

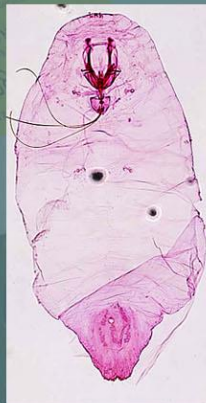


Florida Department of Agriculture and Consumer Services



Florida Cooperative Agricultural Pest Survey Program - Combined Survey

Semi-Annual Report - Quarters 1 & 2 March 2, 2018 to September 2, 2018



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Introduction

The Florida Department of Agriculture and Consumer Services-Division of Plant Industry (FDACS-DPI) Cooperative Agriculture Pest Survey (CAPS) program staff was engaged in many program activities including data entry, survey, public outreach, training and program development. Information on each program area is detailed in this report.

NAPIS Data Base

Table 1a. Pest records entered into the NAPIS database, 1st, 2nd, and 3rd Quarter 2018 during the period March 2-September 2, 2018.

U.S. Records				
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County
<i>Aleuroplatus validus</i> Quaintance & Baker	a whitefly	<i>Mosiera longipes</i> (O. Berg) Small	mangrove berry	Monroe
Total = 1				

State Records				
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County
<i>Fiorinia phantasma</i> Cockerell & Robinson	Phantasma scale	<i>Phoenix canariensis</i> Hort. Ex Chabaud	Canary Island date palm	Miami-Dade
Total = 1				

County Records				
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County
<i>Matsucoccus alabamiae</i> Morrison	Alabama pine scale	N/A	N/A	Duval
<i>Phoenicococcus marlatti</i> Cockerell	red date scale	<i>Phoenix roebelenii</i> O'Brien	pygmy date palm	Martin
<i>Asiothrixus antidesmae</i> (syn: <i>Aleurothrixus antidesmae</i>)	a whitefly	<i>Ixora</i> sp.	Flame-of-the-woods	Lee
<i>Thysanofiorinia nephelii</i> (Maskell)	longan scale	<i>Dimocarpus longan</i> Lour	longan	Lee
<i>Thysanofiorinia nephelii</i> (Maskell)	longan scale	<i>Magnolia grandiflora</i> L.	magnolia	Lake
<i>Oceanaspidiotus spinosus</i> (Comstock)	Spinose scale	<i>Persea borbonia</i> (L.) Spreng.	red bay	Lake
<i>Crisococcus taxodii</i> Kosztarab	bald cypress mealybug	<i>Taxodium distichum</i> (L.) L. Rich.	bald cypress	Palm Beach
<i>Asphondylia borrichiae</i> Rossi & Strong	gall midge	<i>Borrichia frutescens</i> (L.) Dc.	sea oxeye	Levy
<i>Heteropsylla flexuosa</i> Muddiman & Hodkinson	acacia psyllid	<i>Acacia farnesiana</i>	pineland acacia, sweet acacia	Hillsborough
<i>Matsucoccus alabamiae</i> Morrison	Alabama pine scale	N/A	N/A	Broward
<i>Aphis eugeniae</i> van der Goot	an aphid	<i>Eriobotrya japonica</i> (Thunb.) Lindl	loquat	Flagler
<i>Neophyllaphis varicolor</i> Miller and Halbert	podocarpus aphid	<i>Podocarpus</i> sp.	Japanese yew	Manatee
<i>Leptoglossus zonatus</i> (Dallas)	western leaf-footed bug	N/A	N/A	Lake
<i>Xyleborus glabratus</i> Eichhoff	redbay ambrosia beetle	<i>Persea borbonia</i> (L.)	redbay	Santa Rosa
<i>Planococcus minor</i> (Maskell)	passionvine mealybug	<i>Citrus</i> sp.	citrus	Martin
<i>Homaemus proteus</i> Stål	a scutellerid bug	<i>Citrus sinensis</i> (L.) Osbeck	sweet orange	Indian River
<i>Eubule spartocerana</i> Brailovsky	a coreid bug	<i>Citrus sinensis</i> (L.) Osbeck	sweet orange	Okeechobee
Total = 17				

Host Records				
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County
<i>Fiorinia phantasma</i> Cockerell & Robinson	Phantasma scale	<i>Phoenix reclinata</i> Jacq.	Senegal date palm	Miami-Dade
<i>Fiorinia phantasma</i> Cockerell & Robinson	Phantasma scale	<i>Cocos nucifera</i> L.	coconut palm	Miami-Dade
<i>Fiorinia phantasma</i> Cockerell & Robinson	Phantasma scale	<i>Dyopsis lutescens</i> (H. Wendl.) Roxb.	areca palm	Miami-Dade
<i>Fiorinia phantasma</i> Cockerell & Robinson	Phantasma scale	<i>Phoenix sylvestris</i> (L.) Roxb.	silver date palm	Miami-Dade
<i>Fiorinia phantasma</i> Cockerell & Robinson	Phantasma scale	<i>Phoenix roebelenii</i> O'Brien	pygmy date palm	Miami-Dade
<i>Nipaecoccus nipae</i> (Maskell)	coconut mealybug	<i>Ficus microcarpa</i> L.F.	cuban laurel, indian laurel	Indian River
Total = 6				

Table 1b. Historical pest records entered into NAPIS database.

HISTORICAL U.S. Plant Pest Records					
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County	Year
N/A	N/A	N/A	N/A	N/A	N/A
Total = 1					

HISTORICAL State Plant Pest Records					
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County	Year
N/A	N/A	N/A	N/A	N/A	N/A
Total = 0					

HISTORICAL County Plant Pest Records					
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County	Year
<i>Nipaecoccus nipae</i> (Maskell)	coconut mealybug	<i>Cocos nucifera</i> L.	coconut palm	Indian River	2007
Total = 1					

HISTORICAL Host Plant Pest Records					
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County	Year
N/A	N/A	N/A	N/A	N/A	N/A
Total = 0					

Table 2a. Counties with new records for all categories sorted most to least, 1st, 2nd, and 3rd Quarter 2018 during the period March 2-September 2, 2018.

County	# of Records	County	# of Records
Miami-Dade	6	Hillsborough	1
Indian River	3	Levy	1
Lake	3	Manatee	1
Lee	2	Monroe	1
Martin	2	Okeechobee	1
Broward	1	Palm Beach	1
Duval	1	Santa Rosa	1
Flagler	1		
		Total = 26	

Table 2b. Counties with new historical records for all categories sorted most to least.

County	# of Records	County	# of Records
Indian River	1	N/A	0
		Total = 1	

Table 3a. U.S./State records for plant pests only, 1st, 2nd, and 3rd Quarter 2018 during the period March 2-September 2, 2018.

U.S. Plant Pest Records				
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County
<i>Aleuroplatus validus</i> Quaintance & Baker	a whitefly	<i>Mosiera longipes</i> (O. Berg) Small	mangrove berry	Monroe
Total = 1				

State Plant Pest Records				
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County
<i>Fiorinia phantasma</i> Cockerell & Robinson	Phantasma scale	<i>Phoenix canariensis</i> Hort. Ex Chabaud	Canary Island date palm	Miami-Dade
Total = 1				

Table 3b. Historical U.S./State records for plant pests only.

HISTORICAL U.S. Plant Pest Records					
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County	Year
N/A	N/A	N/A	N/A	N/A	N/A
Total = 0					

HISTORICAL State Plant Pest Records					
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County	Year
N/A	N/A	N/A	N/A	N/A	N/A
Total = 0					

Table 4a. State survey records entered into CAPS/ NAPIS database, 1st, 2nd, and 3rd Quarter 2018 during the period March 2-September 2, 2018.

State Pest Survey Efforts					
Target Organism Scientific Name	Target Organism Common Name	Counties Surveyed	# Traps / Locations / Sites	# Specimens	# of Records
<i>Anastrepha ludens</i> (Loew)	Mexican fruit fly	41	~7,969	N/A	300
<i>Bactrocera cucurbitae</i> (Coquillett)	melon fruit fly	41	~5,532	N/A	300
<i>Bactrocera dorsalis</i> (Hendel)	Oriental/guava fruit fly	41	~10,484	N/A	301
<i>Ceratitis capitata</i> (Wiedemann)	Mediterranean fruit fly	41	~19,762	N/A	301
<i>Agrilus planipennis</i> Fairmaire	emerald ash borer (EAB), part of EWBB survey	14	34	1,275-neg	100 *1
<i>Anoplophora glabripennis</i>	Asian long-horned beetle (ALB), part of EWBB survey	3	11-locs	3-neg	22 *3
<i>Anoplophora chinensis</i>	Citrus long-horned beetle (CLB), part of EWBB survey	3	11-locs	3-neg	22 *3
<i>Bagrada hilaris</i> (Burmeister)	Bagrada bug/painted bug, part of NS	6	9-sites	3-neg	0 *20
<i>Candidatus Liberibacter asiaticus</i>	citrus greening disease (Asian strain) = CG / HLB	23	N/A	83-pos, 48-neg	131
<i>Helicoverpa armigera</i> (Hübner)	cotton bollworm (HA), part of NS & TCS & CCS	11	44	156-neg	303 *16
<i>Lobesia botrana</i> (Denis & Schiffermüller)	European grapevine moth (EGVM)	0	0	0	0 *12
<i>Lymantria dispar asiatica</i> (L.)	Asian gypsy moth (AGM), part of NS	7	63	25-neg	290 *2
<i>Lymantria dispar</i> (L.)	European gypsy moth (EGM), part of NS	19	72	0	0 *2
<i>Lymantria mathura</i>	Pink gypsy moth (PGM), part of NS	6	28	224-neg	135 *2
<i>Oxycarenus hyalinipennis</i> (Costa)	cotton seed bug (OH-CSB), part of NS	5	10-sites	13-neg	55 *13
<i>Potyvirus PPV</i>	Plum Pox Virus (5 strains/isolates): PPV-W, PPV-D, PPV-M, PPV-C, and PPV-EA	N/A	N/A	N/A	0 *19
<i>Raffaelea lauricola</i> Harrington & Fraedrich	laurel wilt (LW) -- also see RBAB (<i>Xyleborus glabratus</i>)	N/A	N/A	N/A	0 *5
<i>Sirex noctilio</i> F.	Sirex woodwasp, part of EWBB survey	3	4	394-neg	27 *6
<i>Spodoptera littoralis</i> Boisduval	Egyptian cottonworm (SLS) - in TCS, NS	1	4	1-neg	36 *17
<i>Spodoptera litura</i> (F.)	rice cutworm (RCW or SLA) - in TCS, NS	10	32	76-neg	308 *18
<i>Thaumatotibia leucotreta</i> (Meyrick)	false codling moth (FCM-TL) - part of NS & CCS	5	17	102-neg	124 *10
<i>Xyleborus glabratus</i> Eichhoff	redbay ambrosia beetle (RBAB), part of EWBB -- also see laurel wilt (LW)	1	1	1-pos	1 *8
Bark Beetle / EWBB-SWPM Survey (6 pest species)	<i>Hylobius</i> , <i>Megaplatypus</i> , <i>Monochamus alternatus</i> & <i>M. urussovii</i> , <i>Trypodendron domesticum</i> , and <i>Tomicus destruens</i> (excluding counts for ALB, CLB, EAB, RBAB, and <i>Sirex</i> listed separately)	17	77	22,303-neg	879 *4
Commodity Survey – Nursery (NS) (8 pest species, listed above)	see AGM, EGM, PGM, Bagrada bug, OH-CSB, HA, SLA, TL above	N/A	N/A	N/A	N/A
Commodity Survey – Potato (PCN) / Nematodes (10 pest species)	potato cyst nematode survey (PCN), Nematology records (10 pest nematode species)	N/A	N/A	N/A	0 *9
Honey Bee Survey (for DPI Apiary) (11 pest species)	honeybee survey -- 11 pest species	N/A	N/A	N/A	N/A
Mollusc Survey (10 pest species)	Exotic mollusc survey - 10 pest species, includes <i>Lissachatina fulica</i> (Giant African land snail, aka GALS)	N/A	N/A	N/A	0 *7
Table 4b. Commodity Survey – Corn (CCS) (10 pest species)	<i>H. armigera</i> , <i>Chilo partellus</i> , <i>T. leucotreta</i> , 2-corn downy mildews (Java and Phillipene = <i>Peronosclerospora maydis</i> and <i>P. philippinensis</i>), 2-corn tar spots (<i>Phyllachora</i> and <i>Monographella</i>), Late Wilt, Brown stripe downy mildew, and <i>Diabrotica speciosa</i> beetle	18	162	2,760-neg	905 *14
(Continued on next page)					

Table 4c. Commodity Survey – Tomato (TCS) (6 pest species)	<i>H. armigera</i> , <i>Chrysodeixis chalcites</i> , <i>Neoleucinodes elegantalis</i> , <i>Spodoptera litura</i> , <i>Spodoptera</i> <i>littoralis</i> , and <i>Tuta absoluta</i>	21	262	1,387-neg	1,485 *15
					Total = 6,025

*1 EAB (in SWPM Survey): Surveys were done at 34 traps at 22 sites in 14 counties (Alachua, Brevard, Collier, DeSoto, Duval, Hamilton, Hardee, Highlands, Hillsborough, Jackson, Marion, Sarasota, Sumter, Volusia), resulting in 2 records (1-NSR, 1-NCR), neither of which were pests and were not entered in NAPIS. Negative survey data entry is in progress and all screenings and identifications to date are negative for EAB.

