

TRI-OLOGY

A PUBLICATION OF THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, DIVISION OF PLANT INDUSTRY
CHARLES H. BRONSON, COMMISSIONER RICHARD D. GASKALLA, DIVISION DIRECTOR

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DPI's Bureau of Entomology, Nematology and Plant Pathology (the botany section is included in this bureau) produces TRI-OLOGY six times a year, covering two months of activity in each issue. The report includes detection activities from nursery plant inspections, routine and emergency program surveys, and requests for identification of plants and pests from the public. Samples are also occasionally sent from other states or countries for identification or diagnosis.

Highlights

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

***Sacola lanceolata* (Aubl.) Garay. (beaked ladiestresses).** This conspicuous and widespread species, also known as *Spiranthes lanceolata* and *Stenorrhynchos lanceolatus*, is one of Florida's showiest terrestrial orchids. It ranges from Florida and the West Indies, through Mexico and Central America, to South America east of the Andes as far south as Uruguay. In Florida, it is occasionally seen in flatwoods, oak hammocks, pastures, and roadsides throughout most of the peninsula, with an isolated occurrence in Walton County in the Panhandle. The species is included on the list of threatened plants by the State of Florida in order to draw attention to its vulnerability, although it is by no means rare at the moment.



***Sacola lanceolata* (beaked ladies' tresses)**
Photograph and copyright courtesy of Shirley Denton, [Atlas of Florida Vascular Plants](#)



***Guzmania monostachia* (Fuchs' bromeliad), an example of Bromeliaceae.**
Photograph and copyright courtesy of Shirley Denton, [Atlas of Florida Vascular Plants](#)

***Helicotylenchus dihystra* (Cobb, 1893) Sher, 1961, a spiral nematode, and *Tylenchorhynchus eremicolus* Allen, 1955, a stunt nematode,** were found infecting the roots of ornamental bromeliads in Lake County. Bromeliads are ornamental epiphytes that are grown and sold for their attractive foliage and flowers. These ornamental epiphytes produce roots that anchor the plant to branches and twigs of trees, but also take up nutrients when bromeliads are in contact with soil or other growing media. Bromeliad roots are often found with plant-parasitic nematodes. These ectoparasitic nematodes on bromeliads do not cause serious damage; however, the presence of these nematodes may cause regulatory problems for plant export to national and international markets.

***Kordyana tradescantiae* (a leaf spot)** was found on

Section Reports

Botany

Entomology

Nematology

Plant Pathology

Our Mission...getting it done

As a regulatory agency of the Florida Department of Agriculture & Consumer Services, the Division of Plant Industry works to detect, intercept and control plant and honey bee pests that threaten Florida's native plant and agricultural resources.

Perhaps you'd like to know more about our duties and the legal authority of FDACS/Division of Plant Industry. Florida Statute 570.32 defines the powers and duties of the Division of Plant Industry. They include:

1. **Insects, mites, mollusks, plant diseases and nematodes**

We identify them on request, determine their presence in agricultural and horticultural crops, and investigate methods of controlling plant pests and

Tradescantia ohiensis (Ohio spiderwort) in a dooryard garden in Alachua County. This pathogen, first found in North America last year, has apparently over-wintered without difficulty. The pathogen behaves like a leaf smut and is being explored for biocontrol of weedy *Tradescantia* species.

***Mycovellosiella* sp. (a leaf spot)** was found on *Plumeria* sp. (frangipani) in a Collier County nursery. This pathogen is apparently an undescribed species.

***Raffaelea lauricola* (laurel wilt)** was found on *Persea borbonia* (red bay) at Crystal River Preserve State Park. This is a new **County record** and marks the first record on the west side of the Florida peninsula.



***Plumeria obtusa* (frangipani)**
Photograph and copyright courtesy of Shirley Denton, [Atlas of Florida Vascular Plants](#)



***Castianeira crucigera* (a spider)**
Photograph and copyright courtesy of Jeff Hollenbeck www.bugguide.net

***Castianeira crucigera* (Hentz) (a spider)**, a new **Florida state record**, was found during a wheat farm survey in Lake City. A male specimen was collected. This species was previously known from Arkansas, North Carolina and Virginia. It is not a plant pest.

