

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.

Ceratitis capitata (Mediterranean fruit fly).

In June 2010, after 10 Mediterranean fruit flies were captured in two separate traps baited in Palm Beach County, it became apparent that the largest detected active Mediterranean fruit fly infestation in Florida since 1998 was underway. [More...](#)



One of several trapped *Ceratitis capitata* (Mediterranean fruit fly) shown on a sticky board
 Photograph courtesy of Jeffrey W. Lotz, [DPI](#)



Strongylium cultellatum (a tenebrionid beetle), a Western Hemisphere record,

was found on *Persea borbonia* (redbay). This is an Asian species previously unknown from this hemisphere. It is unlikely to become an economic problem. However, it points out the existence of unknown pathways for Asian species to enter southern Florida.

Strongylium cultellatum (a tenebrionid beetle) Photograph courtesy of Michael C. Thomas, [DPI](#)

Mesalox pitangae (pitanga or Surinam cherry mite)

was found on *Eugenia uniflora* (Surinam



Mesalox pitangae (pitanga or Surinam cherry mite)
 Photograph courtesy of W.C. 'Cal' Welbourn, [DPI](#)

cherry; Cayenne cherry). Dr. Jorge E. Peña discovered this mite on young fruits of *E. uniflora* in Homestead, as did James C. Lee in West Palm Beach. In both cases, the mite was damaging the surface texture of the young fruits. The mite also was found on new growth.

Septoria mikania-micranthae (leaf spot).

was found again, after recently having been reported for the first time in the Northern Hemisphere. It is considered a potential biocontrol pathogen, but research into this

Section Reports

Botany

Entomology

Nematology

Plant Pathology

Our Mission...getting it done

The mission of the Division of Plant Industry is to protect Florida's native and commercially grown plants and the State's apiary industry from harmful pests and diseases. Perhaps you'd be interested in some of the things we do to protect our state when a pest outbreak occurs.

Occasionally, serious agricultural pests arrive in our state and demand immediate action. In June, 2010, during routine fruit fly monitoring, a trap containing Mediterranean fruit flies, *Ceratitis capitata* (Medfly), was collected in Boca Raton by one of our inspectors. Since then, flies have been found on traps in mango, loquat and sour orange trees. This is the first major outbreak of Medfly in Florida since 1997-1998 when nine counties sustained Medfly infestations.



Mass of *Mikania micrantha* in full bloom at a nursery in Miami-Dade County.

Photograph courtesy of Stephen Beidler, [DPI](#)

organism is in its infancy. The pathogen was found on the invasive vine, *Mikania micrantha*, a noxious weed that was detected in Miami-Dade County in 2009, also for the first time in this country.

***Pratylenchus hippeastri* Inserra et**

al., 2007 (a root-lesion nematode), a new Host record, was found infecting the roots of the ornamental palm *Butia capitata* (pinto palm).



***Butia capitata* (pinto palm) in the landscape.**

Photograph courtesy of Patti J. Anderson, [DPI](#)

***Iris hexagona* Walter (Dixie iris)**, is the

showiest *Iris* species native to Florida, and the most common as well. It grows in swamps, marshes and wet prairies throughout much of the state,

although it is apparently absent from the western Panhandle, the southern tip of the peninsula and the Keys. Its wider range encompasses the Southeast from South



***Iris hexagona* (Dixie iris)**

Photograph courtesy of [Rodney Barton](#), [USDA Forest Service](#)

Carolina to Texas.

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 also thank Scott Weinberg for his skillful use of web authoring tools to produce this report.

The Medfly is among the most serious agricultural pests because it attacks more than 250 different fruits, vegetables and nuts, including oranges, grapefruit, lemons, apples, guava, mango, tomatoes and peppers. Medflies breed continuously when host fruits are available and population growth may be explosive.

The State/Federal cooperative fruit fly program monitors more than 56,000 fruit fly traps across the state of Florida. To address the current outbreak of Medflies, additional traps were placed around each location where Medflies were found. In addition to traps, other measures to control the pest were carried out, including foliar spot treatment of host trees with Spinosad, an insecticide derived from a naturally occurring soil organism, and approved for use on organic crops. Other treatments included soil drenching and fruit stripping of infested trees. Another important tool is the sterile insect technique. Millions of sterile Medflies are currently released throughout high-risk areas of the state, including the Boca Raton area. Prior to the recent finding of Medflies in Boca Raton, there had been no outbreaks since the sterile release program began in 1998.

More information can be found at the [Department's website](#) and in the [Medfly Pest Alert](#).