*2 AGM, PGM (Gypsy moths): For AGM, surveys were done at 63 traps in 7 counties (Bay, Brevard, Hillsborough, Manatee, Miami-Dade, Palm Beach, Pinellas). For PGM, surveys were done at 28 traps in 6 counties (Brevard, Hillsborough, Manatee, Miami-Dade, Palm Beach, Pinellas). Negative data entry is in progress, and all screenings and identifications to date are negative for all 3 target species.

*3 ALB/CLB (in SWPM Survey): Surveys were done at 11 locations at 6 sites in 3 counties (Broward, Monroe, Palm Beach), resulting in 1 record (1-NCR), which was not considered a pest and was not entered in NAPIS. Lab ID of survey samples is ongoing and data entry is in progress. Negative survey data entry is in progress and all screenings and identifications to date are negative for ALB and CLB.

*4 SWPM/Bark Beetle: Surveys were done at 77 traps at 48 sites in 17 counties (Alachua, Bay, Brevard, Broward, Charlotte, Duval, Escambia, Hernando, Hillsborough, Manatee, Miami-Dade, Monroe, Nassau, Orange, Palm Beach, St Lucie, Volusia), resulting in 14 records (14-NCR), of which 2 were considered pests and were entered in NAPIS. All samples were screened by CAPS Lab Technician Krystal Ashman and were negative for the 6 target species *Hylobius abietis*, *Megaplatypus mutatus*, *Monochamus alternatus*, *M. urussovii*, *Trypodendron domesticum*, and *Tomicus destruens* (excluding counts for ALB, CLB, EAB, *X. glabratus*, and *Sirex noctilio*, which are listed separately). Negative survey data entry is in progress and all screenings and identifications to date are negative for the 6 target species.

*5 LW (part of DPI-LW & DPI-RBAB Survey): Both visual surveys for the disease and trapping surveys for the beetle are ongoing at DPI-Plant Inspection, and no new records were reported for LW disease during this period. As of September 2, 2018, 66 counties have been confirmed positive for laurel wilt disease (also see *8 RBAB below).

*6 SWPM/Sirex: Surveys were done at 4 traps at 3 sites in 3 counties (Broward, Palm Beach, Volusia), and screened by CAPS Lab Technician Krystal Ashman. All results were negative for *Sirex noctilio*. Negative survey data entry is in progress and all screenings and identifications to date are negative for the target species. *Sirex* was discontinued as a target pest for CAPS Florida in 2017 and the few remaining traps will be removed when lure supplies are used up.

*7 Mollusk Survey: Visual surveys for 10 exotic mollusk species (*Cerutuella* spp., *Cochlicella* spp., *Colosius* spp., *Laevicaulis* spp., *Lissachatina* (*Achatina*) *fulica*, *Monacha* spp., *Sarasinula* spp., *Semperula* spp., *Veronicella* spp., and *Belocaulis* spp.) were completed in early 2017 and reported previously. Negative survey data entry was completed and all screenings and identifications to date are negative for the target species.

*8 RBAB: Trapping surveys were done by DPI-Plant Inspection personnel with ongoing checks of approximately 50 traps in Miami-Dade County, plus other beetle traps (see *1, *4, *6), and were screened by DPI Entomology. As of September 2, 2018, 32 counties have been confirmed positive for RBAB. Field survey and lab ID of survey samples is ongoing and data entry is in progress (also see *5 LW above).

^{*9} *PCN*: No CAPS survey was done, however cooperator surveys are ongoing throughout approximately 58 Florida counties during the calendar year. Lab Identifications and results are in progress. To date, all specimens identified have been negative for the 10 target species (*Bursaphelenchus cocophilus*, *Globodera pallida*, *Globodera rostochiensis*, *Heterodera sacchari*, *Heterodera zea*, *Meloidogyne chitwoodi*, *Meloidogyne citri*, *Meloidogyne fallax*, *Nacobbus aberrans*, and *Punctodera chalcoensis*).

^{*10} *TL-FCM* (also see CCS (*14)): Surveys for *Thaumatotibia leucotreta* (false codling moth or TL-FCM) Surveys were done (Nursery Survey numbers only) at 17 traps at 17 sites in 5 counties (Broward, Hillsborough, Manatee, Miami-Dade, Palm Beach). Negative data entry is in progress, and all screenings and identifications to date are negative for the target species.

^{*12} *EGVM*: Surveys for *Lobesia botrana* (European grapevine moth or EGVM) were not on the Work Plan and so were not done during 2018. All screenings and identifications to date were completed and are negative for the target species.

^{*13} *CSB*: Visual surveys were done (part of Nursery Survey) at approximately 10 cotton sites/locations in 5 counties (Collier, Manatee, Miami-Dade, Monroe, Pinellas), resulting in 1 record (NHR), which was not considered a pest and was not entered in NAPIS. Negative survey data entry is in progress and all screenings and identifications to date are negative for the target species.

^{*14} CCS: Surveys were done (see Table 4b below) at 162 traps/locations at 49 sites in 18 counties (Bradford, Charlotte, Collier, Columbia, Hamilton, Hillsborough, Jackson, Jefferson, Lake, Lee, Madison, Manatee, Miami-Dade, Palm Beach, Pinellas, Santa Rosa, St Johns, Suwannee), resulting in 3 records (3-NCR), none of which were considered pests and were not entered in NAPIS. Lab ID of survey samples is ongoing and data entry is in progress. All screenings and identifications to date are negative for all 10 target species.

^{*15} TCS: Surveys were done (see Table 4c below) at 262 traps at 87 sites in 21 counties (Bay, Broward, Charlotte, Collier, DeSoto, Escambia, Gadsden, Hardee, Hendry, Hillsborough, Jackson, Lee, Manatee, Miami-Dade, Monroe, Orange, Pinellas, Santa Rosa, Sarasota, St Johns, Suwannee), resulting in 3 records (2-NCR, 1-NHR), none of which were considered pests and were not entered in NAPIS. Lab ID of survey samples is ongoing and data entry is in progress, and all screenings and identifications to date are negative for all 6 target species.

^{*16} *HA* (also see CCS (*14), and TCS (*15), above): Surveys were done (Nursery Survey numbers only) at 44 traps at 40 sites in 11 counties (Brevard, Broward, DeSoto, Hillsborough, Manatee, Miami-Dade, Monroe, Orange, Palm Beach, Pinellas, Sarasota). Negative data entry is in progress, and all screenings and identifications to date are negative for the target species.

^{*17} *SLS* (also see TCS (*15), above): Surveys were done (Nursery Survey numbers only) at 4 traps at 4 sites in 1 county (Miami-Dade). Negative data entry is in progress, and all screenings and identifications to date are negative for the target species.

^{*18} *SLA* or *RCW* (also see TCS (*15), above): Surveys were done (Nursery Survey numbers only) at 32 traps at 28 sites in 10 counties (Broward, DeSoto, Hillsborough, Lee, Manatee, Miami-Dade, Orange, Palm Beach, Pinellas, Sarasota). Negative data entry is in progress, and all screenings and identifications to date are negative for the target species.

^{*19} *Plum Pox Virus*: Visual surveys were completed in 2017 and reported previously. Negative survey data entry was completed and all screenings and identifications to date are negative for the target species.

^{*20} *Bagrada* bug: Visual surveys were done at 9 sites/locations in 6 counties (Alachua, Collier, Hillsborough, Lee, Pinellas, St Johns) on 5 host plants: *Brassica* sp., collards, kale, parsley, wild radish. Negative data entry is in progress, and all screenings and identifications to date are negative for the target species.

Table 4b. Corn Commodity Survey (CCS) entered into NAPIS

CORN COMMODITY – uploaded data only	TRAPS *	COUNTIES	TRAP CHECKS	SPECIMENS	NAPIS ENTRIES
Brown Stripe downy mildew (<i>Sclerophthora rayssiae</i> var <i>zeae</i>)	45 **	17	84 **	9	84
<i>Chilo partellus</i> (spotted stem borer) = CP	34	16	117	229	117
Java downy mildew = JDM (<i>Peronosclerospora maydis</i>)	45 **	17	84 **	9	84
Philippine downy mildew = PDM (<i>Peronosclerospora philippinensis</i>)	45 **	17	84 **	9	84
Cucurbit Beetle (<i>Diabrotica speciosa</i>)	45 **	17	84 **	9	84
<i>Helicoverpa armigera</i> = HA	46	16	205	1,951	205
Late Wilt (<i>Harpophora maydis</i>)	45 **	17	84 **	9	84
<i>Monographella maydis</i> = CTS-M	45 **	17	84 **	9	84
<i>Phyllachora maydis</i> = CTS-P	45 **	17	84 **	9	84
<i>Thaumatotibia leucotreta</i> = TL	37	18	163	535	163
TOTALS:	162 **	18 *	905	2,760	905
* represents max # traps and max # counties of the collected data only. Does not represent actual #s of traps and counties currently active.					
** represents visual survey (no traps), so the numbers for “traps” listed are the same as site #s or location #s.					
18 counties total: (Bradford, Charlotte, Collier, Columbia, Hamilton, Hillsborough, Jackson, Jefferson, Lake, Lee, Madison, Manatee, Miami-Dade, Palm Beach, Pinellas, Santa Rosa, St Johns, Suwannee).					
49 sites total.					

Table 4c. Tomato Commodity Survey (TCS) entered into NAPIS

TOMATO COMMODITY – uploaded data only	TRAPS *	COUNTIES	TRAP CHECKS	SPECIMENS	NAPIS ENTRIES
<i>Chrysodeixis chalcites</i> = CHCH	25	10	131	105	131
<i>Helicoverpa armigera</i> = HA	101	19	323	1181	323
<i>Neoleucinodes elegantalis</i> = NE	30	12	456	3	456
<i>Spodoptera littoralis</i> = SLS	6	6	28	3	28
<i>Spodoptera litura</i> = SLA	11	9	62	23	62
<i>Tuta absoluta</i> = TA	89	16	485	72	485
TOTALS:	262	21 *	1,485	1,387	1,485
* represents max # traps and max # counties of the collected data only. Does not represent actual #s of traps and counties currently active.					
21 counties total (Bay, Broward, Charlotte, Collier, DeSoto, Escambia, Gadsden, Hardee, Hendry, Hillsborough, Jackson, Lee, Manatee, Miami-Dade, Monroe, Orange, Pinellas, Santa Rosa, Sarasota, St Johns, Suwannee).					
87 sites total.					