***Episimus* n. sp. (a tortricid moth)**, a new **Western Hemisphere record**, was found on *Calophyllum* sp. (beauty leaf) at a residence in Miami. This is an undescribed species, probably of no economic importance and might be native to Florida. This moth does some leaf damage to

Calophyllum antillanum, one of several species called beauty leaf, which has been listed as an invasive species by the Florida Exotic Pest Plant Council. *Episimus unguiculus* Clarke, another of the 65 species in this new world genus, has been studied as a potential biological control agent for use against the invasive Brazilian pepper, *Schinus terebinthifolius*.



***Odontonema callistachyum* (purple firespike)**
Photograph courtesy of [Top Tropicals](#)

***Frankliniella salviae* Moulton (a thrips)**, a new **Florida state record**, previously reported in the United States only from Brownsville, Texas, was collected in Miami Springs. Three adult specimens were found on *Odontonema callistachyum* (purple firespike) at a residence.

***Geckobia hemidactyli* Lawrence 1936 (gecko mite)**, a new **Florida state record**, was found at a residence in Ft. Pierce. This is an exotic mite found on an exotic gecko. *Geckobia* is a genus of ectoparasites found on reptiles mostly in the Old World.

Patti J. Anderson, Ph.D., managing editor
Wayne N. Dixon, Ph.D., editor

Acknowledgements:

The editors would like to acknowledge the work of all those who contributed

diseases from these groups.

2. Honeybees

We enforce the laws of the state and the rules of the department to control and eradicate honeybee pests and unwanted races of honeybees.

3. Plant pests

We inspect plants or plant products grown or held in any area of the state, and enforce the laws of the state and the rules of the department pertaining to plants and plant products.

4. Pest plants and noxious weeds

We carry out eradication and control programs and associated plant surveys.

5. Citrus

We test citrus trees for diseases and for desirable horticultural characteristics; maintain a source of budwood of the superior, tested varieties for distribution to the citrus industry; and verify propagations of citrus varieties and special rootstocks for growers when requested

6. New ideas

We develop, investigate and implement improved techniques and methods to meet our objectives in the areas described above.

Next time...more about the kinds of people who help carry out our mission.

We welcome your comments and suggestions for improvement on the new format of TRI-OLOGY. Please feel free to contact me at dixonw@doacs.state.fl.us or Dr. Patti Anderson at

information and explanations by providing data, photographs or text and by carefully reading early drafts. We also thank Scott Weinberg for his skillful use of web authoring tools to produce this report.

andersp1@doacs.state.fl.us and let us know.

Wayne N. Dixon, Ph.D., editor
Assistant Director, DPI

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[Florida Department of Agriculture and Consumer Services, Division of Plant Industry](#)
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Botany Section

Compiled by [Richard E. Weaver, Jr., Ph.D.](#), and [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 10,000 plants and nearly 1,400 vials of seeds.

***Asclepias cinerea* Walt. (Carolina milkweed)** (a genus of about 100 species primarily from North and Central America, with some naturalized in the Old World). Asclepiadaceae. Found mainly in dry pinelands from South Carolina to Florida and west to Mississippi, this perennial herb with milky sap has slender, glabrous stems (although they are sometimes marked with a vertical band of pubescence) to 30 cm tall, growing from woody or tuberous roots. The leaves are opposite, narrowly linear and up to 10 cm long. The flowers are loosely held in umbels on lax, 1.5 – 2.5 cm long pedicels. The calyx has five connate, lanceolate lobes; the corolla has reflexed lobes that are lavender or lavender with white margins or bases. As is characteristic of *Asclepias*, the five stamens, with two pollinia per anther, are fused to the stigma to form a gynostegium with unusual floral appendages: a spur-like horn surrounded by a cup-like hood. In this species, the lavender hoods are shorter than the gynostegium and have a pair of triangular, 1 mm long lobes on the margin. The fruit is a slender follicle that narrows toward both tips, about 8 cm long and 5-6 mm wide. The genus *Asclepias* was named for the Greek mythological god of physicians and healing, Asklepios. Not surprisingly, the species within this genus have been used medicinally, both by Native Americans and Europeans, for respiratory, digestive and skin ailments. Unfortunately, the chemicals produced by these plants, including alkaloids and cardiac glycosides, are considered dangerous and not recommended for internal and external use. Carolina milkweed is native to Florida and occurs across North Florida, as far south as Marion County. (Duval County; B2009-288; Flewellyn W. Podris; 25 June 2009.) (Austin 2004; Godfrey and Wooten 1981; Wunderlin and Hansen 2003; <http://www.florida.plantatlas.usf.edu>.)

