CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE

CALIFORNIA AGRICULTURE DETECTOR DOG TEAM PROGRAM

Annual Report

July 1, 2014 - June 30, 2015

Pictured: ***California Dog Team's group picture***

Photo taken by Josh Norem, The Furrtographer (http://www.thefurrtographer.com/)

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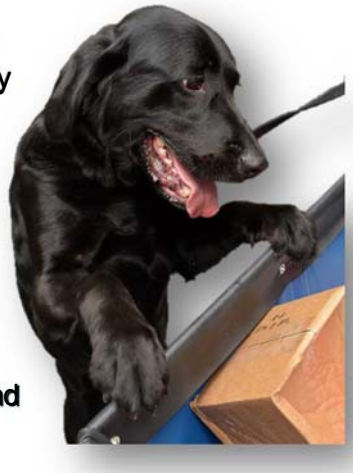
PURPOSE OF COOPERATIVE AGREEMENT #14 8506 1165 CA

Under USDA agreement #14-8506-1165-CA California Agriculture Detector Dog Teams (herein referenced as California Dog Teams) were used to enhance inspection and surveillance activities related to plant products entering the State of California via parcel delivery facilities for the purpose of excluding the introduction of plant pests that may negatively impact agriculture.

ACTIVITIES PERFORMED BY CDFA

CDFA performed the following during agreement period:

- Administered and provided guidance for the statewide Program
- Distributed funds through cooperative agreements to C ounty Agricultural Commissioners (CAC)
- Verified all expenses approved for payment to CAC w ere legitimate expenses as per federal and state regulations
- Acted as the liaison between CAC and the National Dete ctor Dog Training Center (NDDTC)
- Communicated significant pest finds to USDA/APHIS and smuggling information to USDA/SITC
- Analyzed data to ensure program activities aligned with go als and to verify the Program was run effectively and efficiently



ACTIVITIES PERFORMED BY COUNTY AGRICULTURAL COMMISSIONERS

The California Dog Teams and inspectors were distributed as outlined in **Table 1** below. Nine of the eleven California Dog Teams worked parcel facilities for the full reporting period (July 1, 2014 - June 30, 2015)

TABLE 1: Distribution of CA Dog Teams

County	Area Covered	# of Teams
Alameda	Alameda County	1
Contra Costa	San Francisco Bay Area	2
Fresno	Fresno County	1
Los Angeles	Los Angeles County	2
Sacramento	Sacramento Valley	1
San Bernardino	Inland Empire Area	1
San Diego	San Diego County	2
Santa Clara	South Bay Area	1
Total		**11**

During this reporting period, Venus, one of the San Diego Dogs, required shoulder surgery in July. After the surgery, she received platelet- rich plasma injections to promote healing of the elbow joint. She remained on a light to moderate work schedule to limit the amount of high impact on her elbow for most of the reporting period.

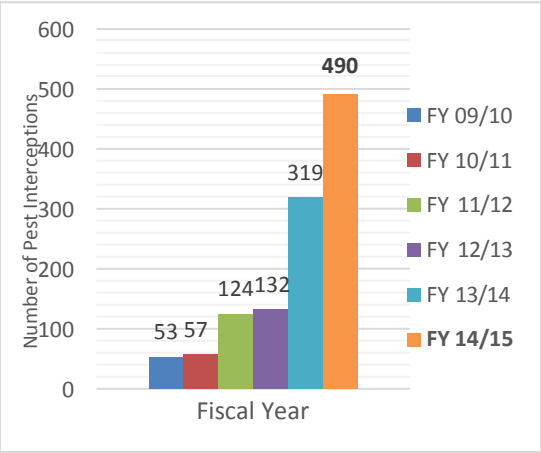
Fresno and Santa Clara counties each had handlers retire from the Program during this reporting period. The Santa Clara handler left the Program in August 2014, and the Fresno handler retired in December 2014.

SUMMARY OF DOG TEAM INTERCEPTIONS

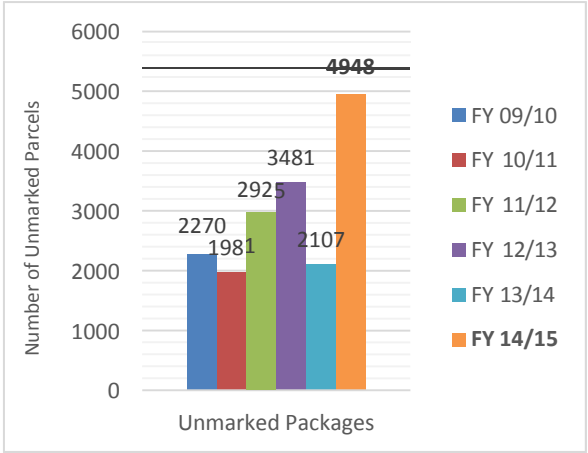
The California Dog Teams continue to demonstrate that unmarked parcels present a high-risk pathway for significant agricultural pests to enter California**.**

During the agreement period, a total of 490 significant pests were intercepted by California Dog Teams (**Graph 1**), which is **a 70% increase** from FY 2013/2014. Some of these interceptions involved multiple pest specimens in a single package. The California Dog Teams alerted on 22,583 total marked and unmarked parcels containing agricultural products and had a **97% accuracy rate** detecting agricultural commodities in unmarked packages. During the agreement period, the California Dog Teams intercepted 4,948 unmarked parcels containing agricultural commodities (**Graph 2**). Of the total alerted parcels (22,583), 4,548 were intercepted at USPS facilities and of these packages nearly 80% (3,578) were unmarked. Additionally, due to the efforts of the California Dog Teams, 2,273 rejections have been issued for violations of state and federal plant quarantine laws and regulations (**Graph 3**), **a 65% increase** from FY 2013/2014.