Performance Measures:

Conferences/Trainings/Workshops	Hours	Training Provided by:
CAPS Monthly Conference Calls (3/22, 4/19, 5/17, 6/21, 7/19, 8/16)	40.5	N/A
CAPS weekly/spontaneous meetings	16.5	N/A
CAPS coordinators meetings (07/02, 08/28)	8.0	N/A
CAPS Work Plan meeting (8/7, 8/8), Gainesville FL (plus travel)	93.0	CAPS
ESRI & Survey123 meetings/data entry (3/5, 3/23, 5/16, 5/22), Gainesville	25.0	ESRI / CAPS
(GG) SHRUGinar GIS 2018 (6/13/2018), Tallahassee FL	10.0	SHRUG
(BD) NFPRC (N FL Pest Risk Committee) conference calls (07/10), meetings SPHD Office (08/14)	7.0	DPI/USDA
(GG) GoToWebinar - Data, Design, Develop: Learn ArcGIS App Dev Skills with DevLabs	1.0	ESRI
(GG) Esri Live Training Seminar Build Your Own Web Apps	1.0	ESRI
(GG) GoToWebinar - Extracting Value from LiDAR	1.0	ESRI
(GG) GoToWebinar - Get Analytical Insights from Your GIS	1.0	ESRI
(GG) GoToWebinar - Leveraging Dashboards: Information at the Assessor's Fingertips	1.0	ESRI
(GG) ESRI Collector, Survey 123, Data Related Issues	4.0	CAPS
(JF) BTAG (Biological Threat Assessment Group) (06/28/2018), Miami FL	10.0	USDA/CBP/DPI
(BD,JF) Southern Plant Board Meeting (5/6-5/9/2018), Charleston, SC	56.0	SPB/USDA/FDACS/CAPS
(BD) FSTMP (Federally Recognized State Managed Phytosanitary Program) training	4.0	USDA
(BD) NAPIS Training (07/02)	2.0	NAPIS
(JF) Everglades Cisma (7/17/2018), Davie FL	8.0	FWC, USFW, USDA, FDACS, MDC, etc.
(BD) Performance Reviews (8/10, 8/13)	3.0	N/A
Subtotal:	292.0	
Projects	Hours	Acres Surveyed / Other
CAPS Web Page	0.0	N/A
Artwork: downloadable calendars	9.0	N/A
Graphics misc (TCS pest ID cards)	2.0	CM / LW / BD
Outreach misc	2.0	CM / PP
CAPS Qtr/Accomplishment Report Q3+Q4+Q1	39.0	CM
CAPS Qtr/Accomplishment Report Cover Q3+Q4+Q1	4.0	CM
Performance Measures (PM's) Q1-Q2 (CM)	7.0	CM
PM's Q2-Q3 2018 (all)	65.0	CM / KA / GG / BD
Report for LW for CBP re Miami River traps 2014-2017	1.0	CM
Report DEP State Parks 2016-2017	10.0	CM
Report for BD & LW - #TCS sites per target	4.0	CM
Report for LW - 2017 #targets, entries, USA-NSR	2.0	CM
Report for BD re Mollusc Survey 2017	1.0	CM
PM's Q3-Q4 CAPS to DPI (DPI Q1-Q2)	6.0	CM
(BD) CAPS Budget & Financial - ongoing	8.0	BD=Meetings, calls, emails, documents, reviewing & purchasing
(BD) CAPS Work Plan - ongoing	66.5	BD=Meetings, calls, emails, documents, discussions
(BD) Farm Bill - Work Plan & budget for Tomato Commodity/OWB	40.5	BD=Financial review, organizing, documents, procuring, meetings,

		emails, conf calls, suggestions, uploads
(BD) Farm Bill – Interview prep for Bio Sci IV position (TCS-OWB)	4.0	BD=Phone calls, preparation, application reviews
(BD) CAPS – Interviews (3) for Bio Sci IV position (N FL PSS) on 8/29/2018	51.0	BD=Meetings, prep, interviews
(BD) CAPS Website - request changes through TA	2.0	BD
(BD) Travel documents for BD, GG, KE, RB	7.0	BD=Meetings, calls, emails, documents, discussions
<i>Helicoverpa armigera</i> (OWB) -- see HA-OWB Incident above	0.0	(Reference placeholder only)
(BD) Bean Pod Borer trip preparations and survey report	44.0	BD
(JF) Leaf litter project w Dr. Soto-Adames (FDACS)	3.0	JF
(JF, BD) Palm Phantasma Scale Report & review by BD	13.0	JF in Q3 (written by J. Farnum & Z. Ahmed)
(GG) Mobile App Development	180.0	GG
Subtotal:	571.0	
NAPIS	Hours	
NAPIS ongoing	26.0	N/A
NAPIS--ALB, CLB (Asian & Citrus longhorned beetle)	7.0	N/A
NAPIS--Bagrada bug (<i>Bagrada hilaris</i>)	1.0	N/A
NAPIS--BMSB = Brown marmorated stink bug (<i>Halyomorpha halys</i>)	2.0	N/A
NAPIS--BSDM = Brown stripe downy mildew (part of CCS)	2.0	N/A
NAPIS--CC/CHCH (<i>Chrysodeixis chalcites</i>)	20.0	N/A
NAPIS--CG/HLB (citrus greening)	3.0	N/A
NAPIS--CDM = 2 spp. corn downy mildew (part of CCS)	5.0	N/A
NAPIS--Corn Tar Spot (2 spp.)	2.0	N/A
NAPIS--CP (<i>Chilo partellus</i>)	14.0	N/A
NAPIS-- <i>Diabrotica speciosa</i> (part of CCS)	1.0	N/A
NAPIS--EAB (Emerald ash borer)	15.0	N/A
NAPIS--FF (fruit flies)	9.0	N/A
NAPIS--Gypsy Moth (3 spp.)	16.0	N/A
NAPIS--HA (<i>Helicoverpa armigera</i>)	51.0	N/A
NAPIS-- <i>Harpophora maydis</i> (part of CCS)	0.0	N/A
NAPIS--NE (<i>Neoleucinodes.elegantalis</i>)	14.0	N/A
NAPIS--Nematodes (10 spp.)	0.0	N/A
NAPIS-- <i>Oxycarenus hyalinipennis</i> (CSB or cotton seed bug)	7.0	N/A
NAPIS-- <i>Spodoptera littoralis</i> (SLS)	6.0	N/A
NAPIS-- <i>Spodoptera litura</i> (SLA)	28.0	N/A
NAPIS--SWPM or EWBB (solid wood packing materials)	11.0	N/A
NAPIS--TL or FCM (<i>Thaumatotibia leucotreta</i>)	22.0	N/A
NAPIS-- <i>Tuta absoluta</i> (TA)	35.0	N/A
Corn Commodity Survey (CCS)	7.0	N/A
Nursery Survey (NS)	5.0	N/A
Tomato Commodity Survey (TCS)	74.0	N/A
Subtotal:	383.0	
OTHER DATA ENTRY & DATABASES	Hours	
EDRR (Early Detection Rapid Response)	10.0	N/A
eTRAP	0.0	N/A
Subtotal:	10.0	
IDENTIFICATIONS	Hours	
EAB (Emerald ash borer)	88.3	73 samples, approx. 1,222 specimens screened.

EWBB-SWPM	658.7	470 samples, approx. 10,400 specimens screened.
ISS-Interdiction	6.0	4 samples, approx. 100 specimens screened.
Subtotal:	753.0	
SURVEYS	Hours	
Bagrada bug (<i>Bagrada hilaris</i>): Alachua County	2.0	BD=1 site
Brown marmorated stink bug (BMSB) = <i>Halyomorpha halys</i>	19.0	BD=2 sites // BD=Meetings, calls, discussions, emails, trapping NATL
Bean pod borer survey (<i>Maruca vitrata</i> moth): 4/9-4/13/2018, Monroe County	129.0	GG=mapping // JF=many sites // BD=many sites
Corn commodity survey = <i>Helicoverpa</i> , <i>Chilo</i> , <i>Thaumotibia</i> , <i>S. litura</i> and <i>S. littoralis</i> traps. Also visual surveys.	161.0	BD=9 sites // JF=11 sites // GG=mapping // BD=Meetings, calls, discussions, emails
Cotton Seed Bug Survey (see Nursery Survey), <i>Oxycarenus hyalinipennis</i>	0.0	REFERENCE PLACEHOLDER
EDRR – Early Detection Rapid Response (Forestry Survey)	141.0	BD=10 sites // BD=Meetings, calls, discussions, emails
Emerald ash borer (EAB)	53.0	BD=1 site
EWBB - (duplicate, see SWPM)	0.0	REFERENCE PLACEHOLDER
Environs Survey in Miami-Dade	12.0	JF=12 sites
FDACS GIS Task Force	56.0	GG=mapping support
HA or OWB (<i>Helicoverpa armigera</i> aka Old world boll worm) – part of TCS and Nursery Survey	0.0	REFERENCE PLACEHOLDER
High Risk & Interdiction Stations (Farm Bill)	2.3	GG=mapping support
Lychee mite survey in Lee County	118.0	GG=mapping // JF=many sites
Mollusk Survey in Miami-Dade County	37.0	BD=1 site // GG=mapping support // BD=Meetings, calls, discussions, emails
Nursery Survey	214.0	JF=94 sites // GG=mapping support // BD=Meetings, calls, discussions, emails
<i>Oxycarenus</i> (see Cotton Seed Bug) – under Nursery Survey	0.0	REFERENCE PLACEHOLDER
Palm phantasma scale in Miami-Dade County	137.0	GG=mapping // JF=many sites
Pink Boll Worm (PBW) - <i>Pectinophora gossypiella</i> , and Okra sites	107.0	JF=41 sites // GG=mapping support // BD=Meetings, calls, discussions, emails
Psyllids (Keys Psyllids) Survey in Monroe County	9.0	JF=many
Psyllids - Processing, rearing, and submitting samples (incl. suction trap)	55.0	JF
Sugar Cane survey for Flat Grass Scale (<i>Aclerda takahashii</i>) and Thrips (<i>Fulmekiola serrata</i>) in Hamilton County	9.0	JF=2 sites // BD=1 site // BD=Meetings, calls, discussions, emails
SWPM (aka EWBB) – Solid Wood Packing Materials	178.0	BD=5 sites // JF=22 sites // GG=mapping // BD=Meetings, calls, discussions, emails
<i>Spodoptera litura</i> (see Nursery Survey) regular traps	0.0	REFERENCE PLACEHOLDER
<i>Spodoptera littoralis</i> (see Nursery Survey) regular traps	0.0	REFERENCE PLACEHOLDER
Tomato Commodity Survey (and OWB not ICS)	1993.3	BD=4 sites // KE=many // RB=many // GG=mapping // BD=Meetings, calls, discussions, emails
Texas phoenix palm decline (TPPD)	8.0	GG=mapping
(GG) CHRP application - Post Irma	8.0	GG=mapping
(GG) CAPS Office Coverage Areas	8.0	GG=mapping
(GG) 2017 Accomplishment Report - maps	40.0	GG=mapping support
(GG) Mobile Solutions Governance Team (USDA)	6.0	GG=mapping support
Subtotal:	3,502.5	

