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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.



Meloidogyne partityla galls on roots of laurel oak (*Quercus laurifolia*) Photography courtesy of J.A. Brito and M. Beckman, DPI



Parallaxis guzmani, a leafhopper Photograph courtesy of Susan E. Halbert, DPI



Schacontia rasa Solis & Goldstein, a crambid moth. Photograph courtesy of James E. Hayden, DPI



Zeuxine strateumatica (lawn orchid, soldier orchid) Photograph courtesy of Frank Soltes http://florida.plantatlas.usf.edu/photo. aspx?ID=2227

Highlights

Meloidogyne partityla Kleynhans, 1986, the pecan root-knot nematode, was found infecting the roots of laurel oak, *Quercus laurifolia*. This nematode species has a narrow host range known to include pecan, hickory (*Carya* spp.) and walnut (*Juglans* spp.), all belong to only one botanical family, Juglandaceae. Recently, root samples of laurel oak (*Quercus laurifolia*) were found infected with root-knot nematodes in two residential landscapes in Alachua County, Florida.

Paralaxis guzmani, a leafhopper, a new Continental USA record. This leafhopper is native to the Neotropics. Other than the infestations on pothos (*Epipremnum aureum*), its hosts and pest potential are unknown. This specimen was spotted in a suction trap sample from Chapman Field in Miami.

Rhodococcus fascians (leafy gall pathogen). During this reporting period, we feature a pathogen causing an unusual proliferation and gall disease on herbaceous plants in other parts of the United States and world. This disease has become more prevalent in the industry and could easily find its way to Florida on propagative material and cuttings.

Schacontia rasa Solis and Goldstein, a crambid moth, a new Continental USA record. Schacontia species are distributed in the Neotropics, Mexico and the Caribbean. The only prior United States record for the genus is one specimen of Schacontia themis Solis and Goldstein from Sanibel Island, Florida, deposited in the Florida State Collection of Arthropods. Schacontia species have no economic importance.

Zeuxine strateumatica (L.) Schltr. (lawn orchid, soldier orchid), a terrestrial herb that grows 4-25 cm tall, with purplish-green or greenish-brown stems, and forms a short rhizome, is often submitted for identification when plants "spontaneously" pop up in lawns, nurseries, fields, and occasionally, in moist natural areas.

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Photograph courtesy of Patti J. Anderson, DPI

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We welcome your suggestions for improvement of TRIOLOGY. Please feel free to contact me or <u>Dr. Patti</u> <u>Anderson</u> with your comments. <u>Dr. Wayne N. Dixon</u>, Editor, Assistant Director, DPI



∮T R I - O L O G Y

Botany Section

Compiled by Patti J. Anderson, Ph.D.

This section identifies plants for the Division of Plant Industry, as well as for other governmental agencies and private individuals. The Botany Section maintains a reference herbarium with over 11,000 plants and nearly 1,400 vials of seeds.

A sample received for identification is discussed below:

Zeuxine strateumatica (L.) Schltr. (lawn orchid, soldier orchid), from a genus of about 70 species native to warm and tropical areas of the Old World. Orchidaceae. This terrestrial herb grows 4-25 cm tall, with purplish-green or greenish-brown stems, and forms a short rhizome. The sessile, spirally-arranged leaves can be as long as 9 cm. Plants usually have 5-12 of these linear to narrowly lanceolate, acuminate-tipped leaves. The terminal inflorescence is a spike of 8-50 white to greenish-white flowers with a yellow lip. Flowers begin to mature in fall (but occasionally in spring) and are usually found from October to February in Florida. This species is often submitted for identification when plants "spontaneously" pop up in lawns, nurseries, fields and moist natural areas. The specific epithet is taken from the Greek word "strateuma," which means a company or army, and suggests that a cluster of the plants looks like company of soldiers. It is native to Asia and Pacific Islands, but is often found in lawns and open, grassy, disturbed sites throughout Florida, extreme southern Georgia, Alabama and Mississippi and southeastern Louisiana and Texas. (Hendry County; B2015-7; Roberto Delcid; 7 January 2015 and Pinellas County; B2015-24; William J. Salway; 13 January 2015.) (Mabberley 2008; Wunderlin and Hansen 2011; http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_ id=242102093 [accessed 2015 March 13]).

References

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- Wunderlin, R. P. and B. F. Hansen. 2011. Guide to the vascular plants of Florida, 3rd edition. University Press of Florida, Gainesville, Florida. 783 p.

The following table provides information about samples identified in the current volume's time period. The table is organized alphabetically by plant species, but with new county records listed before all others.

Sample Submissions

	January February	Year to date
Samples submitted by other DPI sections	779	779
Samples submitted for botanical identification only	141	141
Total Sam- ples Submit- ted	920	920
Specimens added to the herbarium	97	97



Zeuxine strateumatica (lawn orchid, soldier orchid) Photograph courtesy of Frank Soltes http://florida.plantatlas.usf.edu/photo.aspx?ID=2227