We welcome your suggestions for improvement of TRI- OLOGY. Please feel free to

contact me or [Dr. Patti Anderson](#) with your comments.

[Wayne N. Dixon, Ph.D.](#), editor
Director, DPI

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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.

***Argemone mexicana* L. (Mexican prickly poppy)**, from a genus of 32 species in North America, South America and Hawaii. Papaveraceae. This weedy, herbaceous annual, often found growing in full sun along roadsides and fields or in pastures and waste places, is native to the Caribbean and Florida, but has spread north to Massachusetts and west to Texas within the United States. It has been widely introduced and naturalized in tropical and temperate areas worldwide. This prickly plant regularly grows to a height of 80 cm (occasionally to 1 m) and exudes a sticky yellow latex. The leaves are alternate and sessile or with very short petioles. The blades have deeply lobed margins that are armed with prickles and are usually bluish-green mottled with white. Spiny, foliaceous bracts subtend the solitary flowers, each of which can be up to 7 cm across, with prickly sepals, bright yellow petals, 30-50 stamens and red-tipped stigmas. The fruit is an oblong capsule with spines. All parts of this plant contain toxic alkaloids, but they are most concentrated in the roots and seeds. The latex can be irritating to sensitive individuals, but the plant has also been used medicinally. Livestock poisoning has been reported from contaminated hay and from seeds mixed with grains fed to cattle. Mustard seeds mixed with those of the Mexican poppy and pressed for cooking oil have reportedly caused illness in India when the adulterated oil was consumed. Research on the effects of the toxic alkaloids on mollusks, nematodes, bacteria and fungi are underway. (Marion County; B2010-198; Shelly M. Wayte; 26 April 2010.) (Pinellas County; B2010-199; Linda G. McRay; 29 April 2010.) (Mabberley 1997; Nellis 1997; Shaukat *et al.* 2002; www.eflora.org [accessed 2 July 2010];

<http://www.hort.purdue.edu/newcrop/CropFactSheets/argemone.html> [accessed 6 July 2010].)

***Broussonetia papyrifera* (L.) Vent. (paper mulberry)**, from a genus of eight species found in Madagascar and tropical and warm areas of Asia. Moraceae. This introduced tree is found growing in Hawai'i and most of the eastern half of the United States from New York and Massachusetts across the Midwest from Kansas to Ohio and throughout the Southeast to Texas and Oklahoma. Like most plants in the Mulberry family, all parts exude a milky sap when damaged. The young twigs are conspicuously pubescent, with coarse, reddish, spreading hairs. The tree grows to 15 m tall with a smooth or slightly rough, tan-colored stem. Leaves are deciduous and alternate, or sometimes opposite as well, and generally ovate in shape, 6-20 × 5-15 cm in size either unlobed or variously and deeply lobed, particularly on vigorous growth. They have an uneven, broadly rounded or shallowly cordate base, an acuminate apex and a sharply serrate margin; the underside is densely pubescent with whitish or grayish hairs, especially

Sample Submissions

	May/ Jun	Year to Date
Samples submitted by other DPI sections	1,643	3,701
Samples submitted for botanical identification only	197	391
Total Samples Submitted	1,840	4,092
Specimens added to the herbarium	0	37



***Argemone mexicana* (Mexican prickly poppy)**
Photograph courtesy of Casey Tompkins, [Atlas of Florida Vascular Plants](#)



***Broussonetia papyrifera* (paper mulberry)**

Photograph courtesy of Bob Upcavage, [Atlas of Florida Vascular Plants](#)

when the leaves are young, and the upper surface scabrous, with stiff, forward-pointing hairs. The greenish flowers are borne with the emerging leaves, the males in drooping catkins 6-8 cm long and the females, on separate trees, in globose heads about 2 cm in diameter. The female flowers mature into club-shaped, red-orange, sweet, fleshy fruits aggregated into spiky balls. In Hawai'i, the bark is used to produce a barkcloth which is then made into a number of useful items, such as delicate clothing, screens and funeral shrouds. This species is listed by the Florida Exotic Pest Plant Council as a Category II invasive (with the potential to alter natural areas). (Lee County; B2010-238; Roberto Delcid; 9 March 2010.) (Miami-Dade County; B2010-288; Olga Garcia; 11 May 2010.) (Pinellas County; B2010-321; Linda G. McRay; 26 May 2010.) (www.eflora.org [accessed 1 July 2010]; <http://www.kew.org/collections/ecbot/collections/topic/bark-cloth/index.html> [accessed 6 July 2010].)