Presentations – Public Outreach			Hours	No. of People in Audience	
(JF) Poster - "Florida CAPS/MIS Domestic Survey"			5.0	~30 - In lobby of USDA Miami Inspection Station	
(JF) Outreach/presentation planning: Poster w/ Miami Inspection Station, ECISMA			15.0	N/A	
(JF) Everglades CISMA (7/17/2018), Davie FL			0.5	~175	
(JF) YMCA Youth Camp (7/23/2018), Kendall FL			5.0	=42 (39 kids ages 5-16, 3 adults)	
(JF) Outreach/presentation planning for CISMA and YMCA			32.0	N/A	
(BD) New Inspector Training Class #89 (6/19/2018), Gainesville FL (includes prep time)			6.0	~10	
(BD) Florida Entomological Society (FES) Meeting (07/23, 07/24)			28.0	unknown, create presentation, meetings	
Subtotal:			91.5		
Other Pertinent Activities			Hours		
Backup & Organize I-drive, mapping, misc. (other)			255.0	CM, GG, BD, JF	
Computer - printer - problems - Software Maintenance & Upgrades			80.0	GG=SW upgrades & maintenance	
Contacts / phone lists			2.0	CM	
Personnel (New Hire – meetings, emails, paperwork), other issues			12.0	BD=for A. Martin // CM	
Permits (EAB, SWPM, etc) - (State Parks, City parks, Nature Preserves, etc.)			2.0	BD=County permits- J. Farnum	
Truck maintenance (includes filling out monthly mileage sheets)			35.0	BD // JF	
Field Preparations: Includes gathering supplies, mapmaking, and loading vehicle for field work			5.0	BD // JF	
Sample Submission: paperwork, preparing/processing/rearing samples for submission			5.0	BD // JF	
(BD) IFAS public records request – Air potato beetle (07/12)			2.0	BD=Calls, emails with extension agent (Alachua co.)	
PSS Meetings: various such as collaborating/training with USDA and State Survey Coordinator/various phone calls to cooperators and growers			17.0	BD // JF	
Inhouse OTJ training - Learning about beetles within the Xyleborine group (and Agrilus and beetles within Hylesinini) to set aside for county record purposes.			55.0	KA	
Database Maintenance by PSS & KA (also Survey 123)			177.0	BD // KA	
SSC - Coordination and networking (CAPS and Farm Bill related)			68.0	BD=Meetings, calls, discussions, emails, reading, reviewing, office activities, documentation, scheduling, etc.	
SSC - Administrative duties - report writing/reviewing, meetings, material and equipment procurement, etc.			52.0	BD=Reviewing, meetings, material & equip. procurement, invoices, pcard transactions, inventory, literature review of emerging pests, Other misc activities (Ex: supplies for cooperators, phone calls, email, travel documents etc.)	
Moving out of CAPS Trailer prep			6.0	CM	
Subtotal:			773.0		
TOTAL ALL SECTIONS:			6,376		
US-State-County-Host Records (species) found by CAPS and entered in NAPIS:			Record	Date & Survey	
E2018-0609-1 (Alabama pine scale)	<i>Matsucoccus alabamae</i> Morrison	Duval	NCR	20171101	CAPS-SWPM--MLara
E2018-2263-1 (bald cypress mealybug)	<i>Crisicoccus taxodii</i> Kosztarab	Palm Beach	NCR	20180420	CAPS-JF
E2018-2743-3 (Alabama pine scale)	<i>Matsucoccus alabamae</i> Morrison	Broward	NCR	20180426	CAPS-SWPM--JF
E2018-2767-1 (Phantasma scale on Senegal palm)	<i>Fiorinia phantasma</i> Cockerell & Robinson	Miami-Dade	NHR	20180522	CAPS-PPSS--ZA-HM-JM

E2018-2773-1 (Phantasma scale on coconut palm)	<i>Fiorinia phantasma</i> Cockerell & Robinson	Miami-Dade	NHR	20180524	CAPS-PPSS--ZA-OG
E2018-2778-1 (Phantasma scale on Areca palm)	<i>Fiorinia phantasma</i> Cockerell & Robinson	Miami-Dade	NHR	20180523	CAPS-PPSS--JF-JV
E2018-2782-1 (Phantasma scale on Phoenix palm)	<i>Fiorinia phantasma</i> Cockerell & Robinson	Miami-Dade	NHR	20180523	CAPS-PPSS--JF-JV
E2018-2795-1 (Phantasma scale on Pygmy date palm)	<i>Fiorinia phantasma</i> Cockerell & Robinson	Miami-Dade	NHR	20180524	CAPS-PPSS--JF-CT
		Subtotal:	8 records	Pests	
The records below are not pests (or other reason), so were not entered in NAPIS:					
E2018-3962-1 (a springtail)	<i>Trogolaphysa riopedrensis</i> Mari Mutt	Miami-Dade	USA (*)	20180712	CAPS-JF
E2018-3962-2 (a springtail)	<i>Lepidocyrtus vireticulus</i> Mari Mutt	Miami-Dade	USA (*)	20180712	CAPS-JF
E2018-3050-1 (a beetle)	<i>Trichodesma klagesi</i> (Fall)	Gadsden	NSR (*)	20180517	CAPS-EAB--BD-RL
E2017-4832-1 (a scale)	<i>Matsucoccus gallicolus</i> Morrison	Duval	NCR (*)	20171023	CAPS-SWPM--RL-BD
E2018-0039-1 (a scale)	<i>Matsucoccus gallicolus</i> Morrison	Hernando	NCR (*)	20171103	CAPS-SWPM(SP)--BS
E2018-1119-1 (a leafminer moth)	<i>Calliprora</i> sp.	Manatee	NCR (*)	20180312	CAPS-CCS-CP--DG
E2018-1119-2 (a moth)	<i>Siskiwitia</i> sp.	Manatee	NCR (*)	20180312	CAPS-CCS-CP--DG
E2018-1311-1 (a scale)	<i>Matsucoccus gallicolus</i> Morrison	Miami-Dade	NCR (*)	20180223	CAPS-SWPM--JF
E2018-1367-1 (a scale)	<i>Matsucoccus gallicolus</i> Morrison	St Lucie	NCR (*)	20180228	CAPS-SWPM--BS
E2018-1573-1 (a beetle)	<i>Thione championi</i> Sharp	Volusia	NCR (*)	20180307	CAPS-EAB--KC
E2018-1659-1 (a scale)	<i>Matsucoccus gallicolus</i> Morrison	Broward	NCR (*)	20180323	CAPS-SWPM--JF
E2018-1698-1 (a scolytid)	<i>Hylesinus aculeatus</i> Say	Nassau	NCR (*)	20180328	CAPS-SWPM(SP)--RL-BD
E2018-1873-1 (a moth)	<i>Nealyda kinzelella</i> Busck	Monroe	NCR (*)	20180322	CAPS-JF
E2018-1961-1 (a scale)	<i>Matsucoccus gallicolus</i> Morrison	Hillsborough	NCR (*)	20171027	CAPS-SWPM--KM
E2018-2654-1 (a moth)	<i>Melanocinclis gnoma</i> Hodges	Palm Beach	NCR (*)	20180503	CAPS-NS-TL--JF
E2018-2907-1 (a moth)	<i>Spodoptera androgea</i> (Stoll)	Hendry	NCR (*)	20180406	CAPS-TCS-CC--KE
E2018-2932-1 (a moth)	<i>Melanocinclis gnoma</i> Hodges	Hillsborough	NCR (*)	20180516	CAPS-NS-TL--DG
E2018-3040-1 (a moth)	<i>Melanocinclis lineigera</i> Hodges	Broward	NCR (*)	20180426	CAPS-NS-TL--JF
E2018-3040-2 (a moth)	<i>Melanocinclis gnoma</i> Hodges	Broward	NCR (*)	20180426	CAPS-NS-TL--JF
E2018-3174-1 (a moth)	<i>Spodoptera androgea</i> (Stoll)	Hillsborough	NCR (*)	20180529	CAPS-TCS-CC--KE
E2018-3178-2 (a planthopper)	<i>Megamelus gracilis</i> Beamer	Miami-Dade	NCR (*)	20180604	CAPS--JF
E2018-3390-1 (a roach)	<i>Pseudomops septentrionalis</i> Hebard	Duval	NCR (*)	20180524	CAPS-SWPM--RL-BD
E2018-3444-1 (a moth)	<i>Melanocinclis gnoma</i> Hodges	Miami-Dade	NCR (*)	20180419	CAPS-CCS-TL--JF
E2018-3553-1 (a scolytid)	<i>Ambrosiodmus minor</i> Stebbing	Hernando	NCR (*)	20180529	CAPS-SWPM(SP)--BS
E2018-4028-2 (a scolytid)	<i>Ambrosiodmus minor</i> Stebbing	Volusia	NCR (*)	20180627	CAPS-SWPM--KC
E2018-4076-1 (a scolytid)	<i>Ambrosiodmus minor</i> Stebbing	Broward	NCR (*)	20180629	CAPS-SWPM--ATullock
E2018-4150-1 (a scolytid)	<i>Hylesinus aculeatus</i> Say	Volusia	NCR (*)	20180614	CAPS-SWPM(SP)--BS
E2018-4573-1 (a moth leafminer)	<i>Chilocampyla</i> sp.	Palm Beach	NCR (*)	20180724	CAPS-ALBSurvey--JF
E2018-4673-1 (a largid bug on Piscidia)	<i>Largus pallidus</i> Halstead	Monroe	NHR (*)	20180830	CAPS-NS-OH--JF

PPST-2018-97742 (a fungus on Smallanthus)	<i>Cercospora apii</i>	St Johns	NHR (*)	20180827	CAPS-TCS--RL
		Subtotal:	30 records	Non-Pests	
		Grand Total:	38	Records	
(*) denotes non-pest, therefore not entered in NAPIS					

Approved and signed by

----- Date: -----
Cooperator

----- Date: -----
ADODR

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Photography Credits:

Cover page:

Background photo – *Thaumatotibia leucotreta* trap in corn field in Miami-Dade County FL, by Jake Farnum FDACS-DPI-CAPS.

Photographs (left to right) courtesy of:

LEFT PANEL:

Pink bollworm (PBW) survey in Miami-Dade County, Florida, 2018 with Roger Blanco FDACS-DPI and PBW trap in okra field, photo by Jake Farnum FDACS-DPI-CAPS.

MIDDLE PANEL:

USA Continental Record: *Fiorinia phantasma* (Phantasma scale), Miami-Dade County, photo by Zee Ahmed FDACS-DPI;

USA Continental Record: *Falconia* sp., a new mirid plant bug, Miami-Dade County, photo by Charles Boring FDACS-DPI;

RIGHT PANEL:

Sugarcane survey for *Aclerda takahashii* (flat grass scale) and *Fulmekiola serrata* (sugarcane thrips) in Hamilton County, photo by Jake Farnum FDACS-DPI-CAPS.

Interior pages:

Maps by Glen Gardner, FDACS-DPI-CAPS.

Photographs courtesy of:

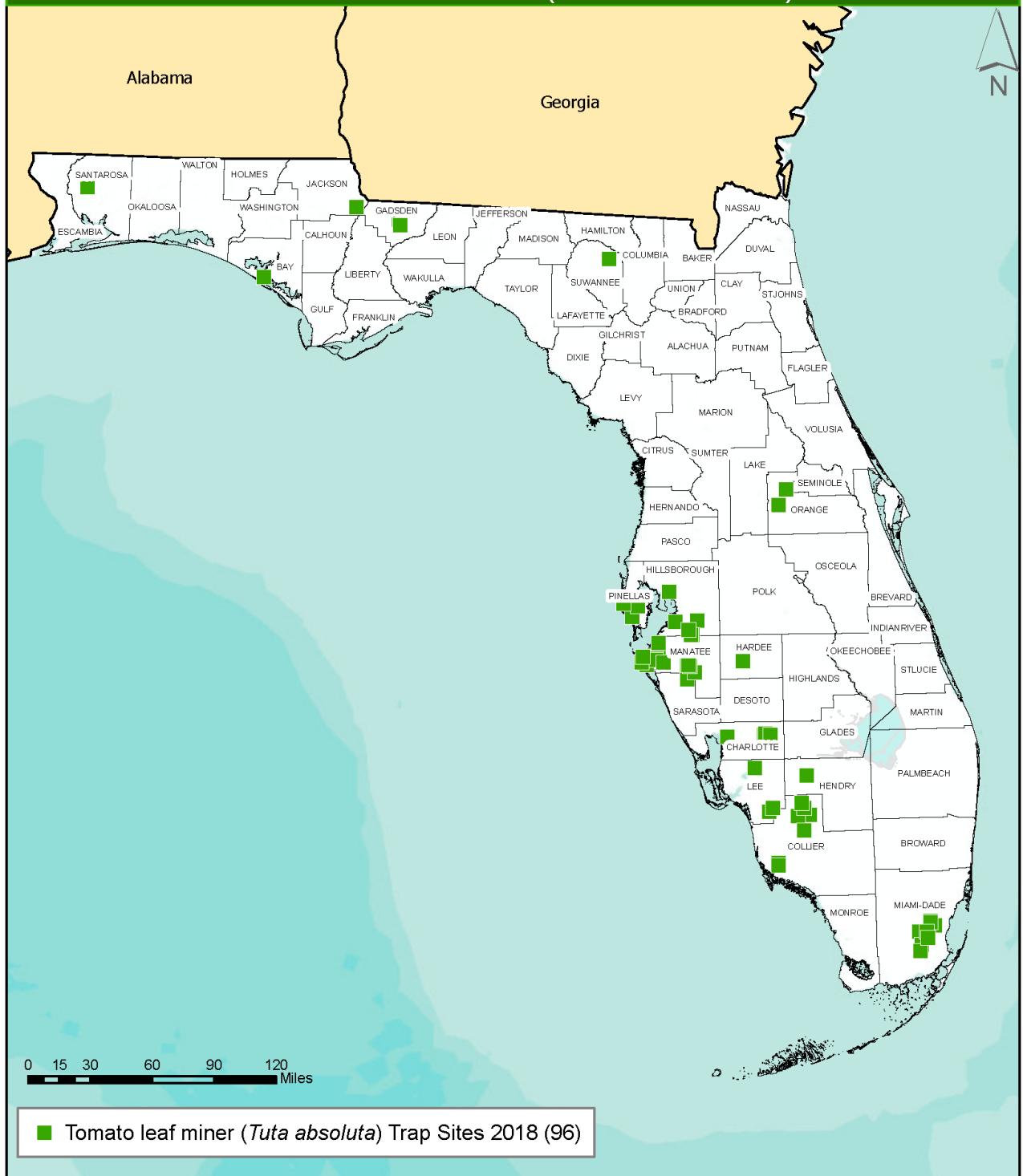
Downloadable calendar, design by Cyndi Moncrief, FDACS-DPI-CAPS;

