



FDACS-P-00124

April - June 2022

Volume 61, Number 2

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



NEMATODOLOGY

Providing certification programs and
diagnoses of plant problems



PLANT PATHOLOGY

Offering plant disease diagnoses
and information





Lissachatina fulica (Bowditch), the giant African land snail.
Photo by Jeffrey Lotz, FDACS-DPI

ABOUT TRI-OLOGY

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

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

HOW TO CITE TRI-OLOGY

Section Editor. Year. Section Name. P.J. Anderson and G.S. Hodges (Editors). TRI-OLOGY Volume (number): page. [Date you accessed site.]

For example: S.E. Halbert. 2015. Entomology Section. P.J. Anderson and G.S. Hodges (Editors). TRI-OLOGY 54(4): 9. [Accessed 5 June 2016.]

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ACKNOWLEDGEMENTS

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







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

Thank you,

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Cover Photo

Rosa luciae, 'Dorothy Perkins'
Photo from Wikipedia



HIGHLIGHTS



1 *Rosa L. (rose)*, a genus of about 140 species, with hundreds of named cultivars and hybrids, in the plant family Rosaceae. Roses are among our most familiar and beloved ornamental plants, but the ones we most often encounter are hybrids and cultivars. Three *Rosa* species were found in four new counties by DPI plant inspectors during the period of this Tri-ology issue.

2 *Lissachatina fulica (Bowditch), giant African land snail, a regulatory incident.* Giant African land snail is one of the most invasive pests on the planet, causing agricultural and environmental damage wherever it is found. On June 21, 2022, photographs of snails from a population in New Port Richey were submitted to FDACS, and live specimens were subsequently collected.

3 *Meloidogyne spartinae* (Rau and Fassuliotis, 1965) was found infecting the roots of saltmarsh cordgrass (*Spartina alterniflora*) in St. Johns County.

4 *Hemileia vastatrix* Berk. & Broome (coffee leaf rust) (Pucciniales, Pucciniomycotina, Basidiomycota) (cedar-quince rust) (Gymnosporangiaceae, Pucciniaceae, Pucciniomycotina) was found at a residential property in Naples on coffee, *Coffea arabica* L. (Rubiaceae).



1 - *Rosa palustris*, swamp rose.
Photo by Shirley Denton, [Atlas of Florida Plants](#)



2 - *Lissachatina fulica (Bowditch), the giant African land snail.*
Photo by Jeffrey Lotz, FDACS-DPI



3 - *Spartina alterniflora*, saltmarsh cordgrass, infected with *M. spartinae*. View of the sampling area and saltmarsh cordgrass plants.
Photo by Silvia Vau, FDACS-DPI



4 - *Coffea arabica*, coffee, leaf with coffee leaf rust.
Photo by Hector Urbina, FDACS-DPI





BOTANY

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

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 16,000 plants and 1,400 vials of seeds.

QUARTERLY ACTIVITY REPORT

	APRIL - JUNE	2022 - YEAR TO DATE
Samples Submitted by Other DPI Sections	1,498	2,538
Samples Submitted for Botanical Identification Only	343	603
Total Samples Submitted	1,841	3,141
Specimens Added to the Herbarium	367	665

Some of the samples submitted recently are described below.

1 *Rosa* L. (rose), a genus of about 140 species, with hundreds of named cultivars and hybrids, in the plant family Rosaceae. Roses are among our most familiar and beloved ornamental plants, but the ones we most often encounter are hybrids and cultivars. People have had a long relationship with cultivated roses, enjoying their beauty and fragrance as well as using the plants in perfumes, medicines and as food, but *Rosa* species can also be found growing without human cultivation in natural areas. In Florida, we have three native species: *Rosa carolina* L. (Carolina rose), *R. palustris* Marshall (swamp rose) and *R. setigera* Michx. (climbing rose). In addition, four exotic species of *Rosa* have escaped cultivation and become naturalized in the state: *Rosa bracteata* J.C. Wendl. (Macartney rose), *R. laevigata* Michx. (Cherokee rose), *R. luciae* Franch. & Roehbr. ex Crép. (memorial rose) and *R. multiflora* Thunb. (multiflora rose). Three of these species were found in four new counties by DPI plant inspectors during the period of this Tri-ology issue, suggesting there might be interest in characteristics used to identify the species.

Rosa laevigata* Michx. (Cherokee rose)** was assumed to be native when the botanist André Michaux discovered it in Georgia in the late 1700s, but it was later confirmed to be an Asian species, introduced very early in the history of United States horticulture. It was used medicinally for respiratory and digestive problems by herbalists in China. (Okaloosa County; 04132022-03151; Ethan Kelly; 13 April 2022 and Indian River County; 04272022-03708; Noemi Negron; 27 April 2022.) ***Rosa



1a - *Rosa laevigata*, (Cherokee rose), flower.
Photo by Shirley Denton



1b - *Rosa luciae*, memorial rose, flowers.
Photo by Georges Seguin



1c - *Rosa palustris*, swamp rose, flower.
Photo by James R. Holland, bugwood



luciae Franch. & Rochebr. ex Crép., previously known as *R. wichuraiana*, (memorial rose) was introduced widely in the southeastern United States and used as a “rambling rose” on fences or as a creeping groundcover. In Florida, the escapees found growing without human help are the ‘Dorothy Perkins’ cultivar. (Santa Rosa County; 05172022-04430; Ethan Kelly; 17 May 2022.) **Rosa palustris** Marshall (swamp rose) is native to North America and found from Quebec westward to Iowa and Wisconsin and south from Louisiana to Florida, but it was named from a specimen collected near Jacksonville, Florida in 1894. Cherokee healers used the bark and roots to make an infusion used as a medicine for digestive problems. The rose hips of the swamp rose have been ground to become an ingredient in a red-colored bread in Maine.



1d - *Rosa palustris*, swamp rose, rose hips.
Photo by Agnieszka Kwiecień, wikimedia

True species in the *Rosa* genus share several elements of morphology as well as having distinctive characteristics allowing us to distinguish among them. Common characteristics include multiple, woody stems with prickles (some cultivars are unarmed); compound leaves with 3, 5 or 9 leaflets; stipules (leaf-like structures at the base of the leaf); flowers with five sepals, five or 10 petals, numerous stamens and flower parts fused at the base to form a floral cup; and the fruits are achenes held within the expanded floral cup

(known as rose hips and the basis of a tea with a high vitamin C content). Below is a table of the characteristics identifying each of the three species found in new counties. (Nassau County; 05162022-04322; Rachel Conklin and Connor Kuppe; 17 May 2022.) (Austin, 2004; Mabberley, 2017; Nelson, 1996; Weakley, 2020; Wunderlin and Hansen, 2011; Wunderlin and Hansen, 2016; [accessed 15 July 2022].)

