



Florida Department of
Agriculture and
Consumer Services



Florida Cooperative Agricultural Pest Survey Program - Combined Survey

Final Report - Quarters 3 & 4 & 1 September 3, 2018 to March 1, 2019



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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, 3rd and 4th Quarter 2018, and 1st Quarter 2019, during the period September 3, 2018- March 1, 2019.

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

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

County Records				
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County
<i>Liberibacter asiaticus</i>	Citrus greening aka Huanglongbing	<i>Citrus aurantium</i>	sour orange	Okaloosa
<i>Liberibacter asiaticus</i>	Citrus greening aka Huanglongbing	<i>Citrus sp.</i>	citrus	Taylor
<i>Acanthoscelides macrophthalmus</i> (Schaeffer)	a beetle	<i>Leucaena leucocephala</i> (Lam.) De Wit.	leadtree	Miami-Dade
<i>Matsucoccus alabamae</i> Morrison	Alabama pine scale	N/A	N/A	Alachua
<i>Oncopeltus cingulifer</i> Stål	milkweed bug	N/A	N/A	Citrus
<i>Sophonia orientalis</i> (Matsumura)	two-spotted leafhopper	<i>Vitis sp.</i>	grape	Hardee
<i>Cnestus</i> (syn: <i>Xylosandrus</i>) <i>mutilatus</i> (Blanford)	camphor shot-borer, ambrosia beetle	N/A	N/A	Marion
<i>Aphis eugeniae</i> van der Goot	an aphid	<i>Eriobotrya japonica</i> (Thunb.) Lindl	loquat	Sarasota
<i>Fulvius brevicornis</i> Stål	a mirid plant bug	N/A	N/A	Collier
<i>Tarophagus colocasiae</i> (Matsumura)	a taro planthopper	<i>Colocasia esculenta</i> (L.) Schott	dasheen, wild taro	Duval
<i>Toxoptera citricida</i> (Kirkaldy)	brown citrus aphid	<i>Citrus sp.</i>	citrus	Taylor
<i>Heteropsylla flexuosa</i> Muddiman & Hodkinson	an acacia psyllid	N/A	N/A	Monroe
<i>Tinocallis ulmiparvifoliae</i> Matsumura	Chinese elm aphid	<i>Ulmus sp.</i>	elm	Duval
<i>Spodoptera pulchella</i> (Herrich-Schaffer)	Caribbean armyworm moth	N/A	N/A	Orange
<i>Acutaspis morrisonorum</i> Kosztarab	round conifer scale	<i>Pinus sp.</i>	pine	Flagler
Total = 15				

Host Records				
Pest Scientific Name	Pest Common Name	Host Scientific Name	Host Common Name	County
<i>Fiorinia phantasma</i> Cockerell & Robinson	Phantasma scale	<i>Pittosporum tobira</i> (Thunb.) Ait. F.	Japanese pittosporum	Miami-Dade
<i>Fiorinia phantasma</i> Cockerell & Robinson	Phantasma scale	<i>Livistona chinensis</i> (Jacq.) R. Br. Ex Mart.	Chinese fan palm	Miami-Dade
<i>Fiorinia phantasma</i> Cockerell & Robinson	Phantasma scale	<i>Ficus rubiginosa</i> Desf.	Port Jackson fig	Miami-Dade
<i>Fiorinia phantasma</i> Cockerell & Robinson	Phantasma scale	<i>Schinus terebinthifolia</i> Raddi	Brazilian peppertree	Miami-Dade
Total = 4				

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 = 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					

HISTORICAL County 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 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, 3rd and 4th Quarter 2018, and 1st Quarter 2019, during the period September 3, 2018- March 1, 2019.

County	# of Records	County	# of Records
Miami-Dade	5	Hardee	1
Duval	2	Marion	1
Taylor	2	Monroe	1
Alachua	1	Okaloosa	1
Citrus	1	Orange	1
Collier	1	Sarasota	1
Flagler	1		
		Total = 19	

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

County	# of Records	County	# of Records
N/A	0	N/A	0
		Total = 0	

Table 3a. U.S./State records for plant pests only, 3rd and 4th Quarter 2018, and 1st Quarter 2019, during the period September 3, 2018- March 1, 2019.

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

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

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, 3rd and 4th Quarter 2018, and 1st Quarter 2019, during the period September 3, 2018- March 1, 2019.

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	~7,917	N/A	228
<i>Bactrocera cucurbitae</i> (Coquillett)	melon fruit fly	42	~5,554	N/A	231
<i>Bactrocera dorsalis</i> (Hendel)	Oriental/guava fruit fly	42	~10,468	N/A	231
<i>Ceratitis capitata</i> (Wiedemann)	Mediterranean fruit fly	42	~19,789	N/A	231
<i>Agrilus planipennis</i> Fairmaire	emerald ash borer (EAB), part of EWBB survey	13	24	655-neg	60 *1
<i>Anoplophora glabripennis</i>	Asian long-horned beetle (ALB), part of EWBB survey	11	31-locs	11-neg	57 *3
<i>Anoplophora chinensis</i>	Citrus long-horned beetle (CLB), part of EWBB survey	11	31-locs	11-neg	57 *3
<i>Bagrada hilaris</i> (Burmeister)	Bagrada bug/painted bug, part of NS	9	20-sites	40-neg	220 *16
<i>Candidatus Liberibacter asiaticus</i>	citrus greening disease (Asian strain) = CG / HLB	26	N/A	139-pos, 41-neg	180
<i>Helicoverpa armigera</i> (Hübner)	cotton bollworm (HA), part of NS, CCS, TCS	11	65	199-neg	642 *13
<i>Lymantria dispar asiatica</i> (L.)	Asian gypsy moth (AGM), part of NS	6	40	1-neg	220 *2
<i>Lymantria dispar</i> (L)	European gypsy moth (EGM)	20	96	0	221 *2
<i>Lymantria mathura</i>	Pink gypsy moth (PGM), part of NS	6	19	8-neg	120 *2
<i>Oxycarenus hyalinipennis</i> (Costa)	cotton seed bug (OH-CSB), part of NS	5	23-sites	35-neg	110 *10
<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>Spodoptera littoralis</i> Boisduval	Egyptian cottonworm (SLS) - in TCS, NS	3	3	0	0 *14
<i>Spodoptera litura</i> (F.)	rice cutworm (RCW or SLA) - in TCS, NS	11	51	121-neg	358 *15
<i>Thaumatotibia leucotreta</i> (Meyrick)	false codling moth (FCM-TL) - part of NS & CCS	8	28	95-neg	197 *9
<i>Xyleborus glabratus</i> Eichhoff	redbay ambrosia beetle (RBAB), also see laurel wilt (LW)	N/A	N/A	N/A	0 *7
Bark Beetle / EWBB-SWPM Survey (5 pest species)	<i>Hylobius abietis</i> , <i>Megaplatypus mutatus</i> , <i>Monochamus alternatus</i> & <i>M. urussovii</i> , and <i>Tomicus destruens</i> (excluding counts for ALB, CLB, EAB, and RBAB listed separately).	13	66	approx. 7,920-neg	0 *4
Commodity Survey – Nursery (NS) (7 pest species, listed above)	see AGM, 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 *8
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)	12	36-sites	0	0 *6
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	19	145	1,422-neg	1,127 *11
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 littoralis</i> , and <i>Tuta absoluta</i>	22	179	1,165-neg	1,118 *12
					Total = 5,608

*1 EAB (in SWPM Survey): Surveys were done at 24 traps at 21 sites in 13 counties (Alachua, Brevard, DeSoto, Duval, Hamilton, Hardee, Highlands, Hillsborough, Jackson, Marion, Sarasota, Sumter, Volusia). 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 40 traps in 6 counties (Brevard, Hillsborough, Manatee, Miami-Dade, Palm Beach, Pinellas). For PGM, surveys were done at 19 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 both target species.

*3 ALB/CLB (in SWPM Survey): Surveys were done at 31 locations in 11 counties (Alachua, Broward, Duval, Hillsborough, Manatee, Monroe, Nassau, Orange, Palm Beach, Pinellas, Sarasota). 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: No records were uploaded during this period, however survey trapping was ongoing during September 2018 through February 2019 with approximately 66 existing traps in approximately 13 counties (Alachua, Bay, Broward, Charlotte, Duval, Escambia, Hillsborough, Manatee, Miami-Dade, Monroe, Nassau, Palm Beach, Volusia). All samples were screened by CAPS Lab Technician Krystal Ashman, resulting in 4 new records: 3-NCR and 1-NHR which were not considered pests and were not entered in NAPIS. All results were negative for the 5 target species *Hylobius abietis*, *Monochamus alternatus* and *M. urossovii*, *Tomicus destruens*, and *Megaplatypus mutatus* (excluding counts for EAB, ALB, CLB, and *X. glabratus*, which are listed separately). Lab ID of survey samples is ongoing and data entry is in progress. All screenings and ID's to date are also negative for the 5 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 March 1, 2019, 66 counties have been confirmed positive for laurel wilt disease (also see *7 RBAB below).

*6 Mollusk Survey: No records were uploaded during this period, however visual surveys (for 10 exotic mollusk species (*Ceratomyxa* spp., *Cochlicella* spp., *Colosius* spp., *Laevicaulis* spp., *Lissachatina* (*Achatina*) *fulica*, *Monacha* spp., *Sarasasinula* spp., *Semperula* spp., *Veronicella* spp., and *Belocaulus* spp.) were ongoing and CAPS conducted approximately 56 site visits to 36 sites in 12 counties (Brevard, Broward, Charlotte, Duval, Hillsborough, Lee, Manatee, Miami-Dade, Orange, Pinellas, Santa Rosa, Sarasota). Negative survey data entry was completed and all screenings and identifications to date are negative for the target species.

*7 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,*5), and were screened by DPI Entomology. As of March 1, 2019, 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).

*8 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*).

*9 TL-FCM (also see CCS (*11): Surveys for *Thaumatotibia leucotreta* (false codling moth or TL-FCM) Surveys were done (Nursery Survey numbers only) at 28 traps at 28 sites in 8 counties (Broward, DeSoto, Hillsborough, Manatee, Miami-Dade, Palm Beach, Pinellas, Sarasota). Negative data entry is in progress, and all screenings and identifications to date are negative for the target species.