Prepared By:

Dr. Leroy Whilby, FDACS-DPI- CAPS Program Manager; ENPP Bureau Chief
Bradley Danner, FDACS-DPI-CAPS State Survey Coordinator
Cynthia Moncrief, FDACS-DPI-CAPS

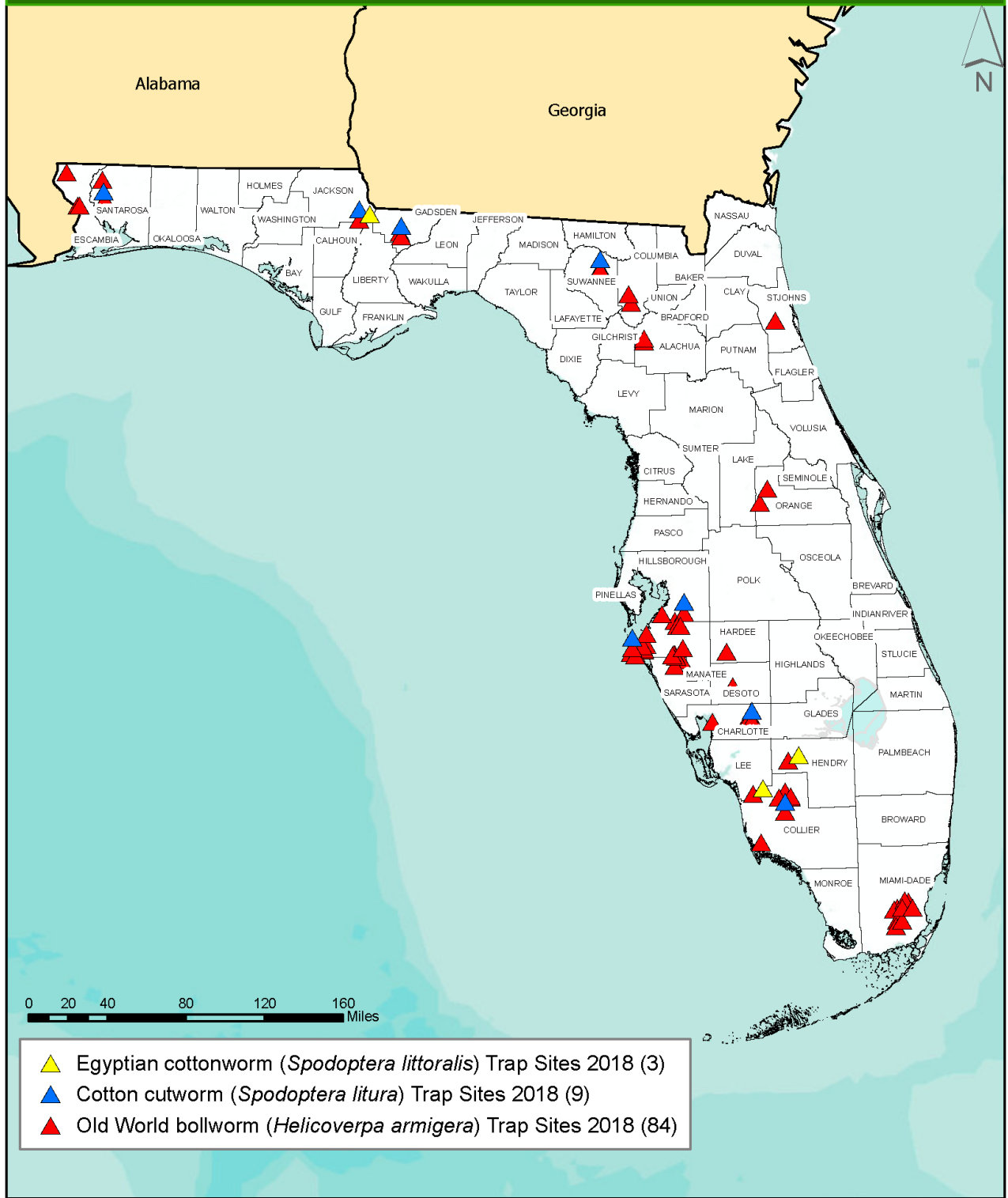
Florida CAPS Tomato Commodity Survey 2018

Tomato leaf miner (*Tuta absoluta*)



Map 1. Tomato Commodity Survey (part 1 of 3) – *Tuta absoluta* trap locations as of 9/2/2018.

Florida CAPS Tomato Commodity Survey 2018



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Map for illustrative purposes only

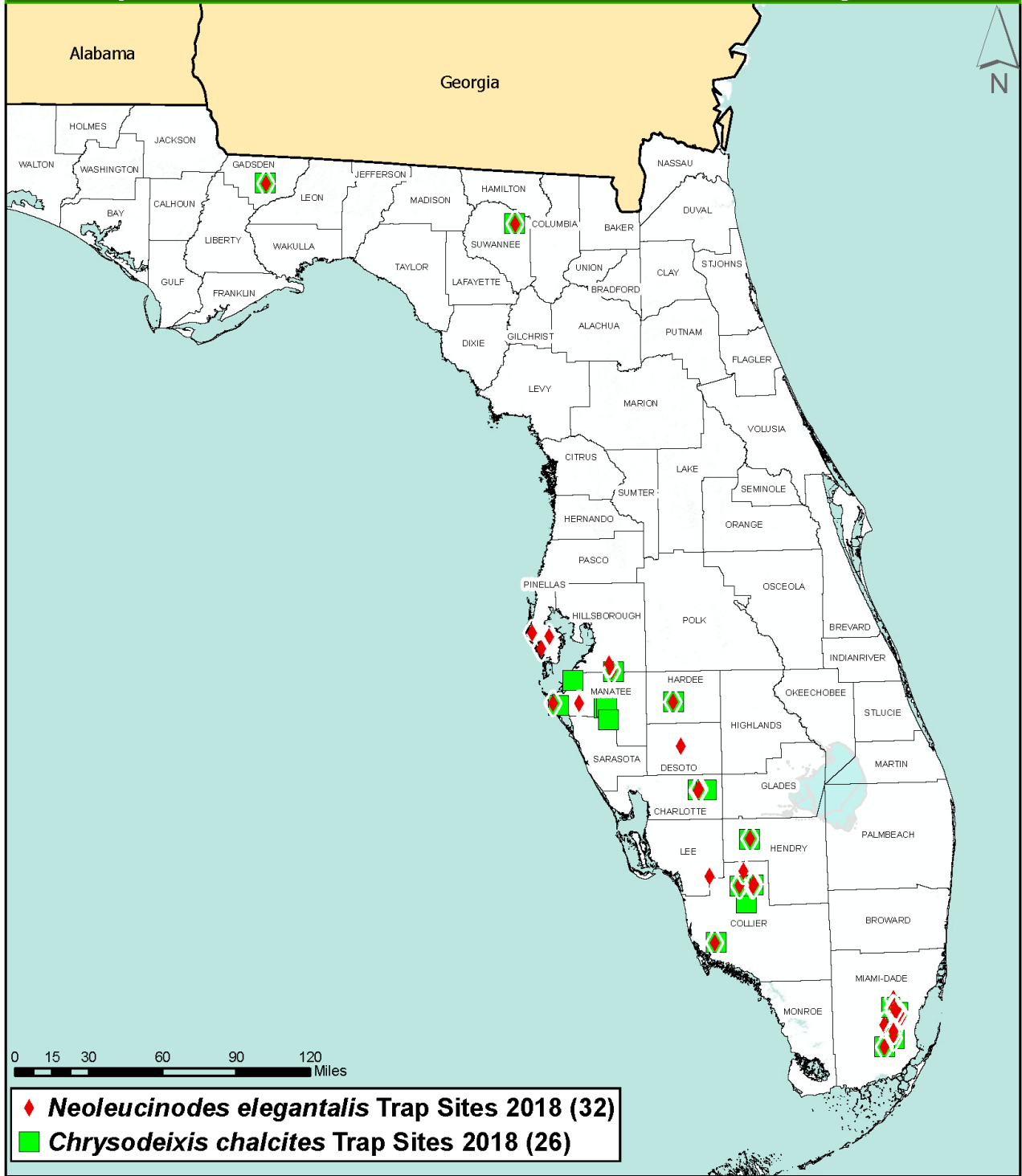


Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 10/23/2018

Map 2. Tomato Commodity Survey (part 2 of 3) – non-*Tuta* moth (*Helicoverpa armigera*, *Spodoptera litura*, *Spodoptera littoralis*) trap locations as of 9/2/2018.

Florida CAPS Tomato Commodity Survey 2018

Chrysodeixis chalcites and *Neoleucinodes elegantalis*



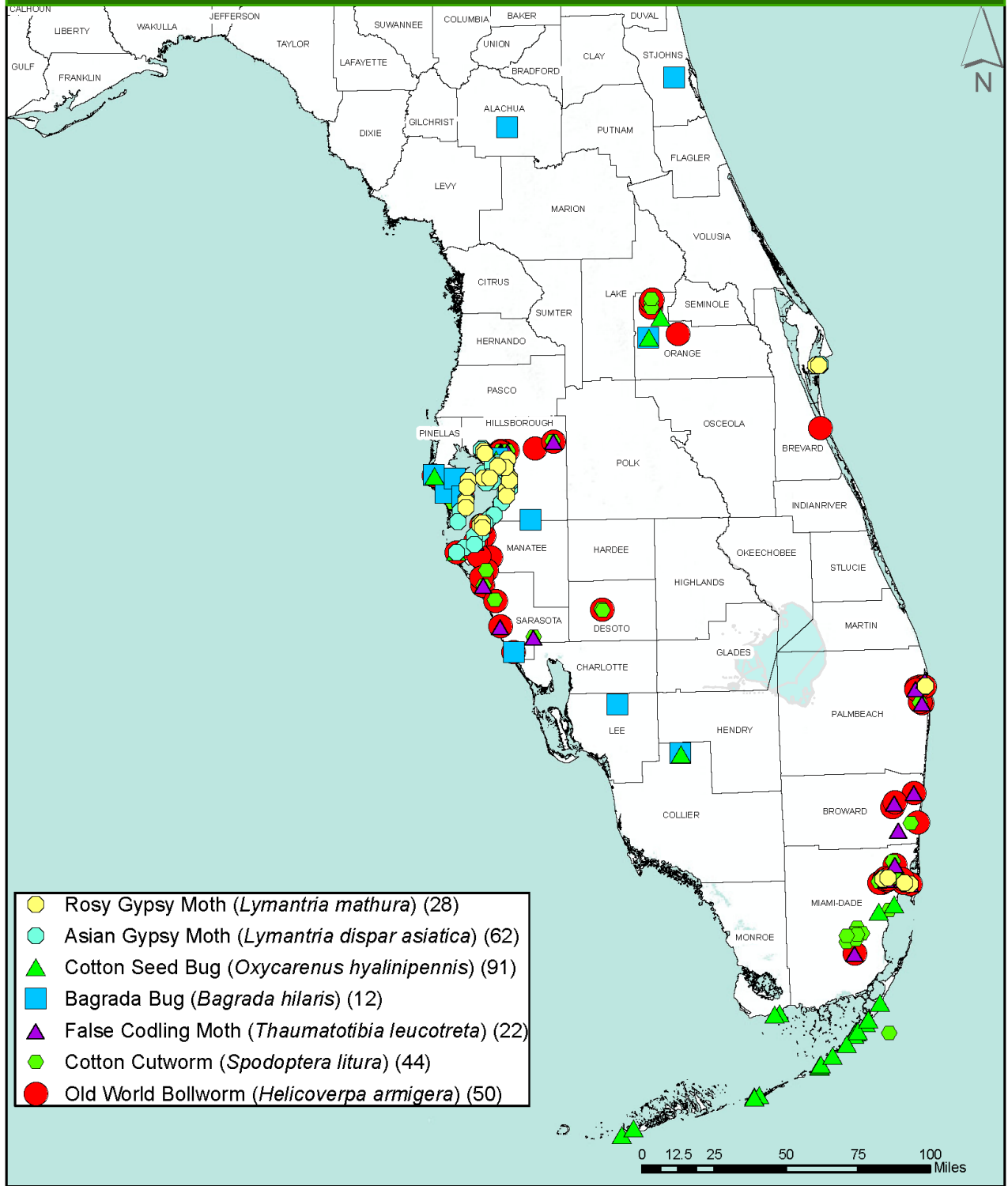
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 Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
 Datum: North American 1983
 Data Source: CAPS
 Date: 10/23/2018

Map 3. Tomato Commodity Survey (part 3 of 3) – non-Tuta moth (*Neoleucinodes elegantalis*, *Chrysodeixis chalcites*) trap locations as of 9/2/2018.