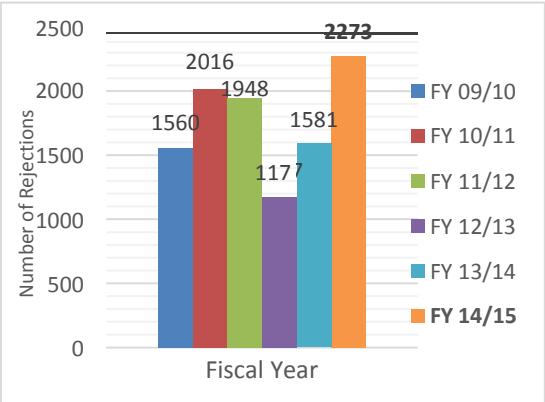
GRAPH 1: PEST INTERCEPTIONS



GRAPH 2: UNMARKED PARCELS



GRAPH 3: VIOLATION OF PLANT LAWS AND REGULATIONS



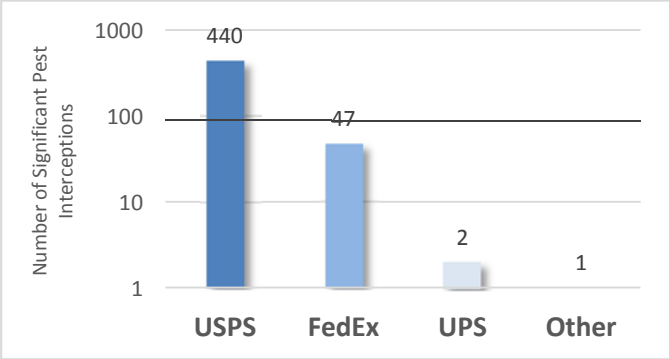
USPS PROGRESS

CDFA continued laying the groundwork for Dog Teams working at U.S. Postal Service's (USPS) processing and distribution centers. This work is conducted under a multiagency Memorandum of Understanding (MOU). This MOU requires inspectors to contact either the shipper or receiver within 24 hours to gain consent to open a parcel the dog alerted on. Although this process is resource intense, data collected over the past two years shows evidence that the USPS is the highest risk parcel pathway based not only on the quantity of pest interceptions, but also on the quality of pest interceptions.

Because of the risks associated with the USPS, California Dog Teams started concentrating their efforts in this pathway. CDFA will continue to work with the USDA and USPS to improve the existing MOU by making modifications in the existing language to clarify the intent and instructions. The pursuit of search warrants to open parcels when inspectors are unable to gain consent began this agreement period as a pilot program in Santa Clara County (San Jose USPS). All parcels opened with a search warrant have contained agricultural material. CDFA continues to work with USDA on expanding the ability to seek search warrants at all USPS locations.

Graph 4 below illustrates the parcel facilities where pests have been intercepted and demonstrates the risk of parcels entering California through the USPS. The California Dog Teams have increased inspection hours at the United States Postal Service (USPS) as a result of the data.

GRAPH 4: SIGNIFICANT PEST INTERCEPTION TOTALS PER FACILITY TYPE



SIGNIFICANT PEST INTERCEPTIONS

During the agreement period California Dog Teams were extremely successful at protecting California agriculture by intercepting significant pests of agriculture before they could be introduced into California. **Table 2** below lists the number and type of actionable pests which included 87 actionable A-rated pests**,** 402 actionable Q-rated pests, and 1 actionable W-rated pest

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Table 2: Significant Pests Interceptions

July 1, 2014 – June 30, 2015

Interceptions	Scientific Name	Common Name	Rating	Origin
1	*Acari Order*	Mite	Q	HI
1	*Aceria annonae*	Eriophyid mite	Q	PR
1	*Adoxophyes sp.*	Moth	Q	AR
4	*Aleurocanthus woglumi*	Citrus blackfly	A	FL (4)
2	*Aleurodicus dispersus*	Spiraling whitefly	Q	FL (2)
1	*Aleurotrachelus sp.*	Whitefly	Q	FL
1	*Aleurotrachelus trachoides*	Whitefly	Q	PR
2	*Aleurovitreus sp.*	Whitefly	Q	FL (2)
1	*Anaphothrips sp.*	Thrips	Q	MN
1	*Anastrepha obliqua*	West Indian Fruit Fly	A	PR
3	*Anastrepha sp.*	Fruit Fly	A	FL (3)
5	*Anastrepha suspensa*	Caribbean Fruit Fly	A	FL (5)
1	*Ancylostomia stercorea*	Moth	Q	FL
1	*Andaspis hawaiiensis*	Hawaiian scale	Q	FL
1	*Anoplolepis gracilipes*	Ant	Q	HI
1	*Aonidiella aurantii*	California red scale	Q	PR
8	*Aonidiella orientalis*	Oriental scale	A	FL (8)
8	Aphididae Family	Aphid	Q	CA (1), FL (3), GA (1), TX (1), VA (2)
1	Aphidiidae Family	Aphid wasp	Q	PA
3	*Aspidiella sacchari*	Armored scale	Q	FL (3)
2	*Aulacaspis alisiana*	Scale	Q	FL (2)
1	*Aulacaspis sp.*	Armored scale	Q	HI
16	*Aulacaspis tubercularis*	Armored scale	Q	FL (11), MS (1), PR (3), Unk (1)
1	*Bactrocera dorsalis group*	Oriental Fruit Fly	A	HI
3	*Bambusaspis miliaris*	Robust bamboo pit scale	Q	FL (3)
2	*Bephratelloides sp.*	Eurytomid wasp	Q	FL (2)
1	Blastobasidae Family	Moth	Q	FL