* New County Record	Plant genus	Plant species	Plant common name	1st Collector	2nd Collec- tor	County	Sample Number	Collection date
*	Corydalis	micrantha	smallflower fumewort; harlequin; southern corydalis	Jason B. Sharp		Manatee	2015 58	Jan 29 2015
*	Imperata	cylindrica	cogongrass	Sol F. Looker	Cheryl A. Jones	Putnam	2015 11	Jan 8 2015
*	Macroptilium	atropurpureum	purple bushbean	Jason B. Sharp		Manatee	2015 85	Feb 9 2015
*	Polygonum	glabrum	denseflower knotweed; smooth smartweed	Harry L. Morrison	Stacey S. Simmons	Lake	2015 42	Jan 21 2015
*	Solanum	viarum	tropical soda- apple; Sodom apple; apple- of-Sodom	Kaleigh Hire		St. Johns	2015 3	Jan 1 2015
*	Triumfetta	semitriloba	Sacramento burrbark; Sacramento bur; burweed	LeAnn M. West		Martin	2015 73	Feb 4 2015
*	Urena	lobata	Caesarweed; bur-mallow; Congo jute	Kaleigh Hire		St. Johns	2015 107	Feb 16 2015
	Abrus	precatorius	rosary pea; crab's-eyes; precatory pea; licorice vine	Jason M. Spiller		Hillsborough	2015 82	Feb 9 2015
	Abutilon	sp.	Indian mallow	Linda G. McRay	Jessica V. Tromer	Pinellas	2015 55	Jan 27 2015
	Acalypha	wilkesiana	Jacob's-coat; copperleaf; beefsteak plant	Olga Garcia		Miami-Dade	2015 122	Feb 16 2015
	Aglaia	odorata	Chinese perfume plant, Chinese rice flower, mock lime, mock lemon	Sallie H. Simmons		Palm Beach	2015 36	Jan 14 2015
	Allium	sp.	onion	Linda G. McRay		Pinellas	2015 115	Feb 17 2015
	Alternanthera	brasiliana	Brazilian joyweed; purple joyweed; ruby leaf	Olga Garcia		Miami-Dade	2015 123	Feb 17 2015
	Ammannia	sp.	redstem	Linda G. McRay		Pinellas	2015 114	Feb 17 2015
	Ammannia	latifolia	pink redstem; toothcups	Lane M. Smith		Palm Beach	2015 141	Feb 25 2015
	Anagallis	arvensis	scarlet pimpernel; blue pimpernel; poor man's weatherglass; bird's eye	Jake M. Farnum		Miami-Dade	2015 71	Feb 3 2015
	Andropogon	sp.	bluestem	M. 'Janie' Echols		Columbia	2015 100	Feb 10 2015
	Andropogon	virginicus	chalky bluestem	Bobbe A. Rose	Jessica V. Tromer	Pinellas	2015 88	Feb 10 2015

* New County Record	Plant genus	Plant species	Plant common name	1st Collector	2nd Collec- tor	County	Sample Number	Collection date
	Ardisia	sp.		Charlie L. Spriggs		Lake	2015 6	Jan 6 2015
	Ardisia	crenata	coralberry; coral ardisia; spice berry; scratchthroat; hen's eyes	Sol F. Looker		Putnam	2015 106	Feb 12 2015
	Ardisia	crenata	coralberry; coral ardisia; spice berry; scratchthroat; hen's eyes	Lisa M. Hassell		Duval	2015 33	Jan 16 2015
	Ardisia	crenata	coralberry; coral ardisia; spice berry; scratchthroat; hen's eyes	Sol F. Looker		Clay	2015 111	Feb 16 2015
	Ardisia	crenata	coralberry; coral ardisia; spice berry; scratchthroat; hen's eyes	Sol F. Looker		Clay	2015 112	Feb 16 2015
	Ardisia	crenata	coralberry; coral ardisia; spice berry; scratchthroat; hen's eyes	Sol F. Looker		Clay	2015 133	Feb 20 2015
	Ardisia	crenata	coralberry; coral ardisia; spice berry; scratchthroat; hen's eyes	Sol F. Looker		Clay	2015 138	Feb 25 2015
	Arnoglossum	sp.	plantain	Linda G. McRay		Pinellas	2015 120	Feb 17 2015
	Baccharis	dioica	broombush falsewillow, Vahl's baccharis, hammock groundsel tree	Jake M. Farnum		Monroe	2015 121	Feb 17 2015
	Basella	alba	Ceylon spinach; Malabar spinach; Indian spinach; vine spinach	Jake M. Farnum		Miami-Dade	2015 139	Feb 26 2015
	Batis	maritima	saltwort; turtleweed	Linda G. McRay	Jessica V. Tromer	Pinellas	2015 56	Jan 27 2015
	Begonia	sp.	begonia	Kaleigh Hire		St. Johns	2015 4	Jan 2 2015
	Blechnum	serrulatum	saw fern, swamp fern, toothed midsorus fern	Linda G. McRay	Jessica V. Tromer	Pinellas	2015 54	Jan 27 2015
	Brassica	rapa	field mustard, rape mustard	Jake M. Farnum		Miami-Dade	2015 9	Jan 7 2015
	Bromelia	pinguin	pinguin; wild pine; maya	Gay Durrance, USDA		Polk	2015 132	Feb 18 2015

* New County Record	Plant genus	Plant species	Plant common name	1st Collector	2nd Collec- tor	County	Sample Number	Collection date
	Bulnesia	arborea	Maracaibo lignumvitae, verawood	Scott D. Krueger		Collier	2015 134	Feb 13 2015
	Calibrachoa	sp.	calibrachoa	Lane M. Smith		Palm Beach	2015 77	Feb 4 2015
	Callisia	fragrans	basket plant, inch plant, spironema	Richard T. Bloom		Highlands	2015 44	Jan 22 2015
	Callistemon	sp.	bottlebrush	Kaleigh Hire		Duval	2015 51	Jan 22 2015
	Calophyllum	sp.	beauty leaf	Matthew M. Miller		Palm Beach	2015 130	Feb 19 2015
	Cecropia	sp.	cecropia, trumpet tree	Mark A. Spearman		Pinellas	2015 53	Jan 27 2015
	Centratherum	punctatum	larkdaisy; porcupine flower; Brazilian button flower	Gabriela M. Bernard		Pinellas	2015 21	Jan 12 2015
	Ceratiola	ericoides	Florida rosemary; sand heath; sandhill rosemary	Stephen R. Jenner	Sara M. White	Marion	2015 84	Feb 4 2015
	Ceratophyllum	demersum	coontail, hornwort, rigid hornwort	Kaleigh Hire		Duval	2015 126	Feb 18 2015
	Chenopodium	album	lamb's-quarters	Jodi Bixler		Pasco	2015 128	Feb 18 2015
	Cirsium	nuttallii	Nuttall's thistle	Linda G. McRay	Jessica V. Tromer	Pinellas	2015 57	Jan 27 2015
	Citrus	aurantium	sour orange	Bobby L. Jones, USDA		Broward	2015 15	Jan 6 2015
	Cleome	rutidosperma	fringed spiderflower	Lane M. Smith		Palm Beach	2015 76	Feb 4 2015
	Clerodendrum	indicum	tubeflower; Turk's turban; skyrocket	Ellen J. Tannehill		Broward	2015 2	Dec 30 2014
	Cnidoscolus	aconitifolius	spinach tree; chaya; copapayo; chichicaste	P. Karen Coffey		Volusia	2015 47	Jan 26 2015
	Cordia	sp.		Maria C. Acosta		Miami-Dade	2015 43	Jan 22 2015
	Cordia	globosa	Curacao bush; bloodberry; butterfly sage	Jake M. Farnum		Miami-Dade	2015 18	Jan 12 2015
	Cornus	elliptica	evergreen dogwood; Chinese evergreen dogwood	Theresa R. Estok		Alachua	2015 48	Jan 27 2015
	Crotalaria	longirostrata	chipilín, longbeak rattlebox, chepil	Jake M. Farnum		Miami-Dade	2015 127	Feb 19 2015