^{*10} *CSB: Visual surveys were done (part of Nursery Survey) at approximately 23 cotton sites/locations in 5 counties (Hillsborough, Miami-Dade, Monroe, Orange, Pinellas). Negative survey data entry is in progress and all screenings and identifications to date are negative for the target species.*

^{*11} *CCS: Surveys were done (see Table 4b below) at 145 traps/locations at 52 sites in 19 counties (Bradford, Charlotte, Collier, Columbia, Hamilton, Hillsborough, Jackson, Jefferson, Lake, Lee, Madison, Manatee, Miami-Dade, Palm Beach, Pinellas, Santa Rosa, Sarasota, St Johns, Suwannee). 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.*

^{*12} *TCS: Surveys were done (see Table 4c below) at 179 traps at 77 sites in 22 counties (Alachua, Bay, Charlotte, Collier, Columbia, DeSoto, Escambia, Gadsden, Hardy, Hendry, Hillsborough, Jackson, Lee, Manatee, Miami-Dade, Monroe, Orange, Pinellas, Santa Rosa, Sarasota, St Johns, Suwannee). 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.*

^{*13} *HA (also see CCS (*11), and TCS (*12), above): Surveys were done (Nursery Survey numbers only) at 65 traps at 59 sites in 11 counties (Brevard, Broward, Charlotte, DeSoto, Hillsborough, 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.*

^{*14} *SLS (also see TCS (*12), above): Surveys were done during this period only within the TCS Survey, at 3 traps at 3 sites in 3 counties (Hendry, Jackson, Lee). Negative data entry is in progress, and all screenings and identifications to date are negative for the target species.*

^{*15} *SLA or RCW (also see TCS (*12), above): Surveys were done (Nursery Survey numbers only) at 51 traps at 48 sites in 11 counties (Broward, Charlotte, Collier, DeSoto, Hillsborough, Lee, Manatee, Miami-Dade, Palm Beach, Pinellas, Sarasota). Negative data entry is in progress, and all screenings and identifications to date are negative for the target species.*

^{*16} *Bagrada bug: Visual surveys were done at 20 sites in 9 counties (Alachua, Collier, Hillsborough, Lee, Manatee, Orange, Pinellas, Sarasota, St Johns) on 9 host plants (bok choy, broccoli, cabbage, cauliflower, collard greens, kale, Kohlrabi, parsley, wild radish). Lab ID of survey samples is ongoing, data entry is in progress, and all screenings and identifications to date have been 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>)	23 **	15	60 **	9	60
<i>Chilo partellus</i> (spotted stem borer) = CP	41	18	221	111	221
Java downy mildew = JDM (<i>Peronosclerospora maydis</i>)	23 **	15	60 **	9	60
Philippine downy mildew = PDM (<i>Peronosclerospora philippinensis</i>)	23 **	15	60 **	9	60
Cucurbit Beetle (<i>Diabrotica speciosa</i>)	23 **	15	60 **	9	60
<i>Helicoverpa armigera</i> = HA	49	16	348	1,063	348
Late Wilt (<i>Harpophora maydis</i>)	23 **	15	60 **	9	60
<i>Monographella maydis</i> = CTS-M	23 **	15	60 **	9	60
<i>Phyllachora maydis</i> = CTS-P	23 **	15	60 **	9	60
<i>Thaumatotibia leucotreta</i> = TL	32	17	138	185	138
TOTALS:	145 **	19 *	767	1,422	1,127
* 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.					
19 counties total (Bradford, Charlotte, Collier, Columbia, Hamilton, Hillsborough, Jackson, Jefferson, Lake, Lee, Madison, Manatee, Miami-Dade, Palm Beach, Pinellas, Santa Rosa, Sarasota, St Johns, Suwannee).					
52 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	26	10	117	46	117
<i>Helicoverpa armigera</i> = HA	73	19	544	971	544
<i>Neoleucinodes elegantalis</i> = NE	19	12	82	5	82
<i>Spodoptera littoralis</i> = SLS	0	0	0	0	0
<i>Spodoptera litura</i> = SLA	8	8	55	38	55
<i>Tuta absoluta</i> = TA	53	15	320	105	320
TOTALS:	179	22 *	1,118	1,165	1,118
* represents max # traps and max # counties of the collected data only. Does not represent actual #s of traps and counties currently active.					
22 counties total (Alachua, Bay, Charlotte, Collier, Columbia, DeSoto, Escambia, Gadsden, Hardy, Hendry, Hillsborough, Jackson, Lee, Manatee, Miami-Dade, Monroe, Orange, Pinellas, Santa Rosa, Sarasota, St Johns, Suwannee).					
77 sites total.					

Performance Measures:

Conferences/Trainings/Workshops	Hours	Training Provided by:
CAPS Monthly Conference Calls (09/20/2018, 10/18, 11/15, 12/20, 1/17, 2/28/2019)	46.0	N/A
CAPS weekly/spontaneous meetings	68.1	N/A
CAPS coordinators meetings (11/06/2018, 02/06, 02/13)	11.0	N/A
Florida First Detector Hernando County, calls, emails	5.0	UF/Amanda Hodges
APHIS Survey Supply and Procurement Webinar	1.0	USDA-APHIS-PPQ
Constructing Leaders Training Phase I, II (09/07, 01/29-01/31), Tallahassee and online	37.0	FDACS
(BD) DPI Supervisor Training (02/20, 02/21)	8.0	FDACS-DPI
(BD) ESRI Meeting (2/06)	1.0	ESRI Representative
(BD) First Detector Conference Calls - Hillsborough Co. (01/11)	1.0	UF-IFAS
(BD) ICS Training Scenario (10/23-10/25)	20.0	USDA
(BD) National CAPS Committee Call (02/07)	2.0	N/A
(BD) NFPRC conference calls, meetings (09/18, 11/13, 12/11, 01/08)	4.0	N/A
(BD) P-card Works (01/09, 01/10)	15.0	DPI Fiscal
(GG) Bureau of Plant and Apiary Inspection Supervisor Meeting October 30-31	16.0	DPI-PI
(GG) Discuss the Emergency Management Operations Solution	1.0	ESRI
(GG) Esri Live Training Seminar Get Started with ArcGIS Notebooks	1.0	ESRI
(GG) Esri Training MOOC Cartography.	20.0	ESRI
(GG) GoToWebinar - Extending Survey123 field app using AppStudio for ArcGIS	1.0	ESRI
(GG) GoToWebinar - Land & Sea Applications Using SAR	1.0	ESRI
(GG) GoToWebinar - Using ArcGIS to Improve Critical Fish and Wildlife Workflows	1.0	ESRI
(GG) GoToWebinar - Using ArcGIS to Support Critical Agriculture Workflows - Solutions for State & Local Agencies	1.0	ESRI
(GG) GoToWebinar - Web Accessibility Best Practices	1.0	ESRI
(GG) Panda Consulting Parcel WebEx Presentation	1.0	Panda Consulting
(GG) SHRUG GIS Workshop 2018	16.0	SHRUG
(GG, MB) Works Training	16.0	FDACS-Fiscal
(JF) Brian Bahder "Phytoplasmas of palms"	1.0	UF
(JF) Cooperator trainings and supplies	4.0	CAPS, USDA, CBP
(JF) Cory Penca "The Caribbean Pest Pathway: Addressing Areas of Recent Concern" Seminar	1.0	UF
(JF) Florida Keys Invasive Exotic Task Force	15.0	FWC, DEP, Monroe Co, USFWS
(JF) Florida Keys Native Plant ID class	8.0	DEP
(MB) IT Orientation Training	2.0	FDACS
(MB) New Employee Orientation (NEO) Online Training Modules (AgAcademy)	5.0	FDACS
(MB) New Employee Orientation, Tallahassee (1/16-1/18/2019), plus DPI Tour	22.0	FDACS
(MB) New Inspector Training - Attended CAPS presentation	1.0	CAPS/FDACS
(MB) North Central Florida Cooperative Invasive Species Management Area (CISMA) Organizational Meeting, O'Leno State Park	4.0	CISMA
(MB) Safety Training and Exam at Commercial Metals (formerly Gerdau), Jacksonville	2.0	Commercial Metals aka Gerdau
Annual FDACS-DPI Required training - Security, Ethics, PR, Safety, Harassment	6.0	FDACS-DPI (MB, JF)

(BD) Performance Reviews (for JF)	1.0	N/A
Subtotal:	367.1	
Projects	Hours	Acres Surveyed / Other
CAPS Web Page	24.0	MB=new content, updates, edits
Artwork: downloadable calendars	6.0	N/A
Graphics misc (CAPS brochure cover, PBW report cover)	8.0	CM / LW / BD
CAPS Qtr 1&2&3 Accomplishment Report	41.0	CM
Performance Measures (PM) Qtr 3 (all)	29.0	CM / KA / GG / JF / BD
Performance Measures Qtr 4 (all)	58.0	CM / KA / GG / JF / MB / BD
PM Qtr3 CAPS to DPI (DPI Q1)	3.0	CM
PM Qtr4 CAPS to DPI (DPI Q2)	4.0	CM
TCS-Tomato/OWB/Tuta Accomplishment Report (Final)	49.0	CM
Report for LW & BD-- FRSMP Bagrada	3.0	CM
Report AreaB overall for BD-LW-JW	14.0	CM
Report Oxycarenus for LW	1.0	CM
(BD) CAPS 2019 Workplan – meetings, emails, calls, document	8.0	BD=Meetings, calls, discussions, emails
(BD) CAPS & Farm Bill Budget & Financial Meetings (11/20/2018, 12/20, 02/04/2019)	3.0	BD=Meetings, calls, emails, documents, reviewing & purchasing
(BD) Farm Bill - Tomato Commodity/OWB - hiring for OPS Environmental Specialist I position	18.7	BD=Phone calls, preparation, application reviews for Palmetto position
(BD) Biological Scientist IV (PSS) Position Hiring Package	30.0	BD=Meetings, interviews review, hiring package
(BD) SMART Goals- Biological Scientist IV/PSS's	4.0	BD
(BD) CAPS Survey Summary Form-Workplan	4.0	BD=Meetings, calls, discussions, emails
(BD) CAPS Combined Survey Mid-year Accomplishment Report Review	8.0	BD=Meetings, calls, discussions, emails
(BD) CAPS Infrastructure Mid-year Accomplishment Report	24.0	BD=Meetings, calls, discussions, emails
(BD) Hosting - Arkansas SSC Jake Bodart - visit to DPI 10/3-10/4/2018	16.0	BD=Meetings, calls, discussions, emails
(MB) Designed scouting activity for Florida First Detector training	5.0	MB
(MB) Nursery Survey: researched sites for new targets in 2019 Work Plan	36.0	MB
(MB) Outreach: wrote blurb for St. Johns County Extension Community Garden Newsletter	4.0	MB
(MB) Reviewed 2018 and proposed 2019 Work Plans; researched target pests	16.0	MB
(BD) Personnel Issues - meetings, calls, memo	19.5	BD w/ KE (visit Palmetto on 09/28)
(BD) Other Personnel Issues	31.8	BD
(BD) FRSMP Bagrada bug document	4.0	BD
(BD) Pink Bollworm Blitz Report	58.0	BD
(GG) Mobile App Development	53.6	GG=technical support
(GG) Mobile Solutions Governance Team	3.3	GG=technical support
(GG) Plant Inspection PPD App	2.7	GG=technical support
(GG) GIS Consultation W/Bureaus & Sections	10.7	GG=technical support
(GG) Apiary Inspection Brood Hive App	2.7	GG=technical support
(BD) Outreach production - CAPS Brochure/Website- request changes through TA	2.0	B. Danner, C. Lawson, K. Davis, A. Martin, M. Byron
(BD) Travel documents, reservations for BD, MB, KE, RB, JH, SB, LW, RL, DRG	2.0	BD=Meetings, calls, discussions, emails
(MB) FDACS Forum (upcoming May 8th) - worked with Ashleigh Martin to write CAPS abstract	8.0	MB