Florida CAPS Nursery Survey 2018



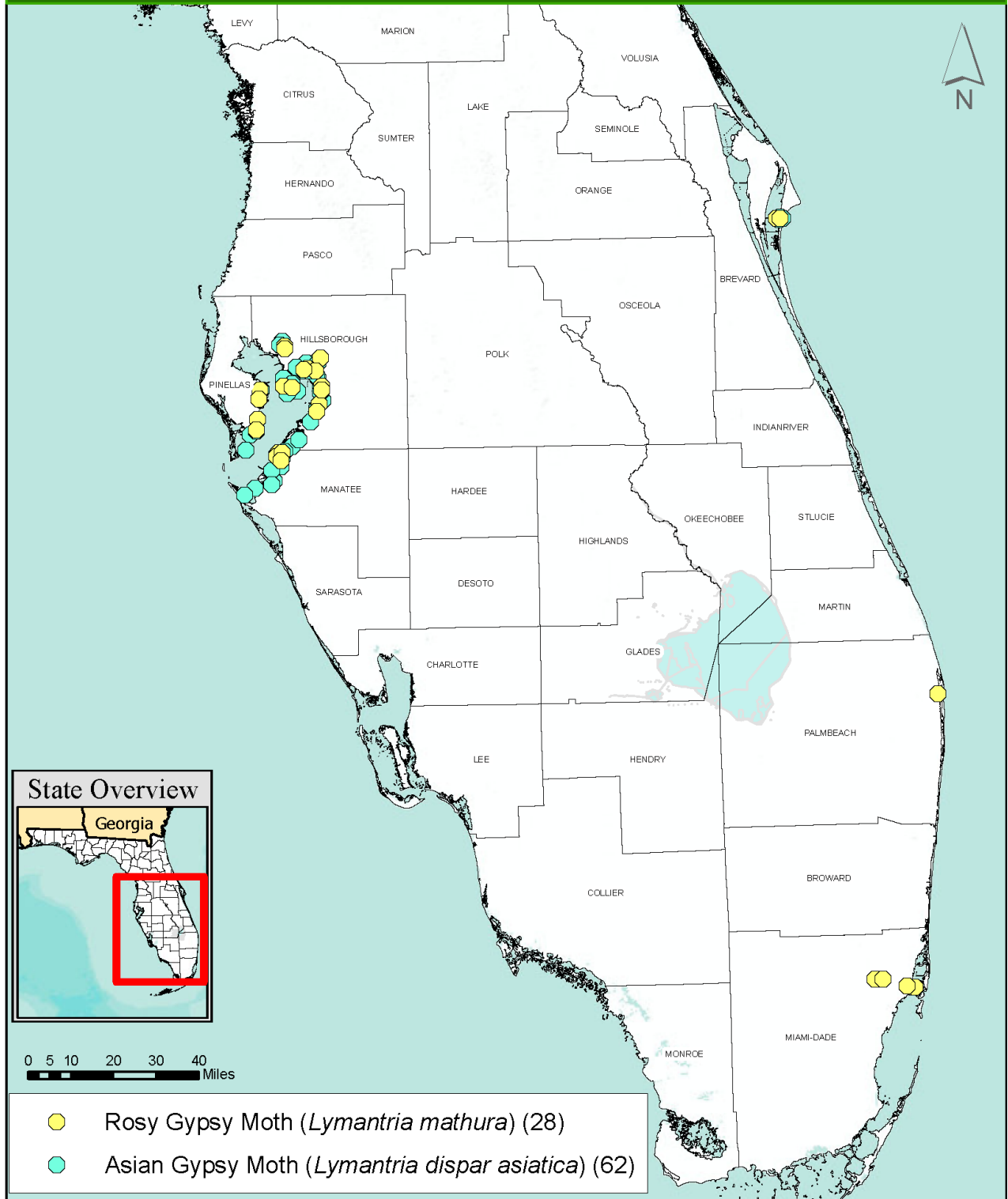
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Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 10/17/2018

Map 4. Nursery Survey (part 1 of 4) – showing all trap and county locations of 7 target pests as of 9/2/2018.

Florida CAPS Nursery Survey 2018 - Gypsy Moth Trap Sites



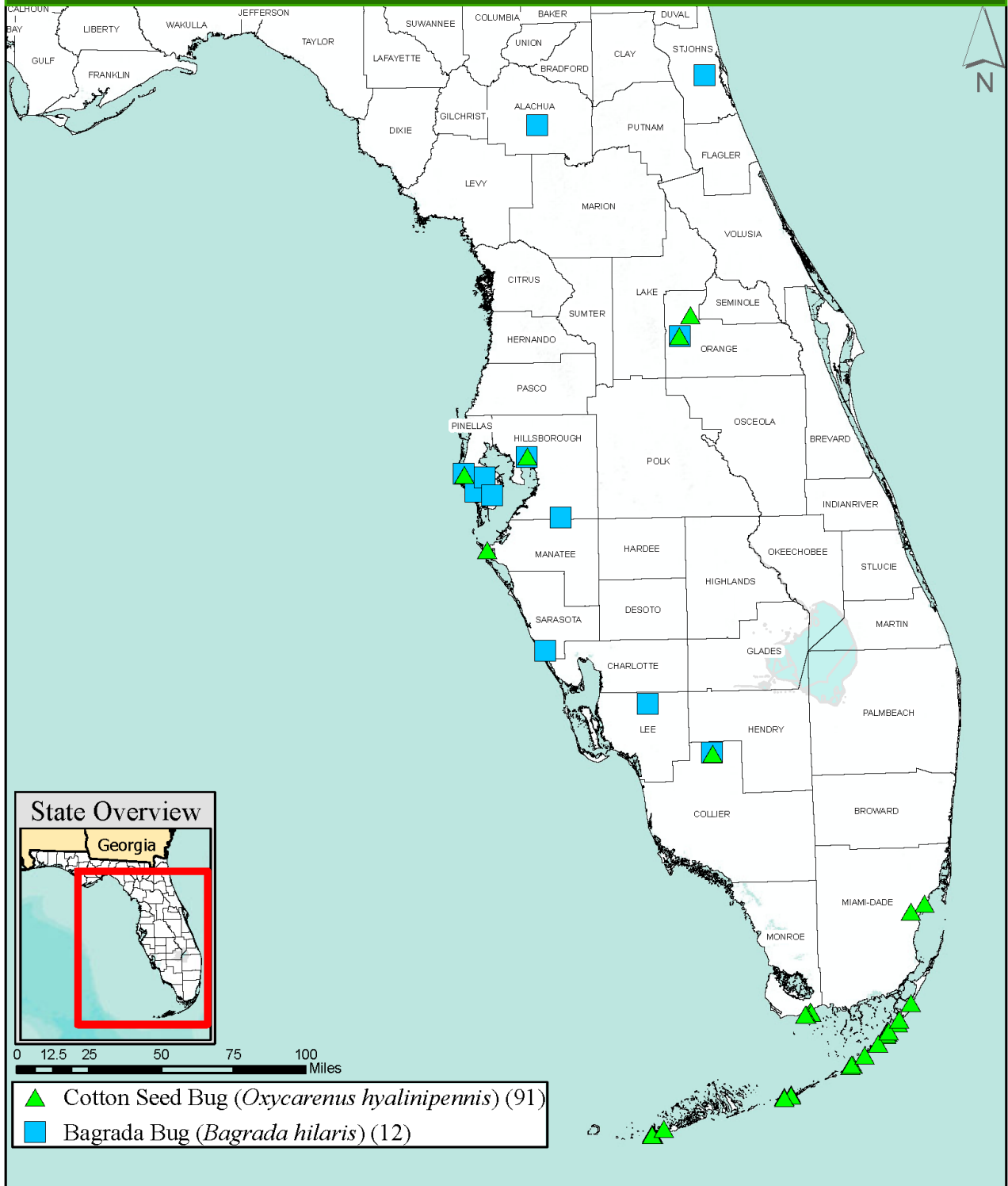
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Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 10/17/2018

Map 5. Nursery Survey (part 2 of 4) – gypsy moth surveys: Asian gypsy moth (*Lymantria dispar asiatica*) and Rosy gypsy moth (*Lymantria mathura*), and the associated trap locations as of 9/2/2018.

Florida CAPS Nursery Survey 2018 - Visual Surveys



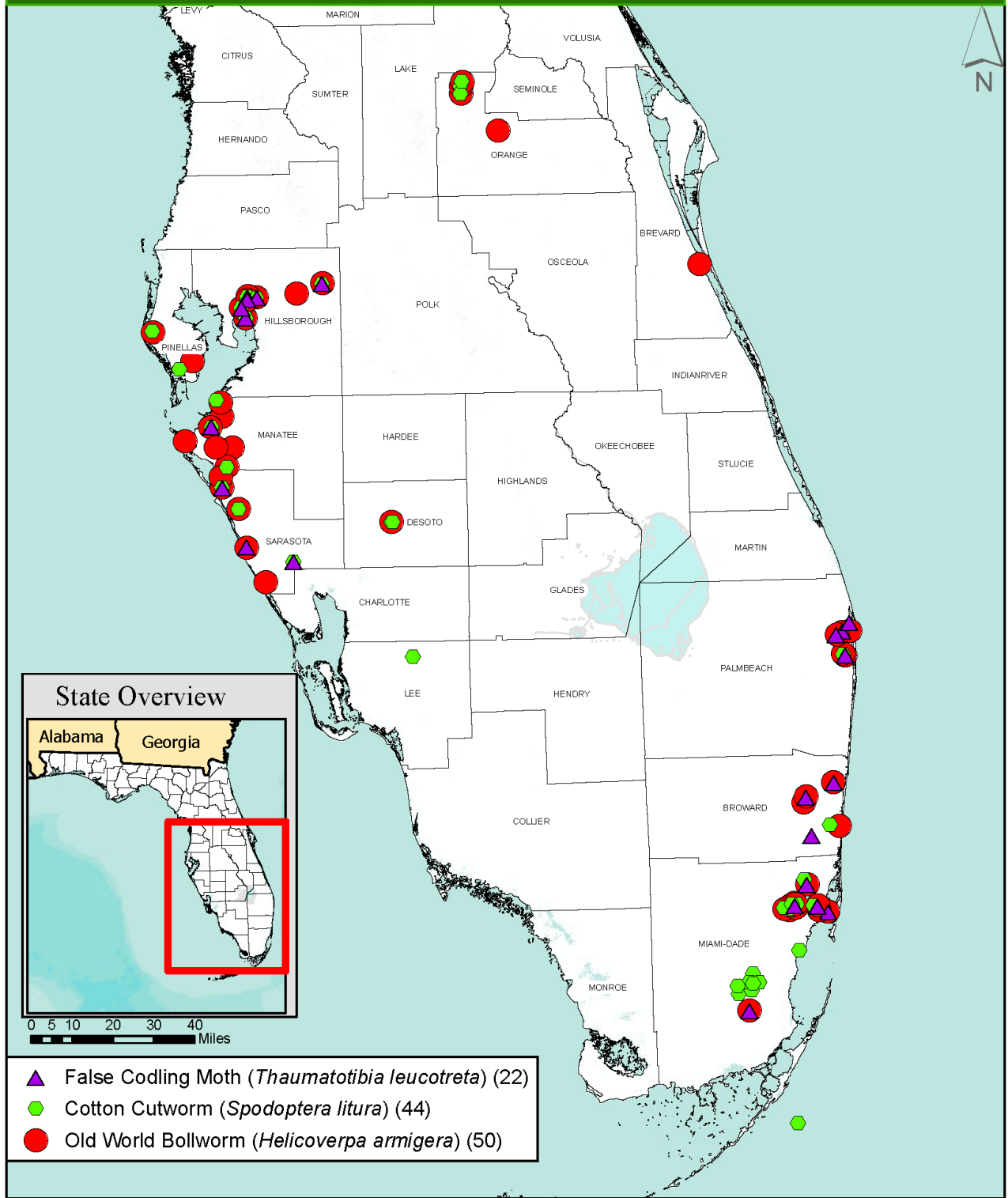
FDACS, DPI, CAPS
 G. Gardner, L. Whilby, B. Danner
 Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
 Datum: North American 1983
 Data Source: CAPS
 Date: 10/17/2018