Interceptions	Scientific Name	Common Name	Rating	Origin
1	Brentidae Family	Xylophagous beetle	Q	FL
1	*Callosobruchus sp.*	Cowpea weevil	Q	HI
1	*Camponotus floridanus*	Ant	Q	FL
9	*Candidatus Liberibacter asiaticus*	Citrus greening/ Huanglongbing (HLB)	A	FL (7), PR (2)
1	*Cardiocondyla sp.*	Ant	Q	FL
1	*Caryobruchus sp.*	Beetle	Q	PR
2	Cerambycidae Family	Longhorm beetle	Q	FL, LA
1	Cercopidae Family	Froghoppers	Q	MS
1	*Cercospora cf. flagellaris*	Leaf spot	Q	TX
2	*Ceroplastes floridensis*	Florida wax scale	A	FL (2)
1	*Ceroplastes rubens*	Red wax scale	A	HI
1	*Ceroplastes sp.*	Wax scale	Q	FL
1	Chalcididae Family	Chalcidid wasp	Q	FL
1	*Chionaspis sp.*	Armored scale	Q	FL
1	Chrysididae Family	Cuckoo wasp	Q	MN
2	Cicadellidae Family	Leafhopper	Q	HI, IL
1	*Clavaspis herculeana*	Herculeana scale	A	FL
27	Coccidae Family	Soft scale	Q	FL (20), IL (3), PR (3), TX (1)
1	*Coccus capparidis*	Capparis soft scale	Q	FL
1	*Coccus sp.*	Soft scale	Q	Unk
2	*Coccus viridis*	Green scale	A	FL (2)
33	*Colletotrichum asianum*	Anthracnose	Q	FL (33)
1	*Colletotrichum boninense*	Anthracnose	Q	FL
1	*Colletotrichum siamense*	Anthracnose	Q	PR
1	*Colletotrichum truncatum*	Leaf spot	Q	FL
5	Curculionidae Family	Weevil	Q	FL, IL, MA, MS, NC
1	*Cuscuta campestris*	Dodder	W	FL
1	*Cydia caryana*	Hickory shuckworm	A	PA
2	*Dasturella divina*	Bamboo rust	Q	FL (2)
3	*Delottococcus confusus*	Mealybug	Q	HI (3)
1	Delphacidae Family	Planthoppers	Q	VA
45	Diaspididae Family	Scale	Q	CA (1), FL (29), HI (2), IL (1), LA (1), NJ (1), PR (9), TX (1)
1	Diptera Order	Fly	Q	FL
11	*Dysmicoccus grassii*	Mealybug	A	FL (11)
1	*Dysmicoccus sp.*	Mealybug	Q	FL (1)

Interceptions	Scientific Name	Common Name	Rating	Origin
1	*Dysmicoccus texensis*	Mealybug	Q	MI (1)
1	*Eichhornia crassipes*	Common water hyacinth	Q	FL
1	*Elsinoe australis*	Sweet orange scab	A	TX
1	*Eurosta solidaginis*	Gall fly	Q	MI
7	*Ferrisia dasylirii*	Mealybug	Q	FL (5), MI (1), MS (1)
3	*Ferrisia sp.*	Mealybug	Q	FL (3)
1	*Fiorinia theae*	Tea scale	A	LA
1	Flatidae Family	Planthoppers	Q	FL
1	*Frankliniella tritici*	Flower thrips	A	MA
5	Gastropoda Order	Snail/Slug	Q	FL (4), NJ (1)
2	Gelechiidae Family	Gelechiid moths	Q	FL (2)
1	*Geotomus pygmaeus*	Burrowing bug	Q	HI
2	Gracillariidae Family	Leaf minor moths	Q	FL (2)
1	Gryllidae Family	Cricket	Q	FL
2	*Gymnosporangium juniperi-virginianae*	Cedar apple rust	A	MA (2)
1	*Helicotylenchus multicinctus*	Endoparasite of bananas	Q	FL
1	*Hendecasis duplifascialis*	Moth	Q	IN
2	*Howardia biclavis*	Mining scale	A	FL (1), TX (1)
21	*Insect eggs, etc.*	Insect eggs	Q	FL (12), HI (3), IL (1), ME (1), TX (3), Unk (1)
1	*Ischnaspis longirostris*	Black thread scale	A	FL
1	Isoptera Order	Termite	Q	PR
1	*Kweilingia divina*	Bamboo rust	Q	FL
1	*Lasiodiplodia iraniensis*	Black-soot disease	Q	PR
1	Lepidoptera Order	Moth	Q	FL
6	*Lindingaspis floridana*	Armored scale	Q	FL (6)
1	*Lopholeucaspis cockerelli*	Cockerell scale	A	MS
1	*Lymantria dispar*	Gypsy moth	A	MA
3	*Maconellicoccus hirsutus*	Pink hibiscus mealybug	A	FL (3)
1	*Meghimatium bilineatum*	Slug	Q	HI
3	*Milviscutulus mangiferae*	Mango shield scale	Q	FL (2), NJ (1)
1	*Mycetaspis personata*	Masked scale	Q	FL
1	*Neofusicoccum batangarum*	Black fruit spots	Q	FL
3	*Neofusicoccum mangiferae*	Black fruit spots	Q	FL (3)
1	*Paracoccus ferrisi*	Mealybug	Q	CA

Interceptions	Scientific Name	Common Name	Rating	Origin
1	*Paracoccus sp.*	Mealybug	Q	HI
1	*Parlatoria ziziphi*	Black citrus scale	A	PR
1	*Parmarion martinsi*	Semi-slug	Q	HI
13	*Phalacrococcus howertoni*	Soft scale	Q	FL (13)
1	*Pheidole megacephala*	Bigheaded ant	Q	FL
9	*Pheidole sp.*	Ant	Q	FL (9)
1	*Philephedra tuberculosa*	Soft scale	Q	FL
1	Phlaeothripidae Family	Thrips	Q	FL
1	*Phyllophaga sp.*	Scarab beetle	Q	AR
1	*Pinnaspis buxi*	Boxwood scale	A	HI
9	*Pinnaspis strachani*	Lesser snow scale	A	FL (3), HI (2), PR (4)
2	*Planococcus sp.*	Mealybug	Q	FL (1), HI (1)
1	*Prococcus acutissimus*	Slender soft scale	Q	FL
2	*Pseudaonidia duplex*	Camphor scale	Q	FL (2)
3	*Pseudaonidia trilobitiformis*	Trilobe scale	Q	FL (2), HI (1)
5	*Pseudaulacaspis cockerelli*	Magnolia white scale	A	FL (4), SC (1)
1	*Pseudaulacaspis sp.*	Armored scale	Q	FL
33	Pseudococcidae Family	Mealybug	Q	CA (1), FL (22), HI (5), IL (1), PR (5), TX (1)
1	*Pseudococcus importatus*	Imported mealybug	A	Unk
3	*Pseudococcus jackbeardsleyi*	Mealybug	Q	FL (3)
1	*Pseudococcus lycopodii*	Club moss mealybug	Q	HI
3	*Pseudococcus odermatti*	Mealybug	Q	FL (3)
5	*Pseudococcus sp.*	Mealybug	Q	FL (2), KS (1), OH (2)
1	*Pseudomyrmex gracilis*	Ant	Q	LA
1	*Psychidae Family*	Bagworm moth	A	GA
4	*Psyllidae Family*	Psyllid	Q	FL (3), TX (1)
1	*Pulvinaria sp.*	Soft scale	Q	FL
8	Pyralidae Family	Snout moth	Q	Colombia (2), FL (3), NJ (1), NY (1), PR (1)
1	Pyrgomorphidae Family	Grasshopper	Q	TX
2	*Radionaspis indica*	Mango scale	Q	FL (1), PR (1)
1	*Rhagoletis suavis*	Walnut husk fly	A	PA
2	*Rutherfordia major*	Lychee bark scale	Q	FL (2)
1	*Scirtothrips dorsalis*	Thrips	Q	FL
1	Scolytidae Family	Bark beetle	Q	HI