Subtotal:	615.0	
NAPIS	Hours	
NAPIS ongoing	19.0	N/A
NAPIS--ALB, CLB (Asian & Citrus longhorned beetle)	6.0	N/A
NAPIS--Bagrada bug (<i>Bagrada hilaris</i>)	17.0	N/A
NAPIS--BSDM = Brown stripe downy mildew (part of CCS)	1.0	N/A
NAPIS--CC (<i>Chrysodeixis chalcites</i>)	19.0	N/A
NAPIS--CG/HLB (citrus greening)	2.0	N/A
NAPIS--CDM = 2 spp. corn downy mildew (part of CCS)	5.0	N/A
NAPIS--Corn Tar Spot (2 spp.)	1.0	N/A
NAPIS--CP (<i>Chilo partellus</i>)	22.0	N/A
NAPIS-- <i>Diabrotica speciosa</i> (part of CCS)	1.0	N/A
NAPIS--EAB (Emerald ash borer)	6.0	N/A
NAPIS--FF (fruit flies)	11.0	N/A
NAPIS--Gypsy Moth (3 spp.)	16.0	N/A
NAPIS--HA (<i>Helicoverpa armigera</i>)	120.0	N/A
NAPIS-- <i>Harpophora maydis</i> (part of CCS)	1.0	N/A
NAPIS--NE (<i>Neoleucinodes.elegantalis</i>)	12.0	N/A
NAPIS-- <i>Oxycarenus hyalinipennis</i> (CSB or cotton seed bug)	5.0	N/A
NAPIS-- <i>Spodoptera littoralis</i> (SLS)	0.0	N/A
NAPIS-- <i>Spodoptera litura</i> (SLA)	18.0	N/A
NAPIS--SWPM or EWBB (solid wood packing materials)	2.0	N/A
NAPIS--TL or FCM (<i>Thaumatotibia leucotreta</i>)	24.0	N/A
NAPIS-- <i>Tuta absoluta</i> (TA)	17.0	N/A
Corn Commodity Survey (CCS)	0.0	N/A
Nursery Survey (NS)	6.0	N/A
Tomato Commodity Survey (TCS)	0.0	N/A
Subtotal:	331.0	
OTHER DATA ENTRY & DATABASES	Hours	
EDRR (Early Detection Rapid Response)	1.0	N/A
eTRAP	0.0	N/A
Subtotal:	1.0	
IDENTIFICATIONS	Hours	
EAB (Emerald ash borer)	24.4	18 samples, approx. 182 specimens screened.
EWBB-SWPM	588.8	431 samples, approx. 7,199 specimens screened.
ISS-Interdiction	114.8	84 samples, approx. 1,107 specimens screened.
Subtotal:	728.0	
SURVEYS	Hours	
Asian longhorned beetle (ALB), Alachua & St Johns Counties	15.4	MB=2 sites
Corn commodity survey = <i>Helicoverpa</i> , <i>Chilo</i> , <i>Thaumatotibia</i> , <i>S. litura</i> and <i>S. littoralis</i> traps. Also visual surveys.	165.6	MB=3 sites // JF=40 sites // GG=mapping // BD=meetings, calls, discussions, emails
Cotton Seed Bug Survey (see Nursery Survey and <i>Oxycarenus hyalinipennis</i>)	0.0	REFERENCE PLACEHOLDER
EDRR – Early Detection Rapid Response (Forestry Survey)	17.1	BD-MB=6 sites // JF=2 sites // GG=mapping // BD=meetings, calls, discussions, emails

Emerald ash borer (EAB)	34.1	MB=11 sites AreaA&B // BD=meetings, calls, discussions, emails.
EWBB - (duplicate, see SWPM)	0.0	REFERENCE PLACEHOLDER
Environs Survey in Miami-Dade	27.1	JF=10 sites
<i>Fiorinia</i> scale/Palm phantasma scale in Miami-Dade County	26.1	JF=12 sites
<i>Helicoverpa armigera</i> aka Old world bollworm (HA or OWB) – part of TCS and Nursery Survey	0.0	REFERENCE PLACEHOLDER
Lychee mite survey	44.1	JF=6 sites // GG=mapping support
<i>Maruca vitrata</i> aka Bean pod borer (moth) survey (Monroe County)	36.4	JF=6 sites
Mollusk Survey in Miami-Dade County	37.0	BD=1 site // GG=mapping support // // BD=Meetings, calls, discussions, emails
Nursery Survey (OH-CSB, cotton, SLA, TL, HA, visual)	228.7	MB=2 sites // JF=72 sites // GG=mapping support // BD=calls, discussions, emails
<i>Oxycarenus hyalinipennis</i> (OH or CSB) - SEE Nursery Survey	0.0	REFERENCE PLACEHOLDER
Pink Bollworm Blitz in Miami-Dade (11/26-11/30)	170.0	BD=survey // MB=survey // GG=survey, mapping support
Pink Bollworm (PBW) - <i>Pectinophora gossypiella</i> , and Okra sites	113.1	MB= 9 sites // JF=50 sites // GG=mapping support // BD=meetings, calls, discussions, emails, prep
Psyllids & Potato Psyllid - Inspected two distribution centers	8.0	MB=Lake City and Macclenny
Spotted Lanternfly - scouting in St. Cloud, with Brian Saunders and Robert Leahy	10.0	MB=several
SWPM (aka EWBB) – Solid Wood Packing Materials	314.0	MB=9 sites // JF=29 sites // GG=mapping // BD=meetings, calls, discussions, emails
<i>Spodoptera litura</i> (SLA) (see Nursery Survey) regular traps	0.0	REFERENCE PLACEHOLDER
<i>Spodoptera littoralis</i> (SLS) (see Tomato Commodity Survey) regular traps	0.0	REFERENCE PLACEHOLDER
Tomato Commodity Survey aka TCS (HA-OWB, CC, TA, NE, SLA, SLS)	1286.8	MB=2 sites // KE, RB=many sites // GG=mapping // BD=meetings, calls, discussions, emails
(JF) Leaf Litter (S Florida)	3.0	JF=6 locs
(JF) National Key Deer Refuge (psyllid, leafminer, whitefly)	48.4	JF=15 locs
(JF) Hibiscus bud weevil (Miami-Dade Co.)	10.7	JF=3 locs
2018 Parcel Project	24.0	GG=mapping support
FDACS GIS Task Force	3.0	GG=mapping support
FDACS GIS In-House Training Prep	16.0	GG=mapping support
(GG) Mobile App Development	80.0	GG=mapping support
(GG) Mobile Solutions Governance Team (USDA)	2.0	GG=mapping support
(GG) Plant Inspection PPD App	20.0	GG=mapping support
Subtotal:	2,762.1	
Presentations – Public Outreach	Hours	No. of People in Audience
(BD) Commissioner Fried Visit, Gainesville FL (2/13/2019)	3.0	~5-10
(BD) First Detector workshop & presentation, Hernando County FL (10/22/2018)	8.0	~15
(BD) New Employee Orientation Lunch, Tallahassee FL (01/16/2019)	7.0	~20
(JF) Corn Growers Meeting, Belle Glade FL (10/10/2018)	15.0	~25
(JF) Florida Keys Invasive Exotic Task Force, Marathon FL (12/13/2018)	23.0	~12
(JF) Miami-Dade County Fair, Miami FL (3/14-4/7/2019)	8.0	~128

(KA) Florida State Fair - outreach booth, Tampa FL (2/8-2/18/2019)	16.0	~2,000 - 5,000			
Subtotal:	80.0				
Other Pertinent Activities	Hours				
Backup & Organize I-drive, mapping, misc. (other)	222.5	CM, GG			
Computer - printer - Software Maintenance & Upgrades	66.8	GG			
Contacts / phone lists	1.0	CM			
Personnel (New Hire – MB)	18.0	BD=Meetings, calls, discussions, emails, paperwork			
Permits (EAB, SWPM, etc.) - (State Parks, City parks, Nature Preserves, etc.)	11.0	BD=County permits- J. Farnum, Brian Garrett SFWMD			
Traps and Lures Inventory - organizing & ordering	62.5	MB			
Truck maintenance (includes filling out monthly mileage sheets)	49.8	MB // JF			
Office maintenance and misc. (filing inventory reorganizing shelving)	20.7	JF			
Field Preparations: Includes gathering supplies, mapmaking, and loading vehicle for field work	20.7	BD // JF			
Sample Submission: paperwork, preparing/processing/rearing samples for submission	59.2	MB // JF			
Pack and ship supplies to cooperators	11.7	MB			
PSS Meetings: various such as collaborating/training with USDA and State Survey Coordinator/various phone calls to cooperators and growers	66.2	MB			
Insect care, rearing for Entomology Department & outreach	58.4	KA // JF			
Entomology section duties – misc.	8.3	KA			
Inhouse OTJ training - Learning about beetles within the <i>Xyleborine</i> group (and <i>Agrilus</i> and beetles within <i>Hylesinini</i>) to set aside for county record purposes.	16.6	KA			
Database Maintenance by PSS & Technicians (Survey 123 & Collector apps & others)	121.8	BD // KA // MB			
Moving office prep - to Apiary offices - clean out, measuring, etc.	78.0	BD			
Subtotal:	988.8				
TOTAL ALL SECTIONS:	5,873				
US-State-County-Host Records (species) found by CAPS and entered in NAPIS:	Record	Date & Survey			
E2018-5571-1	<i>Cnestus mutilatus</i> (Blandford)	Marion	NCR	9/11/2018	CAPS-SWPM--BrianAlford
E2018-5926-2	<i>Heteropsylla flexuosa</i> Muddiman & Hodkinson	Monroe	NCR	11/13/2018	CAPS-MarucaS--JF
E2018-5458-1	<i>Nipaecoccus viridis</i> (Newstead) -- on <i>Couroupita quianensis</i> Aubl.	Miami-Dade	NHR	10/17/2018	CAPS-JF
E2018-5679-1	<i>Fiorinia phantasma</i> -- on <i>Pittosporum tobira</i>	Miami-Dade	NHR	10/26/2018	CAPS-PPSS--JF-AR
E2018-5680-1	<i>Fiorinia phantasma</i> -- on <i>Livistona chinensis</i>	Miami-Dade	NHR	10/26/2018	CAPS-PPSS--JF-AR
E2018-5945-1	<i>Fiorinia phantasma</i> -- on <i>Ficus rubiginosa</i>	Miami-Dade	NHR	11/15/2018	CAPS-PPSS--JF-PP
E2018-5952-1	<i>Fiorinia phantasma</i> -- on <i>Shinus terebinthifolia</i> (Brazilian pepper)	Miami-Dade	NHR	11/15/2018	CAPS-PPSS--JF-PP
	Subtotal:		7 records	Pests	
The records below are not pests (or other reason), so were not entered in NAPIS:					
E2017-0343-2 (a moth found in 2017 and ID in 2019)	<i>Cycloplasis</i> sp. -- on <i>Mosiera longipes</i>	Monroe	USA (*) no species	2/8/2017	CAPS--JF
E2018-1830-7 a moth	<i>Nealyda</i> sp.	Monroe	USA (*) no species	4/13/2018	CAPS-MarucaS--BD-ET-JF-JH-JS-LW-PC
E2018-5754-1 a buprestid beetle	<i>Chrysobothris acutipennis</i> Chevrolat	Manatee	NCR (*) not a pest	9/10/2018	CAPS-SWPM-Mega--DRG
E2018-5835-1 a noctuid moth	<i>Lacinipolia parvula</i> (Herrich-Schäffer), a noctuid moth	Palm Beach	NCR (*) not a pest	10/29/2018	CAPS-CCS-CP--JF

