fragrans</i>	<i>Chilocampyla</i> sp.	a blotch miner.	Marieta Figueroa, RosaMaria M. Quinones	NEW FLORIDA COUNTY RECORD
<i>Myrcianthes fragrans</i>	<i>Chilocampyla</i> sp.	a blotch miner	Jake M. Farnum	NEW FLORIDA COUNTY RECORD
<i>Nerium oleander</i>	<i>Aspidiotus destructor</i>	coconut scale	Henrique Mayer, Juleysy Rodriguez, Muhammad "Zee" Z. Ahmed	NEW FLORIDA HOST RECORD
<i>Parthenium hysterophorus</i>	<i>Euthochtha galeator</i>	coreid bug	Abby L. Bartlett	NEW FLORIDA HOST RECORD
<i>Paspalum notatum</i>	<i>Anadenobolus monilicornis</i>	yellow-banded millipede	Tamika S. Varela	NEW FLORIDA COUNTY RECORD
<i>Peperomia</i> sp.	<i>Platynota stultana</i>	omnivorous leafroller	Mary P. Sellers	NEW FLORIDA HOST RECORD
<i>Persea borbonia</i>	<i>Xyleborus glabratus</i>	redbay ambrosia beetle	Cameron T. Walters	NEW FLORIDA COUNTY RECORD
<i>Phoenix</i> sp.	<i>Fiorinia phantasma</i>	phantasma scale	Olga Garcia	QUARANTINABLE PEST
<i>Physalis philadelphica</i>	<i>Bactericera cockerelli</i>	potato psyllid	Catherine E. White, Dyrana N. Russell-Hughes, Logan Cutts	REGULATORY SIGNIFICANT
<i>Pilea cadierei</i>	<i>Myzus fataunae</i>	pilea aphid	Jesse M. Krok	NEW HEMISPHERE RECORD, QUARANTINABLE PEST
<i>Pinus clausa</i>	<i>Ambrosiodmus minor</i>	an ambrosia beetle	Brian D. Saunders	NEW FLORIDA COUNTY RECORD
<i>Pinus clausa</i>	<i>Matsucoccus gallicolus</i>	pine twig gall scale	Brian D. Saunders	NEW FLORIDA COUNTY RECORD
<i>Pinus</i> sp.	<i>Matsucoccus alabamae</i>	Alabama pine scale	Muhammad "Zee" Z. Ahmed	NEW FLORIDA COUNTY RECORD
<i>Piscidia piscipula</i>	<i>Largus pallidus</i>	a largid bug	Jake M. Farnum	NEW FLORIDA HOST RECORD
<i>Quercus hemisphaerica</i>	<i>Acrocercops albinatella</i>	an oak leafminer	Mary P. Sellers	NEW FLORIDA HOST RECORD
<i>Quercus</i> sp.	<i>Leptoglossus fulvicornis</i>	leaffooted bug	Tamika S. Varela	NEW FLORIDA COUNTY RECORD
<i>Quercus</i> sp.	<i>Monopis longella</i>	nest moth	Michael A. Dina	NEW FLORIDA COUNTY RECORD
<i>Rhodomyrtus tomentosa</i>	<i>Anthonomus alboannulatus</i>	a weevil	Susan A. Wright	NEW FLORIDA COUNTY RECORD
<i>Rhynchosia minima</i>	<i>Leptopharsa machalana</i>	a lace bug	Olga Garcia	NEW FLORIDA HOST RECORD
<i>Rhynchospora</i> sp.	<i>Oedancala crassimana</i>	a seed bug	Alexander D. Tasi	NEW FLORIDA COUNTY RECORD
<i>Sesbania herbacea</i>	<i>Hypurus bertrandi</i>	portulaca leafmining weevil	Olga Garcia	NEW FLORIDA COUNTY RECORD
<i>Sideroxylon salicifolium</i>	<i>Ceropsylla sideroxyli</i>	false mastic psylla	David St. John	NEW FLORIDA HOST RECORD
<i>Thuja</i> sp.	<i>Eremocoris borealis</i>	a seed bug	Michael L. Golub	REGULATORY SIGNIFICANT
<i>Tillandsia usneoides</i>	<i>Platynota rostrana</i>	eastern omnivorous leafroller	James E. Hayden	NEW FLORIDA HOST RECORD
undetermined	<i>Oncopeltus cingulifer</i>	a milkweed bug	Nora V. Marquez	NEW FLORIDA COUNTY RECORD
<i>Urochloa maxima</i>	<i>Tagosodes wallacei</i>	a delphacid planthopper	Alexander D. Tasi	NEW FLORIDA COUNTY RECORD
<i>Vitis</i> sp.	<i>Sophonia orientalis</i>	two-spotted leafhopper	Cecilia Carrero-Turnbull	NEW FLORIDA COUNTY RECORD