***Camptotheca acuminata* Decne. (Happy tree, camptotheca)** (a genus of two species restricted in distribution to southern and western China). Nyssaceae (or Cornaceae). This handsome tree is often planted along streets in its native China, but it is rare in cultivation in this country. In the wild, it is relatively fast-growing and attains a height of 20 m. This species is closely related to our native black gums and tupelos (*Nyssa* spp.). Its leaves resemble those of *Nyssa ogeche*, except that they are broader with more prominent lateral veins. The leaf blades are 12-28 cm long and 6-12 cm broad, mostly elliptical, rounded at the base and sharp-pointed at the apex. The leaves are entire along the margin and have 8-11 pairs of veins. Male and female flowers are generally borne in separate inflorescences on the same tree, but most individuals produce some bisexual flowers as well. The flowers are borne in open clusters of long-stalked, ball-like heads that are 1.5-2 cm in diameter. The petals and sepals are greenish and

Sample Submissions

	May/ Jun	Year to Date
Samples submitted by other DPI sections	1,934	4,569
Samples submitted for botanical identification only	138	332
Total Samples Submitted	2,072	4,901
Specimens added to the herbarium	88	218



***Asclepias cinerea* (Carolina milkweed)**
Photograph and copyright courtesy of Shirley Denton, [Atlas of Florida Vascular Plants](#)



***Camptotheca acuminata* (happy tree, camptotheca)**
Photograph courtesy of James Manhart TAMU Herbarium, Texas A&M University

inconspicuous, but the protruding stamens make the male-flowered heads quite showy. The narrowly winged fruits are also borne in globose heads as much as 7 cm in diameter. In addition to its ornamental aspects, this tree has medicinal properties as well. The alkaloid camptothecin, extracted from the bark, is a powerful anticancer drug. Unfortunately, it is toxic to human cells in general and thus is of limited utility. However, several less toxic derivatives have been approved for use in cancer therapy. (Orange County; B2009-323; George A. Warden, 16 June 2009.) (Qin and Phengklai 2007; <http://botany.csd.tamu.edu/FLORA/gallery.htm>.)

Fraxinus (Ash tree) (a genus of 65 north temperate species with a few extending to the tropics). Oleaceae. We have received numerous specimens of this genus for identification recently due to a concern for a wood boring beetle not yet known to occur in Florida. Two from the current period are included below. The four species of *Fraxinus* native to Florida can be difficult to separate because they share many common characteristics, such as opposite compound leaves, and the size of some characteristics overlap among the species. In addition, some morphological characteristics vary with ecological factors. The shape and size of leaves and leaflets fluctuate so much that samaras are usually required to confirm the species identity. Species also hybridize, making identification even more challenging. To illustrate the differences and similarities, a table of characteristics that might be useful for separating the species is provided below. The Florida ashes are all deciduous, with opposite, odd-pinnately compound leaves, and inconspicuous male and female flowers on separate trees. The male (staminate) flowers have a calyx and two stamens; female (carpellate) flowers have a calyx, no petals and a pistil. The calyx is often persistent on the samaras (winged fruits) produced only on trees with carpellate flowers. These wind-pollinated flowers are held in dense inflorescences and mature before the leaves of the tree emerge in spring. Samaras persist on the trees for much of the growing season. The single seed enclosed in each of the samaras is usually round in cross-section, except for the flattened seeds of *Fraxinus caroliniana*. Although some authorities include *Fraxinus profunda* (formerly *Fraxinus tomentosa*) within *Fraxinus pennsylvanica*, we now recognize them as separate species. Any of the ash species in Florida could become a host for the emerald ash borer, *Agrilus planipennis* Fairmaire, an exotic beetle that is establishing populations in several states, with recent introductions into Kentucky and Virginia. A [pest alert, available from the DPI website](#), provides more information about the insect.



Fraxinus caroliniana (Carolina ash, pop ash)

Photograph and copyright courtesy of Shirley Denton, [Atlas of Florida Vascular Plants](#)



Fraxinus profunda (pumpkin ash)

Top: leaf; bottom: samaras.