E2018-6018-1 a scale	<i>Matsucoccus gallicolus</i> Morrison	Nassau	NCR (*) not a pest	9/28/2018	CAPS-SWPM--RL
E2018-6342-1 a scolytid beetle	<i>Ambrosiodmus minor</i> Stebbing	Marion	NCR (*) not a pest	10/16/2018	CAPS-SWPM--MB-RL
E2019-0094-3 a tineid moth	<i>Dryadula n. sp.</i>	Monroe	NCR (*) no species	1/8/2019	CAPS-MarucaS--JF
E2019-0204-1 a scolytid beetle	<i>Theoborus ricini</i> (Eggers)	Palm Beach	NCR (*) not a pest	5/17/2018	CAPS-EDRR--JF
E2019-0210-1 a scolytid beetle	<i>Ambrosiodmus minor</i> Stebbing	St Johns	NCR (*) not a pest	5/17/2018	CAPS-EDRR--BD-RL
E2019-0283-2 a leafhopper	<i>Xestocephalus subtessellatus</i> Linnavuori	Monroe	NCR (*) not a pest	1/24/2019	CAPS-MarucaS--JF
E2019-0354-3 a leafhopper	<i>Xestocephalus subtessellatus</i> Linnavuori	Miami-Dade	NCR (*) not a pest	12/17/2018	CAPS--JF
E2019-1007-1 a planthopper	<i>Pissonotus muiri</i> Metcalf	Miami-Dade	NCR (*) not a pest	2/26/2019	CAPS--JF
E2018-4673-1 a largid bug	<i>Largus pallidus</i> Halstead -- on <i>Piscidia piscipula</i> (L.) Sarg.	Monroe	NHR (*) not a pest	8/30/2018	CAPS-NS-OH--JF
E2018-6492-2 a soft scale	<i>Coccus capparidis</i> -- on <i>Murraya koenigii</i>	Miami-Dade	NHR (*) not a pest	12/17/2018	CAPS--JF
E2019-0070-1 a whitefly	<i>Aleurodicus dispersus</i> Russell -- on <i>Mosiera longipes</i>	Monroe	NHR (*) not a pest	1/8/2019	CAPS--JF
E2019-0281-1 sugarcane scale	<i>Aspidiella sacchari</i> (Cockerell) -- on <i>Lasiacis divaricata</i>	Monroe	NHR (*) not a pest	1/22/2019	CAPS--JF
E2019-0434-1 a scale	<i>Odonaspis sp.</i> -- on <i>Lasiacis divaricata</i>	Monroe	NHR (*) no species	2/6/2019	CAPS--JF
PPST-2019-98356 a rust	<i>Coleosporium plumeriae</i> (a rust) -- on <i>Jacquemontia tamnifolia</i> (hairy clustervine)	Suwannee	NHR (*) not a pest	11/1/2018	CAPS-CCS-visual--RL-MB
PPST-2019-98357 a fungus	<i>Pyricularia grisea</i> (a fungus) -- on <i>Pennisetum americanum</i> (Pennisetum)	Suwannee	NHR (*) not a pest	11/1/2018	CAPS-TCS-visual--RL-MB
PPST-2019-98956 a fungus	<i>Pestalotiopsis sp.</i> (a fungus) -- on <i>Phlebodium aureum</i> (golden polypody)	Orange	NHR (*) not a pest	12/14/2018	CAPS-SWPM--RL-MB
		Subtotal:	20 records	Not Pests	
The records below are pests and were found by CAPS during this Period, but are not yet entered in NAPIS:					
E2018-6219-1 Phantasma scale	<i>Fiorinia phantasma</i> -- on <i>Howea forsteriana</i>	Miami-Dade	NHR (*) - needs Host code	12/3/2018	CAPS-PPSS--JF-LN
E2018-6221-1 Phantasma scale	<i>Fiorinia phantasma</i> -- on <i>Sabal mexicana</i>	Miami-Dade	NHR (*) - needs Host code	12/3/2018	CAPS-PPSS--JF-LN
E2018-6222-1 Phantasma scale	<i>Fiorinia phantasma</i> -- on <i>Nypa fruticans</i>	Miami-Dade	NHR (*) - needs Host code	12/3/2018	CAPS-PPSS--JF-LN
E2018-6513-1 Phantasma scale	<i>Aleuroplatus validus</i> -- on <i>Mosiera longipes</i>	Monroe	NHR (*) - needs Host code	12/27/2018	CAPS--JF
		Subtotal:	4 records	Pests	
		Grand Total:	31	Records	
(*) denotes non-pest, therefore not entered in NAPIS					

Approved and signed by

Cooperator

Date: -----

ADODR

Date: -----

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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:

Corn Commodity Survey (CCS) in St. Johns County, Florida, 2018 with Robert Leahy USDA-APHIS-PPQ surveying in/next to corn field, photo by Ashleigh Martin FDACS-DPI-CAPS.

MIDDLE PANEL:

New State Record: *Zyginama rossi* Dietrich & Dmitriev (Oak leafhopper), Polk County, photo by Kyle Kittelberger (<http://dpr.ncparks.gov>);

USA Continental Record: *Trogolaphysa riopedrensis* Mari Mutt (a new springtail), Miami-Dade County, photo by Felipe Soto-Adames FDACS-DPI;

New State Record: *Anthonomus testaceosquamosus* Linell (a weevil), Miami-Dade County, photo by Paul Skelley FDACS-DPI;

RIGHT PANEL:

CAPS survey for *Stenoma catenifer* (avocado seed moth) in Miami-Dade County, wing trap in avocado tree, photo by Jake Farnum FDACS-DPI-CAPS.

Interior pages:

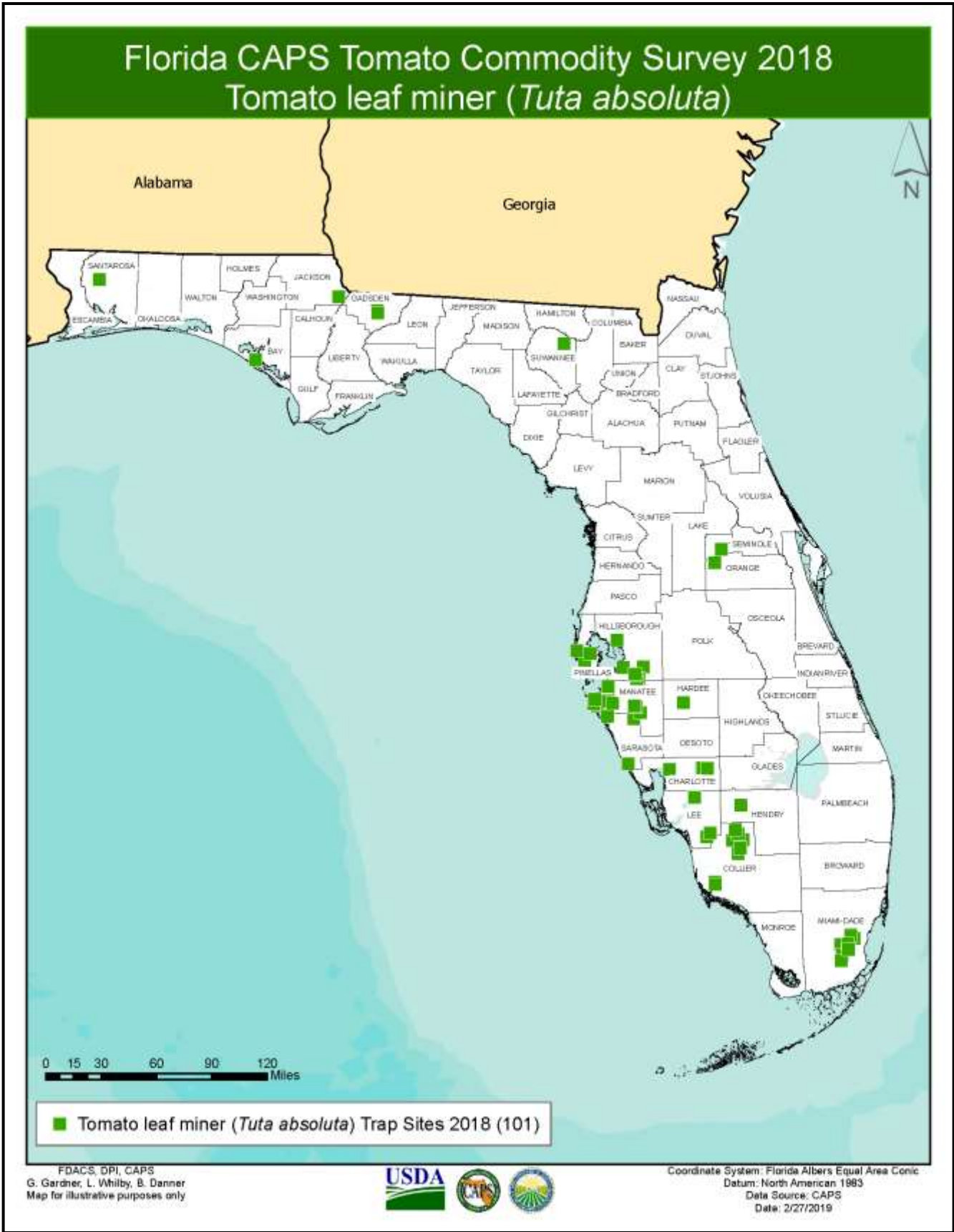
Maps by Glen Gardner, FDACS-DPI-CAPS.

Photographs courtesy of:

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

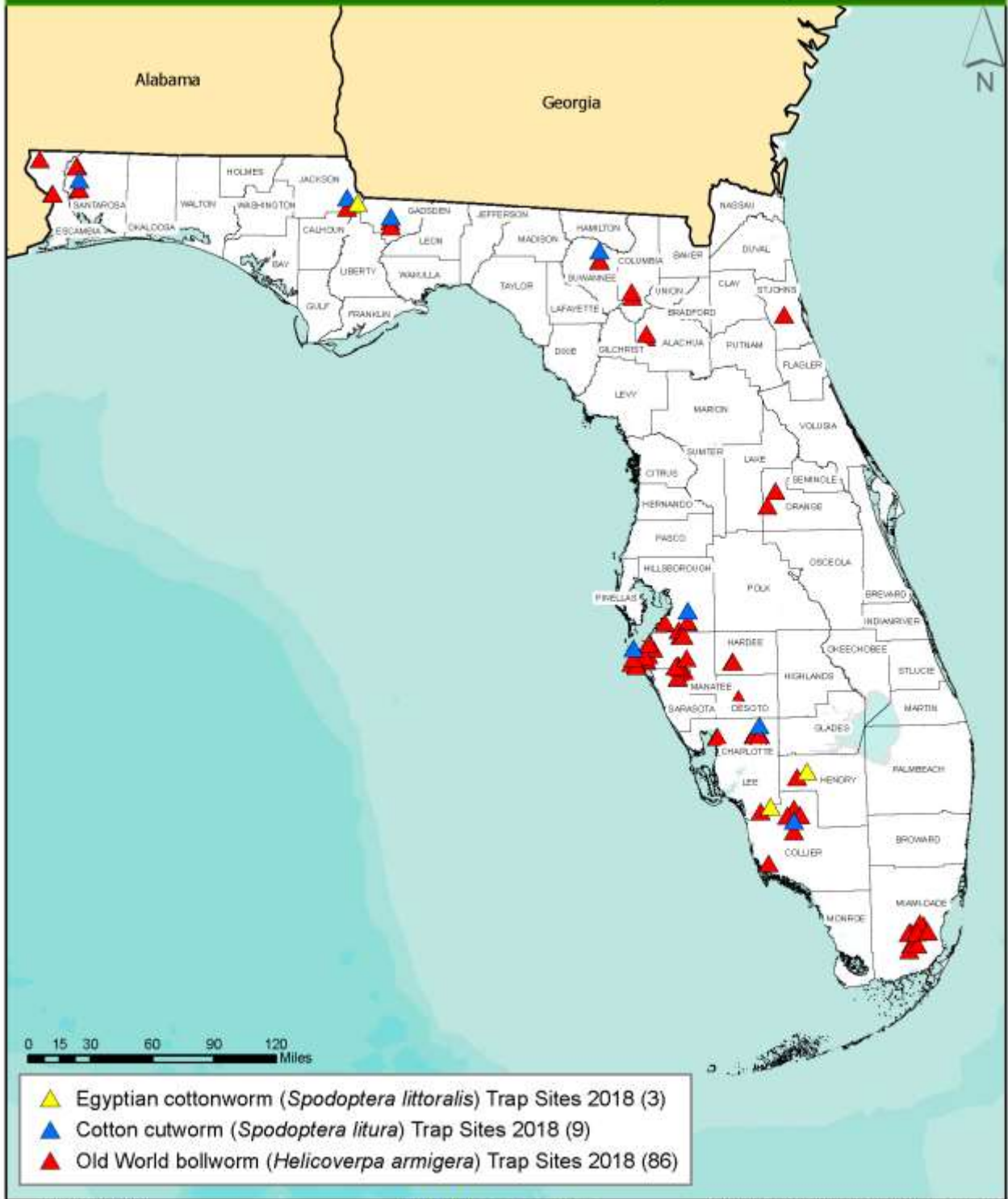
Prepared By:

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



Map 1. Tomato Commodity Survey (part 1 of 3) – *Tuta absoluta* trap locations as of 3/1/2019.