* New County Record	Plant genus	Plant species	Plant common name	1st Collector	2nd Collec- tor	County	Sample Number	Collection date
	Dactyloctenium	aegyptium	crowfoot grass; Durban crowfoot grass; Egyptian crowfoot grass; Egyptian crabgrass	Kaleigh Hire		St. Johns	2015 5	Jan 2 2015
	Dalea	carnea	whitetassels	Theresa R. Estok		Levy	2015 102	Feb 13 2015
	Ehretia	acuminata	koda; kodowood; hou ke shu; brown cedar	Roberto Delcid		Lee	2015 135	Feb 23 2015
	Elaeocarpus	floribundus	Indian olive; jalpai	Ricardo E. Lopez, USDA		Orange	2015 40	Jan 20 2015
	Erythrina	coralloides	naked coraltree	Roberto Delcid		Hendry	2015 92	Feb 10 2015
	Erythrina	herbacea	Cherokee bean, coral bean, cardinal spear	Jake M. Farnum		Miami-Dade	2015 99	Feb 13 2015
	Eucalyptus	robusta	swamp mahogany, swamp stringybark, robust eucalyptus	Olga Garcia		Miami-Dade	2015 124	Feb 16 2015
	Eulophia	graminea	Asian ground orchid	Jake M. Farnum		Miami-Dade	2015 72	Feb 3 2015
	Forestiera	segregata	Florida swampprivet; Florida privet	James C. Lee		Palm Beach	2015 110	Feb 12 2015
	Fumaria	officinalis	drug fumitory; common fumitory; earthsmoke	William J. Salway	Jessica V. Tromer	Pinellas	2015 68	Feb 3 2015
	Galium	aparine	bedstraw; stickywilly; catchweed bedstraw; goosegrass; cleavers	Kaleigh Hire		Duval	2015 131	Feb 20 2015
	Gardenia	jasminoides	gardenia, cape jasmine	Violett, Larry L. (Mo)		Orange	2015 79	Feb 5 2015
	Heterotheca	subaxillaris	camphorweed; camphor daisy	Jason B. Sharp		Manatee	2015 75	Feb 3 2015
	Holmskioldia	sanguinea	Chinese- hat plant; Mandarin's-hat; cup-and-saucer plant	Jake M. Farnum		Miami-Dade	2015 8	Jan 7 2015
	Illicium	parviflorum	anise tree, star anise, yellow anise tree	Jodi Bixler		Pasco	2015 32	Jan 15 2015
	Imperata	cylindrica	cogongrass	Sol F. Looker		Flagler	2015 34	Jan 20 2015
	Indigofera	spicata	trailing indigo, creeping indigo	Kevin S. Loadholtz		Volusia	2015 16	Jan 12 2015
	Ipomoea	sp.	morning glory	Kaleigh Hire		St. Johns	2015 30	Jan 13 2015

* New County Record	Plant genus	Plant species	Plant common name	1st Collector	2nd Collec- tor	County	Sample Number	Collection date
	Ipomoea	sp.	morning glory	Kaleigh Hire		St. Johns	2015 31	Jan 13 2015
	Jacquinia	arborea	braceletwood, barbasco, bizcocho	Olga Garcia		Miami-Dade	2015 60	Jan 29 2015
	Jacquinia	keyensis	joewood, joebush, cudjoe-wood, barbasco, ironwood	Haylett Cruz- Escoto		Miami-Dade	2015 59	Jan 29 2015
	Jasminum	sp.	jasmine	Shelly M. Wayte		Marion	2015 62	Jan 30 2015
	Jatropha	curcas	Barbados nut; physic nut; purging nut	(homeowner)		Brevard	2015 1	Dec 23 2014
	Jatropha	multifida	coral plant; coral bush; French physic nut	P. Karen Coffey		Volusia	2015 46	Jan 26 2015
	Juncus	sp.	rush	Linda G. McRay		Pinellas	2015 116	Feb 17 2015
	Koelreuteria	elegans	golden raintree; flamegold; copperpod	Kaleigh Hire		Duval	2015 17	Jan 9 2015
	Limonium	carolinianum	sea lavender; Carolina sea lavender; seaside thrift; lavender thrift	Karen 'Lea' Etchells		Sarasota	2015 137	Feb 23 2015
	Lindernia	grandiflora	savannah false pimpernel, blue moneywort	Linda G. McRay		Pinellas	2015 22	Jan 13 2015
	Ludwigia	arcuata	piedmont primrosewillow	Karen 'Lea' Etchells		Sarasota	2015 136	Feb 23 2015
	Lygodium	japonicum	Japanese climbing fern	T.J. Coburn		Polk	2015 45	Jan 23 2015
	Lygodium	microphyllum	Old World climbing fern; small-leaf climbing fern	George D. Warden		Orange	2015 65	Jan 29 2015
	Lyonia	lucida	fetterbush; shiny lyonia; shining fetterbush	Daniel Merced		Pasco	2015 93	Feb 11 2015
	Lyonia	lucida	fetterbush; shiny lyonia; shining fetterbush	Kaleigh Hire		St. Johns	2015 10	Jan 7 2015
	Magnolia	x soulangeana	saucer magnolia, Japanese magnolia	Gay Durrance, USDA		Polk	2015 96	Jan 13 2014
	Marsilea	sp.	waterclover	Linda G. McRay		Pinellas	2015 117	Feb 17 2015
	Mazus	pumilus	Japanese mazus	Lane M. Smith		Palm Beach	2015 78	Feb 4 2015