***Deeringothamnus rugelii* (B.L. Robins.) Small (Rugel's false pawpaw, yellow squirrel-banana)**, from a genus of two species endemic to Florida. Annonaceae. This deciduous shrub or subshrub sometimes grows to 50 cm tall, but is usually 20-30 cm in height, with a woody taproot from which new, somewhat arching, shoots grow after old ones die back after a freeze. The leaves, up to 7 cm long, are alternate and have a short petiole and a leathery, oblong to obovate blade with revolute margins. The fragrant, solitary flowers arise from the leaf axils and usually have three sepals, six or nine lemon-yellow petals, numerous stamens in a compact ring, and one to five pistils. The fruit is a yellowish, lumpy, oblong berry 3-6 cm long with up to eight seeds. This species is listed as endangered by both Florida and the United States. Rugel's pawpaw grows in sandy soils of pine flatwoods and is adapted to fire, often flowering after its habitat burns, but its habitat has been greatly reduced by development in Volusia County where it is an endemic species. The specimen submitted for identification was included in a rescue effort to protect a population in danger of being destroyed. (Volusia County; B2010-316; Ray C. Jarrett; 27 May 2010.) (Chafin 2000; <http://efloras.org> [accessed 6 July 2010].)

***Iris hexagona* Walter (Dixie iris)**, from a genus of approximately 210 species in temperate Eurasia, North Africa and North America. Iridaceae. This is the showiest *Iris* species native to Florida, and the most common as well. It grows in swamps, marshes and wet prairies throughout much of the state, although it is apparently absent from the western Panhandle, the southern tip of the peninsula and the Keys. Its wider range encompasses the Southeast from South Carolina to Texas. Several varieties have been recognized, and one, var. *savannarum* (Small) R.C. Foster, is often considered a separate species. The Dixie iris grows nearly a meter tall, from thick, branching rhizomes that can produce dense colonies in moist, mucky soil. As in all irises, the narrow, sword-shaped leaves are borne in a fan-like arrangement at the base of the plant; this species has an additional one or two leaves on the flowering stem. The leaves are often yellow-green, and they wither soon after the plants have bloomed. The beautiful, showy, blue or violet flowers are 10-15 cm across and appear in early to late spring, depending on the locality. They are borne in succession from a modified bract, termed a "spathe," at the tip of the flowering stem branches. The large, heavy capsules are hexagonal in cross-section and contain large seeds that are corky and buoyant when mature. The Dixie iris is one of a



***Deeringothamnus rugelii* (Rugel's false pawpaw, yellow squirrel-banana)**
Photograph courtesy of Walter K. Taylor, [Atlas of Florida Vascular Plants](#)



***Iris hexagona* (Dixie iris)**
Photograph courtesy of Shirley Denton, [Atlas of Florida Vascular Plants](#)



***Portulaca umbraticola* (wingpod purslane)**
Photograph courtesy of Forest and Kim Starr

group of four species often called the "Louisiana irises" because they are particularly common and conspicuous in the extensive marshes of that state. In fact, J.K. Small, renowned student of the Southeastern flora, named more than 70 "new species" from that area in the 1930s. All of these "new" irises turned out to be part of a bewildering series of natural crosses and backcrosses between the Louisiana *Iris* species. Since then, horticulturists have produced a large number of artificial hybrids in the group, and these include some of the most beautiful and brightly colored of all irises. They are also the best irises for general cultivation in the Deep South, but they must have abundant moisture, at least during the growing season, to succeed in the garden. (St. Lucie County; B2010-319; Kenneth L. Hibbard; 25 May 2010.) (Henderson 2002.)

***Portulaca umbraticola* Kunth (wingpod purslane)**, from a genus of 40 species native mostly in warmer climates, but including several widespread or even cosmopolitan weeds. Portulacaceae. Most of the plants in the genus *Portulaca* are low-growing annuals with alternate, fleshy, flat or terete (round in cross-section) leaves, and short-lived flowers that are open only in bright sunlight. The flowers have eight to many stamens and five delicate, brightly colored petals; some cultivated forms have double flowers with numerous petals. The distinctive capsules dehisce around their entire circumference, and the top falls off intact. Several species are grown as ornamentals, but most are also edible, and this is one of the very few plant groups in which the plants contain significant amounts of omega-3 fatty acids. The most common species of *Portulaca* in the eastern United States is *P. oleracea* L., a cosmopolitan weed with broad, flat, fleshy leaves and small yellow flowers. In the Southeast, the native *P. pilosa* L., with narrow, terete, fleshy leaves and small, but attractive, pink flowers, is a familiar plant. But the cultivated species are the best known. For many years, the South American annual *P. grandiflora* (moss rose), has been a popular bedding plant, with many strains featuring brightly-colored single or double flowers. Of late, another type, supposedly derived from *P. grandiflora*, has become a popular subject for hanging baskets. These are perennials with narrow, terete, fleshy leaves and large, single flowers. A popular cultivar is 'Samba', with white, pink or bicolored blooms (no reds or yellows as in the annual types). These also make excellent, perennial bedding plants and are cold-hardy in the Gainesville, Florida, area. *Portulaca amilis*, another South American annual species, with narrow but flat, fleshy leaves and showy bright pink flowers, has become a common weed in the southeastern United States. Recently, a plant labeled 'Puerto Rican Hot Pink' was brought into the herbarium for verification. Little information on this cultivar is available, but it appears to be derived from *P. amilis*.