Florida CAPS Tomato Commodity Survey 2018



FDACS, DPL, CAPS
G. Gardner, L. Whitby, B. Danner
Map for illustrative purposes only

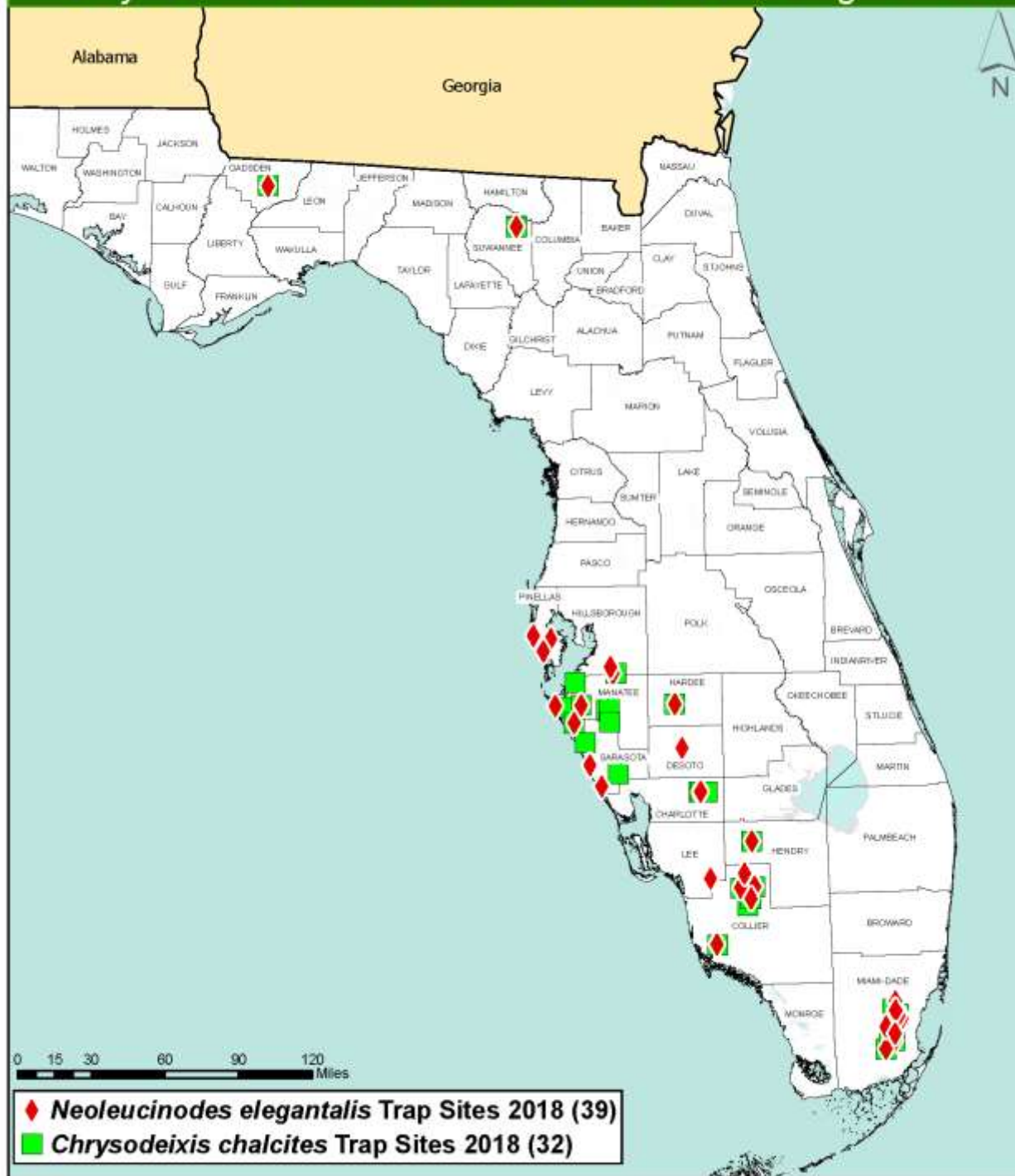


Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 2/27/2019

Map 2. Tomato Commodity Survey (part 2 of 3) – non-*Tuta* moth (*Helicoverpa armigera*, *Spodoptera litura*, *Spodoptera littoralis*) trap locations as of 3/1/2019.

Florida CAPS Tomato Commodity Survey 2018

Chrysodeixis chalcites and *Neoleucinodes elegantalis*



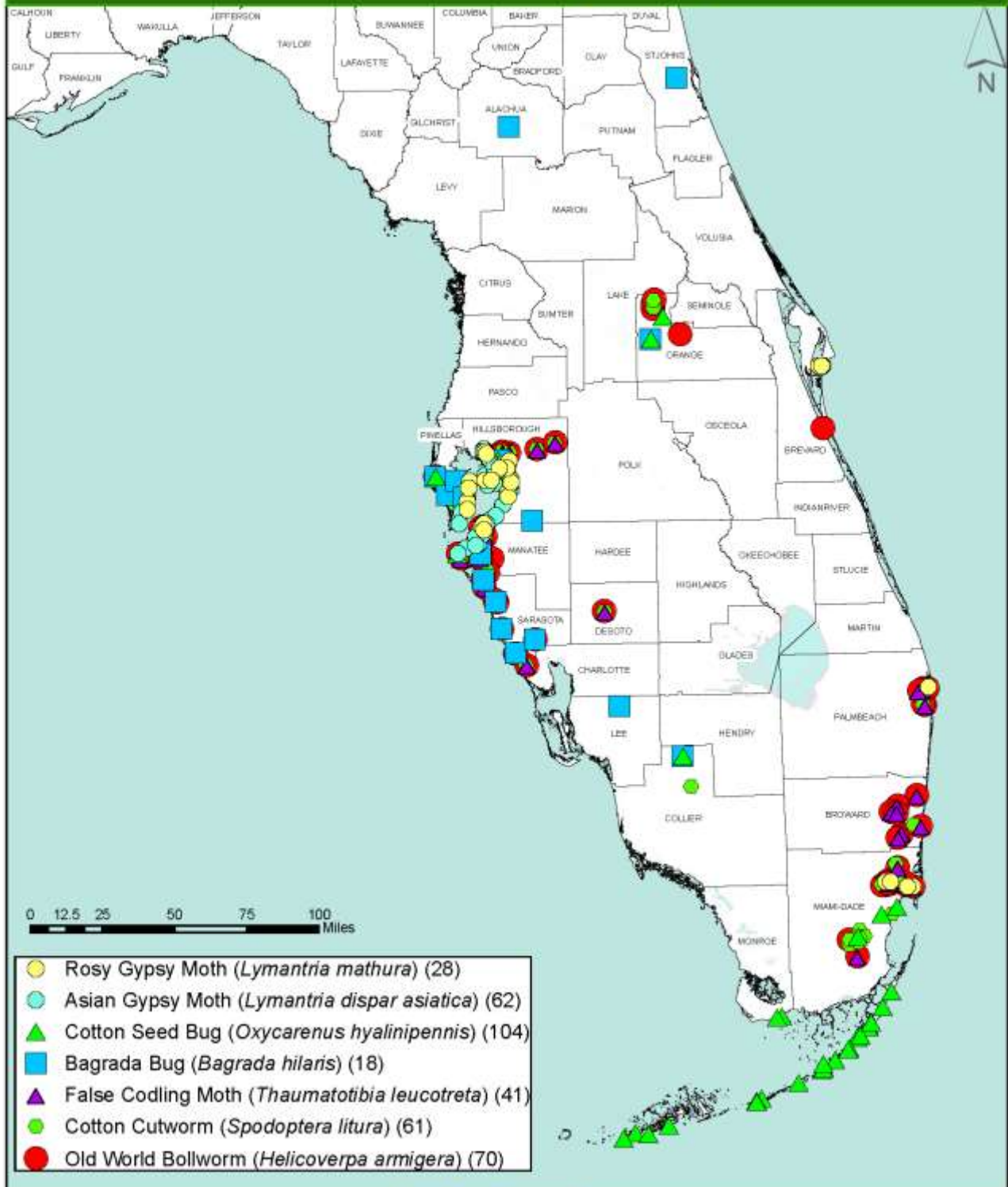
FDACS, DPI, CAPS
G. Gardner, L. Whitby, B. Danner
Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 2/27/2019

Map 3. Tomato Commodity Survey (part 3 of 3) – non-Tuta moth (*Neoleucinodes elegantalis*, *Chrysodeixis chalcites*) trap locations as of 3/1/2012.

Florida CAPS Nursery Survey 2018

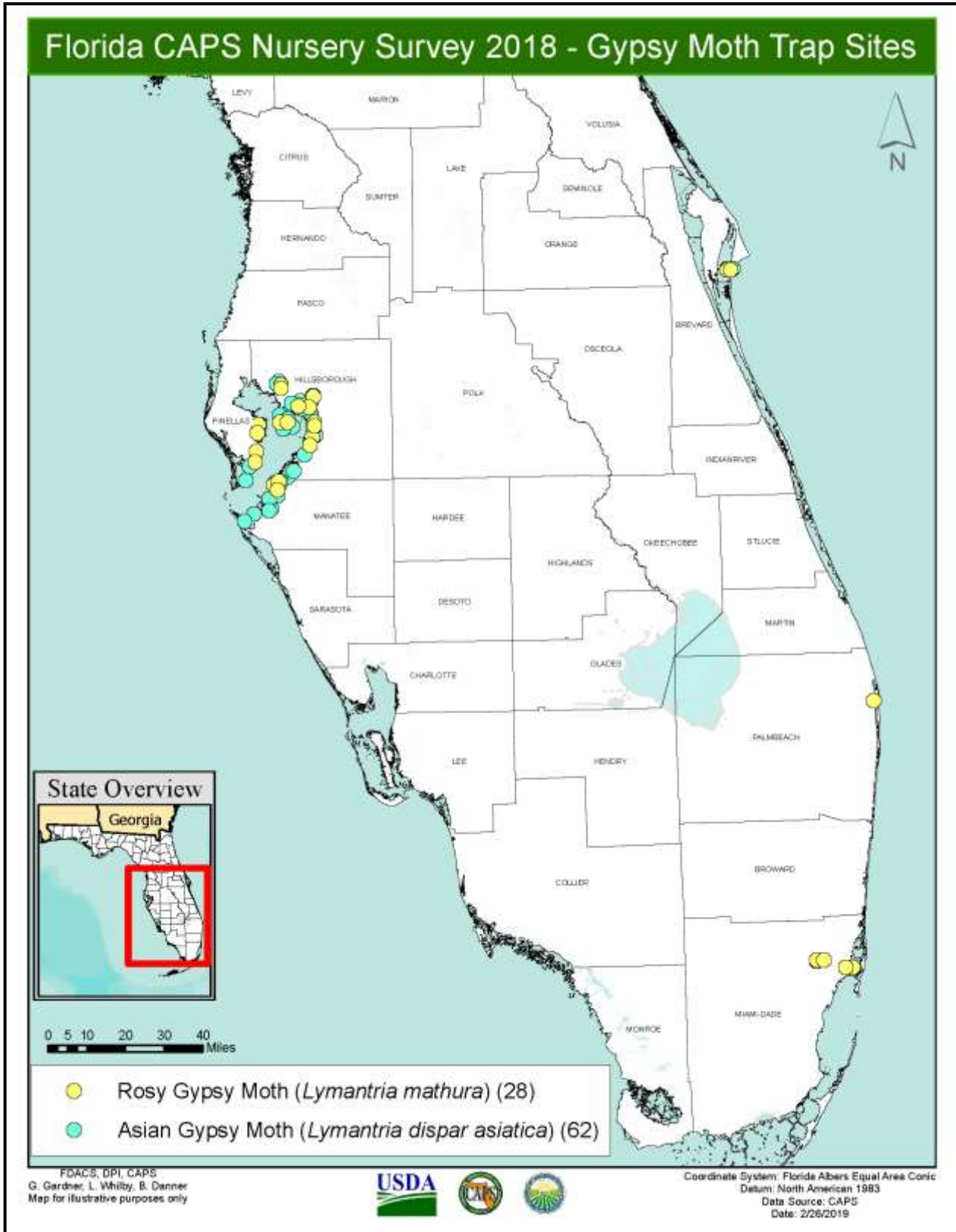


FDACS, DPI, CAPS
G. Gardner, L. Whilby, B. Danner
Map for illustrative purposes only