Interceptions	Scientific Name	Common Name	Rating	Origin
2	*Selenothrips rubrocinctus*	Redbanded thrips	A	FL (2)
1	Sesiidae Family	Clearwing moth	Q	FL
1	*Spilococcus steelii*	Scale	Q	NM
2	Subulinidae Family	Snail	A/Q	FL, TX
3	*Technomyrmex difficilis*	Ant	Q	FL (3)
1	*Tetranychus sp.*	Tetranychid mite	Q	FL
2	Tettigoniidae Family	Katydid	Q	HI (2)
4	Thripidae Family	Thrips	Q	FL (1), HI (1), PR (1), VA (1)
1	*Thrips maculicollis*	Thrips	Q	HI
18	*Thysanofiorinia nephelii*	Longan scale	Q	FL (18)
3	Thysanoptera Order	Thrips	Q	KS (1), OH (1), PR (1)
2	Tingidae Family	Lace bug	Q	FL (2)
5	Tortricidae Family	Moth	Q	FL (3), NJ (1), TX (1)
1	*Trialeurodes floridensis*	Avocado whitefly	A	FL
2	*Unaspis citri*	Citrus snow scale	A	FL (1), LA (1)

Total Interceptions: 490

*A-rated, **a pest of economic or environmental detriment and is either not known to be established in California or it is present in a limited distribution that allows for the possibility of eradication or successful containment.**

*Q-rated, **an organism or disorder suspected to be of economic or environmental detriment, but whose status is uncertain because of incomplete identification or inadequate information.**

*W-rated, **a species listed as a noxious weed on California Code of Regulation 4500.**

HIGHLIGHTS OF COUNTY DOG TEAM INTERCEPTIONS

Dog Team interceptions resulted in the interception of 1 W-rated invasive dodder plant, 402 Q-rated pests, and 87 A-rated pests. Of these pest interceptions, there were 9 interceptions of huanglongbing, 10 exotic fruit fly interceptions and other notable finds, such as walnut husk fly, hickory shuckworm, sweet orange scab, and cedar apple rust. These quarantine pests are not known to occur in California and the Dog Team interceptions were critical to prevent the establishment of detrimental pests in California. The narratives below detail examples of interesting interceptions during the reporting period.

Highlights –
Alameda County Dog Team Interceptions

Alameda County Dog Team Lisa Sampson and Cosmo worked at ten Federal Express facilities, one OnTrac facility, one United Postal Service facility, and one United States Postal Services facility in Alameda County. Below are highlights of their parcel interceptions, which include:

1. Sweet Orange Scab on Texas Citrus
2. Black Fruit Spot on Mangos
3. Lesser Snow Scale

1. Sweet Orange Scab on Texas Citrus

On January 15, 2015, Alameda County Dog Team Inspector/Handler Lisa Sampson with canine Cosmo (pictured above) intercepted an unmarked parcel from Texas at a USPS distribution center in Oakland. Alameda County Inspector Chris Craft contacted the receiver by telephone and obtained permission to inspect the parcel. Inside the parcel were **ten pounds of backyard grown citrus fruit** *Citrus maxima* and *Citrofortunella microcarpa* (pumelo and calamondin).

Alameda County dog team intercepts pumelo (right) and calamondin (left)

Fruit samples of both types of fruit were submitted to the Plant Pest Diagnostics (PPD) Laboratory for diagnostics. The **pumelo fruit tested positive for Federal Actionable and A-rated Sweet Orange Scab** (*Elsinoe australis*), which is a fungal disease that causes unsightly corky legions on fruit reducing the marketability. A notice of rejection was issued and the shipment was destroyed.

2. Black Fruit Spot on Mangos

On March 31, 2015, Alameda County Dog Team Inspector/Handler Lisa Sampson with dog Cosmo intercepted an unmarked and uncertified parcel from Florida containing five pounds of green mangos at FedEx Express in Pleasanton. Alameda County Inspector Claire Perkins opened the parcel to inspect the *Mangifera sp.* (mangos).

After inspection, fruit samples were submitted to the PPD Laboratory for identification/examination and it was confirmed positive for Q-rated anthracnose (*Colletotrichum asianum)* and Q-rated black fruit spot *(Neofusicoccum mangiferae)* in culture from black spots on mango fruit. Both pathogens were detected from incoming Florida green mango fruit shipment.

A notice of rejection was issued and the fruit was confiscated and destroyed.

3. Lesser Snow Scale on Plants

On May 13, 2015, Alameda County Dog Team Inspector/Handler Lisa Sampson with canine Cosmo intercepted an uncertified parcel marked as “Live Plants” from Florida at a USPS distribution center in Oakland. Inspector Claire Perkins opened the package with the receiver’s consent. Inside the box were two plants without proper certification. Upon closer inspection, one of the plants was found to be heavily infested with pests on the underside of the leaves and stem.

Pest samples were submitted to the Plant Pest Diagnostics (PPD) Laboratory for identification. The pests were identified as A-rated *Pinnaspis strachani* (lesser snow scale), Q-rated insect eggs, and a C-rated scale.

A notice of rejection was issued and the shipment was destroyed.

Alameda County dog Cosmo intercepted plants from Florida.