Portulaca umbraticola is a widespread, usually weedy species, with broad, flat, fleshy leaves, that is native throughout much of South America into the West Indies and the southeastern and southwestern United States. In the Southeast, it is not weedy and occurs only on granitic and sandstone outcrops in Georgia and South Carolina. These plants have been treated in the past as a separate species, *P. coronata* Small, or more recently as a variety of *P. umbraticola*. In various areas of its range in the wild, the color of the flowers varies from purple to yellow or is bicolored red and yellow, and the size varies from 0.6 to 2.5 cm across. In 1982, the Pan American Seed Company of Chicago, Illinois, introduced a cultivar of this species,



***Robinia pseudoacacia* (black locust)**
Photograph courtesy of Dennis Woodland,
[Atlas of Florida Vascular Plants](#)

called 'Wildfire Mixed', developed from South American material with large flowers in a broad array of bright colors. Several others have appeared since then, and popular cultivars at present include 'Yubi Summer Joy' with two-inch-wide flowers and 'Jumbo' with flowers in separate colors, rather than a mix. All of these are sometimes erroneously listed as cultivars of *P. oleracea*. With their spreading stems and brightly colored flowers produced in profusion over a long season, these plants make excellent subjects for hanging baskets. They are reasonably easy to grow in a greenhouse or outdoors, but they do best in full sun, and overwatering is fatal. They are sometimes disfigured by a mealybug, *Hypogeococcus pungens*, which congregates at the nodes on the stems. (Alachua County; B2010-293; Cheryl A. Jones; 2 May 2010.) (Matthews *et al.* 1992.)

***Robinia pseudoacacia* L. (black locust)**, from a genus of four species in temperate North America. Leguminosae/Fabaceae. The original range of this distinctive tree is believed to be the Appalachian Mountains from Pennsylvania to Georgia, and the Ozark-Ouachita region of Missouri, Arkansas and Oklahoma. But for centuries, it has been extensively cultivated for its lumber and its ornamental qualities and, at present, is found in every state (except for Hawaii and Alaska) and in most of the Canadian provinces. It was one of the first North American tree species introduced into Europe, in the early 1600s, and is now widely naturalized there and is considered an invasive species. In Florida, it is found in the wild state in only a few counties, mostly in the Panhandle. The black locust was originally a component of oak-hickory forests, often inhabiting the margins, but it has become weedy, spreading by both suckers and seeds. I remember it most vividly as a tree of fencerows in my native Pennsylvania. Although enormous trees more than 40 m tall have been reported, it is seldom more than half that size, with a trunk diameter of less than a meter. It forms an open, slender, irregular, often flat-topped crown, and the distinctive bark is thick, dark and deeply furrowed. The twigs are armed with paired, short sharp spines at the nodes. Leaves are odd-pinnate with 9-15, oval, rounded leaflets about 2.5-5 cm long. The beautiful, delightfully fragrant, white or cream-colored flowers are borne in pendent clusters, like a wisteria but shorter, in May and June, after the leaves have expanded. The pods are flat, nearly black when mature and 7.5-10 cm long. Although sometimes cultivated as an ornamental, the black locust is most valuable for its remarkable wood. It is very hard and heavy, burning with little smoke and producing almost as much heat as anthracite coal. It has been reported to last a more than a hundred years in the soil. For centuries, it was widely used for fence posts and fuel. The tree is the sole host of a native, black and yellow cerambycid beetle, *Megacyllene robiniae* (the locust borer). Mature, healthy trees are not seriously affected, but infestations often seriously disfigure young trees that are under stress from other factors. The black locust seems to have fallen out of favor as an ornamental, perhaps because of its weedy tendencies. Several cultivars are available, including 'Frisia' with yellow foliage during the growing season and 'Purple Robe' with pink or purple flowers. (Taylor County; B2010-360; Clay B. Olson, extension agent; 9 June 2010.) (Godfrey 1988; http://en.wikipedia.org/wiki/Robinia_pseudoacacia [accessed 16 July 2010].)