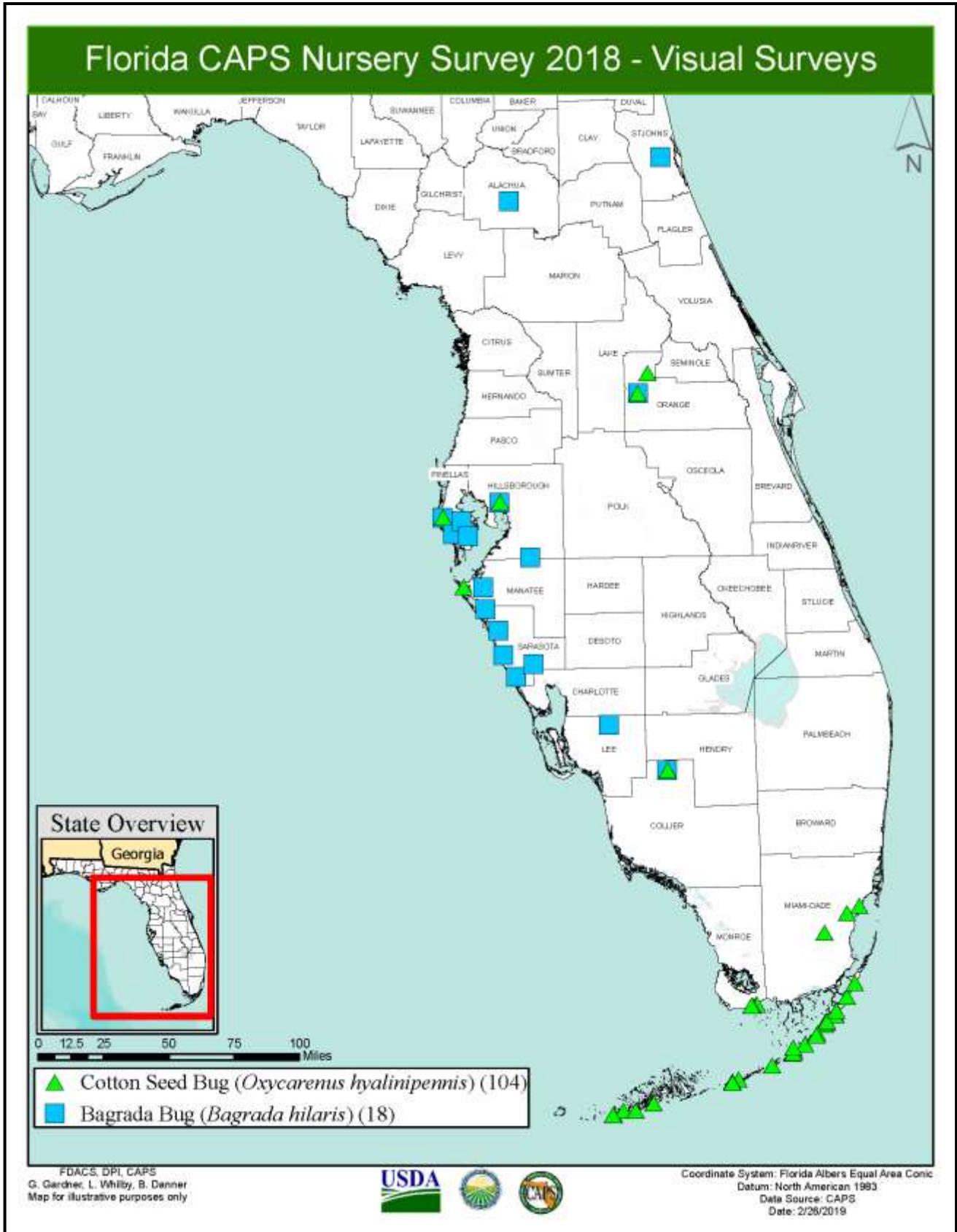


Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 2/28/2019

Map 4. Nursery Survey (part 1 of 4) – showing all trap and county locations of 7 target pests as of 3/1/2019.

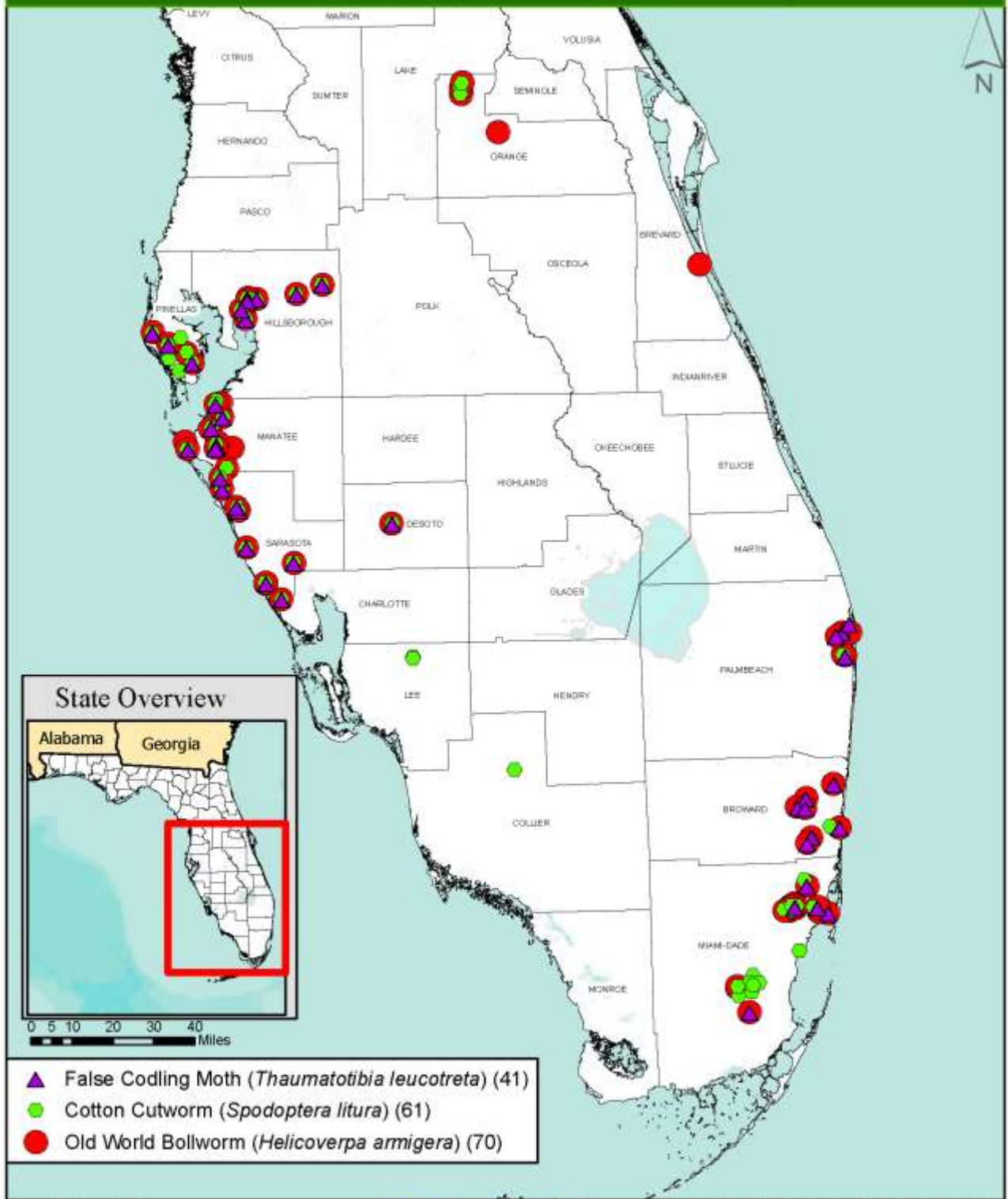


Map 5. Nursery Survey (part 2 of 4) – gypsy moth surveys: Asian gypsy moth (*Lymantria dispar asiatica*) and Rosy gypsy moth (*Lymantria mathura*), and the associated trap locations as of 3/1/2019.



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 3/1/2019.

Florida CAPS Nursery Survey 2018 - Trap Sites



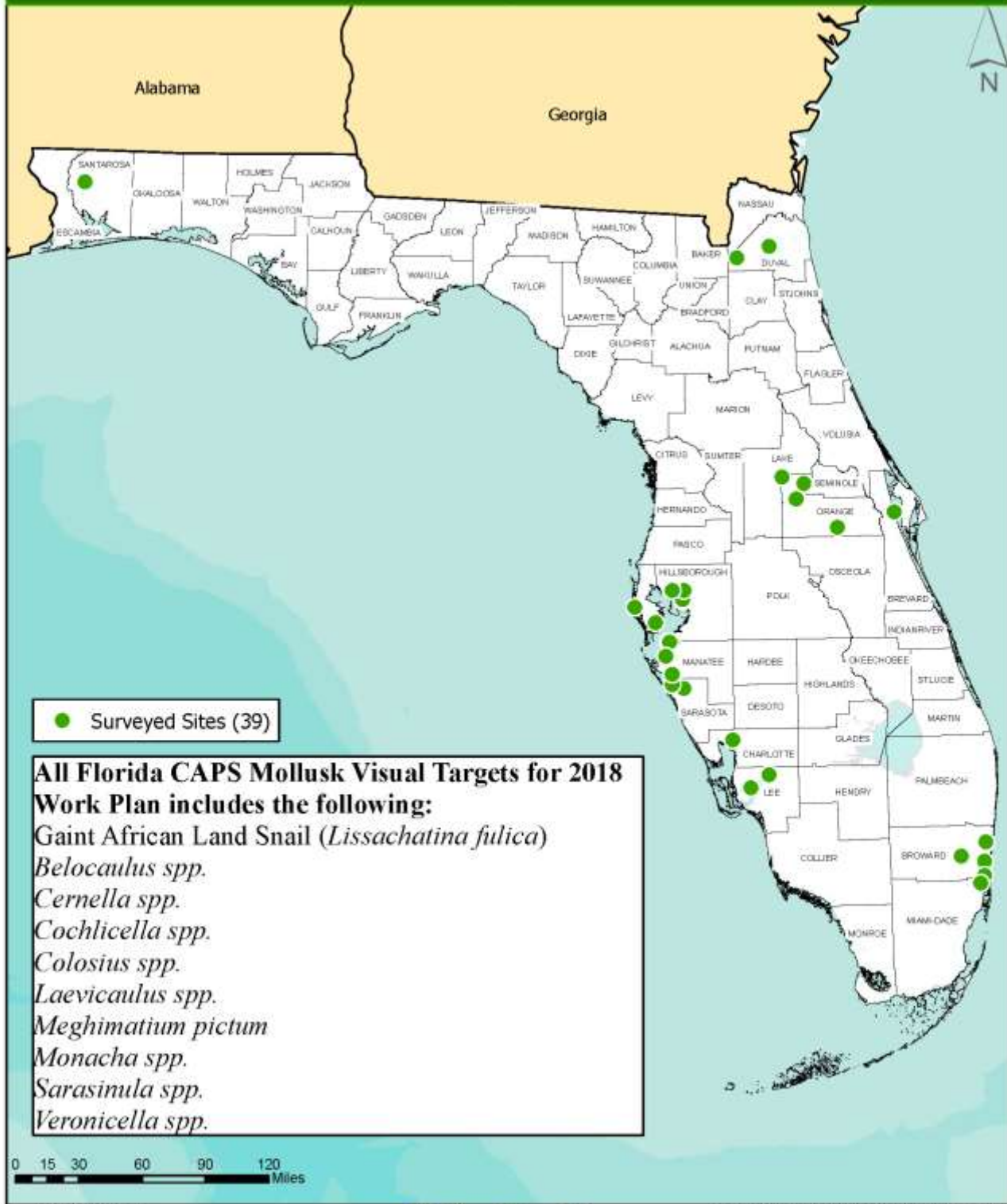
FDACS, DPI, CAPS
G. Gardner, L. Whilby, B. Danner
Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 2/26/2019

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 3/1/2019.