* New County Record	Plant genus	Plant species	Plant common name	1st Collector	2nd Collec- tor	County	Sample Number	Collection date
	Melia	azedarach	Chinaberry; pride-of-India; paradise tree; paraiso	Carmen C. Laureano, USDA		Miami-Dade	2015 104	Feb 11 2015
	Melothria	pendula	creeping cucumber; Guadeloupe cucumber	Shelly M. Wayte		Marion	2015 105	Feb 11 2015
	Merremia	quinquefolia	rock-rosemary; mile-a-minute	Jake M. Farnum		Miami-Dade	2015 98	Feb 12 2015
	Michelia	figo	banana shrub	Shelly M. Wayte		Marion	2015 61	Jan 30 2015
	Mikania	micrantha	climbing hempweed, mile-a-minute vine	Marieta Figueroa		Miami-Dade	2015 66	Feb 3 2015
	Mikania	scandens	climbing hempvine	Lane M. Smith		Palm Beach	2015 140	Feb 25 2015
	Mitchella	repens	partridge berry	Kevin S. Loadholtz	P. Karen Coffey	Volusia	2015 38	Jan 14 2015
	Morrenia	odorata	latexplant, doca, milkweed vine, strangler vine	Kaleigh Hire		Duval	2015 80	Feb 4 2015
	Myriophyllum	aquaticum	parrot's feather, Brazilian water- milfoil, water feather	Kaleigh Hire		Duval	2015 125	Feb 18 2015
	Neyraudia	reynaudiana	silkreed; Burma reed; cane grass	Olga Garcia		Miami-Dade	2015 13	Jan 7 2015
	Pachira	glabra	French peanut; lucky tree; money tree	Juan Aleman- Martinez		Miami-Dade	2015 14	Jan 7 2015
	Paederia	foetida	skunk vine; Chinese fever vine; stink vine	Kaleigh Hire		Duval	2015 49	Jan 26 2015
	Passiflora	sp.	passionflower	Daniel M. Hamre, USDA		Brevard	2015 103	Feb 4 2015
	Passiflora	sp.	passionflower	Sallie H. Simmons	Lane M. Smith	Palm Beach	2015 109	Feb 13 2015
	Passiflora	suberosa	corkystem passion flower	Sallie H. Simmons	Lane M. Smith	Palm Beach	2015 108	Feb 13 2015
	Pereskia	aculeata	Barbados shrub, Barbados gooseberry, Iemonvine, Ieafy cactus, blade-apple cactus	James C. Lee		Palm Beach	2015 26	Jan 13 2015
	Persea	palustris	swamp bay	Esteban Godinez		Miami-Dade	2015 86	Feb 10 2015

* New County Record	Plant genus	Plant species	Plant common name	1st Collector	2nd Collec- tor	County	Sample Number	Collection date
	Phyla	nodiflora	turkey tangle fogfruit; capeweed; matchsticks; carpetweed	Shelly M. Wayte		Marion	2015 39	Jan 16 2015
	Phyllanthus	acidus	Otaheite gooseberry; Malay gooseberry; grosella; jimbilin; Tahitian gooseberry	Gabriela M. Bernard		Pinellas	2015 81	Feb 4 2015
	Pisonia	aculeata	devil's-claws, pullback	Enger German- Ramirez, CAPS	Doug Restom Gaskill, CAPS	Manatee	2015 20	Jan 9 2015
	Pistia	stratiotes	water lettuce, water cabbage, Nile cabbage, shellflower	Michael Bentley	Cheryl A. Jones	Leon	2015 27	Jan 15 2015
	Pithecellobium	duice	monkeypod, Manila tamarind, Madras thorn, camachile, guayamochil	Mona Lisa Payne, USDA		Highlands	2015 83	Feb 6 2015
	Pityopsis	graminifolia	narrowleaf silkgrass	Harry L. Morrison	Stacey S. Simmons	Marion	2015 41	Jan 21 2015
	Pluchea	foetida	stinking camphorweed	Linda G. McRay		Pinellas	2015 119	Feb 17 2015
	Pluchea	odorata	sweetscent, saltmarsh fleabane	Bobbe A. Rose	Jessica V. Tromer	Pinellas	2015 89	Feb 10 2015
	Polygonum	sp.	knotweed	Michael Bentley	Cheryl A. Jones	Leon	2015 28	Jan 15 2015
	Prunus	umbellata	hog plum; flatwoods plum	Bobbe A. Rose	Jessica V. Tromer	Pinellas	2015 90	Feb 10 2015
	Prunus	umbellata	hog plum; flatwoods plum	Sol F. Looker		Putnam	2015 70	Feb 3 2015
	Rotala	rotundifolia	dwarf rotala; roundleaf toothcup; redweed	Jose L. Llanos		Hillsborough	2015 87	Feb 9 2015
	Rubus	pensilvanicus	sawtooth blackberry, Pennsylvania blackberry	Bobbe A. Rose	Jessica V. Tromer	Pinellas	2015 91	Feb 10 2015
	Ruellia	blechum	Browne's blechum; green shrimp plant	Linda G. McRay		Pinellas	2015 23	Jan 13 2015
	Ruellia	simplex	Mexican bluebell; Mexican petunia; Britton's wild petunia	Kaleigh Hire		Duval	2015 63	Jan 29 2015
	Salvinia	minima	water spangles	Daniel Merced		Pasco	2015 94	Feb 11 2015