Highlights –
Contra Costa County & Santa Clara County Dog Team Interceptions

Contra Costa County inspector/dog handler Cecilie Siegel and canine Conan work cooperatively with the Santa Clara Department of Agriculture to inspect packages at the USPS located in San Jose (Santa Clara County). Cecile and Conan work nights identifying suspect parcels and Santa Clara inspectors work to gain permissions and perform inspections on high-risk packages. In order to get access to high-risk shipments, Santa Clara County is also participating in a pilot program to issue warrants for high-risk packages intercepted at USPS but where consent is not granted. This program has successfully allowed for the interception of 15 agricultural shipments.

Cecile and Conan also work at Federal Express and UPS locations in Marin, Monterey, San Francisco, San Joaquin, San Mateo, Santa Cruz, and Sonoma counties. *Below are highlights of their parcel interceptions, which include*:

1. Banana Spiral Nematode
2. Florida Papaya
3. Warrant Sought for Mangos

1. Banana Spiral Nematode

On February 6, 2015, Contra Costa County Dog Team inspector/handler Cecilie Siegel with canine Conan intercepted an unmarked and uncertified package at the San Jose USPS distribution facility. The package was shipped from Florida and was en route to an addressee in San Jose, Santa Clara County. Santa Clara County inspectors Paulo Philippidis and Julius Calso contacted the receiver by telephone and obtained permission to inspect the package. Inside the package they found *Musa sp*. (banana plant) with roots and soil.

A sample of the banana plant with roots and soil was submitted to the Plant Pest Diagnostics (PPD) Laboratory for nematode examination and it was confirmed positive for Q-rated *Helicotylenchus multicinctus* (endoparasite of banana or banana spiral nematode).

A notice of rejection was issued and the plant was destroyed.

2. Florida Papaya

On March 9, 2015, Contra Costa County Dog Team Inspector/Handler Cecilie Siegel with canine Conan intercepted an unmarked and uncertified package at the San Jose USPS distribution facility. The package was shipped from Florida and was en route to an addressee in Santa Clara County. Santa Clara County inspectors Paulo Philippidis and Julius Calso contacted the receiver by telephone and obtained permission to inspect the package. The package contained two large backyard grown papayas. Both papayas had lots of visible signs of anthracnose on the skin.

A sample was submitted to the PPD Laboratory for identification/examination and it was confirmed positive for Q-rated anthracnose *(Colletotrichum boninese)* in culture and by PCR from spots on fruit. Samples were sent to USDA for confirmation. The anthracnose pathogen is not known to occur in California. This interception was interesting as papaya is not listed as a known host for *C. boninense*.

A notice of rejection was issued and the papaya fruit was destroyed.

3. Warrant Sought for Mangos

On May 22, 2015, Contra Costa County Dog Team Inspector/Handler Cecilie Siegel with canine Conan intercepted an unmarked and uncertified package at the San Jose USPS distribution facility. The package was shipped from Florida and was en route to an addressee in Santa Clara County. Santa Clara County inspectors Paulo Philippidis and Julius Calso tried to find phone numbers for both the sender and receiver of the package but they could not. They applied for a search warrant and the Federal Magistrate issued a search warrant for the parcel inspection. The inspectors opened the package and found 13 pounds of backyard-grown mangos, one with possible anthracnose.

The infested mango sample was submitted to the PPD Laboratory for identification/examination and Q-rated *Colletotrichum asianum* (anthracnose) was detected in culture from black spots on the mango. A notice of rejection was issued and the shipment of mangos was destroyed.

Highlights –

Fresno County Dog Team Interceptions

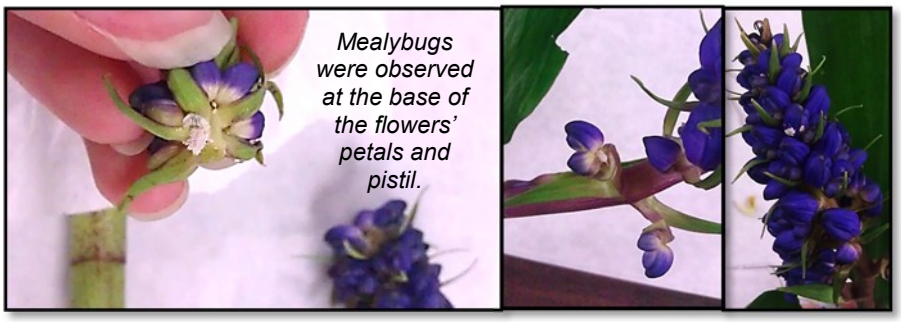
Fresno County Dog Team Stephanie LeBarron and Chelsea made 254 inspections at the following locations: one DHL facility, three Federal Express facilities, one OnTrac facility, one United Postal Service facility, and one Golden State Overnight facility in Fresno County. The Fresno Dog Team worked from July 2014 to November of 2014, retiring in December 2014. *Below are highlights of their parcel interceptions, which include*:

1. Hawaiian Flower Interceptions
2. Backyard Fruit Shipment

1. Hawaiian Flower Interceptions

Fresno County Inspector/Handler Stephanie LeBarron and canine Chelsea intercepted Hawaiian shipments of cut flowers infested with quarantine significant pests. On July 16, 2014, a shipment of cut foliage contained bromeliads, heliconia, and various ginger cut flowers. Upon inspection, a heavy infestation of live mealybugs was found and identified as Q-rated mealybug crawlers (Pseudococcidae) and Q-rated mite eggs (Acari).

Shipment of Hawaiian Cut Flowers Found Infested with Live Mealybug Crawlers



On July 29, 2014, mealybugs were again intercepted on a shipment of Hawaiian cut foliage containing Hawaiian club moss and red tower ginger. The pests were identified as Q-rated mealybug crawlers (Pseudococcidae) and Q-rated club moss mealybug (*Pseudococcus lycopodii*).

On September 3, 2014, while conducting inspections at FedEx in Fresno, canine Chelsea alerted to a properly marked box of Hala leaves. Inspection of the plant material yielded **A-rated *Pinnaspis buxi*** (boxwood scale) and Q-rated insect eggs.

2. Backyard Fruit Shipment

On August 14, 2014, Inspector Laine Bauer, Inspector/Handler Stephanie LeBarron, and canine Chelsea were working at FedEx Air. Chelsea alerted to an unmarked, uncertified box containing mangos, avocados, yam, and bread shipped from New York. Upon inspection, Inspector Bauer collected scale on the mangos.