	<i>Rosa laevigata</i>	<i>Rosa luciae</i> (synonym <i>R. wichuraiana</i>)	<i>Rosa palustris</i>
Stem	Erect or clambering to 6 m tall with curved, reddish-brown prickles	Trailing or clambering to 2 m tall with straight or curved prickles	Erect to 2 m tall with straight to slightly curved prickles
Leaves	3 leaflets with finely serrate margins, some with prickles on underside, midrib, rachis or petiole	5-9 leaflets with serrate margins; prickles on rachis and petiole	5-9 leaflets with finely serrate margins and densely pubescent undersides; some with a few prickles on underside, midrib, rachis or petiole
Stipules	Adnate to petiole (fused to leaf stem) for a short distance; margins glandular-toothed	Adnate to petiole for half their length; margins with irregular, gland-tipped teeth	Adnate to petiole for most of their length; margins with small teeth with or without glands
Inflorescence	Solitary	Solitary or clusters (clusters usually 5-20 flowers)	Solitary or a few flowers
Flower	Sepals ovate, inner surface woolly pubescent at the base, outer surface woolly pubescent on edges; petals white, 3-4 cm long	Sepals ovate, inner surface pubescent, outer surface glabrous; petals pink, 3-4 cm long; double-flowered cultivar ‘Dorothy Perkins’ found here	Sepals ovate, triangular or oblong, often with a tail-like apex, outer surface glandular; petals pink, 2-3 cm long, margins wavy or crinkled
Habitat	Moist hammocks and disturbed sites, fences, hedgerows, old fields; occasionally found from northern counties to the central peninsula; escaped from cultivation	Dry, disturbed sites, old homesteads, roadsides; not common, seen in a few northern counties; escaped from cultivation	Cypress swamps, floodplain forests, marshes, sloughs and riverbanks; frequently found, northern counties to central peninsula; native to Florida
New County	Indian River; Okaloosa	Santa Rosa	Nassau

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🔍 BOTANY IDENTIFICATION TABLE

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

COLLECTOR NAME	COLLECTOR 2	LIST NUMBER	RECEIVED DATE	PLANT NAME	COUNTY
Chase Groninger		5527	6/17/2022	<i>Callisia repens</i>	Brevard
Chase Groninger		5513	6/17/2022	<i>Chenopodium album</i>	Brevard
Chase Groninger		5719	6/24/2022	<i>Cyperus involucratus</i>	Brevard
Chase Groninger	Noemi Negron, Victoria Benjamin	2716	4/5/2022	<i>Eriobotrya japonica</i>	Brevard
Chase Groninger		2639	4/5/2022	<i>Peltandra virginica</i>	Brevard
Chase Groninger	Noemi Negron, Victoria Benjamin	2762	4/5/2022	<i>Tradescantia zebrina</i>	Brevard
David Brown		2887	4/7/2022	<i>Euphorbia hypericifolia</i>	Putnam
Deann Hansen		5093	6/7/2022	<i>Aeschynomene viscidula</i>	Flagler
Deann Hansen		4913	6/2/2022	<i>Boerhavia diffusa</i>	Flagler
Deann Hansen		4910	6/2/2022	<i>Carya floridana</i>	Flagler
Deann Hansen		4679	5/26/2022	<i>Clerodendrum bungei</i>	Volusia
Deann Hansen		5824	6/29/2022	<i>Cyperus croceus</i>	Putnam
Deann Hansen		4086	5/10/2022	<i>Distimake dissectus</i>	Flagler
Deann Hansen		4149	5/12/2022	<i>Habenaria repens</i>	Flagler
Deann Hansen		3473	4/22/2022	<i>Jasminum multiflorum</i>	Volusia
Deann Hansen		4613	5/24/2022	<i>Peltandra virginica</i>	Flagler
Deann Hansen		4318	5/18/2022	<i>Plantago lanceolata</i>	Flagler
Deann Hansen		5823	6/29/2022	<i>Plantago lanceolata</i>	Putnam
Deann Hansen		3774	4/29/2022	<i>Pouzolzia zeylanica</i>	Volusia
Deann Hansen		4776	5/27/2022	<i>Praxelis clematidea</i>	Volusia
Deann Hansen		4237	5/17/2022	<i>Pseudogynoxys chenopodiodes</i>	Volusia
Deann Hansen		4678	5/26/2022	<i>Rumex crispus</i>	Putnam
Deann Hansen		3156	4/18/2022	<i>Sechium edule</i>	Volusia
Deann Hansen		4087	5/10/2022	<i>Spermacoce verticillata</i>	Flagler
Deann Hansen		5625	6/21/2022	<i>Sphagneticola trilobata</i>	Flagler
Deann Hansen		3155	4/18/2022	<i>Vernicia fordii</i>	Volusia
Ethan Kelly		3106	4/13/2022	<i>Clematis terniflora</i>	Okaloosa
Ethan Kelly		6015	6/30/2022	<i>Firmiana simplex</i>	Santa Rosa
Ethan Kelly		5226	6/13/2022	<i>Indigofera caroliniana</i>	Santa Rosa
Ethan Kelly		3151	4/14/2022	<i>Rosa laevigata</i>	Okaloosa
Ethan Kelly		4430	5/18/2022	<i>Rosa luciae</i>	Santa Rosa
Jeanie Frechette	Teresa Ortelli	2992	4/12/2022	<i>Aeschynomene indica</i>	St. Lucie
Jeanie Frechette	Teresa Ortelli	3004	4/12/2022	<i>Echinochloa walteri</i>	St. Lucie
Jeanie Frechette	Teresa Ortelli	2986	4/12/2022	<i>Ipomoea leucantha</i>	St. Lucie
Jeanie Frechette		2724	4/5/2022	<i>Scaevola taccada</i>	St. Lucie
Jennifer Hesse		4265	5/16/2022	<i>Albizia julibrissin</i>	Flagler
Jennifer Hesse		3907	5/4/2022	<i>Allium canadense</i>	Flagler
Jennifer Hesse		5288	6/13/2022	<i>Lantana montevidensis</i>	Flagler
Jennifer Hesse		5385	6/14/2022	<i>Ligustrum lucidum</i>	Seminole
Jennifer Hesse		3406	4/25/2022	<i>Richardia grandiflora</i>	Flagler
Jennifer Hesse		5158	6/13/2022	<i>Sesbania herbacea</i>	Flagler
Jennifer Hesse		5769	6/27/2022	<i>Strophostyles helvola</i>	Flagler
Kelly Douglas		5701	6/22/2022	<i>Polygala lutea</i>	Suwannee
Mark Laurint		4536	5/20/2022	<i>Lagerstroemia indica</i>	St. Johns
Mark Laurint		3834	5/4/2022	<i>Syagrus romanzoffiana</i>	St. Johns
Mark Laurint		3948	5/6/2022	<i>Tradescantia pallida</i>	St. Johns
Mark Laurint		3805	4/29/2022	<i>Tradescantia zebrina</i>	St. Johns
Mary Graham		4510	5/20/2022	<i>Casuarina glauca</i>	Hendry
Noemi Negron		3504	4/25/2022	<i>Polygala lutea</i>	Indian River
Noemi Negron		3708	4/28/2022	<i>Rosa laevigata</i>	Indian River
Rachel Conklin	Connor Kuppe	4322	5/17/2022	<i>Rosa palustris</i>	Nassau
Ricardo Areingdale		3764	4/28/2022	<i>Phlox drummondii</i>	Dixie
Tavia Gordon		4421	5/19/2022	<i>Asclepias curassavica</i>	Marion



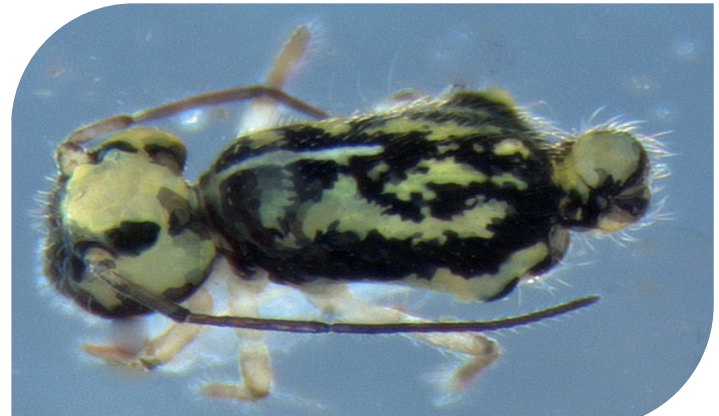


ENTOMOLOGY

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.