Photographs courtesy of Will Cook, www.carolinanature.com

Fraxinus species comparison (based on Godfrey 1988; Kurz and Godfrey 1993; Wallander 2008)

Note: The characteristics described below, including habitat and growth form, may be helpful when used together to identify a species, although the variability within and among the species makes identification difficult.

	<i>F. americana</i>	<i>F. caroliniana</i>	<i>F. pennsylvanica</i>	<i>F. profunda</i>
Habitat	Well-drained forests or occasionally wet areas	Wetland species in swamps and wet forests	Wetland species in swamps and wet forests	Wetland species in swamps and wet forests
Growth form	Single stem tree 25-35 m tall	Often multi-stemmed tree 10-12 m tall	Single stem tree 30 m tall	Single stem tree 30 m tall
Leaves	20-30 cm long odd-	15-30 cm long odd-pinnately	20-30 cm long odd-pinnately compound	12-30 cm long odd-pinnately compound

	pinnately compound with 5-9 leaflets (usually 7)	compound with 5-7 leaflets (rarely 3 or 9)	with 5-9 leaflets (usually 7)	with 5-9 leaflets (usually 7)
Lateral leaflet stalk (petiolule)	0.5-1.5cm long	0.5-2 cm long	0.5-1 cm long	0.5-2.5cm long (rarely to 4 cm)
Leaflet upper surface	Green, glabrous	Green, glabrous	Dark green, glabrous	Dark green, glabrous
Leaflet lower surface	Whitish; pubescent along veins or the entire surface	Paler green; glabrous or short pubescent along the midrib	Paler, duller green; glabrous or pubescent with short and not tangled hairs in a band along the midrib or with hairs over the whole surface	Paler, yellowish-green; pubescent in an irregular band of tangled hairs along the midrib or with hairs over the whole surface, more densely along the midrib
Fruit	Samara, 2.5-6.5 cm long, wing not extending downward along the seed-bearing portion	Samara, 2-5 cm long, wing extending downward to the base of the seed-bearing portion; occasional 3-winged fruits	Samara, 3-6 cm long, wing extending at least halfway downward along the seed-bearing portion	Samara, 4-8 cm long, usually with a notch at the tip, wing merging with the seed-bearing portion and tapering to the base of the seed
Seed	Rounded	Flat (or concave)	Rounded	Rounded

***Fraxinus caroliniana* Mill. (Carolina ash, pop ash)** (a genus of 65 north temperate species with a few extending to the tropics). Oleaceae. Found mainly in the coastal plain from Virginia southward to Florida and as far as Texas to the west, this species grows nearly throughout Florida, in the understories of wet areas such as swamps and hydric hammocks. It is the smallest of our ashes and is often multi-stemmed. The base of the tree sometimes widens to form a buttress which adds stability in wet soil. The leaves of this species vary greatly in overall size and in leaflet shape. The margins may be entire, serrate or crenate. The very variable samaras may be linear-elliptical to suborbicular, spatulate, ovate or oblong and sometimes have three wings. Because it is relatively small, grows in swampy forests and has light-weight wood, this species is seldom used for timber or other purposes. The pop ash is sometimes planted on the borders of retention ponds and in wetland restoration projects, but is not often used as a landscape tree. (Marion County; B2009-280; Adam J. Silagyi, USDA-



***Sacoila lanceolata* (beaked ladiestresses)**
 Photograph and copyright courtesy of Roger Hammer/Wildflowers of the Everglades, [Atlas of Florida Vascular Plants](#)



***Sclerochiton harveyanus* (blue lips)**
 Photograph courtesy of Bart Wursten. Flora of Zimbabwe.

CAPS, and Leroy A. Whilby, DPI-CAPS; 3 June 2009.) (Godfrey 1988; Mabberley 1997; Wunderlin and Hansen 2003; <http://www.florida.plantatlas.usf.edu>.)