PLANT SCIENTIFIC NAME	ARTHROPOD	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
<i>Zanthoxylum fagara</i>	<i>Falconia maculipennis</i>	wild lime bug	Olga Garcia	NEW FLORIDA COUNTY RECORD
<i>Zanthoxylum fagara</i>	<i>Falconia</i> sp.	wild lime bug	Justin K. Anto	NEW FLORIDA HOST RECORD
<i>Zinnia</i> sp.	<i>Lygus</i> sp.	a lygus bug	Jennifer L. Mestas	REGULATORY SIGNIFICANT
	<i>Ambrosiodmus minor</i>	an ambrosia beetle	P. Karen Coffey	NEW FLORIDA COUNTY RECORD
	<i>Ambrosiodmus minor</i>	an ambrosia beetle	Anthony J. Tullock	NEW FLORIDA COUNTY RECORD
	<i>Cardiacephala modesta</i>	a stilt-legged fly	Miguel L. Justiz, Olga Garcia	NEW USA CONTINENTAL RECORD
	<i>Dacne picta</i>	a pleasing fungus beetle	Preston Chappell	NEW USA CONTINENTAL RECORD
	<i>Katacephala grandiceps</i>	a psyllid	Edward T. Putland	NOTABLE FIND
	<i>Lepidocyrtus vireticulus</i>	a springtail	Jake M. Farnum	NEW USA CONTINENTAL RECORD
	<i>Leptoglossus zonatus</i>	a leaffooted bug	Tamika S. Varela	NEW FLORIDA COUNTY RECORD
	<i>Matsucoccus gallicolus</i>	pine twig gall scale	Bradley A. Danner, Robert M. Leahy	NEW FLORIDA COUNTY RECORD
	<i>Melormenis basalis</i>	Puerto Rican planthopper	Julie Nieuwenhuis	NEW FLORIDA COUNTY RECORD
	<i>Nauphoeta cinerea</i>	lobster cockroach	Owner	QUARANTINABLE PEST
	<i>Nylanderia</i> sp.	crazy ant	Kenneth B. Ellis	REGULATORY SIGNIFICANT
	<i>Sanctanus fasciatus</i>	a leafhopper	Ricardo E. Lopez	NEW FLORIDA COUNTY RECORD
	<i>Scolopendra viridis</i>	a centipede	Pierson Hill	NEW FLORIDA COUNTY RECORD
	<i>Scolopendra viridis</i>	a centipede	Pierson Hill	NEW FLORIDA COUNTY RECORD
	<i>Shellenius schellenbergii</i>	a derbid planthopper	Dawn Cermak	NEW FLORIDA COUNTY RECORD
	<i>Stemmatomerinx acircula</i>	a mealybug	Dagne A. Vazquez	NEW FLORIDA COUNTY RECORD
	<i>Tagosodes wallacei</i>	a delphacid planthopper	Kenneth D. Branch, Robinson L. Lawrence	NEW FLORIDA COUNTY RECORD
	<i>Trogolaphysa riopedrensis</i>	a springtail	Jake M. Farnum	NEW USA CONTINENTAL RECORD





NEMATOLOGY

Compiled by Renato N. Inserra, Ph.D.; Brian Alford; Janete A. Brito, Ph.D.; and Silvia Vau, 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 - SEPTEMBER	2018 - YEAR TO DATE
Morphological identifications	3,457	10,105
Molecular identifications *	0	460
Total identifications	3,457	10,565

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

Nematodes of Special Interest

1 *Meloidoderita whittoni* (Sledge & Christie, 1962) comb. n. (syn. *Sphaeronema whittoni*; *Tumiotia whittoni*), a tylenchuloid nematode, was detected in the roots of the forest tree, *Liquidambar styraciflua*, (sweetgum) (Alachua County; N15-00303, Brian Alford, 26 March 2015).