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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.

***Ceratitis capitata* (Mediterranean fruit fly).** A total of 10 Mediterranean fruit flies was captured in two separate Jackson traps baited with Trimedlure. One trap was in a loquat tree (*Eriobotrya japonica*) and captured five males; the second trap was in a mango tree (*Mangifera indica*) a few blocks away and captured four males and one female. None of the flies was marked with the fluorescent dye that is used to mark the millions of sterile flies released weekly in neighboring Broward County. The trapped flies were dissected, and it was determined that the males did not show signs of irradiation that would indicate that they were sterile, and the female was observed to be gravid with about 10 mature eggs, but not mated (empty spermathecae). Thus, it became apparent that an active Mediterranean fruit fly infestation was underway, the largest detected in Florida since 1998. A high-density delimitation trapping network was quickly implemented in an area of approximately 45 square miles around the initial detection sites. Over the course of the following weeks, a total of 56 flies was detected (48 males, 8 females), nearly all contained within the bounds of two contiguous 1-square mile sections (STR). On 23 June, a single female fly was detected in Delray Beach, about 3 miles from the original core area. This discovery enlarged the total survey and regulated area to about 85 square miles. Additionally, two sites with larvae-infested fruits were found within the original core area. The hosts were *Citrus aurantium* (sour orange) and *Psidium cattleianum* (cattleya guava). In response, a treatment regimen of weekly application of GF-120 (a bait spray containing a feeding attractant and the toxicant Spinosad®) was applied to plant foliage on nearly all properties within the regulated area; host fruits were stripped from trees for at least 200 meters surrounding the detection sites; and beginning on June 22, sterile male flies were released at a rate of 125,000 to 250,000 or more per square mile per week (aerial, ground, and/or static release) depending on distance from the core areas. Before a seven day fly-free period was attained, detection traps in and around the core area were checked on a daily basis, then traps continued to be serviced on a weekly basis. When no flies have been detected for a period of time equal to an estimated three life cycles, the infestation will be declared eradicated. That date will be August 31, unless additional detections occur. (see [DPI Pest Alert](#)) (Palm Beach County; E-2010-4460 and E-2010-4433; Ellen J. Tannehill; 2 June 2010.) (Dr. Gary J. Steck.)

***Chrysobothris scitula* (buprestid beetle), a State record,** is a native southeastern United States species not previously recorded from Florida.

Sample/Specimen Submissions

May

Samples Submitted	943
Specimens Identified	17,607

June

Samples Submitted	868
Specimens Identified	14,929

Year to Date

Samples Submitted	3,997
Specimens Identified	137,627



One of several trapped *Ceratitis capitata* (Mediterranean fruit fly)

Photograph courtesy of Jeffrey W. Lotz, [DPI](#)

(Alachua County; E-2010-2624; Adam J. Silagyi and David T. Saege, USDA/ CAPS; 10 May 2010.) (Katherine E. Okins.)

***Cryptolestes atratulus* (laemophloeid beetle), a new Western Hemisphere record**, was collected in a Lindgren funnel trap. This is an Asian species previously unknown from this hemisphere. It is of no economic importance, but it again points out the existence of an unknown pathway for exotic species to enter Florida. (Miami-Dade County; E-2010-2187; Andrew I. Derksen and Janet L. Young, CAPS/ USDA; 7 April 2010.) (Dr. Michael C. Thomas.)

***Ferrisia virgata* (striped mealybug), a new Host record**, was found on *Nuphar* sp. This is a polyphagous species. Even though the host species was not verified, it has never before been recovered from any species in this genus in Florida. The world database reveals that it has never been recovered from any plant in this family (Orange County; E-2010-3352; Ian C. Stocks, Patti J. Anderson, Susan E. Halbert, and George A. Warden; 4 June 2010.) (Dr. Ian C. Stocks.)