* New County Record	Plant genus	Plant species	Plant common name	1st Collector	2nd Collec- tor	County	Sample Number	Collection date
	Samolus	valerandi	seaside brookweed	Linda G. McRay		Pinellas	2015 118	Feb 17 2015
	Sarcostemma	clausum	white twinevine	Mark R. Terrell	1	Hendry	2015 37	Jan 14 2015
	Senna	polyphylla	desert cassia; retama prieta	Erik L. Aleman Espino	Juan Aleman- Martinez	Miami-Dade	2015 67	Jan 30 2015
	Smilax	auriculata	earleaf greenbrier	Kaleigh Hire		Duval	2015 50	Jan 22 2015
	Solanum	wendlandii	giant potatocreeper, blue potato vine, Costa Rica nightshade, paradise flower, Wendland's nightshade	Olga Garcia		Miami-Dade	2015 29	Jan 14 2015
	Solidago	stricta	wand goldenrod	William J. Salway		Pinellas	2015 25	Jan 13 2015
	Sphagneticola	trilobata	creeping oxeye, wedelia, goldcup	Kaleigh Hire		Duval	2015 52	Jan 26 2015
	Sphagneticola	trilobata	creeping oxeye, wedelia, goldcup	Kaleigh Hire		Duval	2015 64	Jan 29 2015
	Stillingia	sylvatica	queen's delight; queen's root	Theresa R. Estok		Levy	2015 101	Feb 13 2015
	Thespesia	populnea	seaside mahoe; portia tree; milo	Matthew M. Miller		Palm Beach	2015 129	Feb 19 2015
	Thevetia	peruviana	yellow oleander; lucky nut; be-still tree; Mexican oleander	Enger German- Ramirez, CAPS	Doug Restom Gaskill, CAPS	Sarasota	2015 19	Jan 9 2015
	Triumfetta	cordifolia	cordleaf burrbark	LeAnn M. West		Martin	2015 35	Jan 15 2015
	Triumfetta	semitriloba	Sacramento burrbark; Sacramento bur; burweed	LeAnn M. West		Martin	2015 74	Feb 4 2015
	Utricularia	sp.	bladderwort	Daniel Merced		Pasco	2015 95	Feb 11 2015
	Vicia	acutifolia	fourleaf vetch; sand vetch	Linda G. McRay		Pinellas	2015 113	Feb 17 2015
	Vicia	acutifolia	fourleaf vetch; sand vetch	Olga Garcia		Miami-Dade	2015 97	Feb 11 2015
	Vigna	adenantha	wild pea	Gabriela M. Bernard		Pinellas	2015 69	Feb 2 2015
	Zeuxine	strateumatica	soldier's orchid; lawn orchid	Roberto Delcid		Hendry	2015 7	Jan 7 2015
	Zeuxine	strateumatica	soldier's orchid; lawn orchid	William J. Salway		Pinellas	2015 24	Jan 13 2015
	Ziziphus	mauritiana	Indian jujube, cottony jujube, ber, chinee apple, Indian date	Jorge P. Gomez		Martin	2015 12	Jan 5 2015

Sample/Specimen Submissions

January							
Samples Submitted	447						
Specimens Identified	6,043						
February							
Samples Submitted	423						
Specimens Identified	8,629						
Year to Date							
Samples Submtted	870						
Specimens Identified	14,672						

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.

Hyalorista sp., a crambid moth, a new Continental USA record. This may be one of four species of *Hyalorista* described from the tropics (Munroe 1995), pending expert identification. *Hyalorista* species have no economic importance. This species has existed in Florida for many years without recognition, as additional misidentified specimens were found in the Florida State Collection of Arthropods (FSCA), collected as early as 1983 in Highlands County and as far north as Leon County. It probably arrived from Central America or the Antilles after the most recent revision of the group (Munroe 1976). *Hyalorista taeniola-lis* (Guenée) and several closely related species of *Pyrausta* occur in Florida. Larvae of the latter feed on inflorescences of Labiatae (mint family), as do some tropical *Hyalorista* species. The biology of the present species is unknown, but is probably similar to that of these closely related species. (Collier County; E2015-224; James T. 'Jim' Troubridge, FSCA Research Associate; 16 November 2014.) (Dr. James E. Hayden.)

Parallaxis guzmani, a leafhopper, a new Continental USA record. This leafhopper is native to the Neotropics. It was confirmed by Dr. Paul H. Freytag, University of Kentucky, Professor Emeritus, to be the same species that was intercepted in several commercial greenhouse pothos (*Epipremnum aureum* and cultivars) plantings about 20 years ago in the Apopka area. Other than the infestations on pothos, the hosts and pest potential of this leafhopper are unknown. This specimen was spotted in a suction trap sample from the Subtropical Horticulture Research Station (Chapman Field) in Miami. Other specimens have been found in the same area after this sample was collected. Evidently, the species is now established in Florida. (Miami-Dade County; E2015-55; Haydee I. Escobar; 29 December 2014.) (Dr. Susan E. Halbert.)

Schacontia rasa Solis and Goldstein, a crambid moth, a new Continental USA record. This species was recently described from Mexico, Cuba and the Dominican Republic (Goldstein *et al.* 2013). Schacontia species are distributed in the Neotropics, Mexico and the Caribbean. The only prior United States record for the genus is one specimen of Schacontia themis Solis and Goldstein from Sanibel Island, Florida, deposited in the Florida State Collection of Arthropods. Schacontia species have no economic importance. The biology of *S. rasa* is unknown, but it is probably a gall-forming bark-borer in *Capparis* like the congeneric species. (Monroe County; E2015-223; James T. 'Jim' Troubridge, FSCA Research Associate; 21 January 2015.) (Dr. James E. Hayden.)