Sweetgum is a native tree in hardwood forests throughout warm and temperate areas of North America. In Florida, this tree can be infested by tylenchuloid nematodes, sedentary semi-endoparasites of feeder roots. Among these tylenchuloids, *Meloidoderita whittoni* is the most common species found parasitizing the tree in central and north Florida forests. Since its description in 1962, the taxonomic status of *M. whittoni* has been controversial, but was clarified in 2017 with its inclusion in the genus *Meloidoderita* and not *Sphaeronema*, where it was included in the original description, nor *Tumiotia*, to which it was subsequently transferred. This new classification was based on phylogenetic analyses using partial 18S rRNA, D2-D3 of 28S rRNA and ITS rRNA gene sequences of a topotype population. The species is genetically related to other species of the genus *Meloidoderita*, but it differs biologically from them. *Meloidoderita* species have a resistant life-stage deriving from the uterus having an ornamented thick wall, called a "cystoid body." In females of other *Meloidoderita* species, the body cuticle of the dead females disintegrates at the end of their life-cycle, but the uterus, having a thick wall and containing the eggs, remains in the soil as a cystoid body. On the contrary, the female body of *M. whittoni* does not disintegrate and becomes a sac with hard, tannic wall



1a - *Liquidambar styraciflua* (sweetgum).

A hardwood tree frequently seen in moist to wet forests in north and central Florida.

Photography by John Ruter, [Bugwood](#)



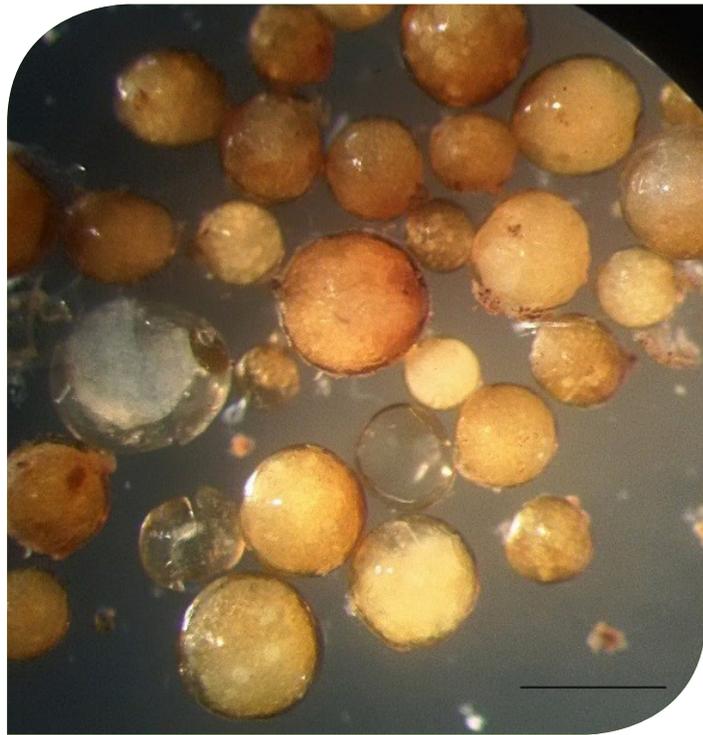
(cyst) protecting the eggs in the uterus. These biological differences make *M. whittoni* an atypical species in the genus *Meloidoderita*. When observed at low magnification, the cysts of *M. whittoni* can be confused with those of cyst forming nematodes in the subfamily Heteroderinae including the potato cyst nematodes. Morphological examination at high magnification is necessary for their separation.

During our studies, many aspects of the biology and parasitic habits of *M. whittoni* were elucidated by conducting both field observations of mature trees and greenhouse studies of sweetgum seedlings infested with the nematode. The motile and vermiform second-stage juvenile females (J2) start the infestation. They penetrate the host feeder roots and remain permanently attached to them with the anterior portion of the body, while the posterior portion protrudes from the root surface. The nematode induces specialized feeding sites in the root tissues. The J2 females molt into swollen J3, J4 and, then, into whitish, fertile adult females that are spherical and covered by a gelatinous matrix. Females retain the eggs inside the uterus and do not deposit eggs outside their body. Senescent females develop a very hard, thick cuticle that protects the eggs inside the body. At the end of females' feeding activity, tannins turn their thick cuticle a brownish color, and the female body is transformed into a cyst packed with eggs. Males are not parasitic. J2 maintained in water for longer than two weeks, and in the absence of host roots, molt into males having a degenerate esophagus.