	APRIL - JUNE	2022 - YEAR TO DATE
Samples Submitted	1,768	3,111
Lots Identified	2,531	4,453



1 - *Heterosminthurus* sp., a springtail.
Photo by Felipe N. Soto-Adames, FDACS-DPI

1 *Heterosminthurus* sp., a springtail, a New Florida State record. *Heterosminthurus* is a genus of Collembola (springtails) in the family Bourletiellidae characterized by having the empodial appendage on the fore legs markedly different from the one on the hind legs. The genus is represented in North America by two species found from New York through the Midwest to Kansas, Canada and Alaska (Christiansen and Bellinger 1998). Species are small, from 0.8 to 1.3 mm long, and have not been associated with damage to plants. Some species display complex mating dances. (Alachua County; E1581-05-0411 2022-03040; Sam Hart, Kelly Douglas and John McVay; 11 April 2022.) (Dr. Felipe Soto-Adames.)



2 - *Scolothrips* sp., a 6-spotted thrips.
Photo by Felipe N. Soto-Adames, FDACS-DPI

2 *Scolothrips longicornis* Priesner species-group, a 6-spotted thrips, a New Florida State record. *Scolothrips* is a genus of predatory thrips, commonly known as the 6-spotted thrips, that specializes on mites. The most recent review of *Scolothrips* (Mound 2011) accepts 14 species informally divided into two groups: the *S. sexmaculatus* (Pergrande) group, characterized by the presence of 1+1 postero-medial discal macrosetae on the prothorax, and the *S. longicornis* species-group, in which the prothoracic discal macrosetae are absent. The two species previously reported from Florida, *S. sexmaculatus* and *S. pallidus* (Beach), are both members of the *S. sexmaculatus* species-group (Diffie *et al.*, 2008). No member of the *longicornis* group has been reported from Florida before. The single specimen of *Scolothrips* submitted for identification was collected on a lemon tree infested with the spider mite *Tetranychus mexicanus* (McGregor) and the citrus rust mite *Phyllocoptruta oleivorus* (Ashmead). (Seminole County; E1320-03-03292022-02544; Younes Belmour, USDA; 25 March 2022.) (Dr. Felipe N. Soto-Adames.)



3 *Bactrocera dorsalis* (Hendel), oriental fruit fly, a regulatory incident. Two male specimens were captured in two separate Jackson traps baited with methyl eugenol in St. Petersburg. Increased detection trap densities were established in an 80-square-mile area around the detection sites. A third male was detected approximately three miles north of the first detection sites four weeks later. A fourth male was collected two days later, only a few hundred feet from the location of the third fly. The following week, a fifth fly, the first female collected, was trapped at the same location as the third fly. This fly was determined to have been mated but did not have developed eggs. Traps in the delimitation area will be monitored closely for an estimated two life cycles. If no additional flies are found, the eradication program will end about September 26, 2022. (Pinellas County; E2370-01-05182022-04438 and E2371-01-05182022-04439; Stepanka Newman; 17 May 2022.) (Pinellas County; E2973-01-06152022-05438; Linda McRay; 14 June 2022.) (Pinellas County; E3040-06162022-05561; Yaritza Perez-Otero, USDA; 16 June 2022) (Pinellas County; E3123-06232022-05727; John Quigley; 22 June 2022.) (Dr. Gary J. Steck and Dr. Craig H. Welch.)



3 - *Bactrocera dorsalis* (Hendel), oriental fruit fly.
Photo by Gary Steck, FDACS-DPI

4 *Lissachatina fulica* (Bowditch), giant African land snail, a regulatory incident. Giant African land snail is one of the most invasive pests on the planet, causing agricultural and environmental damage wherever it is found. This snail was established twice in southeastern Florida and was eradicated successfully both times. On June 21, 2022, photographs of snails from a population in New Port Richey were submitted to FDACS, and live specimens were subsequently collected (Pasco County; E3152-01-06232022-05782; Gary Webb and Daniel Merced; 23 June 2022.) (Dr. Elijah J. Talamas.)



4 - *Lissachatina fulica* (Bowditch), the giant African land snail.
Photo by Jeffrey Lotz, FDACS-DPI

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- Mound, L.A. (2011).** Species recognition in the genus *Scolothrips* (Thysanoptera, Thripidae) predators of leaf-feeding mites. *Zootaxa* 2797: 45–53.