Vanda Orchid Scale on Mangos

The specimens were submitted to the Plant Pest Diagnostic Laboratory and identified as A-rated vanda orchid scale *(Parlatoria pseudaspidiotus*).

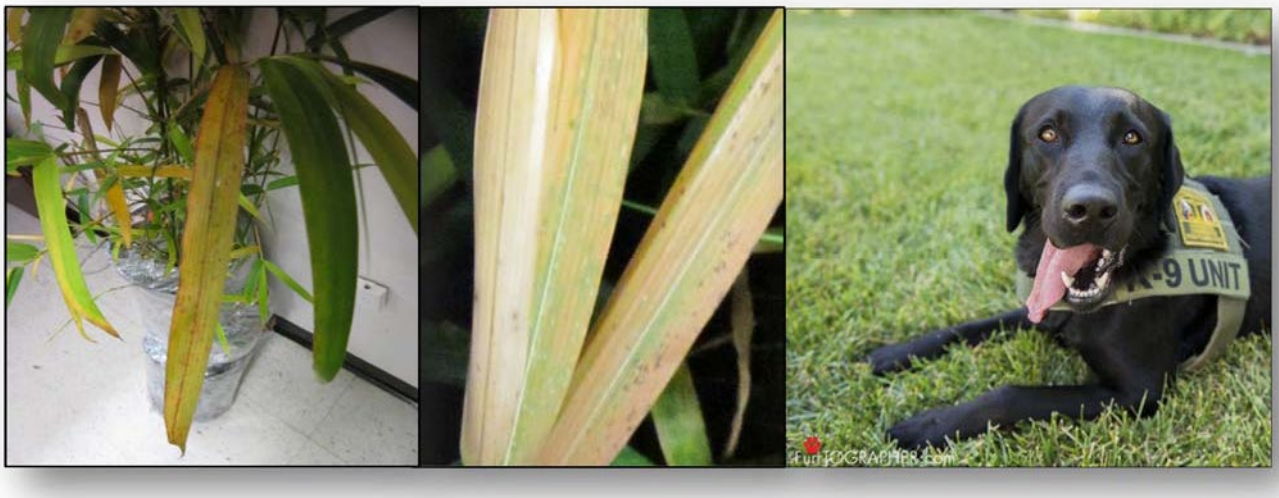
Highlights –
Los Angeles County Dog Team Interceptions

Los Angeles County has two Dog teams: 1) Rogelio Carranza and Tahoe and; 2) Lauren Eckert and Sedona. Together they covered the inspection of 21 Federal Express facilities, 9 United Postal Service facilities and 1 United States Postal Service facility in Los Angeles County. Below are highlights of their parcel interceptions, which include:

1. Bamboo Pests
2. Fruit Spot on Mangos
3. Tropical Fruit Pests
4. Scale on Tropical Fruit

1. Robust Bamboo Pit Scale & Bamboo Rust

On March 11, 2015, Los Angeles County Dog Team Inspector/Handler Lauren Eckert with canine Sedona intercepted a marked and properly certified box from Florida at the USPS distribution facility. Los Angeles County inspectors Craig Foy and Rick LeFeuvre contacted the receiver by telephone and obtained permission to inspect the box. The box contained bamboo plants. Upon inspection of bamboo plants, inspectors Foy and LeFeuvre intercepted scale on bamboo plants leaves and also noticed rust-colored spots dotting at the end of many leaves.



Scale and disease infested leaves samples were submitted to the PPD Laboratory and identified as Q-rated *Bambusaspis miliaris* (robust bamboo pit scale) and Q-rated *Kweilingia divinia* (bamboo rust). A notice of rejection was issued and the shipment was destroyed by freezing.

2. Fruit Spot on Mangos

On June 10, 2015, Los Angeles County Dog Team Inspector/Handler Lauren Eckert and canine Sedona, along with inspectors Rick LeFeuvre, Craig Foy, and Shawn Borbor, were working at the USPS in Los Angeles. Canine Sedona alerted on an unmarked box from Florida. Inspectors Foy and LeFeuvre contacted the sender by telephone and obtained permission to open and inspect the box.

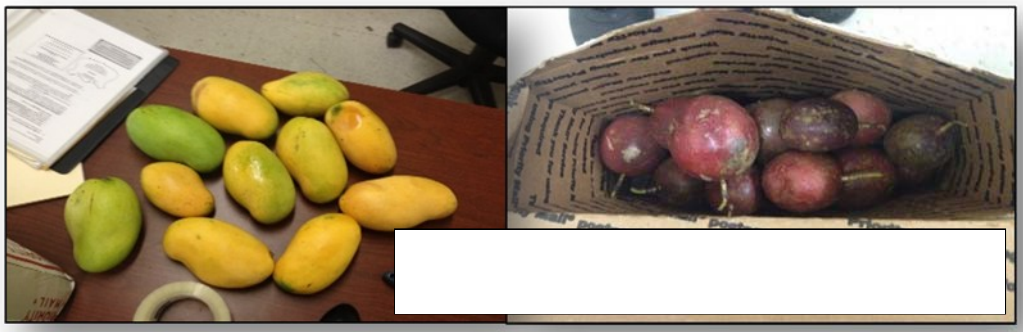
Mangos from Florida with *Colletotrichum asianum*

Inspectors Eckert, LeFeuvre and Borbor opened the box, which contained mangos, and they noticed the large black spots and lesions covering several of the mangos.

The infested mangos sample was submitted to the PPD Laboratory and Q-rated *Colletotrichum asianum* was detected in culture from mango fruit spots. A notice of rejection was issued and the fruit was destroyed via freezing at the Los Angeles County office in South Gate.