Hyalorista **sp., a crambid moth. Scale in mm.** Photograph courtesy of James E. Hayden, DPI.



Parallaxis guzmani, a leafhopper Photograph courtesy of Susan E. Halbert, DPL



Schacontia rasa, a crambid moth. Scale in mm. Photograph courtesy of James E. Hayden, DPI.

TRI-OLOGY

Disonycha quinquelineata (Latrielle), five-striped flea beetle, a new Florida State record. Inspectors with the Florida Department of Agriculture and Consumer Services, Division of Plant Industry, collected this leaf beetle in Florida for the first time feeding on *Passiflora suberosa* L., corkystem passion flower, a native plant often grown in butterfly gardens. *Disonycha quinquelineata* is a Mexican and Central American species that is an occasional pest on some native species of passion vines. Additional surveys of the area surrounding the original find did not locate additional beetles on any other passion flowers of the same or different species. Concern has been raised regarding control of the beetle because the plants often are used to raise butterflies. (Palm Beach County; E2015-0584; Sallie H. Simmons; 30 January 2015.) (Dr. Paul E. Skelley.)

Neotoxoptera formosana, an onion aphid, a new Florida State record. This Asian species has been reported in the United States from several states, but has not been found before in Florida. It is a pest of onions, including bulbs in storage. It can live on onion sets that are sold for planting, another likely pathway for the species to move in trade. The genus is a small one, and only three of the eight species have become established in North America. One is on violets; another is on violets, onions and several other plants; the third, this species, is known only from onions. Winged forms of all the species in the genus have bordered wings. In this species, the borders are dark and parallel to the veins. This colony was found by DPI Inspector training class 86 on a field trip to a local botanical garden. (Alachua County; E2015-825; Cheryl A. Jones; Christine A. Zamora; Theresa R. Estok; Kaleigh Hire; Kevin S. Loadholtz; Sean P. McCarthy; T J Coburn; Matthew M. Miller; Kelly K. Douglas; LeAnn M. West; 24 February 2015.) (Dr. Susan E. Halbert.)



Disonycha quinquelineata, five-striped flea beetle Photograph courtesy of Paul E. Skelley, DPI.

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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 <u>PDF</u> or an <u>Excel</u> spreadsheet.

The tables are organized alphabetically by plant host if the specimen has a plant host. Some arthropod specimens are not collected on plants and are not necessarily plant pests. In the table below, those entries that have no plant information included are organized by arthropod name.

Plant Name	Plant Common Name	Arthropod	Arthropod Common Name	County	Records
Allium tuberosum	garlic chives, he, toi tay, Chinese chives	Neotoxoptera formo- sana	an onion aphid	Alachua	STATE
Citrus x paradisi	grapefruit	Acrotaphis fuscipen- nis	a parasitic wasp	Hillsbor- ough	COUNTY
Cnidoscolus aconiti- folius	spinach tree; copapayo; chichicaste; chaya; chayo	Corythucha gossypii	cotton lace bug	Miami- Dade	HOST
Eriobotrya japonica	loquat, Japanese plum	Paratriphleps laevi- usculus	a minute pirate bug	Lee	COUNTY
Eriobotrya japonica	loquat, Japanese plum	Tetragnatha guate- malensis	a longjawed orbweaver	Lee	COUNTY
Krugiodendron fer- reum	black ironwood; leadwood	Myllocerus undecim- pustulatus	Sri Lankan weevil	Martin	HOST
Murraya paniculata	orange-jessamine, orange- jasmine, Chinese box	Liriomyza schmidti	a leaf miner	Palm Beach	HOST
<i>Nymphaea</i> sp.		Harmalia anacharsis	a delphacid planthop- per	Broward	HOST
Passiflora sp.	passion flower	Disonycha quinque- lineata	five-striped flea beetle	Palm Beach	STATE
Persea americana	avocado; alligator pear; aguacate	Abgrallaspis agua- catae	an armored scale	Suwannee	INTERDICTION INTERCEPTION
Persea americana	avocado; alligator pear; aguacate	Euxesta basalis	a picture-winged fly	Glades	COUNTY
Phoenix roebelenii	pygmy date palm, pigmy date palm	Cryptognathus sp.	a mite	Lee	HOST
Pityopsis gramini- folia	narrowleaf silkgrass	Aceria sp.	an eriophyid mite	Marion	HOST
Psidium cattleianum	cattley guava; strawberry guava	Thiodina sylvana	a jumping spider	Hendry	COUNTY
Quercus sp.	oak	Tomoplagia obliqua	a picture-winged fly	Pinellas	COUNTY
Sarcocornia am- bigua	perennial glasswort, Vir- ginia glasswort		a leaf mining fly	Dixie	HOST
Sarcostemma clau- sum	white twinevine	Eubule spartocerana	a coreid bug	Hendry	HOST
Schinus terebinthi- folia	Brazilian pepper tree; Florida holly; Christmas berry	Tuckerella ornata	a tuckerellid mite	Miami- Dade	HOST
Schinus terebinthi- folia	Brazilian pepper tree; Florida holly; Christmas berry	Undetermined	a minute pirate bug	Pinellas	COUNTY
		Bulimulus sporadicus	ghost Bulimulus	Alachua	COUNTY
		Eubule spartocerana	a coreid bug	Hendry	COUNTY
		Hyalorista sp.	a crambid moth	Collier	US CONTINENTAL
		Parallaxis guzmani	a leafhopper	Miami-Dade	US CONTINENTAL
		Phyllophaga bruneri	Cuban May beetle	Hillsbor- ough	COUNTY
		Schacontia rasa	a crambid moth	Monroe	US CONTINENTAL
		Spartocera batatas	giant sweet potato bug	Sarasota	COUNTY

Nematology Section

Compiled by <u>Jason D. Stanley, M.S., Renato N. Inserra, Ph.D.,</u> Janete A. Brito, Ph.D. and <u>Theresa R. Estok, B.S.</u>

This section analyzes soil and plant samples for nematodes, conducts pest detection surveys and provides diagnoses of plant problems, in addition to completing identification of plant parasitic nematodes involved in regulatory and certification programs. State of Florida statutes and rules mandate the predominant regulatory activities of the section. Analyses of plant and soil samples include those from in-state programs, plant shipments originating in Florida destined for other states and countries, as well as samples intercepted in Florida from outside the United States.