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 SPECIES	PLANT COMMON NAME	ARTHROPOD GENUS AND SPECIES	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
<i>Apium graveolens</i>	celery	<i>Lygus elisus</i>	western lygus bug	Logan Cutts	Regulatory significant
<i>Apium graveolens</i>	celery	<i>Lygus</i> sp.	western lygus bug	Ryan Brown	Regulatory significant
<i>Bambusa</i> sp.	bamboo	<i>Kuwanaspis bambusicola</i>	bamboo thread scale	Noemi Negron	First in County
<i>Beta vulgaris</i>	beet	<i>Circulifer tenellus</i>	beet leafhopper	Eric Dougherty, Jakira Davis	Regulatory significant
<i>Beta vulgaris</i>	beet	<i>Lygus elisus</i>	western lygus bug	Shannan Webb	Regulatory significant
<i>Bidens alba</i>	Spanish needles	<i>Phenacoccus sisymbriifolium</i>	mealybug	Noemi Negron, Alexander Tasi	First in County
<i>Brassica oleracea</i>	cauliflower	<i>Cacopsylla</i> sp.	psyllid	Eric Dougherty, Jakira Davis, Ryan Brown, Dyrana Russell	Regulatory significant
<i>Brassica oleracea</i>	kale	<i>Ceratocapsus punctulatus</i>	mirid plant bug	Alexander Tasi	First in County
<i>Brassica oleracea</i>	broccoli	<i>Lygus</i> sp.	western lygus bug	Ryan Brown	Regulatory significant
<i>Brassica rapa</i>	bok choy	<i>Deltocephalus fuscinosus</i>	leafhopper	Dyrana Russell, Logan Cutts	Regulatory significant
<i>Cannabis sativa</i>	hemp	<i>Ceroplastes ceriferus</i>	Indian wax scale	Sam Hart	New Florida host record
<i>Cannabis sativa</i>	hemp	<i>Entylia carinata</i>	treehopper	Angi Hutcherson	New Florida host record
<i>Cannabis sativa</i>	hemp	<i>Pulvinaria urbicola</i>	urbicola soft scale	Ethan Kelly	New Florida host record
<i>Capsicum annuum</i>	pepper	<i>Bactericera cockerelli</i>	potato psyllid	Victoria Benjamin	Regulatory significant
<i>Capsicum annuum</i>	red bell pepper	<i>Bemisia tobaci</i> "Q"	silverleaf whitefly, Q biotype	Jakira Davis, Eric Dougherty	Regulatory significant
<i>Cedrela odorata</i>	Spanish cedar	<i>Clavaspis herculeana</i>	armored scale	Christine Podos	New Florida host record
<i>Cedrela</i> sp.	Spanish cedar	<i>Mastigimas ernstii</i>	cedrela psyllid	Christine Podos	First in County
<i>Cichorium endivia</i>	escarole	<i>Deltocephalus fuscinosus</i>	leafhopper	Ryan Brown	Regulatory significant
<i>Cinnamomum camphora</i>	camphor tree	<i>Fiorinia proboscidea</i>	snout scale	Sam Hart	First in County
<i>Cinnamomum camphora</i>	camphor tree	<i>Nipaeococcus nipae</i>	coconut mealybug	Colton Striker	New Florida host record
<i>Citrus limon</i>	lemon	<i>Pleuroprucha asthenaria</i>	wave moth	Joshua Borland	First in County
<i>Citrus reticulata</i>	tangerine	<i>Nipaeococcus viridis</i>	lebbeck mealybug	Sylvia Valdez, Maria Zuniga	First in County
<i>Citrus</i> sp.	citrus	<i>Entomobrya citrensis</i>	springtail	Robert Brady	First in County
<i>Citrus</i> sp.	citrus	<i>Scolothrips</i> sp.	predaceous thrips	Younes Belmourd	New Florida State record
<i>Citrus</i> sp.	citrus	<i>Willowsia pyrrhophygia</i>	springtail	Robert Brady	First in County
<i>Cynara cardunculus</i>	artichoke	<i>Brachycaudus cardui</i>	thistle aphid	Dyrana Russell, Logan Cutts	Regulatory significant
<i>Cynara cardunculus</i>	artichoke	<i>Platyptilia carduidactyla</i>	artichoke plume moth	Alexander Tasi	Regulatory significant
<i>Cyperus lecontei</i>	a sedge	<i>Trionymus caricis</i>	carex mealybug	Kyle Schnepf, Alex de la Paz, Lily Deeter	New Florida Host record, First in County
<i>Echinodorus</i> sp.		<i>Opiconsiva anacharsis</i>	delphacid planthopper	David Brown	Regulatory significant
<i>Echinodorus</i> sp.		<i>Opiconsiva anacharsis</i>	delphacid planthopper	David Brown	Regulatory significant
<i>Echinodorus</i> sp.	Amazon sword plant	<i>Opiconsiva anacharsis</i>	delphacid planthopper	Colton Striker	Regulatory significant
<i>Echinodorus</i> sp.	Amazon sword plant	<i>Opiconsiva anacharsis</i>	delphacid planthopper	Colton Striker	Regulatory significant
<i>Echinodorus</i> sp.	Amazon sword plant	<i>Opiconsiva anacharsis</i>	delphacid planthopper	Colton Striker	Regulatory significant



PLANT SPECIES	PLANT COMMON NAME	ARTHROPOD GENUS AND SPECIES	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
<i>Echinodorus</i> sp.	Amazon sword plant	<i>Opiconsiva anacharsis</i>	delphacid planthopper	Colton Striker	Regulatory significant
<i>Eleocharis flavescens</i>	yellow spikerush	<i>Isodelphax basivitta</i>	delphacid planthopper	Victoria Benjamin, Alexander Tasi, Chase Groninger, Noemi Negron	New Florida host record
<i>Elephantopus elatus</i>	elephant foot	<i>Eriococcus mesotrichus</i>	middle seta eriococcin	Abby Bartlett	First in County
<i>Filicium decipiens</i>	Japanese fern tree	<i>Fiorinia phantasma</i>	phantasma scale	Carlos Aguilera	New Florida host record
<i>Filicium decipiens</i>	Japanese fern tree	<i>Nipaecoccus viridis</i>	lebbeck mealybug	Carlos Aguilera	New Florida host record
<i>Fragaria x ananassa</i>	strawberry	<i>Ceratagallia californica</i>	leafhopper	Ryan Brown	Regulatory significant
<i>Fragaria x ananassa</i>	strawberry	<i>Chaetosiphon fragaefolii</i>	strawberry aphid	Ryan Brown	Regulatory significant
<i>Fragaria x ananassa</i>	strawberry	<i>Deltocephalus fuscinosus</i>	leafhopper	Ryan Brown	Regulatory significant
<i>Fragaria x ananassa</i>	strawberry	<i>Lygus</i> sp.	western lygus bug	Ryan Brown	Regulatory significant
<i>Fragaria x ananassa</i>	strawberry	<i>Lygus</i> sp.	western lygus bug	Ryan Brown	Regulatory significant
<i>Fragaria x ananassa</i>	strawberry	<i>Lygus</i> sp.	western lygus bug	Jakira Davis, Eric Dougherty	Regulatory significant
<i>Fragaria x ananassa</i>	strawberry	<i>Lygus</i> sp.	western lygus bug	Ryan Brown	Regulatory significant
<i>Fragaria x ananassa</i>	strawberry	<i>Metopoplax ditomoides</i>	European seed bug	Ryan Brown	Regulatory significant
<i>Gardenia jasminoides</i>	gardenia, cape jasmine	<i>Thrips parvispinus</i>	thrips	Lance Osborne	First in County
<i>Geranium carolinianum</i>	Carolina cranesbill	<i>Phenacoccus sisymbriifolium</i>	mealybug	William Schap, Julieta Brambila	New Florida host record
<i>Hypericum tenuifolium</i>	Atlantic St. John's wort	<i>Aonidomytilus hyperici</i>	hypericum scale	Kyle Schnepf, Alex de la Paz, Lily Deeter	New Florida Host record, First in County
<i>Hypericum tenuifolium</i>	Atlantic St. John's wort	<i>Eriococcus mesotrichus</i>	eriococcid	Kyle Schnepf, Alex de la Paz, Lily Deeter	New Florida Host record, First in County
<i>Hypericum tenuifolium</i>	Atlantic St. John's wort	<i>Neopulvinaria innumerabilis</i>	cottony maple scale	Kyle Schnepf, Alex de la Paz, Lily Deeter	New Florida Host record
<i>Ipomoea batatas</i>	sweet potato	<i>Thrips nigropilosus</i>	thrips	Maria Velez-Climent	Regulatory significant
<i>Ipomoea batatas</i>	sweet potato	<i>Thrips nigropilosus</i>	thrips	Cheryl Jones, Mary Jane Echols	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Autographa californica</i>	alfalfa looper	Jakira Davis, Ryan Brown, Dyran Russell	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Cadra figulilella</i>	raisin moth	Jakira Davis, Ryan Brown, Dyran Russell	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Ceratagallia californica</i>	leafhopper	Jakira Davis, Eric Dougherty	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Ceratagallia californica</i>	leafhopper	Logan Cutts	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Ceratagallia californica</i>	leafhopper	Ryan Brown	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Ceratagallia californica</i>	leafhopper	Ryan Brown	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Ceratagallia californica</i>	leafhopper	Jakira Davis, Eric Dougherty	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Ceratagallia longula</i>	leafhopper	Ryan Brown	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Deltocephalus fuscinosus</i>	leafhopper	Ryan Brown	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Deltocephalus fuscinosus</i>	leafhopper	Logan Cutts	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Deltocephalus fuscinosus</i>	leafhopper	Logan Cutts	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Hyadaphis foeniculi</i>	honeysuckle aphid	Logan Cutts	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Liriomyza langei</i>	California pea leafminer	Jakira Davis, Eric Dougherty	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Liriomyza langei</i>	California pea leafminer	Ryan Brown	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Metopolophium dirhodum</i>	rose-grass aphid	Jakira Davis, Eric Dougherty	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Ryan Brown	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Ryan Brown	Regulatory significant