***Fraxinus profunda* (Bush) Bush (Pumpkin ash)** (a genus of 65 north temperate species with a few extending to the tropics). Oleaceae. This species is found scattered from New York to southern Illinois southward to Florida and Louisiana, but in Florida only as far south as Marion County. Pumpkin ash grows in wet places, and the base of the tree forms buttresses in frequently flooded areas. This enlargement of the trunk is said to look like a pumpkin and may have led to the common name. The leaves of this species usually consist of seven leaflets on fairly long petiolules. As with other species, this one has variable leaflet shapes, but the margins are usually entire although they sometimes have irregular serration. The lower surface of the leaflets is distinguished by tangled, tawny hairs that are especially dense along the midrib and lateral veins, but may cover much of the lamina. The upper surface of the leaflets is dark green and glabrous. The samara often has a tiny notch at the tip and may be spatulate to oblong to oblanceolate. The samara wing distinguishes this species by merging with the seed-bearing portion and tapering downward to the base of the rounded seed. The wood is similar to that of other ash trees. Because this species has sometimes been included with *F. pennsylvanica*, many uses reported for either species may be assumed to be possible for both, including use for lumber and to make wooden handles, bowls and other small utensils. (Jackson County; B2009-236; Shi-Yih "Edward" Hung and Leroy A. Whilby, DPI-CAPS; 21 May 2009.) (Austin 2004; Godfrey 1988; Wallander 2008; <http://www.carolinanature.com>.)

***Sacoila lanceolata* (Aubl.) Garay. (Beaked ladiestresses)** (a genus of 10 species in tropical and subtropical areas of the Americas). Orchidaceae. This conspicuous and widespread species, also known as *Spiranthes lanceolata* and *Stenorrhynchos lanceolatus*, is one of Florida's showiest terrestrial orchids. It ranges from Florida and the West Indies, through Mexico and Central America, to South America east of the Andes as far south as Uruguay. In Florida, it is occasionally seen in flatwoods, oak hammocks, pastures, and roadsides throughout most of the peninsula, with an isolated station in Walton County in the Panhandle. The basal rosette of four to six fleshy leaves grows from a cluster of unbranched, thick, tuberous roots. The leaves are about 15-35 cm long. They appear in early summer after the blooms have faded, then disintegrate during the winter, and are at no time present with the flowers. The spikes appear from April to July, depending on location and environmental conditions, and elongate rapidly to as much as 40 cm tall, bearing 25-40 flowers in the upper third. The flowers vary in color from coral pink to brick red, with a protruding white or pinkish lip, and measure two to three cm in length. Two varieties of this species are present in Florida. The typical variety, *lanceolata*, the **leafless beaked ladiestresses**, is described above. The var. *paludicola*, the **leafy beaked ladiestresses**, is found only in Broward, Collier, Miami-Dade and Sarasota counties. This latter differs from the typical variety most noticeably in its deep red flowers and in having leaves present at flowering time; some authorities consider it a separate species, *Sacoila paludicola*. The species, including both varieties, is included on the list of threatened plants by the State of Florida in order to draw attention to its vulnerability, although it is by no means rare at the moment. It is easily cultivated in the garden or in

containers, and nursery-propagated plants are often available. (Okeechobee County; B2009-300; Christine J. Frere, 9 June 2009.) (Luer 1972; <http://www.florida.plantatlas.usf.edu>.)

***Sclerochiton harveyanus* Nees. (Blue lips)** (a genus of 19 species native to tropical and southern Africa). Acanthaceae. This native of wet montane forests in southeastern Africa, from Mozambique to South Africa, is extremely rare in cultivation, and it proved difficult to positively identify. Because of its unusual corolla, we first assumed that it was a species of *Scaevola*, the fanflowers or half-flowers. But its opposite leaves, superior ovary and only four stamens, with anthers consisting of a single sac, pointed to the Acanthus family instead. This species forms a slender-stemmed, often straggling shrub to 3 m tall in the wild. The 3-6 cm long leaves are elliptical, with entire or sparsely but coarsely toothed margins. The flowers are borne singly or in small clusters in the axils of the uppermost leaves. As mentioned earlier, they superficially resemble the flowers of *Scaevola* in the Goodenia family. The corolla consists of a tube with five lobes, but the tube is contorted so that the lobes are all on the lower part of the flower, forming a single fan-like lip. This lip, held almost horizontally, is blue to purple in color and 13-18 mm long. Because the plant is evidently a sparse bloomer and the flowers are on the small side, it is not remarkably showy. But its rarity and unusual flowers make it well worthy of cultivation. (Pinellas County; B2009-303; Thomas L. Lastrapes, 3 June 2009.) (Volleson 1991; <http://www.zimbabweflora.co.zw>.)

