

## BOTANY SECTION Compiled by Richard E. Weaver, Jr., Ph.D.

For this period, 105 specimens were submitted to the Botany Section for identification, and 1,170 were received from other sections for identification/name verification, for a total of 1,275. Also during this period, 11 specimens were added to the herbarium. Some of the samples sent in for identification are discussed below.

*Clerodendrum splendens* G. Don ex James (A genus of about 400 woody species from tropical and subtropical regions in Africa, Asia, and the western Pacific). Verbenaceae (or Labiatae/Lamiaceae). **Flaming glorybower.** This woody evergreen vine or twining shrub, usually no more than 2-3 m tall, has opposite, ovate to oblong, lustrous, dark green leaves to 18 cm long. The inflorescence is a terminal panicle. Flowers may be recognized by their red calyx with triangular lobes and scarlet to bright red salverform corolla with a tube 2 cm long and lobes another 2 cm. This is a beautiful climber in South Florida, but plants in this genus are known to become invasive pest plants. (Miami-Dade County; B2006-126; Gwen H. Myres; 28 March 2006) (Huxley 1992; Mabberley 1997)

*Coronopus didymus* (L.) Sm. (A cosmopolitan genus of 10 species). Cruciferae. **Lesser swinecress.** (This species is sometimes seen as *Lepidium didymum* L.) This prostrate winter annual has multiple herbaceous stems and alternate, glabrous leaves to 5 cm long and 2 cm broad. The leaves are so finely dissected into small lacey lobes that they appear to be pinnately compound at first sight. The leaves give off a characteristic pungent odor when crushed. The inflorescence is a small raceme with minute greenish-white flowers. The fruits are divided by the septum into two globose sections that separate into two nutlets. This weedy species has found a home in waste places, roadsides, turf and fields from Africa through Europe to North and South America and is scattered throughout Florida. (St. Johns County; B2006-100; Cheryl A. Jones; 17 March 2006) (Wunderlin and Hansen 2003; <http://www.missouriplants.com>)

*Fumaria capreolata* L. (A genus of about 55 species found from the Mediterranean through Central Asia to tropical East Africa) Fumariaceae. **White ramping fumitory.** This sometimes climbing or scrambling herbaceous annual ranges from 10-80 cm in height and is found in ditches, cultivated fields and disturbed areas. The glabrous green leaves are pinnatisect (pinnately divided nearly to the midrib), with lobes 3-5 mm wide. The inflorescence is a 2-3.5 cm long raceme with up to 20 asymmetrical flowers. The white to cream colored corollas have purple to black-purple tips. The base of upper of the two outer petals is spurred. The flowers gradually turn pink following pollination. The fruits are 2-2.5 mm globose capsules. A very similar, pink-flowered species, the common fumitory or earth smoke, *F. officinalis*, is also naturalized in Florida. (Marion County; B2006-73; Christine A. Zamora; 13 March 2006) (Gleason and Cronquist 1991; <http://www.efloras.org>)

*Ipomoea pandurata* (L.) G.F.W. Mey. (A genus of about 50 species from temperate and warm areas). Convolvulaceae. **Man-of-the-earth; wild sweetpotato vine.** This vining, twining, herbaceous, perennial wetland plant was collected along drainage canals in Picayune Strand State Forest. The vine can grow many meters, with or without branching. Like its relative, the edible sweet potato, this species has a tuberous root for starch storage. The cordate leaves are alternate, entire and petiolate, with the petioles (to 9 cm long) having a shallow adaxial groove. The leaves can be quite variable, ranging from the broadly cordate to fiddle-shaped and from

glabrous to pubescent on the underside of the blade. Inflorescences include a pair of bracts subtending one to several flowers. The salverform flowers have a white corolla with a rosy-purple throat. This beautiful Florida native (found mainly in the northern two-thirds of the state) can become weedy and overrun other vegetation, given good growing conditions.

(Collier County; B2006-74; Andrea Van Loan; 9 March 2006) (Godfrey and Wooten 1981; <http://www.missouriplants.com>; <http://www.plantatlas.usf.edu>)

*Osmunda cinnamomea* L. (A genus of 10 species of temperate and tropical ferns). Osmundaceae.