PLANT SPECIES	PLANT COMMON NAME	ARTHROPOD GENUS AND SPECIES	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
<i>Lactuca sativa</i>	lettuce	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Logan Cutts, Eric Dougherty, Dyrana Russell, Jakira Davis, Ryan Brown	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Ryan Brown	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Ryan Brown	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Ryan Brown	Regulatory significant
<i>Lactuca sativa</i>	lettuce	<i>Phytomyza syngenesiae</i>	chrysanthemum leaf miner	David Brown	Regulatory significant
<i>Lemna obscura</i>	duckweed	<i>Rhopalosiphum nymphaeae</i>	waterlily aphid	Victoria Benjamin, Alexander Tasi	New Florida host record
<i>Magnolia</i> sp.	magnolia	<i>Caliothrips striatus</i>	thrips	Ann Dunn, Kathryn Daly, Felipe Soto-Adames	First in County
<i>Mangifera indica</i>	mango	<i>Sinomegoura citricola</i>	aphid	Prem Kumar	First in County
<i>Mentha</i> sp.	mint	<i>Eupteryx decemnotata</i>	Ligurian leafhopper	Lisa Tyler	Regulatory significant
<i>Mentha</i> sp.	mint	<i>Ovatus mentharius</i>	mint aphid	Lisa Tyler	Regulatory significant
<i>Parthenocissus quinquefolia</i>	Virginia creeper	<i>Pseudococcus odermatti</i>	mealybug	Renan Espino Martinez	New Florida host record
<i>Pennisetum setaceum</i>	fountain grass	<i>Mecidea major</i>	stink bug	Sofia Youther	Significant find
<i>Persea americana</i>	avocado	<i>Clavaspis perseae</i>	armored scale	Abby Bartlett, Nora Marquez	Regulatory significant
<i>Persea americana</i>	avocado	<i>Davidsonaspis aguacatae</i>	armored scale	Jakira Davis, Ryan Brown, Dyrana Russell	Regulatory significant
<i>Persea americana</i>	avocado	<i>Davidsonaspis aguacatae</i>	armored scale	Keith Zugar	Regulatory significant
<i>Persea americana</i>	avocado	<i>Davidsonaspis aguacatae</i>	armored scale	Ryan Brown	Regulatory significant
<i>Persea americana</i>	avocado	<i>Davidsonaspis aguacatae</i>	armored scale	Jakira Davis, Eric Dougherty	Regulatory significant
<i>Persea americana</i>	avocado	<i>Davidsonaspis aguacatae</i>	armored scale	Ryan Brown	Regulatory significant
<i>Persea americana</i>	avocado	<i>Davidsonaspis aguacatae</i>	armored scale	Ryan Brown	Regulatory significant
<i>Persea americana</i>	avocado	<i>Davidsonaspis aguacatae</i>	armored scale	Mark Laurint	Regulatory significant
<i>Persea americana</i>	avocado	<i>Davidsonaspis aguacatae</i>	armored scale	Jakira Davis, Eric Dougherty	Regulatory significant
<i>Persea americana</i>	avocado	<i>Davidsonaspis aguacatae</i>	armored scale	Abby Bartlett, Nora Marquez	Regulatory significant
<i>Persea americana</i>	avocado	<i>Davidsonaspis aguacatae</i>	armored scale	Ryan Brown	Regulatory significant
<i>Persea americana</i>	avocado	<i>Davidsonaspis aguacatae</i>	armored scale	Eric Dougherty, Jakira Davis	Regulatory significant
<i>Persea americana</i>	avocado	<i>Davidsonaspis aguacatae</i>	armored scale	Eric dougherty, Jakira Davis, Logan Cutts, Dyrana Russell, Ryan Brown	Regulatory significant
<i>Persea americana</i>	avocado	<i>Fiorinia phantasma</i>	phantasma scale	Stephanie Paz	New Florida host record
<i>Persea borbonia</i>	redbay	<i>Fiorinia fioriniae</i>	fiorinia scale	Lily Deeter	First in County
<i>Phyllanthus angustifolius</i>	foliage flower; swordbush	<i>Nipaeococcus viridis</i>	lebbeck mealybug	Scott Krueger	New Florida host record
<i>Physalis philadelphica</i>	tomatillo	<i>Bactericera cockerelli</i>	potato psyllid	Dyrana Russell, Logan Cutts	Regulatory significant
<i>Physalis philadelphica</i>	tomatillo	<i>Bactericera cockerelli</i>	potato psyllid	Logan Cutts, Ryan Brown	Regulatory significant
<i>Piper</i> sp.		<i>Seira dowlingi</i>	tropical springtail	Muhammad Ahmed	First in County
<i>Polygonella basiramia</i>	Florida jointweed, tufted wireweed, hairy jointweed	<i>Ferrisia gilli</i>	mealybug	Kyle Schnepf, Alex de la Paz, Lily Deeter	New Florida Host record
<i>Quercus castanea</i>	chinkapin oak	<i>Heterosminthurus</i> sp.	springtail	Sam Hart, Kelly Douglas, John McVay	New Florida State record
<i>Quercus hemisphaerica</i>	laurel oak	<i>Thelaxes suberi</i>	southern oak thelaxid	Susan Halbert, Mark Rothschild	First in County
<i>Quercus laurifolia</i>	laurel oak	<i>Thelaxes suberi</i>	southern oak thelaxid	Mark Rothschild	First in County