Map 6. Nursery Survey (part 3 of 4) – two (2) pests: cotton seed bug (*Oxycarenus hyalinipennis*), and Bagrada bug (*Bagrada hilaris*), with the associated visual survey locations as of 9/2/2018.

Florida CAPS Nursery Survey 2018 - Trap Sites



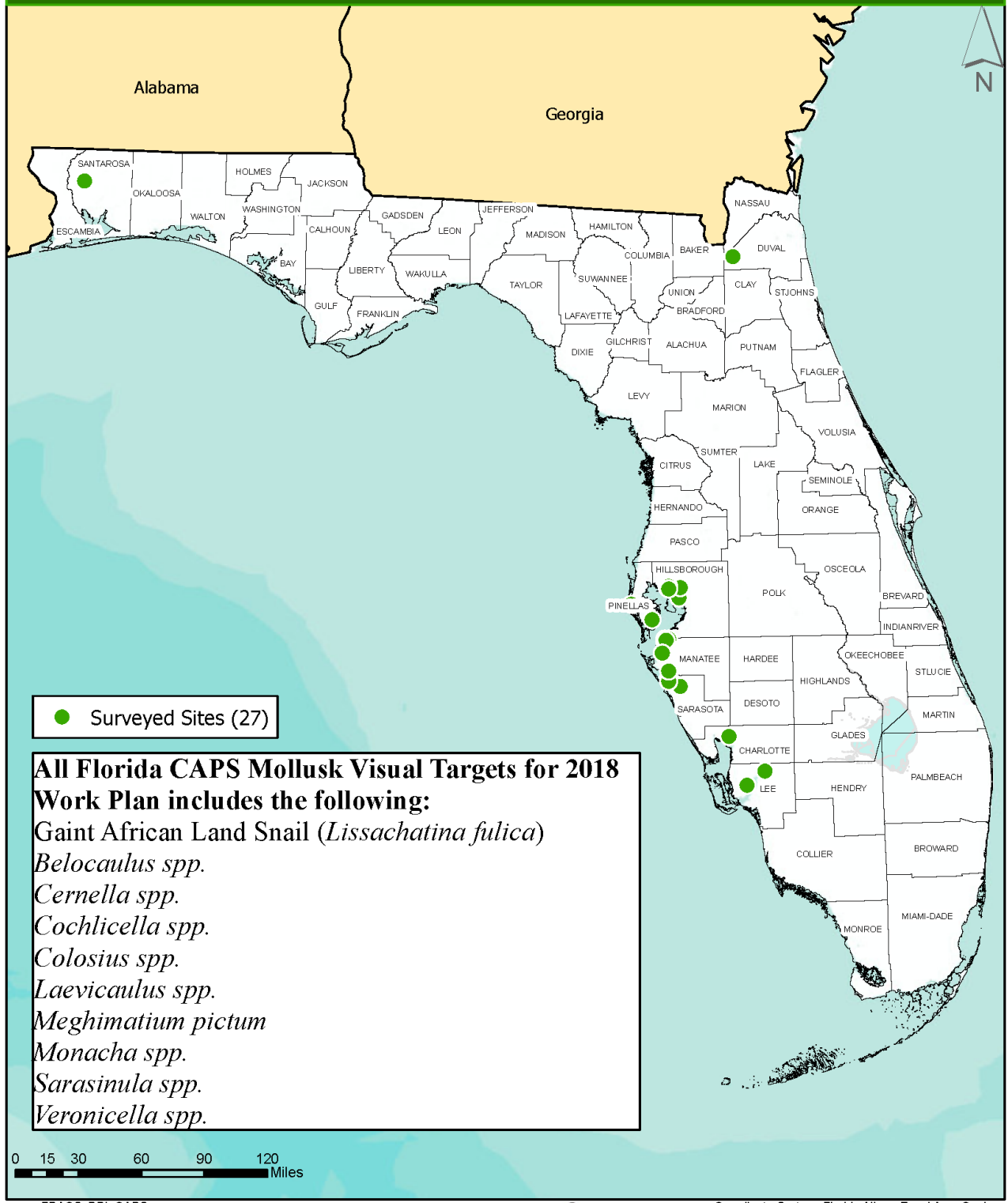
FDACS, DPI, CAPS
 G. Gardner, L. Whilby, B. Danner
 Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
 Datum: North American 1983
 Data Source: CAPS
 Date: 10/17/2018

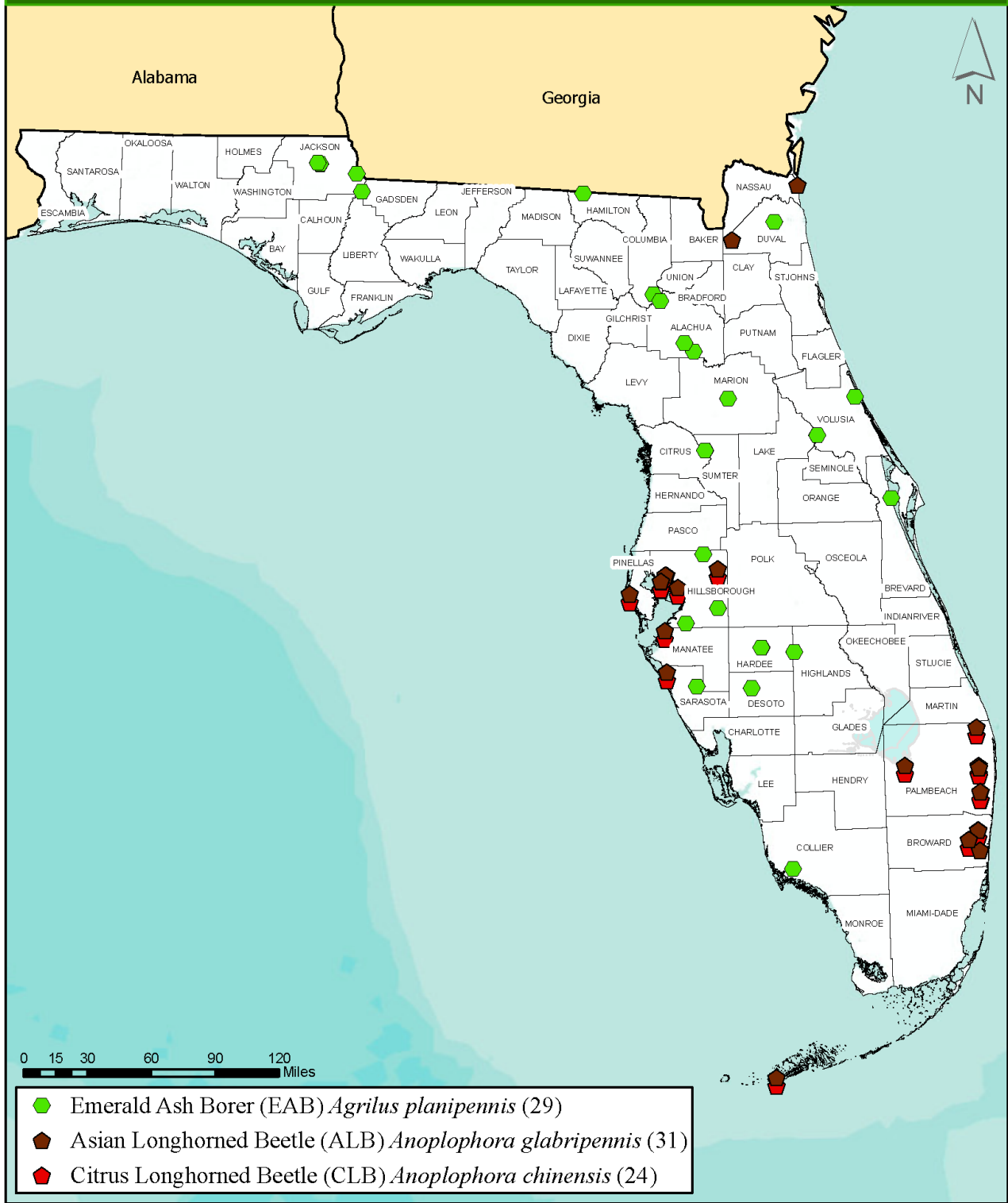
Map 7. Nursery Survey (part 4 of 4) – Old World bollworm (*Helicoverpa armigera*), Tobacco cutworm (*Spodoptera litura*), False codling moth (*Thaumatotibia leucotreta*) and the associated trap locations as of 9/2/2018.

Florida CAPS Mollusk Survey 2018 - Visual Survey Sites



Map 8. Exotic Mollusk Survey – visual survey locations in Florida for ten (10) exotic pest mollusk/snail species as of 9/2/2018.