Nematodes of Special Interest

Meloidogyne partityla Kleynhans, 1986, the pecan root-knot nematode, was found infecting the roots of laurel oak, *Quercus laurifolia,* a new host record. (Alachua County; N13-01500; Jason D. Stanley; 31 December 2013.)

Meloidogyne partityla was first reported infecting pecan in 1986 in South Africa and later in the United States. It was initially found on pecan in Texas (1996), followed by New Mexico (2001), Georgia (2002), Arizona (2002), Oklahoma (2004) and Florida (2005). This nematode species has a narrow host range known to include pecan, hickory (Carva spp.) and walnut (Juglans spp.), both genera belonging to one plant family, Juglandaceae. Root samples of laurel oak (Quercus laurifolia), in the plant family Fagaceae, were found infected with root-knot nematodes in two home gardens in Alachua County, Florida. Infected roots were severely galled and occasionally rotted. Distinct root galls, a typical symptom induced by *Meloidogyne* spp., were observed on secondary and tertiary roots. Egg masses were observed outside the roots. Species identifications were performed using morphology of male stylet, selected characters of second-stage juveniles, perineal patterns, isozyme phenotypes (esterase and malate dehydrogenase) and DNA analysis. Isozymes were extracted from young egg-laying females and resolved with polyacrylamide gel electrophoresis in a BioRad Mini Protean III system. Males showed notable thickening in the region between the stylet cone and stylet shaft. In the second-stage juvenile, rectum was swollen and clearly showed deep, longitudinal groves. Morphological primal patterns of females, and also body, style and tail length of second-stage juveniles and males matched those of the original description of Meloidogyne partityla. Likewise, the isozyme phenotypes (Esterase= Mp3; malate dehydrogenase= N1a) were consistent with that previously reported for *M. partityla*. DNA analysis was performed to confirm the nematode species identification using the M. patityla specific primer set ITS-1 F (CGCAGTGGCTTGAACCGG) and MpSpec (TGAACTTTTATTGGTGAAAG). A single fragment of approximately 530bp was obtained, which agrees with that reported for *M. partityla*. Considering the distribution of the oaks and pecan in the United States, this finding indicates that *M. partityla* can survive in the wild, infecting both plant species in the United States.

Sample Submissions

	January February	Year to date
Morphological Identifications	1,279	1,279
Molecular Identifications	241	241
Total Samples Submitted	1,520	1,520

Certification and Regulatory Samples

	January February	Year to date
Multistate Certification for National and International Export	935	935
California Certification	248	248
Pre- movement (Citrus Nursery Certification)	38	38
Site or Pit Approval (Citrus Nursery and Other Certifications)	2	2

Other Samples

	January February	Year to date
Identifications (invertebrate)	7	7
Plant Problems	5	5
Intrastate Survey, Random	44	44
Molecular Identifica- tions*	241	241

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



Quercus laurifolia (laurel oak) in Alachua County, Florida, infected with *Meloidogyne partityla* Photography courtesy of J. D. Stanley, DPI.

Studies are in progress to determine the ability of this population of root-knot nematode to reproduce on pecan, and also to determine the phylogenetic relations between *M. partityla* individuals infecting oaks with those reported on pecan.

Collectors submitting five or more samples that were processed for nematological analysis during January - February.

Bentley, Michael A.	11	Ochoa, Ana L.	62
Burgos, Frank A.	160	Spriggs, Charles L.	64
Hassell, Lisa M.	6	Terrell, Mark R.	10
Keen, Emily I.	45	Violett, Larry L.	134
LeBoutillier, Karen W.	71		

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- Stamler, R. A. 2009. Molecular identification and characterization of the pecan root-knot nematode (*Meloidogyne partityla*). M.S. thesis. New Mexico State University, Las Cruces, New Mexico.



Quercus laurifolia roots showing galls induced by *M. partityla*. Photography courtesy of J. A. Brito and M. Beckman, DPI

Plant Pathology Section

Compiled by Timothy S. Schubert, Ph.D.

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 diagnoses 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.

Rhodococcus fascians, another "galling" pathogen. During this reporting period, we feature a pathogen causing an unusual proliferation and gall disease on herbaceous plants in other parts of the United States and world. This disease has become more prevalent in the industry and could easily find its way to Florida on propagative material and cuttings.

About ten years ago, a strange syndrome appeared on herbaceous ornamental plants propagated for commercial sales within the United States, but not in Florida. The syndrome consisted of masses of partially developed buds that stopped expanding at a leafy stage of growth, usually located at the base of the young plants during the rooting process. As is the case when increasing popularity of a particular variety or cultivar of plants coincides with limited propagation material, substandard stock plants supply some of the market demand and phytosanitary compromises may arise. This situation has likely spawned the modern appearance of the leafy gall disease. Although this disease was recognized and described in the middle of the last century, few current plant disease diagnosticians have witnessed the disease in planta. Melodie Putnam at Oregon State University first recognized the disease in the modern era, and her studies provide our profession with much useful information on the biology and management of leafy gall. Florida has avoided this challenging disease so far, but the nature of the American and global ornamental plant industry is such that constant vigilance is required.