PLANT SPECIES	PLANT COMMON NAME	ARTHROPOD GENUS AND SPECIES	ARTHROPOD COMMON NAME	COLLECTOR	RECORD
<i>Rosmarinus officinalis</i>	rosemary	<i>Eupteryx decemnotata</i>	Ligurian leafhopper	Lisa Tyler	Regulatory significant
<i>Rubus</i> sp.	raspberry	<i>Ceratagallia californica</i>	leafhopper	Logan Cutts	Regulatory significant
<i>Solanum americanum</i>	nightshade	<i>Leptoglossus phyllopus</i>	leaf-footed bug	Noemi Negron, Alexander Tasi	New Florida host record
<i>Tridax procumbens</i>	coatbuttons	<i>Xyonysius californicus</i>	seed bug	Noemi Negron, Alexander Tasi	New Florida Host Record
undetermined	mixed salad greens	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Ryan Brown, Logan Cutts, Dyrana Russell	Regulatory significant
undetermined	mixed salad greens	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Ryan Brown	Regulatory significant
undetermined	organic baby spring mix	<i>Nasonovia ribisnigri</i>	currant-lettuce aphid	Chase Groninger	Regulatory significant
undetermined	mixed salad greens	<i>Ceratagallia californica</i>	leafhopper	Dyrana Russell, Logan Cutts	Regulatory significant
undetermined	mixed salad greens	<i>Lygus hesperus</i>	western lygus bug	Dyrana Russell, Logan Cutts	Regulatory significant
<i>Vaccinium myrsinites</i>	shiny blueberry	<i>Archips georgiana</i>	orange oak leafroller	Victoria Benjamin, Chase Groninger, Noemi Negron, Alexander Tasi	New Florida host record
<i>Verbesina virginica</i>	white crownbeard; frostweed	<i>Aphis astericola</i>	aphid	Ethan Kelly	First in County
		<i>Aphalara persicaria</i>	psyllid	Douglas Restom-Gaskill	First in County
		<i>Bactrocera dorsalis</i>	Oriental fruit fly	John Quigley	Quarantinable; Regulatory significant
		<i>Bactrocera dorsalis</i>	Oriental fruit fly	Stepanka Newman	Quarantinable; Regulatory significant
		<i>Bactrocera dorsalis</i>	Oriental fruit fly	Stepanka Newman	Quarantinable; Regulatory significant
		<i>Bactrocera dorsalis</i>	Oriental fruit fly	Linda Mcray	Quarantinable; Regulatory significant
		<i>Bactrocera dorsalis</i>	Oriental fruit fly	Yaritza Perez-Otero	Quarantinable; Regulatory significant
		<i>Blastopsylla occidentalis</i>	eucalyptus psyllid	Douglas Restom-Gaskill	First in County
		<i>Bothriocera datuna</i>	cixiid planthopper	Rachel Conklin	First in County
		<i>Carolinaia floridensis</i>	aphid	Alexander Tasi, Scott Weihman	First in County
		<i>Cedusa chuluota</i>	derbid planthopper	Victor Zeno	First in County
		<i>Chionomus quadrispinosus</i>	delphacid planthopper	Douglas Restom-Gaskill	First in County
		<i>Craspedolepta euthamiae</i>	Florida euthamia psyllid	Alexander Tasi	First in County
		<i>Cyrtolobus fenestratus</i>	treehopper	James Lee	First in County
		<i>Eumargarodes laingi</i>	margarodid scale	Kyle Schnepf	First in County
		<i>Lissachatina fulica</i>	giant African land snail	Gary Webb, Daniel Merced	Quarantinable; Regulatory significant
		<i>Mitrapssylla cubana</i>	psyllid	Scott Weihman	First in County
		<i>Neolygus omnivagus</i>	plant bug	Younes Belmourid	First in County
		<i>Oecleus productus</i>	cixiid planthopper	Robert Leahy	First in County
		<i>Ophiderma pubescens</i>	downy treehopper	Douglas Restom-Gaskill	First in County
		<i>Paratriphleps laeviusculus</i>	phytophagous anthocorid bug	Douglas Restom-Gaskill	First in County
		<i>Pompostolella chariwepla</i>	tineid moth	Jennifer Hesse	First in County
		<i>Rhizoecus leucosomus</i>	white ground mealybug	Kyle Schnepf	First in County
		<i>Saccharosydne saccharivora</i>	West Indian canefly	Douglas Restom-Gaskill	First in County
		<i>Schizoptera bispina</i>	jumping ground bug	Robert Brady	First in County
		<i>Sirex juvencus</i>	wood wasp	Robert Shim	Regulatory significant
		<i>Tomnotus communis</i>	burrowing bug	Shasta Thomason	First in County
		<i>Xyonysius basalis</i>	seed bug	Maximilian Carfagno	First in County
		<i>Zyginama tripunctata</i>	leafhopper	Joseph Hanus, James Bouie	First in County





NEMATOLOGY

Compiled by Janete Brito, Ph.D.; Jason Stanley, M.S 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

	APRIL - JUNE	2022 - YEAR TO DATE
Morphological Identifications	3,455	7,111
Molecular Identifications *	207	1,341
Total Identifications	3,662	8,452

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

Nematode of Special Interest

1 *Meloidogyne spartinae* (Rau and Fassuliotis, 1965) was found infecting the roots of saltmarsh cordgrass (*Spartina alterniflora*) (St. Johns County; 04132022-03113; Janete Brito, Jason Stanley and Silvia Vau; 12 April 2022).

Meloidogyne spartinae was first found in 1958 on roots of *Spartina alterniflora*, saltmarsh cordgrass, a member of the grass family (Poaceae or Gramineae), in Marineland, Florida. This species was described as *Hypsoperine spartinea* in 1965 (Rau and Fassuliotis, 1965). Three years later, it was placed in the genus *Meloidogyne* (Whitehead, 1968). Ecologically, this is a unique root-knot nematode, the only coastal root-knot nematode species found in the intertidal zone and not on sand dunes, as are *M. dunensis*, *M. duytsi* and *M. maritima*, described from European sea rocket (*Cakile maritima*), beach grass (*Elymus farctus*) and marram grass (*Ammophila arenaria*) respectively, with the latter two plant hosts also in the Poaceae (Karssen *et al.*, 1998a; 1998b; Jepson 1987; Palomares-Rius *et al.*, 2007). In addition to Florida, *M. spartinae* has been reported in Connecticut, Georgia, Maine, Massachusetts, New Jersey, New York, North Carolina and South Carolina (Eisenback and Hischnmamm, 2001; LaMondia and Elmer, 2007, 2008; Rau and Fassuliotis, 1965). Recently, *M. spartinea* was identified from infected saltmarsh cordgrass plants growing in both the type locality, Marineland, and Vilano Beach, Florida. Infected plants showed circular to ovoid terminal galls, a typical symptom induced by this nematode species. *Spartina alterniflora* is a common saltwater-tolerant plant of tidal marshes growing where the water has a NaCl (sodium chloride) level of approximately 2.1 percent. Usually, plants growing in northern



1a - *Spartina alterniflora*, cordgrass, infected with *M. spartinae*. View of the sampling area and cordgrass plants.
Photo by Silvia Vau, FDACS-DPI

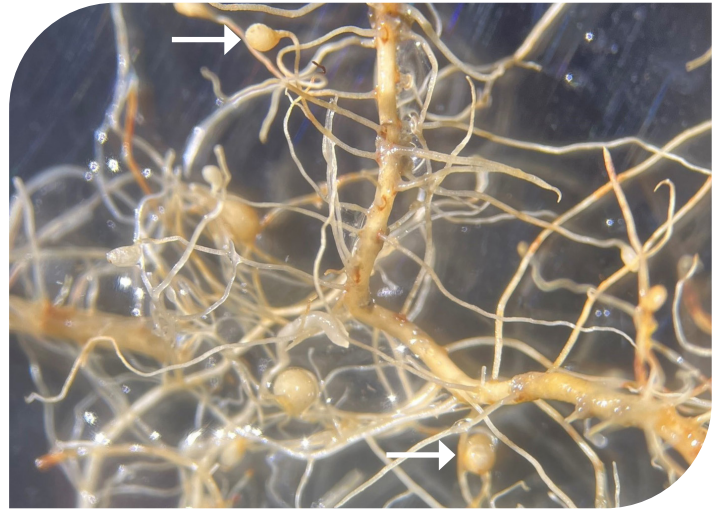


1b - *Spartina alterniflora*, cordgrass, roots infected with *M. spartinae*.
Photo by Janete Brito, FDACS-DPI



areas of the United States have larger and more abundant galls than those from southern areas.