**Cinnamon fern.** This terrestrial, clump-forming fern to 1 m tall is dimorphic, having separate sterile and fertile fronds. Sterile leaves are pinnate-pinnatifid, with 12-25 pairs of pinnae, and pale green with woolly reddish-brown hair on the rachis of new leaves. Fertile leaves, with modified, spore-bearing pinnae, are cinnamon colored and shorter and narrower than sterile leaves. The fertile leaves wither after spores are dispersed. Cinnamon fern prefers moist acidic soils, and is frequently found growing in swamps, bogs and other wetland areas. This common and widespread fern is also cultivated as an ornamental and has been listed as commercially exploited. (Alachua; B2006-106; Christine A. Zamora; 23 March 2006) (Wunderlin and Hansen 2000; <http://www.efloras.org>)

*Securidaca diversifolia* (L.) Blake (A genus of 80 tropical species). Polygalaceae. **Easter flower** (Miami-Dade County; B2006-130; Gwen H. Myres; 28 March 2006). This woody vine to 10 m long with short twining lateral branches has alternate, coriaceous, narrowly ovate, ovate or oblong leaves with an obtuse or short-acuminate apex. The lower surface of the leaves has prominent venation and is minutely strigulose. The inflorescence is a terminal raceme. Each flower has a calyx with five dimorphic pinkish-lavender sepals: the rounded outer three are about 3 mm long, while the inner ones are 8-10 mm long and petaloid. The corolla is colored lavender to violet. The fruit is a 3.5-4 cm long, hirsute samara. This species is native from Mexico to Peru and the Lesser Antilles. (Acevedo-Rodríguez 2005)

## REFERENCES

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- Huxley, A.J. (editor). 1992. The new Royal Horticultural Society dictionary of gardening. 4 volumes. Macmillan Press. London, England. 3,240 p.
- Mabberley, D.J. 1997. The plant book, 2<sup>nd</sup> edition. Cambridge University Press. Cambridge, England. 858 p.
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**ENTOMOLOGY SECTION**

Compiled by Susan E. Halbert, Ph.D.

For the month of March, there were 517 samples and 23,818+ specimens. In April, there were 758 samples and 29,742+ specimens. Some of the samples are listed below:

**ORNAMENTALS, WOODY PLANTS, AND PALMS:**

*Evodia suaveolens* (zodia) -- *Paratachardina lobata* (Chamberlin), **lobate lac scale**: A moderate infestation was found on two plants at Fairchild Tropical Botanical Garden in Coral Gables (Miami-Dade County; E2006-931; Edward T. Putland and Lynn D. Howerton; 2 March 2006). NEW DPI HOST RECORDS.

*Pavonia bahamensis* (pavonia, Bahama swamp bush) -- *Mylocerus undatus* Marshall, **a weevil** and *Maconellicoccus hirsutus* Green, **pink hibiscus mealybug**: Severe infestations were found on a plant at Fairchild Tropical Botanical Garden in Coral Gables (Miami-Dade County; E2006-903; Lynn D. Howerton and Edward T. Putland; 2 March 2006). NEW DPI HOST RECORD.

*Phoenix roebelenii* (pygmy date palm) -- *Phoenicococcus marlatti* (Cockerell), **red date scale**: A severe infestation was found on one of three plants at a residence in St. Petersburg (Pinellas County; E2006-1120; Karyn L. Pippenger; 12 March 2006). NEW DPI COUNTY RECORD.

*Prestonia mollis* (prestonia, babeiro) -- *Composia fidelissima* Herrich-Schaeffer, **Florida composia, Uncle Sam moth**: A slight infestation was found on a plant at Fairchild Tropical Botanical Garden in Coral Gables (Miami-Dade County; E2006-879; Frank A. Burgos; 23 February 2006). NEW DPI HOST RECORD.

**ORNAMENTALS, FOLIAGE PLANTS:**

*Acca sellowiana* (pineapple guava) -- *Ceroplastes floridensis* (Comstock), **Florida wax scale**: A slight infestation was found on a plant at a nursery in Naples (Collier County; E2006-1479; Scott D. Krueger; 24 March 2006). NEW DPI HOST RECORD.

*Bambusa* sp. (bamboo) -- *Kuwanaspis bambusicola* (Takahashi), **an armored scale**: A moderate infestation was found at a business in Odessa (Hillsborough County; E2006-1657; Richard A. White and Gabriela M. Bernard; 28 March 2006). NEW DPI COUNTY RECORD.

*Ilex cornuta* (Chinese holly) -- *Maconellicoccus hirsutus* (Green), **pink hibiscus mealybug**: A slight infestation was found at a residence in Odessa (Hillsborough County; E2006-1095; Richard A. White; 8 March 2006). NEW DPI HOST RECORD.