Meloidoderita whittoni evolved in the wet environment of Florida hardwood forests and is a component of the nematofauna associated with these forests. The production of a resistant life stage, like a cyst, was probably induced by the need of *M. whittoni* to protect the eggs from numerous antagonistic factors present in a wet environment by enclosing them inside the female body transformed into a cyst. The effects of infestation by this species on the growth of sweetgum trees are not known. During our biological observations, sweetgum seedlings infested by *M. whittoni* did not show symptoms of decline.

REFERENCES

Troccoli, A., S.A. Subbotin, J.D. Stanley, B. Alford, N. Vovlas, and R.N. Inserra. 2017. *Meloidoderita whittoni* (Sledge & Christie, 1962) comb. n. (Tylenchida: Sphaeronematidae) and its parasitic habits on sweetgum (*Liquidambar styraciflua* L.). *Nematology* 19: 709-722.



1b - *Meloidoderita whittoni* cysts.
Scale bar = 445 μ m.
Photography by A. Troccoli, CNR-IPSP

COLLECTORS

Collectors submitting five or more samples that were processed for nematological analysis from July through September 2018

COLLECTOR NAME	SAMPLES PROCESSED
Alford, Brian M.	30
Bentley, Michael A.	30
Berryman, Scott D.	22
Bloom, Richard T.	130
Boyar, Jillian	164
Burgos, Frank A.	194
Frechette, Jeanie P.	6
Ochoa, Ana L.	244
Rojas, Eric P.	162
Spriggs, Charles L.	219
St. John, David	40
Taylor, Donald G.	7
Wolfe, C. David	19

SAMPLES FOR MORPHOLOGICAL ANALYSIS

	JULY - SEPTEMBER	2018 - YEAR TO DATE
Multistate certification for national and international export	2,078	5,289
California certification	352	989
Pre-movement (citrus nursery certification)	36	182
Site or pit approval (citrus nursery and other certifications)	42	122

OTHER PURPOSES

	JULY - SEPTEMBER	2018 - YEAR TO DATE
Identifications (other organisms)	0	2
Nematology Investigation	0	90
Plant Problems	30	127
Intrastate Survey, Random	99	415
Total	2,637	7,416

SAMPLES FOR MOLECULAR ANALYSIS

	JULY - SEPTEMBER	2018 - YEAR TO DATE
Regulatory	0	0
Other Purposes	0	0
Surveys	0	460
Total	0	460



PLANT PATHOLOGY

Compiled by Hector Urbina, Ph.D.; Jodi Hansen, M.S.; Taylor Smith, B.S.; and Callie Jones

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 staying 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 *Botryosphaeria dothidea* (Moug.) Ces. & De Not. (stem dieback) was identified on a dead twig of *Olea europaea* L. (olive) collected at an agriculture research center in Suwannee County. This is the first report of *B. dothidea* on olives in Florida. Previous reports of *B. dothidea* in Florida occurred on blueberries, *Citrus* spp., crab apple, grape, and peach. *Botryosphaeria dothidea* is known to occur on olive in all major olive producing countries including Greece, Italy, Spain, Tunisia and in the United States in California. This species has a global host range including economically important crops such as *Citrus*, *Eucalyptus*, *Persea* and *Pistachio*. *Botryosphaeria dothidea* belongs to the family Botryosphaeriaceae (Pezizomycotina, Ascomycota), comprised of important plant pathogens and endophytes of woody plants. Symptoms of infection with *B. dothidea* range from twig, branch and stem cankers to death of the entire plant. A pure culture of the fungus was obtained from twig lesions and identified by molecular means using the internal transcribed spacer (ITS; MK047645) and 28S ribosomal RNA genes (28S; MK047650) with sequence similarity with the designated ex-epitype culture CBS115476 of 99% (GenBank KF766151) and 100% (GenBank NG027577) respectively. Morphological characters of the mitosporic (asexual) form observed on the twigs matched published descriptions of this species. (Suwannee County; P2018-97491; Robert M. Leahy, USDA/CAPS; 6 August 2018).