Since its description, very little additional information about this nematode species has been collected. Many questions still need to be investigated, including the impact of salinity on nematode infectivity and development; the effect of NaCl concentration and water temperature in its life cycle; the phylogenetic relationship of *M. spartinae* with other *Meloidogyne* species; and the role of *M. spartinae*, if any, in the marsh decline and *Spartina alterniflora* dieback observed in the northeastern United States. We have been collecting biological, ecological, taxonomic and phylogenetic data in an attempt to acquire more knowledge about *M. spartinae* in Florida and to address these issues.



1c - *Meloidogyne spartinae* root galls induced (arrow). Notice the presence of circular to ovoid terminal galls (arrow), a typical symptom caused by this nematode species.
Photo by Janete Brito, FDACS-DPI

COLLECTORS

Collectors submitting five or more samples processed for nematological analysis during April-June 2022.

COLLECTOR NAME	
Alexander Arbelaez	168
Bobby Floyd	128
Donald Taylor	7
Eric Rojas	200
Grayson Grume	34
Heathcliff Garcia	461
Janie Echols	19
Michael Bentley	52
Nora Marquez	93
Ricardo Areingdale	9
Richard Blaney	67
Richard Bloom	8
Rogelio Blanco	102
Ryan Brown	10
Sam Hart	19

SAMPLES FOR MORPHOLOGICAL ANALYSIS

Certifications and Regulatory Purposes

	APRIL - JUNE	2022 - YEAR TO DATE
Multistate Certification involving California	998	1,984
Multistate Certification excluding California Certification	1,694	3,642
Citrus Certification (Citrus Nursery Certification, Site or Pit Approval)	42	112
Total	2,734	5,738

Other Purposes

	APRIL - JUNE	2022 - YEAR TO DATE
Identification (other organisms)	0	0
Interdiction Station (AIS)	24	62
Plant Problems	32	42
Survey	24	128
Total	80	232

SAMPLES FOR MOLECULAR ANALYSIS

	APRIL - JUNE	2022 - YEAR TO DATE
Regulatory Purposes	59	141
Other Purposes	0	0
Identifications	148	200
Surveys	0	0
Total	207	341



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- Karssen, G., van Aelst, A. and Cook, R. (1998a).** Redescription of the root-knot nematode *Meloidogyne maritima* Jepson, 1987 (Nematoda: Heteroderidae), a parasite of *Ammophila arenaria* (L.) Link. *Nematologica* 44:241–253.
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- Rau, G.T. and Fassuliotis, G. (1965).** *Hypsoperine spartinea* n. sp. a gall-forming nematode on roots of smooth cordgrass. *Proceedings of the Helminthological Society of Washington* 32: 159–162.
- Whitehead, A.G. (1968.)** Taxonomy of *Meloidogyne* (Nematodea:Heteroderidae) with descriptions of four new species. *Transactions of the Zoological Society of London* 31 :263–401.



PLANT PATHOLOGY

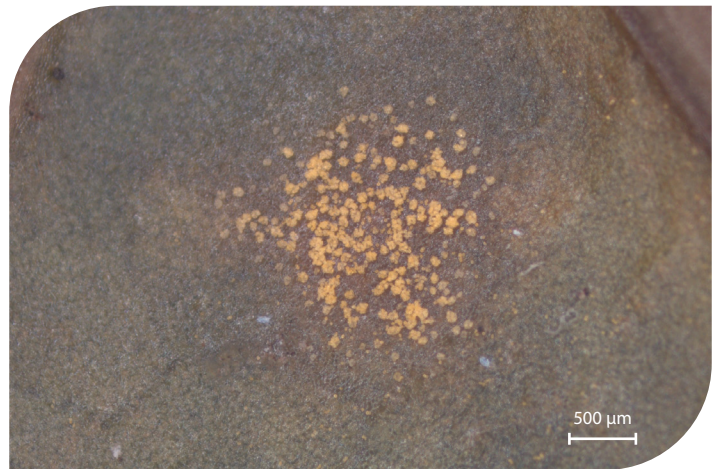
Compiled by Hector Urbina, Ph.D.; Jodi Hansen, M.S. and Taylor Smith, B.S.

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.

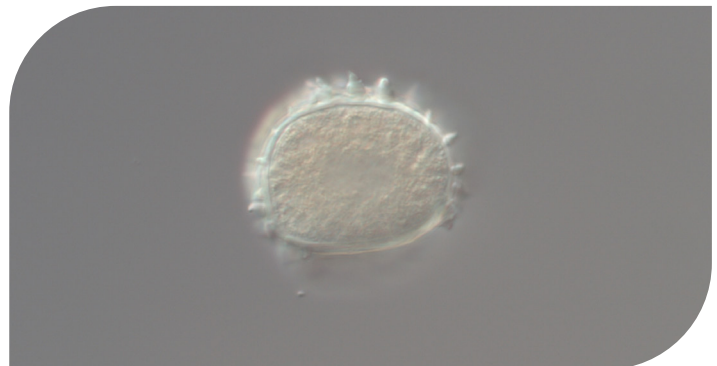
1 *Hemileia vastatrix* Berk. & Broome (coffee leaf rust)
 (Pucciniales, Pucciniomycotina, Basidiomycota)
 (cedar-quince rust) (Gymnosporangiaceae, Pucciniaceae, Pucciniomycotina) was found at a residential property in Naples on coffee, *Coffea arabica* L. (Rubiaceae). The main symptom of this disease is superficial, orange-yellow leaf spots on the lower leaf surface. Under the microscope, urediniospores are hyaline and reniform, with a conspicuous ridge of warts on the convex face. Coffee leaf rust is considered the most important disease of coffee and is present in all major coffee producing areas, including a recent observation in Hawaii (Collier County; 11052021-9024; Scott Krueger; 4 November 2021).