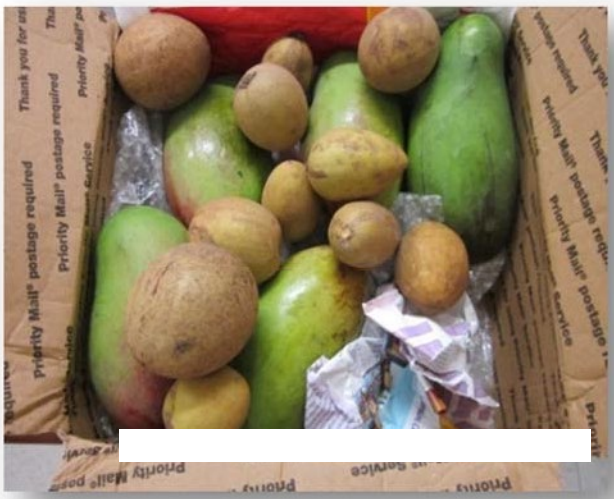
3. Tropical Fruit Harbors Scales and Moths

On June 10, 2015, Los Angeles County Dog Team Inspector/Handler Lauren Eckert and canine Sedona, along with inspectors Craig Foy and Richard LeFeuvre, intercepted two uncertified and unmarked shipments from Florida at the USPS in Los Angeles. One shipment contained *Mangifera indica* (mangos) and the other shipment contained *Passiflora edulis* (passion fruit). Los Angeles County inspectors Foy and LeFeuvre contacted the senders by telephone and obtained permission to open and inspect the packages.



Upon inspection of the fruit, inspectors Foy and LeFeuvre found live pests. The insects collected from the mangos and passion fruit were submitted to the Plant Pest Diagnostics (PPD) Laboratory and identified as Q-rated armored scale (*Aulacaspis alisiana)* on mangos and Q-rated Gelechiidae (moth larvae) on passion fruit. A notice of rejection was issued and the mangos and passion fruit were destroyed via freezing.

4. Herculeana Scale on Tropical Fruit



On June 24, 2015, Los Angeles County Dog Team Inspector/Handler Rogelio Carranza and canine Tahoe, along with Inspector Shawn Borbor, intercepted an uncertified and unmarked shipment of *Mangifera indica* (mangos) and sapotes from Florida at the USPS in Los Angeles. Los Angeles County Inspector Borbor contacted the sender by telephone and obtained permission to open and inspect the package.

Package contained five mangos and twenty sapotes. Several of the sapotes had unknown scales on its surface. The insects collected from the mangos and sapotes fruit were submitted to the Plant Pest Diagnostics (PPD) Laboratory and identified as A-rated *Clavaspis herculeana* (herculeana scale) and Q-rated Diaspididae (armored scale).

Dr. Gillian Watson, CDFA Plant Pest Diagnostics Laboratory, reports that herculeana scale is a polyphagous armored scale insect, feeding on the stems of tropical and subtropical hosts belonging to 25 plant families. The insects use sharp structures on the rear end of the body to cut down through the surface of the host so that they become buried in the bark. This cryptic behavior makes the scales very difficult to detect at plant quarantine inspection. The mining habit causes tissue injury, giving the species considerable pest potential, and the host range includes a number of fruit trees.

A notice of rejection was issued and the mangos and sapotes fruit were destroyed via freezing at the LA County South Gate.

Highlights –

San Bernardino County Dog Team Interceptions

San Bernardino County Dog team Kristina Cummings and Bishop worked at three Federal Express facilities and four United Postal Service facilities located in Riverside and San Bernardino counties. Additionally, in June of 2015 they began parcel inspection at the USPS facility in San Bernardino. Below are highlights of their parcel interceptions, which include:

1. Citrus Snow Scale on Louisiana Mandarins
2. Scales on Hawaiian Leis
3. Scales on Cut Foliage and Mango Shipment

1. Citrus Snow Scale on Louisiana Mandarins

On January 2, 2015, at FedEx Ontario, San Bernardino County inspectors Keri Vigil, Inspector/Handler Kristina Cummings and canine Bishop intercepted an unmarked shipment from Louisiana containing seven pounds of mandarin oranges.

There was no certification present and upon inspection of the shipment, pests were intercepted on stems, leaves, and fruit of mandarin oranges.

The pests collected from the shipment were submitted to the Plant Pest Diagnostics (PPD) laboratory and identified as A-rated *Unaspis citri* (citrus snow scale), A-rated *Fiorinia theae* (tea scale), and Q-rated Diaspididae (only cover of dead parasitoid female). A notice of rejection was issued and the mandarin oranges in the shipment were confiscated and destroyed.

2. Scales on Hawaiian Leis

On May 22, 2015, San Bernardino County Dog Team Inspector/Handler Kristina Cummings with canine Bishop intercepted an unmarked and uncertified shipment of Hawaiian leis from Hawaii at FedEx Ontario.

Upon inspection, Inspector Josh Hardeman found that the leis were infested with small live pests on the leaves of the leis.

Pest samples were collected and submitted to the PPD laboratory for identification, and identified as A-rated *Ceroplastes rubens* (red wax scale) and A-rated *Pinnaspis strachani* (lesser snow scale). A notice of rejection was issued and the shipment was destroyed.

3. Scales on Shipment of Cut Foliage and Mangos

On June 24, 2015, San Bernardino County Dog Team Inspector/Handler Kristina Cummings and canine Bishop, along with Inspector Joshua Hardeman, intercepted an unmarked and uncertified shipment of ten pounds mangos and cut foliage from Florida at USPS. Upon inspection of the shipment, Inspector Hardeman found some live pests on cut foliage leaves.

The insects collected from the cut foliage leaves were submitted to the PPD Laboratory and Q-rated Diaspididae (armored scale) and Q-rated Coccidae were identified. A notice of rejection was issued and the shipment of mangos and cut foliage was destroyed.

Highlights –

San Diego County Dog Team Interceptions

San Diego County has two Dog Teams: 1) Ted Olsen and Drake and; 2) Jeremy Partch and Venus. Together through over 400 separate visits they covered the inspection of 8 Federal Express facilities, 1 OnTrac facility, 4 United Postal Service facilities, and 1 United States Postal Service facility in Los Angeles County. Below are highlights of their parcel interceptions, which include:

1. Citrus Fly on Florida Mango Tree
2. Neofusicoccum Fungus

1. Citrus Blackfly on Florida Mango Tree

On March 13, 2015, San Diego County Dog Team Inspector/Handler Ted Olsen with canine Drake were performing a routine inspection at the FedEx Ground Terminal in San Diego. The Terminal Manager informed Inspector Ted Olsen that he had a mango tree from Florida in the customer pick-up area. Ted Olsen drove back to the facility and inspected the mango tree. There were no markings and certificates with the parcel. Upon removal of the tree from the box, Inspector Olsen found white fly on many of the mango tree leaves. The mango tree was seized and brought back to the office for close examination.