***Mesalox pitangae* (= *Aculus pitangae*) (pitanga or Surinam cherry mite), a Northern Hemisphere record**, was found on *Eugenia uniflora* (Surinam cherry; Cayenne cherry). This species was described originally from *E. uniflora* in Piracicaba, São Paulo, Brazil. Boczek and Davis (1984) reported these mites were leaf vagrants, but Flechtmann and De Moraes (2003) reported leaf distortion and changes in the leaf texture. Dr. J.E. Peña discovered this mite on young fruits of *E. uniflora*, as did J.C. Lee. In both cases, the mite was damaging the surface texture of the young fruits. The mite also was found on new growth, but it could not be determined if the observed damage was due to the pitanga mite or the presence of the broad mite (*Polyphagotarsonemus latus* (Banks)). (Miami-Dade County; E2010-1817; Jorge E. Peña, University of Florida; 6 April 2010.) (Palm Beach County; E2010-1930; James C. Lee; 14 April 2010.) (Dr. W.C. 'Cal' Welbourn.)

***Paracoccus herreni* (mealybug), a new USA country record**, was found on hibiscus at a discount garden center in Bradenton. This species has been intercepted at ports (three records of interceptions), but it has not been recorded in the United States from plant material for distribution. There is little published information about this species. It is a pest of plants in the genera *Manihot*, *Lantana* and *Acalypha*. No additional specimens of




***Chrysobothris scitula* (buprestid beetle)**
Photograph courtesy of Michael C. Thomas,
[DPI](#)



***Cryptolestes atratulus* (laemophloeid beetle)**
Photograph courtesy of Michael C. Thomas,
[DPI](#)

this mealybug have been found. (Manatee County; E-2010-3446; Jason M. Spiller; 8 June 2010.) (Dr. Ian C. Stocks.)

***Siphoninus phillyreae* (ash whitefly), a new State record**, was found for the first time in Florida on *Punica granatum* (pomegranate) in Lake Buena Vista. Experience with previous infestations in California and North Carolina reveal that this species can be a severe pest in the absence of parasitoids, but is almost undetectable when parasitoids are established. The Buena Vista population on *Punica granatum*, a favored host, had parasitoids. A DPI Pest Alert on the ash whitefly will be released soon. (Orange County; E-2010-3385; Ian C. Stocks, Patti J. Anderson, Susan E. Halbert, and George A. Warden; 4 June 2010.) (Dr. Ian C. Stocks.) (see [DPI Pest Alert](#) )

***Strongylium cultellatum* (a tenebrionid beetle), a new Western Hemisphere record**, was found on *Persea borbonia* (redbay). This is an Asian species previously unknown from this hemisphere. The genus as a whole is associated with fungus-infested dead wood and should not be an economic problem. However, it again points out the existence of an unknown pathway (or pathways) for Asian species to enter southern Florida. (Miami-Dade County; E-2010-3375; Andrew I. Derksen and Karolynne M. Griffiths, CAPS/ USDA; 25-May-2010.) (Dr. Michael C. Thomas.)

***Tachardiella mexicana* (a lac scale), a new Host record**, was found causing severe damage on *Myrica cerifera* (wax myrtle). This lac scale was first discovered in Lake Buena Vista on *Pithecellobium flexicaule* (Texas ebony) in 1987 and subsequently on other leguminous hosts, primarily *Acacia* sp. This is a significant host jump onto an important member of Florida's native plant community. A survey to determine the extent of the infestation will be undertaken. (Orange County; E-2010-3386; Ian C. Stocks, Patti J. Anderson, Susan E. Halbert, and George A. Warden; 4 June 2010.) (Dr. Ian C. Stocks.)

***Ferrisia virgata* (striped mealybug), a new Host record**, was found on *Nuphar* sp. This is a polyphagous species. Even though the host species was not verified, it has never before been recovered from any species in this genus in Florida. The world database reveals that it has never been recovered from any plant in this family (Orange County; E-2010-3352; Ian C. Stocks, Patti J. Anderson, Susan E. Halbert, and George A. Warden; 4 June 2010.) (Dr. Ian C. Stocks.)

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***Ferrisia virgata* (striped mealybug)**
Photograph courtesy of Lyle J. Buss, University of Florida



***Mesalox pitangae* (pitanga or Surinam cherry mite)**
Photograph courtesy of W.C. 'Cal' Welbourn, DPI



***Siphoninus phillyreae* (ash whitefly)**
Photograph courtesy of Lyle J. Buss, University of Florida.



***Strongylium cultellatum* (a tenebrionid)**

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.