1a - *Coffea arabica*, coffee, leaf with coffee leaf rust.
 Photo by Hector Urbina, FDACS-DPI



1b - Uredinea of coffee leaf rust on *Coffea arabica*.
 Photo by Hector Urbina, FDACS-DPI



1c - Details of coffee leaf rust urediniospore.
 Photo by Hector Urbina, FDACS-DPI

QUARTERLY ACTIVITY REPORT

	APRIL - JUNE	2022 - YEAR TO DATE
Citrus black spot	23	52
Citrus canker	54	105
Citrus greening / HLB	55	108
HLB Certification for out-of-state shipping	4,412	4,412
Import inspections	3	5
Interdictions	16	33
Palm phytoplasma	4	11
Pathology, General	618	1,107
Soil	56	100
Totals	5,241	5,933



🔍 PLANT PATHOLOGY IDENTIFICATION TABLE

The following table provides information about samples identified between April - June 2022 . 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>Aralia spinosa</i>	Angelica tree, devil's walking stick	<i>Cystiodontia</i> sp.	relampago blight	natural area at springs	06072022-05146	Suwannee	Jeffrey Eickwort	6/7/22	host
<i>Boehmeria cylindrica</i>	false nettle, bog hemp	<i>Pucciniastrum boehmeriae</i>	rust fungus	agricultural site	04282022-03767	Hendry	Jason Stanley	4/27/22	US continental
<i>Cannabis sativa</i>	industrial hemp	<i>Pseudoperonospora cannabina</i>	downy mildew	farm	06032022-05043	Hendry	grower	6/3/22	state
<i>Cannabis sativa</i>	industrial hemp	<i>Pythium aphanidermatum</i>	crown and root rot	farm	06172022-05576	Hendry	grower	6/16/22	host
<i>Illex opaca</i>	American holly	<i>Cystiodontia</i> sp.	relampago blight	natural area at springs	04202022-03450	Suwannee	Jeffrey Eickwort	4/19/22	county
<i>Phalaenopsis</i> sp.	moth orchid	<i>Dickeya fangzhongdai</i>	soft rot	residence	06082022-05215	Orange	George Warden	6/8/22	state
<i>Quercus</i> sp.	oak	<i>Cystiodontia</i> sp.	relampago blight	natural area	04082022-02949	Citrus	Abby Bartlett	4/7/22	county
<i>Ulmus alata</i>	winged elm	<i>Cystiodontia</i> sp.	relampago blight	natural area	05132022-04279	Sumter	Jeffrey Eickwort	5/12/22	host
<i>Zea mays</i>	corn	<i>Phyllachora maydis</i>	maize tar spot	seed company	05162022-04361	Collier	Scott Krueger	5/16/22	county





FROM THE EDITOR

By Patti Anderson

Inquiring minds want to know...

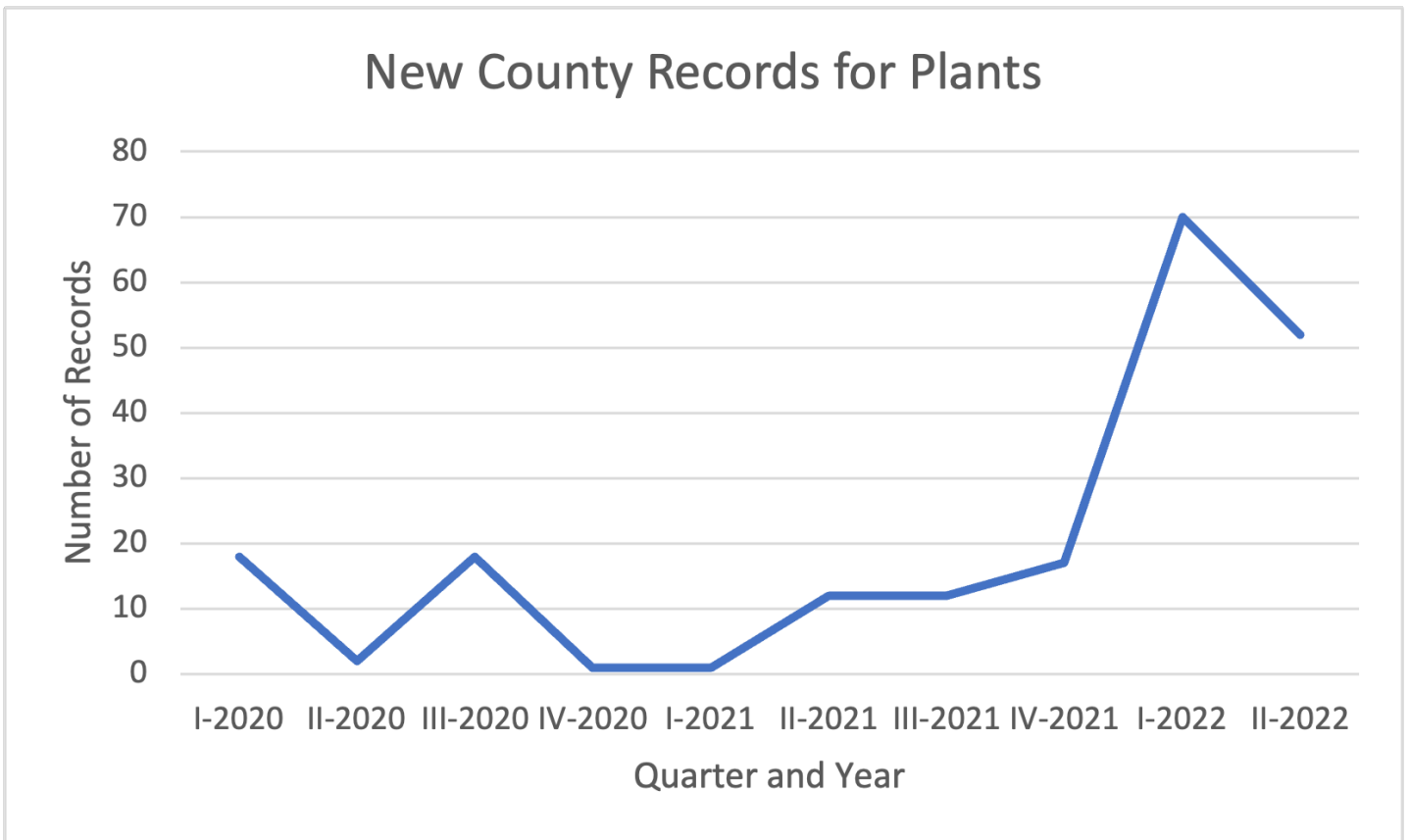
How did the pandemic impact botanical New County records at DPI?

The years 2020 and 2021 are likely to be remembered for the impact of the pandemic across many areas of interest. In the Botany section, we were struck both by the decline in the number of new county records as people worked more from home offices and by the remarkable increase in the number after people returned to more regular routines. The graph below illustrates these changes. For example, in the first quarter of 2021, we recorded only one new county record for a plant species, but from January through March 2022, there were 71 new county records for plants. The number declined to 53 this quarter, but we still see a substantial increase and the trend appears to be continuing.



Plantago lanceolata, narrowleaf plantain.
Photo by F. D. Richards, North Carolina State Extension

We appreciate the effort of DPI Plant Inspectors who pay careful attention to unusual plants in their areas and allow us to determine more accurately the distribution of native and naturalized plants throughout Florida. Job well done!





TRI-OLGY

[FDACS.gov/TRI-OLGY](https://fdacs.gov/TRI-OLGY)

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