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Entomology Section

Compiled by [Susan E. Halbert, Ph.D.](#)

This section provides the division's plant protection specialists and other customers with accurate identifications of arthropods. The entomology section also builds and maintains the arthropod reference and research collection (the Florida State Collection of Arthropods - with over 9 million specimens), and investigates the biology, biological control and taxonomy of arthropods.

***Anastrepha suspensa* (Loew) (Caribbean fruit fly)** was found at a residence in Cape Coral on *Eugenia uniflora* (Surinam cherry). This fly has a very bizarre developmental abnormality. The left wing appears to be duplicated when only one wing should be present. The single right wing is normal. (Lee County; E2009-2804; Jim L. Jacobson, USDA; 23 April 2009.) (Dr. David E. Dean.)

***Curtara insularis* (Caldwell) (a ringspot leafhopper)**, a new **Florida county record**, was found at a residence in Deltona on grapefruit, *Citrus x paradisi*. This leafhopper is a Caribbean species that is becoming more common in Florida. (Volusia County; E2009-3152; Luis O. Torres, USDA; 7 May 2009.) (Dr. Susan E. Halbert.)

***Episimus* n. sp. (a tortricid moth)**, a new **Western Hemisphere record**, was found on *Calophyllum* sp. (beauty leaf) at a residence in Miami. This is an undescribed species, probably of no economic importance and might be native to Florida. This moth does some leaf damage to *Calophyllum antillanum*, one of several species called beauty leaf, which has been listed as an invasive species by the Florida Exotic Pest Plant Council. *Episimus unguiculus* Clarke, another of the 65 species in this new world genus, has been studied as a potential biological control agent for use against the invasive Brazilian pepper, *Schinus terebinthifolius*. (Miami-Dade County; E2009-3728; Olga Garcia; 11 May 2009.) (Dr. John B. Heppner.)

***Geckobia hemidactyli* Lawrence 1936 (gecko mite)**, a new **Florida state record**, was found at a residence in Ft. Pierce. This is an exotic mite found on the exotic gecko, *Hemidactylus mabouia*. *Geckobia* is a genus of ectoparasites found on reptiles mostly in the Old World. *Geckobia hemidactyli* has been reported from Africa, the Mediterranean, Asia, Brazil, Colombia and the Caribbean Region (Antigua, Cuba, Dominica, Grenada, Guadeloupe, Puerto Rico, St. Croix, St. Eustatius, St. Lucia and the U.S. Virgin Islands). (St. Lucie County; E2009-3370; Kenneth L. Hibbard; 11 May 2009.) (Dr. W.C. 'Cal' Welbourn.)

***Castianeira crucigera* (Hentz) (a spider)**, a new **Florida state record**, was found during a wheat farm survey in Lake City. A male specimen was collected. This species was previously known from Arkansas, North Carolina and Virginia. It is not a plant pest (Columbia County; E2009-4489; Julieta Brambila, Leroy A. Whilby, Adam J. Silagyi, USDA/CAPS; 28 May 2009.) (Dr. G. B. Edwards.)

Sample/Specimen Submissions

May

Samples Submitted	864
Specimens Identified	33,281

June

Samples Submitted	1,119
Specimens Identified	32,188

Year to Date

Samples Submitted	4,703
Specimens Identified	187,101



***Anastrepha suspensa* (Caribbean fruit fly)**, with wing mutation. Photograph courtesy of David E. Dean



***Curtara insularis* (a ringspot leafhopper)**, Photograph courtesy of Jeffrey W. Lotz, DPI

***Frankliniella salviae* Moulton (a thrips)**, a new **Florida state record**, previously reported in the United States only from Brownsville, Texas, was collected in Miami Springs. In Texas, it is known on *Lantana* sp., *Verbena* sp., *Malva silvestris*, *Malvaviscus drummondii* and *Salvia* sp.; and from Mexico on *Parthenium* sp. (Texas information provided by Sueo Nakahara, USDA/SEL.) Three adult specimens were found on *Odontonema callistachyum* (purple firespike) at a residence. (Miami-Dade County; E2009-3107; Thomas L. Skarlinsky, USDA; 4 April 2009.) (Dr. G. B. Edwards.)