Exotic Wood Boring Beetle Survey Locations 2018



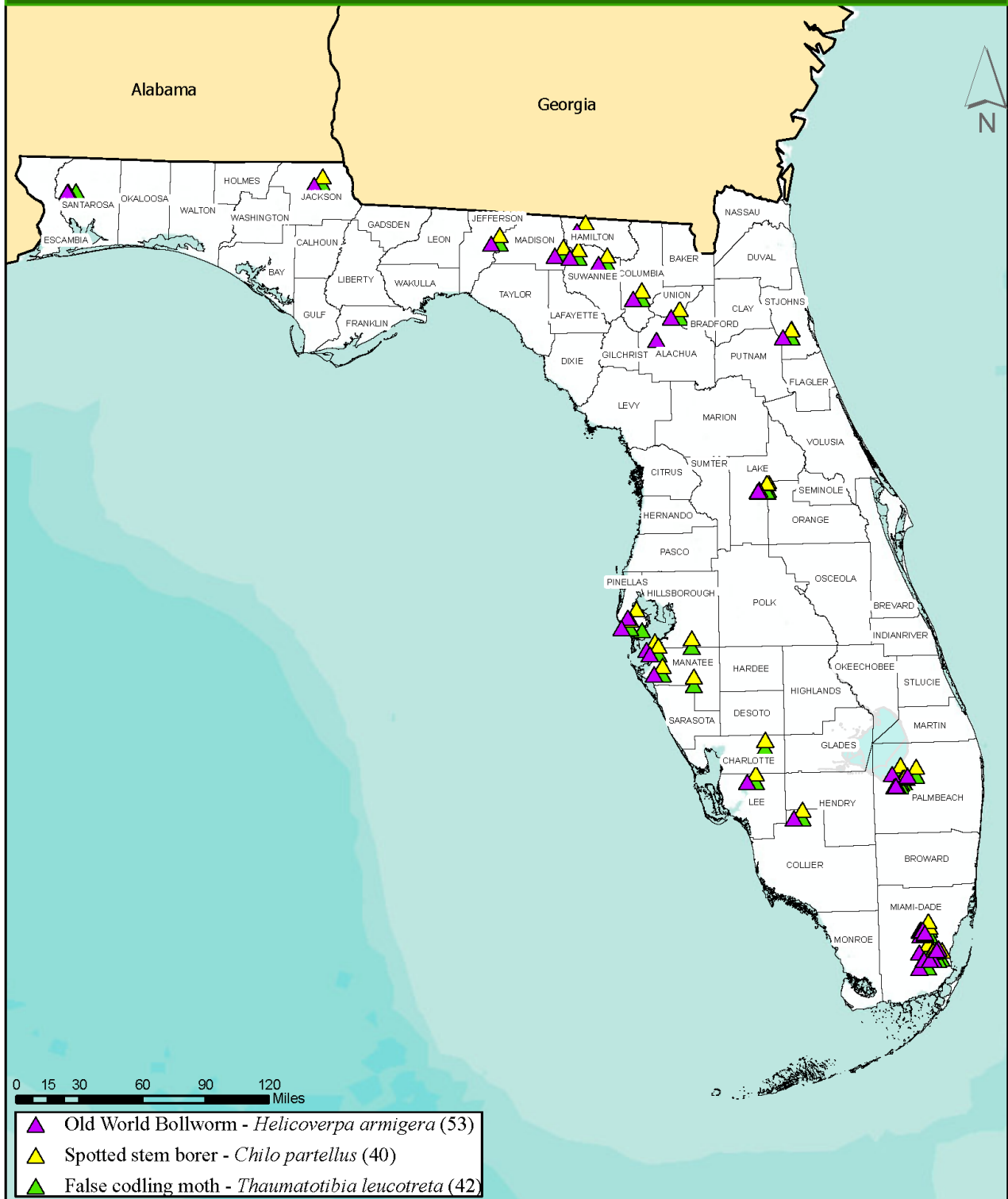
FDACS, DPI, CAPS
 G. Gardner, L. Whilby, B. Danner
 Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
 Datum: North American 1983
 Data Source: CAPS
 Date: 10/16/2018

Map 9. Emerald ash borer (EAB), Asian longhorned beetle (ALB), and Citrus longhorned beetle (CLB) Survey - trap locations in Florida as of 9/2/2018.

Florida CAPS Corn Commodity Survey 2018 - Trap Sites



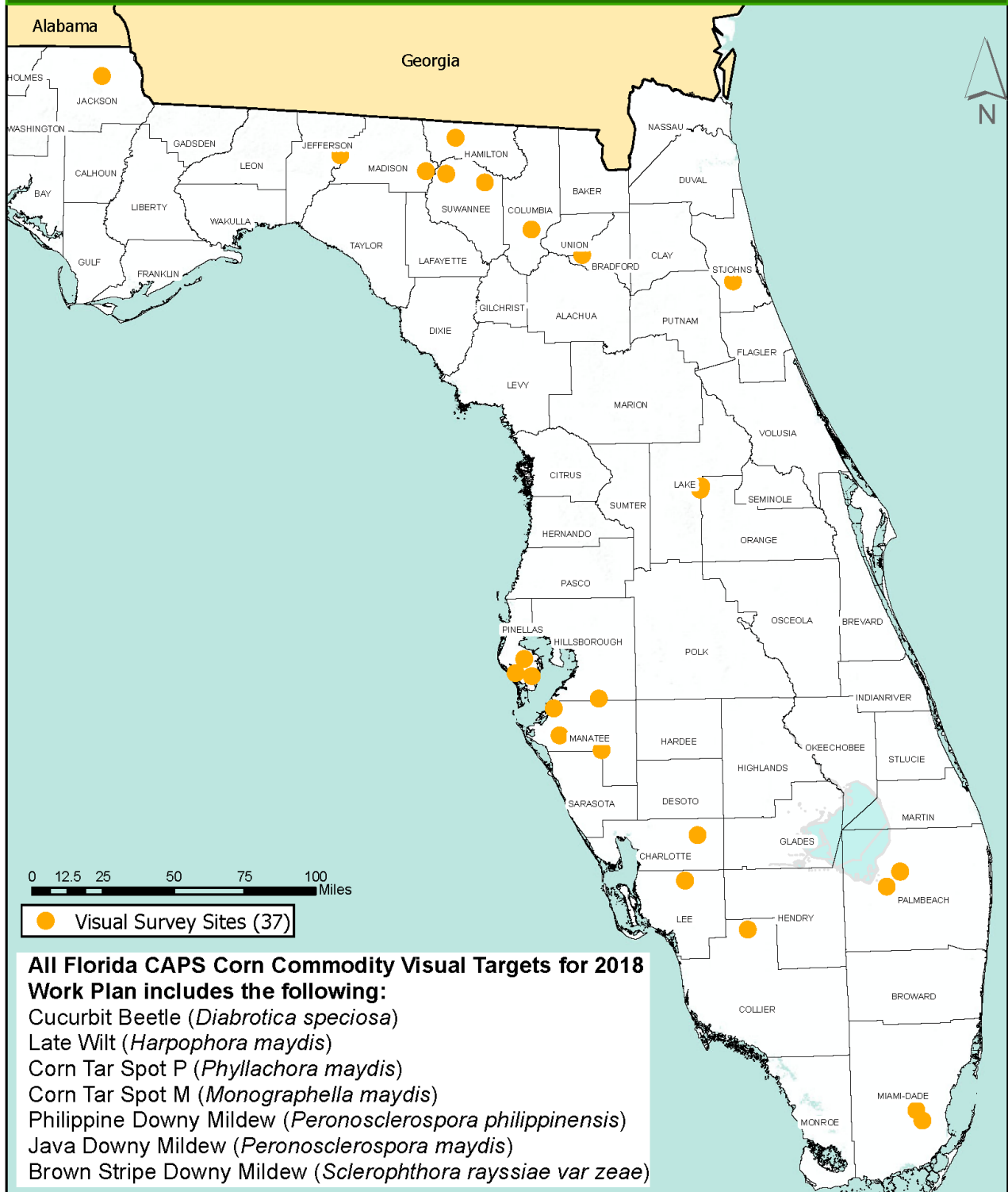
FDACS, DPI, CAPS
G. Gardner, L. Whilby, B. Danner
Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 10/16/2018

Map 10. Corn Commodity Survey – (part 1 of 2) – three (3) pests (*Helicoverpa armigera*, *Thaumatotibia leucotreta*, *Chilo partellus*) and the associated trap locations as of 9/2/2018.

Florida CAPS Corn Commodity Survey - Visual Survey Sites



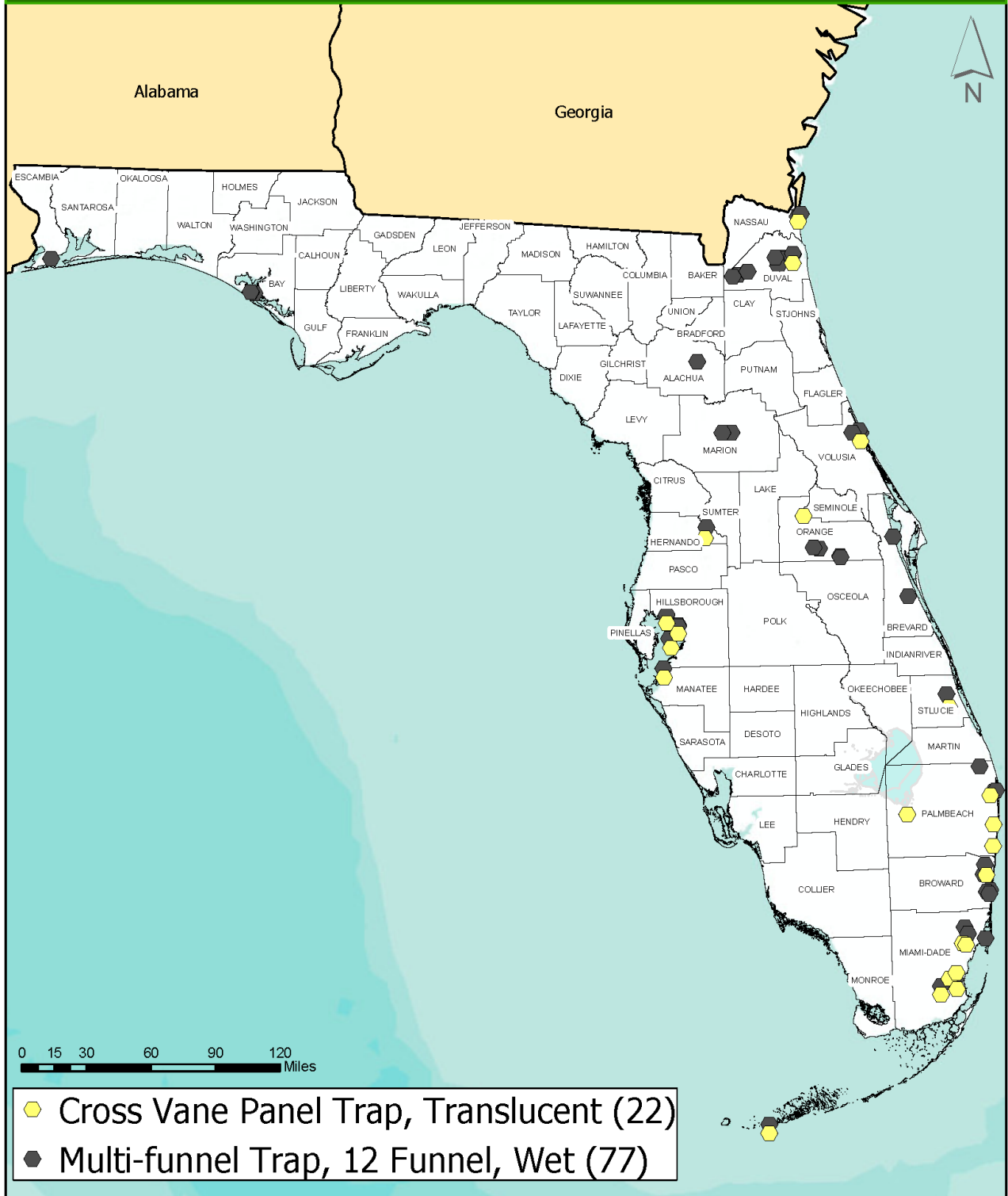
FDACS, DPI, CAPS
G. Gardner, L. Whilby, B. Danner
Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 10/16/2018

Map 11. Corn Commodity Survey – (part 2 of 2) – visual survey locations in Florida as of 9/2/2018.

Exotic Wood Boring Beetle Survey Locations 2018



FDACS, DPI, CAPS
G. Gardner, L. Whilby, B. Danner
Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 10/16/2018

Map 12. Exotic Wood Boring Beetles/Solid Wood Packing Materials Survey (EWBB/SWPM) - trap locations in Florida as of 9/2/2018.

Figures:

blueberry maggot larva

blueberry maggot damage

blueberry maggot adult on a blueberry

MAY 2018

S	29
M	30
T	01
W	02
TH	03
F	04
S	05
S	06
M	07
T	08
W	09
TH	10
F	11
S	12
S	13
M	14
T	15
W	16
TH	17
F	18
S	19
S	20
M	21
T	22
W	23
TH	24
F	25
S	26
S	27
M	28
T	29
W	30
TH	31
F	01
S	02

Florida Department of Agriculture and Consumer Services

USDA

Be on the lookout for the blueberry maggot, *Rhagoletis mendax* Curran
 All foreground images courtesy of Jerry Payne USDA-PPQ. Clockwise from top left: larva (UGA1227011); adult (UGA1224207); and damage (UGA1227057). Background image of blueberries courtesy of Scott NeSmith, USDA-ARS (UGA5007037).
 Cooperative Agricultural Pest Survey Program - Florida
<http://www.freshfromflorida.com/Divisions-Offices/Plant-Industry/Bureaus-and-Services/CAPS>

Fig. 1. CAPS downloadable calendar for May 2018, featuring, *Rhagoletis mendax* Curran, aka the blueberry maggot, a pest of blueberries.