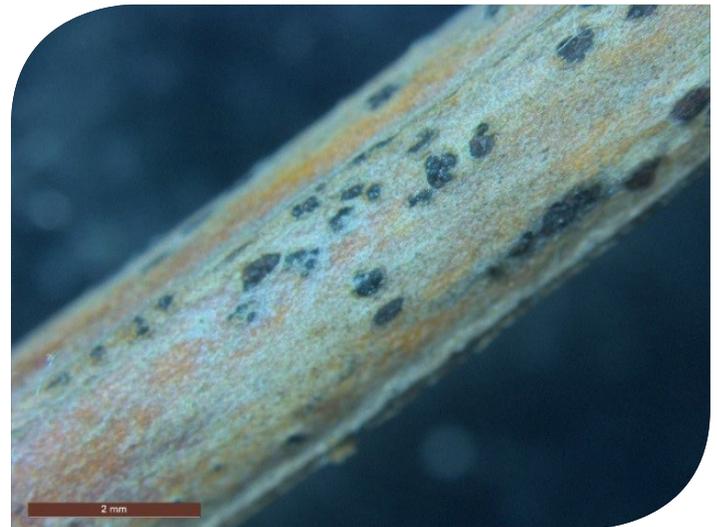
REFERENCES

Fungal Databases, U.S. National Fungus Collections.

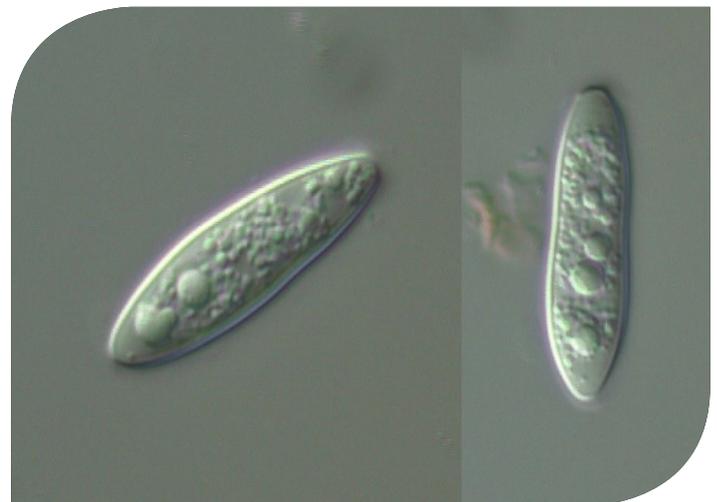
<https://nt.ars-grin.gov/fungaldatabases/> [accessed 12 October 2018].

Marsberg, A., M. Kemler, F. Jami, J.H. Nagel, A. Postma-Smidt, M.J. Wingfield, P.W. Crous, J.W. Spatafora, C.N. Hesse, B. Rovvertse, and B. Slippers. 2017. *Botryosphaeria dothidea*: a latent pathogen of global importance to woody plant health. *Molecular Plant Pathology* 18:477–88.

Slippers B., P.W. Crous, S. Denman, T.A. Coutinho, B.D. Wingfield, and M.J. Wingfield. 2004. Combined multiple gene genealogies and phenotypic characters differentiate several species previously identified as *Botryosphaeria dothidea*. *Mycologia* 96: 83e101.



1a - *Botryosphaeria dothidea*, stem dieback.
Canker stem lesions produced by pycnidia on *Olea europaea* twig.
Photograph by Hector Urbina, DPI



1b - *Botryosphaeria dothidea*, stem dieback.
Mature conidia.
Photograph by Hector Urbina, DPI



Watson, A.F. 2008. Etiology of *Botryosphaeria* stem blight on southern highbush blueberries in Florida and quantification of stem blight resistance in breeding stock. Master Thesis. University of Florida, pp 1-63.

World Atlas. <https://www.worldatlas.com/articles/olive-oil-production-by-country.html> [accessed 12 October 2018].

QUARTERLY ACTIVITY REPORT

	JULY - SEPTEMBER	2018 - YEAR TO DATE
Budwood samples	0	968
Citrus black spot	10	67
Citrus canker	155	382
Citrus greening / HLB	110	1,129
Honeybees	0	1
Interdictions	20	33
Laurel wilt	2	3
Pathology, general	563	1,662
Soil	49	151
Sudden oak death	0	56
Sweet orange scab-like disease	2	7
Texas Phoenix palm decline	14	169
Water	2	4
Miscellaneous	7	22
Totals	934	4,654