***Castianeira crucigera* (a spider).**
 Photograph courtesy of Jeff Hollenbeck, © 2006. www.bugguide.net

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

 [Download full spreadsheet in PDF format](#)

 [Download full spreadsheet in Microsoft Excel format](#)

Plant Species Name	Plant Common Name	Arthropod Species Name	Arthropod Common Name	County	New Records
<i>Cactaceae</i>	cactus	<i>Vryburgia</i> sp.	a mealybug	Volusia	
<i>Calophyllum</i> sp.	beauty leaf	<i>Episimus n.</i> sp.	a tortricid moth	Miami-Dade	Western Hemisphere
<i>Chamaelium uncinatum</i>	waxflower	<i>Cantharis consors</i> LeConte	a soldier beetle	Hillsborough	
<i>Citrus sinensis</i>	orange	<i>Scirtothrips dorsalis</i> Hood	chilli thrips	Putnam	County: Texas
<i>Citrus x paradisi</i>	grapefruit	<i>Curtara insularis</i> (Caldwell)	ringspot leafhopper	Volusia	County
<i>Cocos nucifera</i>	coconut palm	<i>Raoiella indica</i> Hirst	red palm mite	Martin	County
<i>Cordia</i> sp.		<i>Protalebra nexa</i> McAtee	a leafhopper		Country: Cayman Islands
<i>Cucumis sativus</i>	cucumber; garden cucumber	<i>Frankliniella schultzei</i> (Trybom)	a thrips	Miami-Dade	Host
<i>Eugenia uniflora</i>	Surinam cherry; Cayenne cherry	<i>Anastrepha suspensa</i> (Loew)	Caribbean fruit fly	Lee	
<i>Garcinia spicata</i>	mangosteen	<i>Thrips hawaiiensis</i> (Morgan)	a thrips	Miami-Dade	Host
<i>Heliconia</i> sp.	lobster claw; parrot flower	New Genus new species	croton scale	Miami-Dade	Host
<i>Macadamia integrifolia</i>	macadamia nut	<i>Leptoglossus concolor</i> (Walker)	a leaffooted bug	Collier	Host

Nematology Section

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

This section analyzes soil and plant samples for nematodes, conducts pest detection surveys and provides diagnosis 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 principal part of the regulatory activity of the section. Analyses of plant and soil samples include those from in-state programs, plant shipments originating in Florida destined for other states and countries, as well as samples intercepted in Florida from outside the United States.

Nematodes of Special Interest

Bromeliads are ornamental epiphytes that are grown and traded for their attractive foliage and flowers. These ornamental epiphytes produce roots that anchor the plant to branches and twigs of trees, but also take up nutrients when bromeliads are in contact with soil or other growing media. Bromeliad roots are often parasitized by plant-parasitic nematodes. (See photograph.) Ectoparasitic species such as spiral nematodes may penetrate partially in bromeliad root tissues. Other ectoparasitic such as such stunt nematodes feed on the roots with their stylet without penetrating the tissue with their bodies. The damage caused by these ectoparasitic nematodes on bromeliads is not serious; however, the presence of these nematodes in nematode-certified shipments may cause regulatory problems for plant export to national and international markets. Ectoparasitic species recently found on bromeliads are listed below.

***Helicotylenchus dihystera* (Cobb, 1893) Sher, 1961, (a spiral nematode)** was found infecting the roots of an ornamental bromeliad (*Bromeliaceae*). (Lake County, N09-00589, Charles L. Spriggs, 1 May 2009.)

***Tylenchorhynchus eremicolus* Allen, 1955, (a stunt nematode)** was found infecting the roots of an ornamental bromeliad (*Bromeliaceae*). (Lake County, N09-00589, Charles L. Spriggs, 1 May 2009.)