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Plant Species Name	Plant Common Name	Arthropod Species Name	Arthropod Common Name	County	New Records
<i>Acalypha wilkesiana</i>	Jacob's-coat; copperleaf	<i>Pseudoparlatoria ostreata</i>	an armored scale	Broward	HOST
<i>Acca sellowiana</i>	pineapple guava	<i>Mycetaspis personatus</i>	masked scale	Collier	HOST
<i>Ambrosia artemisiifolia</i>	common ragweed	<i>Homaemus proteus</i>	a scutellerid bug	Palm Beach	COUNTY
<i>Asclepias curassavica</i>	butterfly milkweed; scarlet milkweed	<i>Oncopeltus aulicus</i>	a seed bug	Monroe	HOST
<i>Attalea humilis</i>	American oil palm	<i>Palmicultor palmarum</i>	a mealybug	Miami-Dade	HOST
<i>Avicennia germinans</i>	black mangrove	<i>Dysmicoccus neobrevipes</i>	a mealybug	Pinellas	HOST
<i>Bucida buceras</i>	black-olive; gregory wood	<i>Scirtothrips dorsalis</i>	chilli thrips	Broward	REGULATORY INCIDENT
<i>Calophyllum</i> sp.	beauty leaf	<i>Parasaissetia nigra</i>	nigra scale	Miami-Dade	HOST
<i>Calyptranthes pallens</i>	pale lidflower, spicewood	<i>Katacephala</i> n. sp.	Calyptranthes psyllid	Miami-Dade	COUNTY
<i>Chambeyronia macrocarpa</i>	red leaf palm	<i>Eucalymnatus tessellatus</i>	tessellated scale	Miami-Dade	HOST
<i>Citrus hystrix</i>	caffre lime, Mauritius papeda	<i>Coccus hesperidum</i>	brown soft scale	Miami-Dade	HOST
<i>Citrus reticulata</i>	tangerine, mandarin	<i>Sobarocephala quadrimaculata</i>	a clusiid fly	DeSoto	COUNTY
<i>Citrus sinensis</i>	sweet orange, navel	<i>Nipaecoccus viridis</i>	Lebbeck mealybug	Palm Beach	HOST

beetle)

Photograph courtesy of Michael C. Thomas, [DPI](#)

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Nematology Section

Compiled by [Janete A. Brito, Ph.D.](#), [Maria L. Mendes, Ph.D.](#), [Ramandeep Kaur, Ph.D.](#), and [Jason D. Stanley, M.S.](#)

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

Nematodes of special interest detected and/or identified in May – June 2010:

***Anubias* spp.** are aquatic plants native to West Africa that are in great demand as aquarium plants. Recent studies have shown that these ornamentals are heavily parasitized by the burrowing nematode, *Radopholus similis*, which is able to colonize all their organs including petioles and leaves. The presence of the burrowing nematodes in shipments of these aquatic plants causes serious regulatory problems and prevents export to national and international markets. (Lehman *et al.* 2000.)

***Radopholus similis* (Cobb, 1893) Thorne, 1949 (the burrowing nematode)** was found infecting the tissues of the aquatic ornamental *Anubias minima* (anubias). (Broward County; N10-00688; Frank A. Burgos; 26 May 2010.)

***Pratylenchus hippocampis* Inserra *et al.*, 2007 (a root-lesion nematode), a new Host record**, was found infecting the roots of the ornamental palm *Butia capitata* (pinto palm). (Suwannee County; N10-00484; Wayne W. Bailey; 15 April 2010.)

Collectors submitting five or more samples that were processed for nematological analysis in May - June 2010

Anderson, James L.	61
Bailey, Wayne W.	16
Bentley, Michael A.	94
Brown, Lance A.	5
Burgos, Frank A.	178
Echols, M. Janie	7
Edenfield, Carrie S.	58
Garcia, Olga	6
Jenner, Stephen R.	9

Sample Submissions

	May/ Jun	Year to Date
Morphological Identifications	2,955	5,148
Molecular Identifications	170	283
Total Samples Submitted	3,125	5,431

Certification and Regulatory Samples

Multistate Certification for National and International Export	2,136	5,897
California Certification	513	1,428
Pre-movement (Citrus Nursery Certification)	56	160
Site or Pit Approval (Citrus Nursery and Other Certifications)	29	70

Other Samples

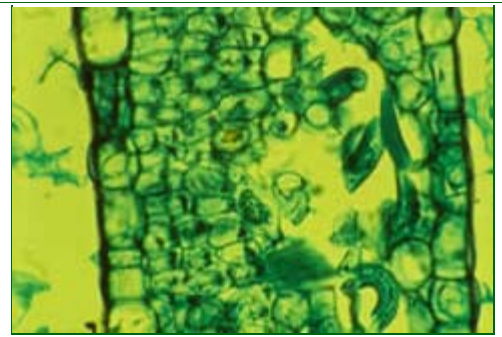
Identifications (invertebrate)	0	4
Plant Problems	43	73
Intrastate Survey, Random	99	392
Molecular Identifications*	0	283