The leafy gall pathogen is an actinomycete bacterium. It does not cause necrotic lesions, but lives mostly as a harmless epiphyte (living on the plant surfaces). However, it can become a systemic pathogenic endophyte (living within host plant tissues), interfering with host metabolism to cause the characteristic distortions. The deformed tissues may be hard to see at the base of infected plants or even below the soil line. The disease is not normally lethal. A propagator may be tempted to use asymptomatic tissues from symptomatic plants, but this practice is ill advised and sure to cause grief in much the same way propagating from asymptomatic tissues of crown gall systemically-infected plants. Infected plants along with plants adjacent to them should be immediately destroyed to prevent further losses. Since the pathogen can be watersplashed and manually transmitted very easily, you must carefully monitor of

Sample Submissions

	January February	Year to date
Citrus black spot	21	21
Citrus canker	86	86
Citrus greening / HLB	130	130
General Pathology	473	473
Honeybees	1	1
Interdictions	1	1
Laurel wilt	3	3
Soil	9	9
Sudden oak death	2	2
Sweet orange scab-like disease	0	0
Texas Phoenix palm decline	2	2
Water	0	0
Miscellaneous	2	2
Total	730	730



Leafy gall on *Dianthus* Photograph courtesy of M. Putnam, Oregon State University

🖣 R I - O L O G Y



Leafy gall on *Leucanthemum* Photograph courtesy of M. Putnam, Oregon State University Nursery operations should take great care to obtain and maintain clean stock material free of *Rhodococcus facians* and other pathogens. Consult Parke and Grünwald (2012) for excellent guidance on a systems approach to plant health in the nursery setting.

The known Florida-adapted host range of the leafy gall pathogen follows with the most susceptible plants in bold font:

Acanthus mollis Geranium sp. Agave sp. Gladiolus sp. Angelonia sp. Gomphrena globosa Argyranthemum sp. Heliopsis helianthoides Begonia tuberahybrida group Herniaria glabra Heuchera versicolor Calendula sp. *Campanula* sp. Hosta sp. Chrysanthemum sp. Iberis gibraltarica Coreopsis sp. Iberis sempervirens Dahlia sp. Iberis x hybrids Dianthus sp. Ipomoea spp. Echinacea purpurea Lathyrus odoratus Erysimum sp. Lavatera sp. Fuchsia sp. Leucanthemum x suberbum Gaura sp. Lilium sp.

Monarda didyma Nemesia sp. Nierembergia sp. Pelargonium spp. Penstemon mensarum Petunia x hybrida Sedum sp. Stokesia laevis Tropaeolum majus Verbascum sp. Verbena sp. Veronica sp. hybrids Viola sp.

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- Putnam, M.L. 2015. How to prevent leafy gall before you lose plants. Greenhouse Grower 33: 57-60. <u>http://www.greenhousegrower.com/production/</u> <u>crop-inputs/how-to-prevent-leafy-gall-before-you-lose-plants/</u> [accessed 2015 April 6].
- Stes, E., I.Francis, I.Pertry, A.Dolzblasz, S.Depuydt and D.Vereecke. 2013. The leafy gall syndrome induced by *Rhodococcus fascians*. FEMS Microbiology Letters 342: 187-195.

Plant Species	Plant Common Name	Casual Agent	Disease Name	Location Type	Specimen Number	County	Collector	Date	New Records	Comments
Acer palmatum	Japanese maple	Sphaeropsis tumefaciens	stem gall	Nursery	82965	Duval	Lisa M. Hassell	1/5/2015		This fungal pathogen causes galls and witches' brooms on woody hosts.
<i>Ardisia</i> sp.	ardisia	Phyllachora ardisiae	tar spot	Public park	83271	Martin	Eduardo Solis	1/29/2015	(Continent)	This apparent Continenetal record is awaiting USDA confirma- tion.
Gladiolus x hortulanus	gladiolus	Uromyces transversalis	glad rust	Commercial cut flower farm	83200	Lee	Mark R. Terrell	1/26/2015		Glad rust ap- pears again in South Florida. Little commercial cultivation of glads remains in Florida anymore.
Juniperus virgin- iana	Eastern red-cedar	Phomopsis juniperovora	Phomopsis blight	Nursery	82901	St.John's	Kaleigh N. Hire	1/8/2015		Phomopsis blight of juniper can devastate a crop of seedlings or cuttings and ruin containerized plants.
<i>Lobelia</i> sp.	lobelia	Sclerotinia sclerotiorum	white mold	Commercial nursery	83361	Broward	Scott Shea, Sue M. Alspach	1/29/2015	Host	Plants were prop- agated in a Gua- temala nursery that had bacterial wilt problems. No <i>Ralstonia</i> <i>solanacearum</i> detected, but white mold was active.
Petroselinum crispum	parsley	Septoria petroselini	leaf spot	Nursery	83234	Marion	Shelly M. Wayte	1/30/2015		This serious foliar pathogen can be seed tranmitted. It was first de- tected in Florida in March 1993.
Prunus persica	peach	Ganoderma lucidum	Ganoderma butt rot	Orchard	83239	St. Lucie	Kenneth L. Hibbard	1/29/2015		Ganoderma infections of peach on old citrus ground may prove to be a major limiting factor for this short-lived fruit crop.
Youngia ja- ponica	Oriental false hawks- beard	Septoria crepedis	Septoria leaf spot	Weed of lawns and disturbed soils	83473	Alachua	Robert M. Leahy, USDA	2/10/2015		Septoria leaf spot on Youngia was reported new to Florida and the United States in 1998. It is gradu- ally becoming more common. This leaf spot might have bio- control potential for this weed.

Plant Species	Plant Common Name	Casual Agent	Disease Name	Location Type	Specimen Number	County	Collector	Date	New Records	Comments
Youngia ja- ponica	Oriental false hawks- beard	Uredo crepedis- japonicae	leaf rust	Weed of lawns and disturbed soils	83473	Alachua	Robert M. Leahy, USDA	2/10/2015	Continent	This rust has probably been in Florida since about 2002, but lack of taxonomic literature prevent- ed a confident identification until now.
Persea ameri- cana	avocado; alligator pear; agua- cate	Abgrallaspis aguacatae	an armored scale	Suwannee	INTERDIC- TION INTERCEP- TION					