*Peristrophe hyssopifolia* (marble leaf) -- *Planococcus citri* (Risso), **citrus mealybug**: A moderate infestation was found at an amusement park in Lake Buena Vista (Orange County; E2006-1509; Greg S. Hodges; Martha K. King and George A. Warden; 28 March 2006). NEW DPI HOST RECORD.

**ORNAMENTALS, FLOWERING PLANTS:**

*Hibiscus acetosella* (sorrel, false roselle) -- *Maconellicoccus hirsutus* (Green), **pink hibiscus mealybug**: A severe infestation was found on two plants at the Fruit & Spice Park in Homestead (Miami-Dade County; E2006-959; Olga Garcia and Edward T. Putland; 5 March 2006). NEW DPI HOST RECORD.

*Impatiens walleriana* (impatiens, sultana, busy Lizzie, balsam) -- *Pseudococcus elisae* Borchsenius, **banana mealybug**: A slight infestation was found on ten plants at a residence in

Miami (Miami-Dade County; E2006-873; Edward T. Putland and Olga Garcia; 27 February 2006). NEW DPI HOST RECORD.

#### FOREST AND SHADE TREES:

*Ficus citrifolia* (wild banyan tree) -- *Greenidea ficicola* Takahashi, **an Asian ficus aphid**: A moderate infestation was found on two plants at a roadside in Miami (Miami-Dade County; E2006-2223; Edward T. Putland; 28 April 2006). NEW DPI HOST RECORD.

*Quercus hemisphaerica* (laurel oak) -- *Myloccerus undatus* Marshall, **a weevil**: A severe infestation was found on a plant at a residence in Cape Coral (Lee County; E2006-1068; Patricia L. McMackins, USDA/APHIS/PPQ; 9 March 2006). NEW DPI HOST RECORD, NEW DPI COUNTY RECORD.

*Quercus virginiana* (live oak) -- *Eulecanium caryae* Fitch, **large hickory lecanium, a scale**: A slight infestation was found on a plant behind a tire store in Gainesville (Alachua County; E2006-1713; Lyle J. Buss, University of Florida; 3 April 2006). NEW DPI COUNTY RECORD.

*Ulmus alata* (winged elm) -- *Tetra americana* (Keifer), **an eriophyid mite**: A moderate infestation was found in Paynes Prairie Preserve State Park in Micanopy (Alachua County; E2006-1805; Lyle J. Buss, University of Florida; 7 April 2006). NEW DPI STATE RECORD. This mite can cause browning and rust on the lower leaf surfaces. It is probably widespread on elms (Dr. W.C. "Cal" Welbourn).

#### FOOD AND CROP PLANTS:

*Eriobotrya japonica* (loquat, Japanese plum) -- *Zaprionus indianus* Gupta, **a fruit fly**: Specimens were reared from 12 ripe, damaged fruit collected from a tree at the Indian River Historical Society in Vero Beach (Indian River County; E2006-1161; Kenneth L. Hibbard; 23 February 2006). NEW DPI HOST RECORD.

*Mentha* sp. (mint) -- *Ovatus crataegarius* (Walker), **mint aphid**: A slight infestation was found on three of six plants at a produce market in Winter Park (Orange County; E2006-2309; Serena Stornaiuolo; 2 May 2006). NEW DPI COUNTY RECORD.

*Rosmarinus officinalis* (rosemary) -- *Aphis gossypii* Glover, **cotton/melon aphid**: Specimens were found on plants at an amusement park in Lake Buena Vista (Orange County; E2006-1143; park employee; 14 March 2006). NEW DPI HOST RECORD for this common species.

#### CITRUS:

*Citrus aurantium* (sour orange) -- *Atherigona orientalis* Schiner, **a fruit fly**: Specimens were reared from ripe fruit collected from the ground in Holopaw (Osceola County; E2006-937; Kenneth L. Hibbard; 26 January 2006). NEW DPI COUNTY RECORD.

#### WEEDS AND GRASSES:

*Bidens alba* (beggarticks, romerillo) -- *Icerya rileyi* nr. Cockerell, **a margarodid scale**: A moderate infestation was found on weeds at Port Everglades (fumigation area) (Broward County; E2006-833; Margarita A. Lahens, USDA/APHIS/PPQ; 23 February 2006). NEW DPI HOST RECORD.

*Cardamine pensylvanica* (Pennsylvania bittercress) -- *Chaetopsis massyla* (Walker), **an otitid fly**: Specimens were found on weeds in pots at a nursery in Mayo (Lafayette County; E2006-854; Wayne W. Bailey; 27 February 2006). NEW DPI COUNTY RECORD.