Florida CAPS Mollusk Survey 2018 - Visual Survey Sites



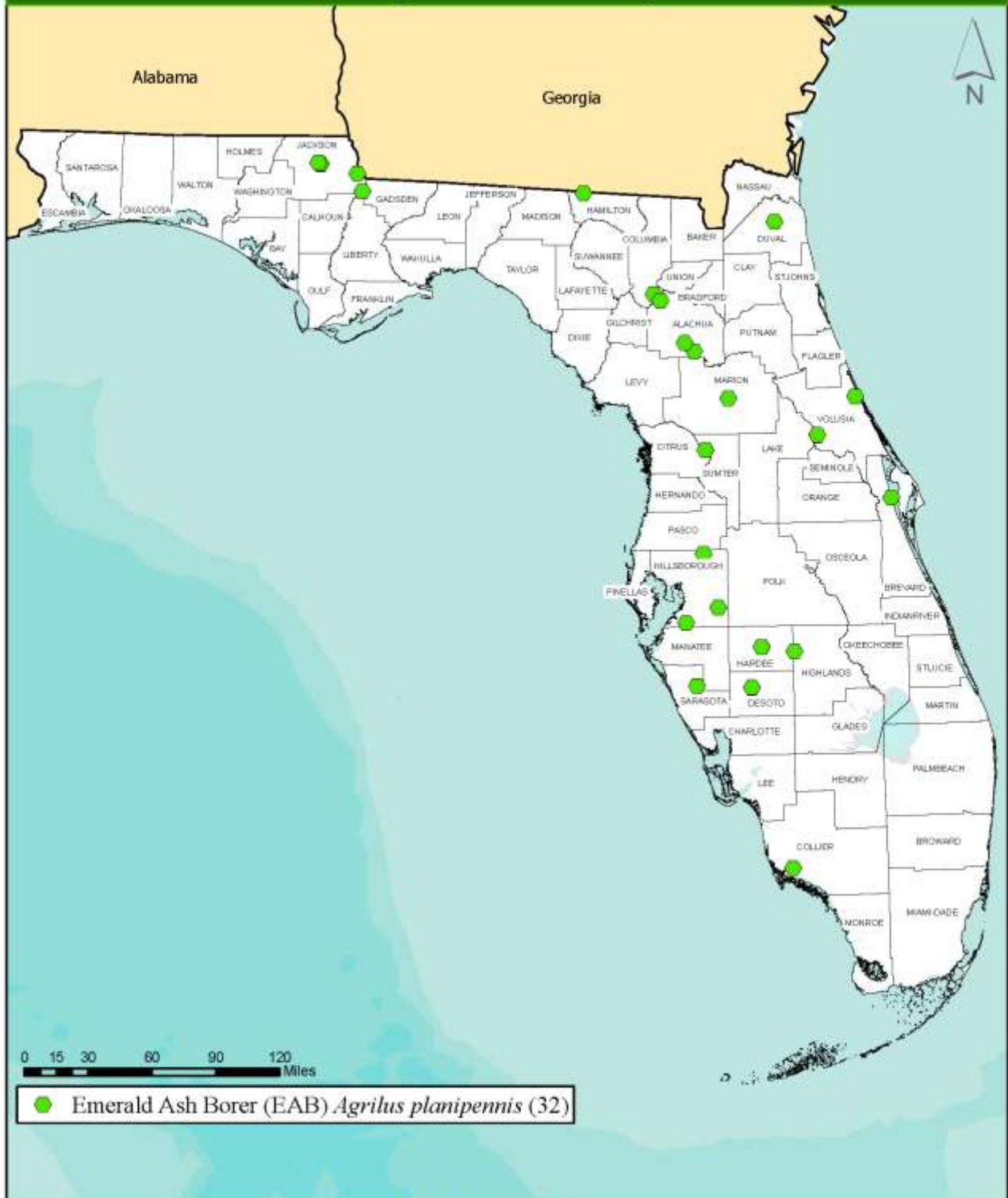
FDACS, DPI, CAPS
G. Gardner, L. Whilby, B. Danner
Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 2/26/2019

Map 8. Exotic Mollusk Survey – visual survey locations in Florida for ten (10) exotic pest mollusk/snail species as of 3/1/2019.

Exotic Wood Boring Beetle Survey Locations 2018



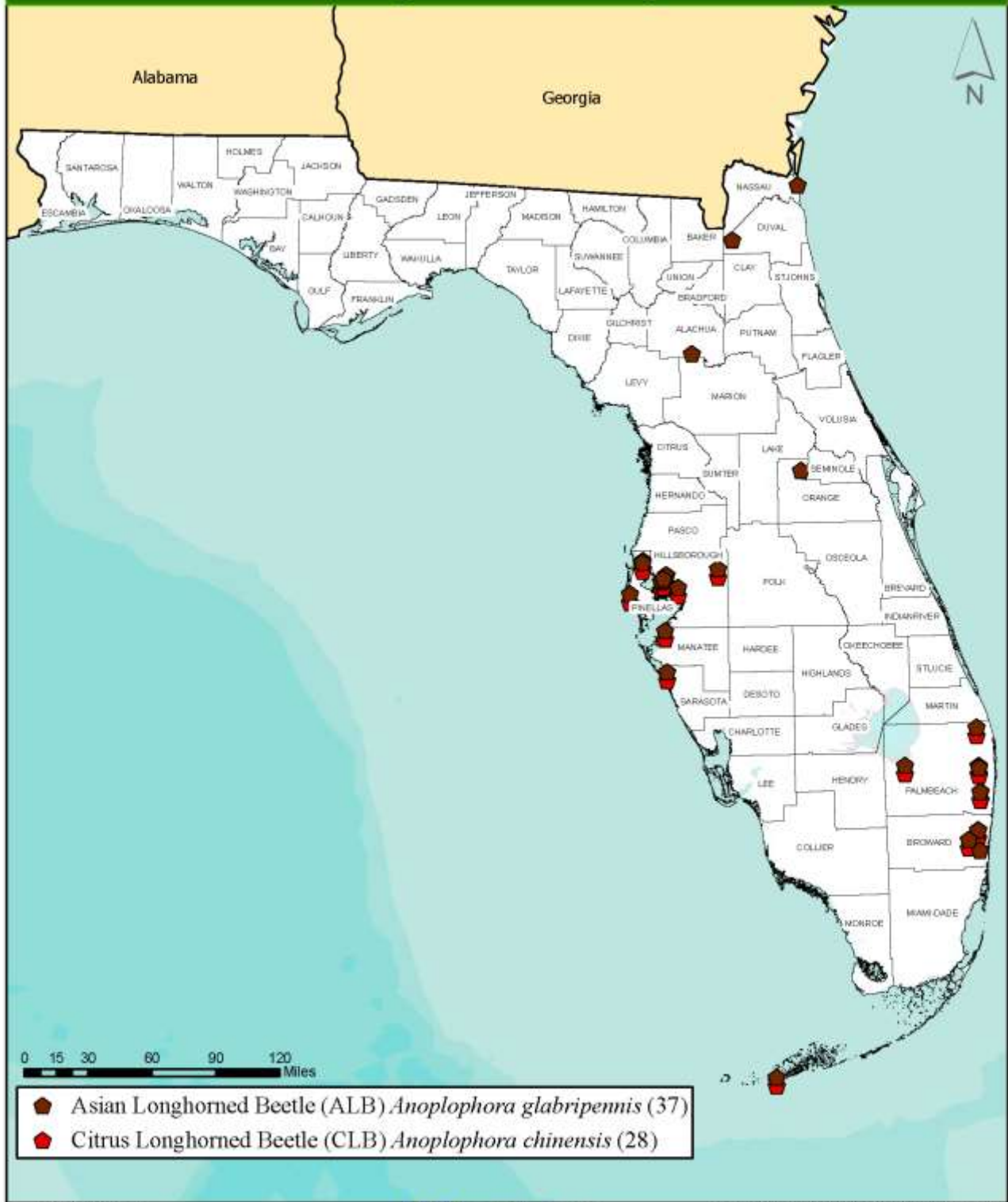
FDACS, DPI, CAPS
G. Gardner, L. Whilby, B. Danner
Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 2/25/2019

Map 9. Emerald ash borer (EAB) Survey - trap locations in Florida as of 3/1/2019.

Exotic Wood Boring Beetle Survey Locations 2018

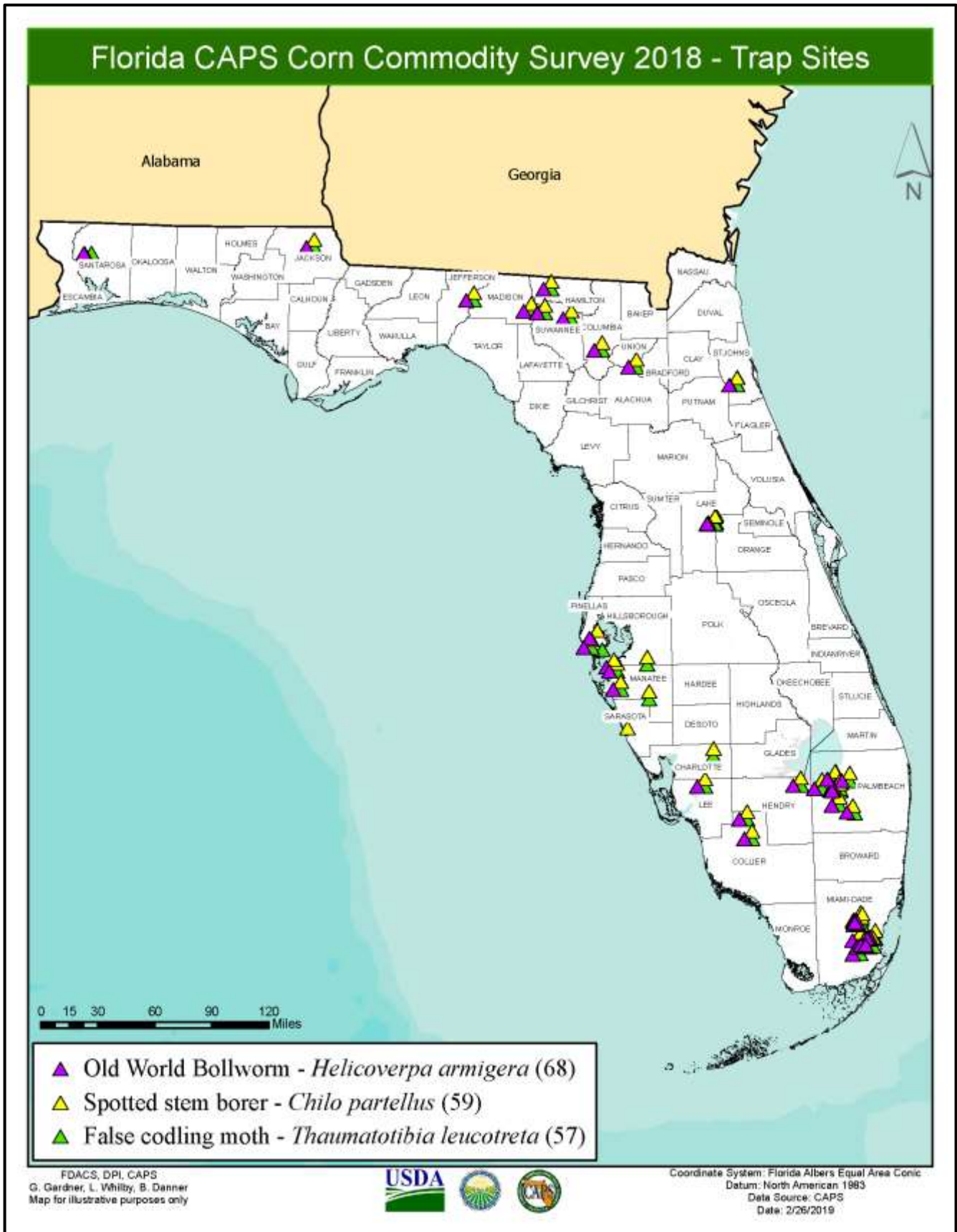


FDACS, DPI, CAPS
G. Gardner, L. Whilby, B. Danner
Map for illustrative purposes only