🔍 PLANT PATHOLOGY IDENTIFICATION TABLE

The following table provides information about samples identified between July-September 2018. 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	COMMENTS
<i>Citrus aurantium</i>	sour orange	<i>Candidatus Liberibacter asiaticus</i>	bacterium	residential	97880	Okaloosa	Michael C. McMahan	9/21/2018	county	Citrus greening (<i>Candidatus Liberibacter asiaticus</i>) is a serious bacterial disease of citrus that is spread by the Asian citrus psyllid (<i>Diaphorina citri</i> Kuwayama or ACP). Infected trees produce green, bitter, and deformed fruit which is not suitable for sale for juice or as fresh fruit. Other symptoms of citrus greening include small and chlorotic new leaves, blotchy mottling, yellow shoots, and enlarged corky leaf veins.
<i>Curcuma longa</i>	tumeric	<i>Curvularia</i> sp.	fungus	residential	97590	Alachua	Owner	8/17/2018	host	<i>Curvularia</i> is a hyphomycete fungus which is commonly found on turf grass leaf spots. Often <i>Curvularia</i> species are secondary invaders on plant tissues that are stressed from adverse environmental conditions.
<i>Olea europaea</i>	olive	<i>Botryosphaeria dothidea</i>	fungus	North Florida Research and Education Center	97491	Suwannee	Robert M. Leahy USDA/CAPS	8/17/2018	host	<i>Botryosphaeria dothidea</i> is a fungal plant pathogen that causes the formation of cankers on many different woody hosts. In addition to its pathogenic capabilities, <i>B. dothidea</i> can also exist in association with asymptomatic plant tissue as an endophyte.
<i>Rosa</i> sp.	rose	<i>Nectria pseudotrichia</i>	fungus	nursery	97508	Citrus	Stephen R. Jenner	8/17/2018	host	<i>Nectria pseudotrichia</i> is an ascomycete fungus that is reported on a variety of dead woody plants. Orange fungal fruiting bodies called synnema are characteristic of this species and can be observed on dead twig tissue when observed with a microscope.
<i>Smallanthus sonchifolius</i>	Peruvian ground apple	<i>Cercospora apii</i> s. lat	fungus	agricultural center	97742	St. Johns	Robert M. Leahy USDA/CAPS	9/5/2018	host	<i>Cercospora apii</i> causes leaf spots on a diverse array of plants. Numerous species of <i>Cercospora</i> described from various hosts and locations are morphologically the same as <i>C. apii</i> and subsequently are referred to as <i>C. apii sensu lato</i> .





FROM THE EDITOR

By Patti J. Anderson

Inquiring minds want to know...

The bureau of entomology, nematology and plant pathology receives many questions about plant pests and diseases, and in the botany section, we are asked about plants, especially about invasive species and noxious weeds. Among the most common questions are variations of the following:

Q: Why are you letting nurseries sell this plant? My neighbor told me it's an invasive species.

A: Many people and organizations have opinions about invasive plants, but the state of Florida regulates only those plants listed in the Florida Administrative Code, Rule 5B-57. Organizations such as universities, homeowners' associations and private, voluntary groups can recommend avoiding species that overrun natural areas, but only state listed plants are prohibited from sale.

Q: This plant is so pretty. Why do you call it a noxious weed?

A: Many plants now known to be noxious weeds, especially those costly for agriculture, or invasive species that disrupt native plant communities, were first brought to Florida because of their ornamental beauty. For example, *Lantana camara* (common lantana) was brought to the state in 1804; *Pueraria montana* var. *lobata* (kudzu), in 1899; and *Schinus terebinthifolia* (Brazilian pepper), in the 1840s. Some exotic ornamentals grow and thrive in Florida without causing problems, but others begin runaway growth in the absence of natural enemies that do not accompany the plants on their trips to Florida. Even cogongrass, *Imperata cylindrica*, has red cultivars (such as 'Red Baron') sold as an ornamental, but not legally in Florida.



Imperata cylindrica 'Red Baron' (Japanese blood grass, a cultivar of cogongrass).
Photograph by [Wouter Hagens](#)

Q: I don't see this plant spreading in my neighborhood. Why do you claim it's an invasive species?

A: Take a look at a map of Florida. Our state is so long, it contains USDA plant hardiness zones from 8A to 11A (<https://planthardiness.ars.usda.gov/PHZMWeb/#>). Many plants that cannot survive the winter freezes common in north Florida can grow aggressively all year in south Florida. Although a plant might not grow well in the soil, rainfall or temperature conditions in one part of the state, it could thrive in other areas within our borders. Although the state regulates plants statewide with a single standard, voluntary groups sometimes list plants as problems for one or more regions of the state and recommend against planting those species in problem areas. Plants prohibited by statute cannot be sold anywhere in the state of Florida. You might not find the plant a problem where you live, but neighbors farther north or south might think of it as a plague.





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