Collectors submitting five or more samples that were processed for nematological analysis in May - June 2009

Anderson, James L.	174
Bailey, Wayne W.	9
Bentley, Michael A.	96
Burgos, Frank A.	199
Echols, Janie M.	13
Edenfield, Carrie S.	73
LeBoutillier, Karen W.	202

Sample Submissions

	May/ Jun	Year to Date
Morphological Identifications	3,330	8,074
Molecular Identifications	52	654
Total Samples Submitted	3,382	8,728

Certification and Regulatory Samples

Multistate Certification for National and International Export	2,352	5,983
California Certification	809	1,564
Pre-movement (Citrus Nursery Certification)	28	90
Site or Pit Approval (Citrus Nursery and Other Certifications)	10	76

Other Samples

Identifications (invertebrate)	0	17
Plant Problems	44	102
Intrastate Survey, Random	87	242
Molecular Identifications*	52	654

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

Looker, Sol F.	20
Ochoa, Ana L.	353
Pate, Jo Ann	67
Qiao, Ping	228
Spriggs, Charles L.	133
Toral, Angelina M.	17



H. dihystra colonizing bromeliad root tissues
Photograph courtesy of Jason D. Stanley

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Plant Pathology Section

Compiled by [Robert M. Leahy](#)

This section provides plant disease diagnostic services and conducts a citrus germplasm introduction program. The agency-wide goal of protecting Florida agriculture very often begins with accurate diagnosis of plant problems. Disease management recommendations are offered where appropriate and available. Our plant pathologists are dedicated to keeping informed about plant diseases outside Florida in order to be prepared for potential introductions of new pathogens.

***Raffaelea lauricola* (laurel wilt)** was found on *Persea borbonia* (red bay) at Crystal River Preserve State Park on 25 May 2009. This is a new county record and marks the first record on the west side of the Florida peninsula.

***Kordyana tradescantiae* (a leaf spot)** was found on *Tradescantia ohiensis* (Ohio spiderwort) in a dooryard garden in Alachua County on 2 June 2009. This pathogen, new to North America last year, has apparently over-wintered without difficulty. The pathogen behaves like a leaf smut and is being explored for biocontrol of weedy *Tradescantia* species.

***Mycovellosiella* sp. (a leaf spot)** was found on *Plumeria* sp. (frangipani), a new host record, in a Collier County nursery on 8 June 2009. This pathogen is apparently an undescribed species.

Plant Pathology Sample Report

Following is a table 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. The tables are organized alphabetically by plant host.

Plant Species	Plant Common Name	Causal Agent	Disease Name	Location Type	County	Sample Number	Collector	Date	New Records
<i>Citrus limon</i>	lemon	<i>Candidatus Liberibacter asiaticus</i>	Huang-longbing, Asiatic strain	nursery	Duval	24621	Andrea N. Van Loan	1-May-2009	County
<i>Citrus sinensis</i>	sweet orange	<i>Candidatus Liberibacter asiaticus</i>	Huang-longbing, Asiatic strain	nursery	Citrus	25539	Frances L. Parianous, USDA	10-Jun-2009	County
<i>Helianthus annuus</i>	common sunflower	<i>Cercospora helianthi</i>	leaf spot	nursery	Alachua	25618	nursery owner	12-Jun-2009	
<i>Helianthus debilis</i>	dune sunflower	<i>Cercospora helianthi</i>	leaf spot	nursery	Alachua	25617	nursery owner	12-Jun-2009	
<i>Persea borbonia</i>	red bay	<i>Raffaelea lauricola</i>	laurel wilt	Crystal River Preserve State Park	Citrus	25161	Keith Morin, Park Biologist	25-May-2009	County
<i>Plumeria</i> sp.	plumeria, frangipani	<i>Mycovellosiella</i> sp.	leaf spot	nursery	Collier	25740	Scott D. Krueger	8-Jun-	Host

Sample Submissions

	May/ Jun	Year to Date
Pathology	338	613
Bee	2	6
Citrus Canker	166	455
Citrus Greening	1,080	1,924
Total Samples Submitted	1,586	3,011

								2009	
<i>Rubus</i> sp.	blackberry	<i>Peronospora sparsa</i>	downy mildew	dooryard	Putnam	24958	homeowner	18-May-2009	
<i>Symplocos tinctoria</i>	common sweetleaf	<i>Exobasidium symploci</i>	leaf spot	off US 41	Columbia	25256	Wayne E. Bailey	26-May-2009	
<i>Tradescantia ohiensis</i>	Ohio spiderwort	<i>Kordyana tradescantiae</i>	leaf spot	dooryard	Alachua	25227	Cheryl A. Jones	2-Jun-2009	
<i>Vitis rotundifolia</i>	muscadine grape	<i>Pyrenochaeta vitis</i>	leaf spot	nursery	Alachua	25259	Cheryl A. Jones	28-May-2009	

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