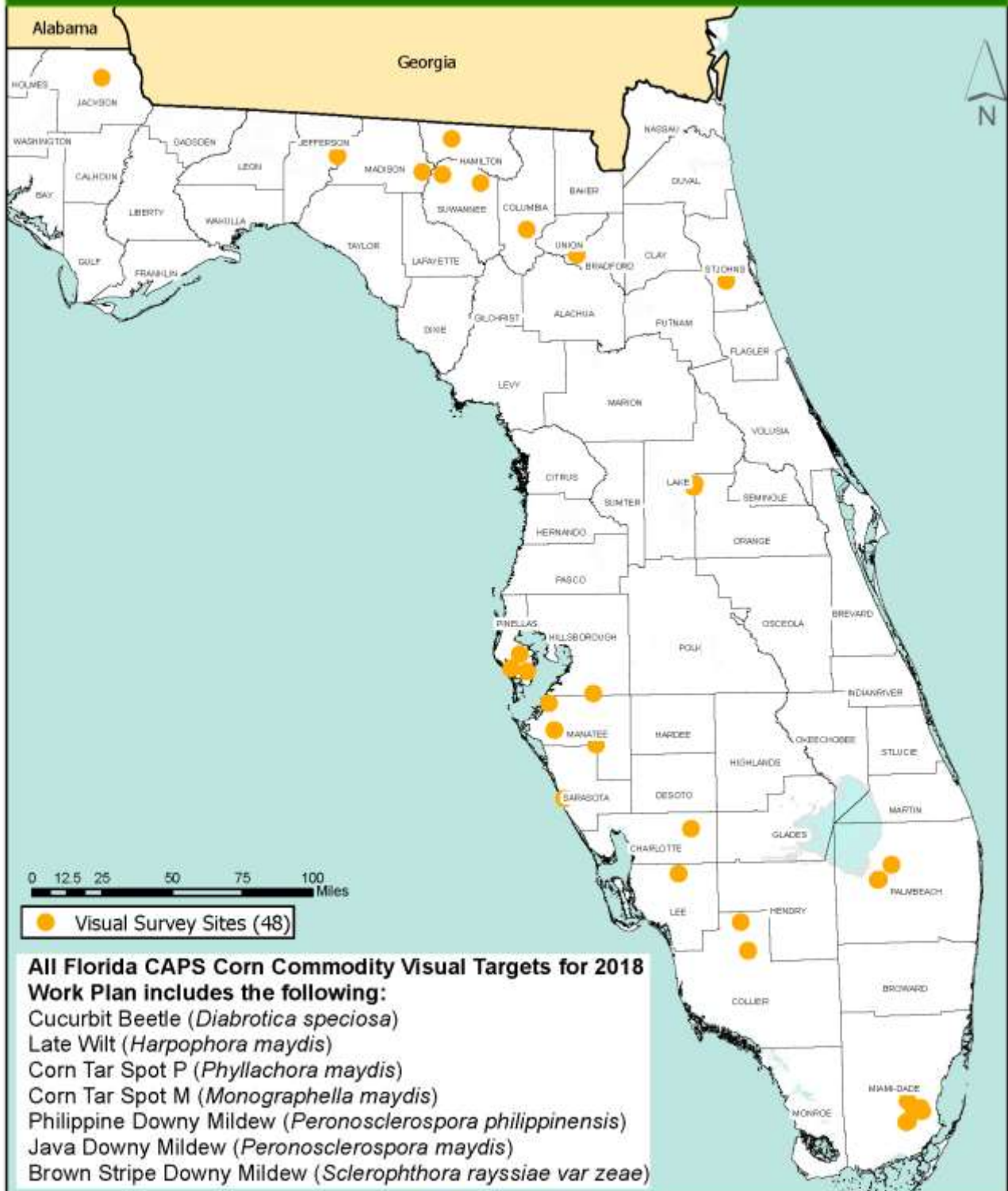
Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 2/25/2019

Map 10. Asian longhorned beetle (ALB), and Citrus longhorned beetle (CLB) Survey - trap locations in Florida as of 3/1/2019.



Map 11. Corn Commodity Survey – (part 1 of 2) – three (3) pests (*Helicoverpa armigera*, *Thaumatotibia leucotreta*, *Chilo partellus*) and the associated trap locations as of 3/1/2019.

Florida CAPS Corn Commodity Survey - Visual Survey Sites



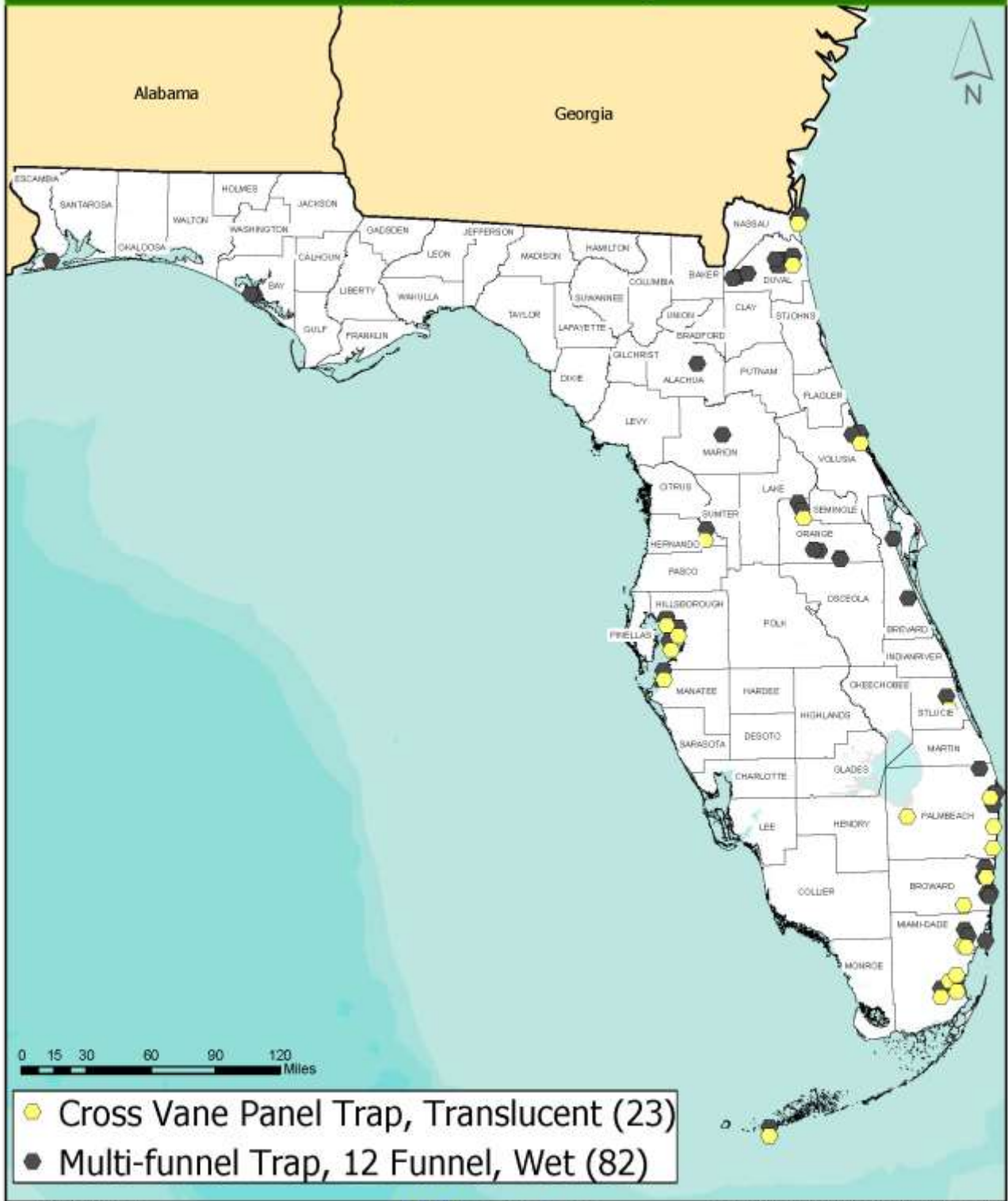
FDACS, DPI, CAPS
G. Gardner, L. Whilby, B. Danner
Map for illustrative purposes only



Coordinate System: Florida Albers Equal Area Conic
Datum: North American 1983
Data Source: CAPS
Date: 2/26/2019

Map 12. Corn Commodity Survey – (part 2 of 2) – visual survey locations in Florida as of 3/1/2019.

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: 2/25/2019

Map 13. Exotic Wood Boring Beetles/Solid Wood Packing Materials Survey (EWBB/SWPM) - trap locations in Florida as of 3/1/2019.

Figures:

Spotted lanternfly damage to bark of Tree of Heaven (*Allianthus altissima*)

Spotted lanternfly, hatched egg cases

Spotted lanternfly adults
 above dorsal view
 left: lateral view
 right: dorsal, pinned

Spotted lanternfly egg cases

Spotted lanternfly, immature: early nymph **late nymph**

NOVEMBER 2018

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

Lycorma delicatula (the spotted lanternfly), an invasive insect pest of stone fruits and grapes
 Photographs (clockwise from top left) courtesy of: Holly Roguza, PA Dept. Agriculture, Bureau of Plant Industry (tree damage UGA5522656, adult dorsal pinned UGA5524067); Lawrence Baerlinger, PA Dept. Agriculture (hatched egg cases UGA5522639, dorsal UGA5524251, lateral UGA5523442); and PA Dept. Agriculture, from Park et al. 2009 (early & late nymphs, and egg cases on tree).
 Background image of Prunus orchard and grape vines courtesy of Cyndi Moncrief, FDACS-OP-CAPS.

Cooperative Agricultural Pest Survey Program - Florida
<http://www.freshfromflorida.com/Divisions-Offices/Plant-Industry/Bureau-and-Services/CAPS>

Fig. 1. CAPS downloadable calendar for November 2018, featuring, *Lycorma delicatula*, aka the spotted lanternfly, a pest of grapes and stonefruits.