*Phyllostachys* sp. (a bamboo) -- *Chaetococcus bambusae* (Maskell), **bamboo mealybug**: An infestation was found on two plants at a nursery in Ruskin (Hillsborough County; E2006-977; Karyn L. Pippenger; 1 March 2006). NEW DPI COUNTY RECORD. This is not a common mealybug in Florida and has been reported only from Miami-Dade, Orange and Seminole counties prior to this find. There is no record that it is a significant pest (Dr. Greg S. Hodges).

*Zoysia* sp. (zoysia grass) -- *Aceria zoysiae* (Baker, et al.), **an eriophyid mite**: A moderate infestation was found at University of Florida greenhouses in Gainesville (Alachua County; E2006-1711; Kevin E. Kenworthy, University of Florida; 31 March 2006). NEW DPI STATE RECORD. This mite has been reported only from Maryland in the United States, but it is probably present in all areas where zoysia grass is grown. Feeding by this mite can cause damage to the host plant (Dr. W.C. "Cal" Welbourn).

#### NATIVE AND NATURALIZED PLANTS:

*Anemia adiantifolia* (maidenhair pineland fern) -- *Ceroplastes floridensis* (Comstock), **Florida wax scale**: A severe infestation was found on 100 of 200 plants in Everglades National Park (Miami-Dade County; E2006-1811; Olga Garcia and Edward T. Putland; 8 April 2006). NEW DPI HOST RECORD.

*Canella winterana* (wild cinnamon, cinnamon bark) -- *Philephedra tuberculosa* Nakahara & Gill, **a soft scale**: A moderate infestation was found on two plants at a residence in Miami (Miami-Dade County; E2006-1717; Olga Garcia; 4 April 2006). NEW DPI HOST RECORD.

*Crataegus michauxii* (Michaux's hawthorn) -- *Eriosoma crataegi* (Oestlund), **hawthorn woolly aphid**: An infestation was found on plants at a residence in Haines City (Polk County; E2006-1742; Sharon B. Garrett; 6 April 2006). NEW DPI HOST RECORD.

*Magnolia grandiflora* (southern magnolia) -- *Prococcus acutissimus* (Green), **banana shaped scale**: A slight infestation was found on one of 30 plants at a nursery in Odessa (Hillsborough County; E2006-1311; Richard A. White; 20 March 2006). NEW DPI COUNTY RECORD.

*Sambucus canadensis* (elderberry) -- *Myzus persicae* (Sulzer), **green peach aphid**: A slight infestation was found on six plants at a residence in Ft. Myers (Lee County; E2006-923; David L. Renz, USDA/APHIS/PPQ; 2 March 2006). NEW DPI HOST RECORD.

#### ARTHROPOD DETECTION:

*Cardiastethus assimilis* (Reuter), **a minute pirate bug**: A specimen was found on plants at a nursery in Ft. Myers (Lee County; E2006-871; Walter W. Golden and Richard L. Blaney; 24 February 2006). NEW DPI COUNTY RECORD. This is a predator.

*Copestylum sexmaculatum* (Palisot de Beauvois), **a flower fly**: A specimen was found in a multi-lure trap in a mango tree in Ft. Myers (Lee County; E2006-1707; Patricia L. McMackins, USDA/APHIS/PPQ; 4 April 2006). NEW DPI COUNTY RECORD.

*Halyomorpha halys* Stål, **brown marmorated stink bug**: A specimen was found in a Jackson trap at Port Everglades (Broward County; E2006-1900; William A. Thiel; 20 March 2006). This species is from Asia. It has become established and is a significant pest in Pennsylvania and neighboring states. A population has been found also in South Carolina. Specimens were found in stored household goods in California transported from Pennsylvania. At this time, it is not known whether the insect trapped in Florida represents an established population. Subsequent survey did not reveal any more bugs (Dr. Susan E. Halbert).

*Mycetobia divergens* Walker, **an anisopodid fly**: A specimen was found in a multi-lure trap in a mango tree in Tampa (Hillsborough County; E2006-1382; Angela C. King, USDA/APHIS/PPQ; 13 March 2006). NEW DPI COUNTY RECORD.

*Paramyiolia rhino* (Steyskal), **rhino fruit fly**: A specimen was found in a multi-lure trap in Casselberry (Seminole County; E2006-847; Oscar Orta, USDA/APHIS/PPQ; 23 February 2006). NEW DPI COUNTY RECORD.

*Polyphylla gracilis* Horn, **a June beetle relative**: A specimen was found in a swimming pool area at a residence in Umatilla (Lake County; E2006-1932; David A. Westervelt; 14 April 2006). This is a rare beetle (Dr. Michael C. Thomas).