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

LeBoutillier, Karen W.	262
Ochoa, Ana L.	235
Pate, Jo Ann	61
Qiao, Ping	238
Robinson, William L.	14
Spriggs, Charles L.	145
Toral, Angelina M.	13
White, Richard A.	6

References

Lehman, P.S., N.Vovlas, R.N. Inserra, L.W. Duncan and D.T. Kaplan.
2000. Colonization of foliar tissues of an aquatic plant, *Anubias barteri*
 Schott by *Radopholus similis*. *Nematropica* 30:63-75.



Cross section of a leaf of *Anubias barteri* showing a large cavity in the spongy parenchyma. Note fragments of the nematode body remained scattered in the cavity during the sectioning of the leaf tissues.

Photograph courtesy of Dr. N. Vovlas, Consiglio Nazionale delle Ricerche, Istituto per la Protezione delle Piante, Bari, Italy.



***Butia capitata* (pinto palm) in the landscape.**

Photograph courtesy of Patti J. Anderson, [DPI](#)

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.

***Septoria mikania-micranthae* (leaf spot)**, recently reported for the first time in the Northern Hemisphere, is considered a potential biocontrol pathogen, but research into this organism is in its infancy. It was found on the invasive vine, *Mikania micrantha*, a noxious weed that was recently detected in Miami-Dade County, also for the first time in this country. (Miami-Dade County; P2010-36618; Haylett Cruz Escoto; 18 May 2010 and Miami-Dade County; Haylett Cruz Escoto; P2010-37116; 8 June 2010.) See the [DPI Pest Alert](#) for more information about this pest plant.

***Phoma* sp. and *Pyrenochaeta* sp. (leaf spot fungi)** were also found on *Mikania micrantha*. Both species are potential pathogens, but their actual pathogenicity on *Mikania* spp. is not known. (Both species found on a single plant: Miami-Dade County; P2010-36887; Haylett Cruz Escoto; 24 May 2010.)

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 sinensis</i>	sweet orange	<i>Guignardia citricarpa</i>	citrus black spot	grove	Collier	34844	Maria D. Olvera, Bobbie L. Seay	8-Mar-10	North America
<i>Citrus sinensis</i>	sweet orange	<i>Guignardia citricarpa</i>	citrus black spot	grove	Hendry	36124	Virginia G. Villarreal, Bobbie L. Seay	29-Apr-10	County
<i>Dracaena</i> sp.	dracaena	<i>Kutilakesopsis macalpineae</i>	stem rot	nursery	Lake	34638	Mary C. Sellers	26-Feb-10	
<i>Phlox subulata</i>	moss phlox	<i>Peronospora phlogina</i>	downy mildew	nursery	Alachua	35479	M. Janie Echols, Cheryl A. Jones	24-Mar-10	State

Sample Submissions

	May/ Jun	Year to Date
Pathology	531	1,204
Bee	9	30
Soil	40	66
Citrus Canker	322	777
Citrus Greening	414	4,734
Citrus Black Spot	0	98
Miscellaneous	6	45
Total Samples Submitted	1,332	6,954



Mass of *Mikania micrantha* in full bloom at a nursery in Miami-Dade County. Photograph courtesy of Stephen Beidler

<i>Phlox subulata</i>	moss phlox	<i>Peronospora phlogina</i>	downy mildew	nursery	Alachua	35556	Cheryl A. Jones	5-Apr-10	
<i>Persea americana</i>	avocado	<i>Raffaelea lauricola</i>	laurel wilt	campus	Highlands	35491	Jorge E. Pena	2-Apr-10	
<i>Persea borbonia</i>	red bay	<i>Raffaelea lauricola</i>	laurel wilt	Goethe State Forest	Levy	35627	Stephen R. Jenner	7-Apr-10	County
<i>Raphiolepis indica</i>	dwarf Indian hawthorn	<i>Phytophthora cactorum</i>	leaf and twig blight	tree farm	Citrus	35823	Robert M. Leahy, David A. Davison	15-Apr-10	Host
<i>Solanum tuberosum</i>	potato	<i>Helminthosporium solani</i>	silver scurf	Ag Inspection Station 9B	Hamilton	34652	Stacey S. Simmons	1-Mar-10	
<i>Triticum aestivum</i>	wheat	<i>Drechslera tritici-repentis</i>	leaf spot	field	Columbia	35871	Leroy A. Whilby	13-Apr-10	Host

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