**NEMATODOLOGY SECTION**

**Compiled by Janete A. Brito, Ph.D., and Renato N. Inserra, Ph.D.**

A total of 4,239 samples (3,766 for morphological and 473 for molecular identifications) were processed in March and April 2006. Details are shown below:

<p><b>Certification and Regulatory Samples:</b></p> <p>Multi-state Certification for National and International Export ..... 2,836                  California Certification ..... 638                  Pre-movement (Citrus Nursery Certification) ..... 63                  Site or Pit Approval (Citrus Nursery and Other Certifications) ..... 48</p>	<p><b>Other Samples:</b></p> <p>Plant Problems ..... 33                  Intrastate Survey, Random ..... 146                  Identification (Invertebrate) ..... 2</p> <p><b>Molecular Identifications*</b> ..... 473</p> <p><small>*The majority of these analyses involved root-knot nematode species.</small></p>
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**Nematodes of Special Interest**

Nematodes of special interest detected and/or identified in March - April 2006:

*Phyllostachys nigra* (black bamboo) - *Afenestrata koreana* Vovlas, Lamberti & Choo, 1992. A **cyst-forming nematode** was found infecting the roots of this ornamental crop (Alachua County, N06-00470, Gable Duclos, 6 April 2006). *Afenestrata koreana* was introduced into the United States from the Far East (Korea) where it parasitizes edible bamboo. In Florida, this species has been detected on *P. aurea* (fishpole bamboo) and black bamboo.

**COLLECTORS SUBMITTING FIVE OR MORE SAMPLES THAT WERE PROCESSED FOR NEMATODOLOGICAL ANALYSIS DURING MARCH AND APRIL 2006:**

Anderson, James L. .... 368	Pate, JoAnn ..... 28
Bailey, W. Wayne ..... 33	Qiao, Ping ..... 288
Echols, M. Janie ..... 5	Salisbury, Thomas L. .... 124
Etchells, K. Lea ..... 11	Shelley, Stacey ..... 8
Frere, Christine J. .... 5	Smith, Lane W. .... 15
Restom Gaskill, Douglas A. .... 5	Spriggs, Charles L. .... 227
LeBoutillier, Karen W. .... 330	Stone, Carrie S. .... 95
Ochoa, Ana L. .... 281	Toral, Angelina M. .... 5
	Zamora, Christine A. .... 6

## PLANT PATHOLOGY

### Compiled by Robert M. Leahy

For this period, the Plant Pathology Section received and processed 1,714 specimens. These included 1,006 pathology, 18 soil, 51 bee, 190 citrus greening and 19 miscellaneous samples. Full pathogenicity tests for citrus canker were performed on 22 samples. Visual inspections for citrus canker were carried out on six samples from South East Florida, 61 from Central Gulf Coast Florida, 183 from South West Gulf Coast Florida, 120 from Central Florida and 38 from North Florida.

#### ORNAMENTALS, WOODY PLANTS AND PALMS:

*Ficus elastica* (rubber tree) -- *Cerotelium fici*, **rust fungus**: Collected at a nursery in Sorrento, Lake County (9 March 2006, Mary C. Sellers, P2006-00906).

*Ilex* sp. (holly), -- *Colletotrichum acutatum*, **leaf spot**: Collected at a nursery in Bushnell, Sumter County (21 March 2006, James R. Holm, P2006-00997).

#### ORNAMENTALS, FOLIAGE PLANTS:

*Ctenanthe* sp. (never-never plant) -- *Bipolaris setariae*, **leaf spot**: Collected at a nursery in Mt. Dora, Lake County (31 March 2006, Mary C. Sellers, P2006-001077).

#### ORNAMENTALS, FLOWERING PLANTS:

*Dietes iridioides* (African iris) -- *Puccinia iridis*, **rust fungus**: Collected at a nursery in Dover, Hillsborough County (24 April 2006, William R. Stokes, P2006-01267).

*Gladiolus x hortulanus* (gladiolus) -- *Uromyces transversalis*, **gladiolus rust**: Collected at a nursery in Bradenton, Manatee County (12 April 2006, Robert M. Leahy, Jodi L. Hansen, Geneva M. Walker and Tracy L. Wright). NEW UNITED STATES RECORD.

#### FOREST AND SHADE TREES:

*Liquidambar styraciflua* (sweetgum) -- *Tubakia dryina*, **leaf spot**: Collected at a nursery in Hawthorne, Alachua County (28 March 2006, Christine A. Zamora, P2006-01011).