After close examination, pests intercepted on mango tree leaves were collected and submitted to the PPD Laboratory for identification and the Laboratory confirmed A-rated *Aleurocanthus woglumi* (citrus blackfly).

A notice of rejection was issued due to the following violations and the mango tree was destroyed.

2. Neofusicoccum Fungus

On June 25, 2014, Inspector/Handler Jeremy Partch and canine Venus were conducting inspections at FedEx. Venus alerted to a parcel shipped from Florida. Inspector Jason Sapp opened

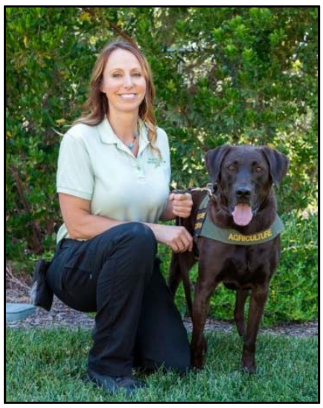
the uncertified and unmarked parcel containing nine pounds of mangos. Upon inspection of the mangos, the inspector collected live pests from the skin of the mango fruit.

A sample was submitted to the Plant Pest Diagnostics Laboratory and it was identified as Q-rated *Neofusicoccum mangiferae* (fungus). Two different species of *Neofusicoccum* were detected in culture from fruit. *Neofusicoccum mangiferae* was confirmed by USDA mycologist on September 25, 2014. This species mainly attacks mango rachises branches and inflorescences but is also a pathogen of *Aganthis, Disoscorea*, *Eucalyptus, Manihot* and *Prunus*. Found in Africa, Asia, Caribbean, Europe, Australia and Uruguay. As there are not any known reports in the US, the USDA will follow-up with the Florida Division of Plant Industry. Additionally, another *Neofusicoccum* sp. was detected. It is closest to *Neofusicoccum batangarum* by molecular sequencing but may be a novel, closely-related species.

Intercepted Mango Fruit

Highlights –

Sacramento and Yolo County Dog Team Interceptions



Sacramento County inspector/dog handler Jennifer Berger and canine Dozier work cooperatively with the Yolo County Department of Agriculture to inspect packages at the USPS located in West Sacramento (Yolo County). Jennifer and Dozer work nights identifying suspect parcels and Yolo County inspectors work to gain permissions and perform inspections on high-risk packages. Below are highlights of their parcel interceptions, which include:

1. Huanglongbing on Citrus Leaves
2. Florida Plant Material
3. Armored Scale on Tropical Fruit
4. Florida Citrus Leaves

1. Huanglongbing on Citrus Leaves

On December 22, 2014, Sacramento County Dog Team Inspector/Handler Jennifer Berger with canine Dozer intercepted an unmarked and an uncertified package at the West Sacramento USPS distribution facility. The box originated from Florida and was en route to an addressee in Modesto, Stanislaus County. Yolo County inspectors Bill Lyon and Kevin Martyn contacted the sender by telephone and obtained permission to inspect the box. Inside the box were six *Persea* sp. (avocados), approximately one pound *Cymbopogon* sp. (lemon grass) with roots, two pounds *Citrus* sp. (citrus leaves), one ounce unidentified leaves and a small amount of non-agricultural items. Upon inspection of the shipment, suspect pests were intercepted on fruit and leaves.

Samples were submitted to the PPD laboratory for identification. The citrus leaves tested positive for A-rated *Candidatus* Liberibacter asiaticus (citrus greening, huanglongbing or HLB) by real-time PCR. The laboratory also identified A-rated *Aleurocanthus woglumi* (citrus blackfly) and Q-rated

Pseudococcidae (mealybug) on citrus leaves; and Q-rated *Aspidiella sacchari* (armored scale) and Q-rated Diaspididae (scale) on lemon grass.

The non-agricultural items in the shipment were forwarded to the receiver and the remainder of the shipment was destroyed.

Pictured left: Pests Intercepted on Shipment

2. Florida Plant Material

On February 20, 2015, Sacramento County Dog Team Inspector/Handler Jennifer Berger with canine Dozer intercepted an unmarked priority mail package from Florida at the West Sacramento USPS distribution facility. The package originated from Florida and was en route to Merced. Yolo County inspectors Bill Lyon and Kevin Martyn called Merced County Inspector Derrick Hunger to obtain permission from the receiver for inspection of the shipment. The package contained two pounds ginger, one pound unknown plant material, eight live rooted plants, eight pounds *Dioscorea* sp. (yam), and 20 *Senna alata* (senna). Upon inspection of the package, Inspectors Lyon and Martyn found live pests on plant leaves and scale on stems.

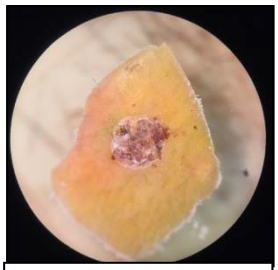
Close-up of shipment contents

Pests intercepted on leaves and stems were submitted to the Plant Pest Diagnostics (PPD) Laboratory for identification and identified as A-rated *Pinnaspis strachani* (lesser snow scale), Q-rated *Pheidole* sp. (ant), Q-rated Diaspididae (scale), and Q-rated Aphididae (aphid).

A notice of rejection was issued and the infested material was destroyed and the remainder reconditioned and released.

3. Armored Scale on Tropical Fruit

On May 1, 2015, Sacramento County Inspector/Dog Handler Jennifer Berger with canine Dozer intercepted an unmarked and an uncertified package at the West Sacramento USPS distribution facility. The box originated from San Juan, Puerto Rico and was en route to an addressee in Sacramento County. Yolo County inspectors Bill Lyon and Kevin Martyn contacted the receiver by telephone and obtained permission to inspect the box. Inside the box were 13 *Mangifera indica* (mangos), one *Pouteria campechiana* (sapote), along with clothing, and ground commercial coffee. Upon inspection of the package, suspect pests were intercepted on fruit.



Pest on mango fruit

Dozer

The pest samples were collected from the fruit and submitted to the PPD Laboratory and identified as Q-rated *Aulacaspis tubercularis* (armored scale).

A notice of rejection was issued and the fruit was removed and destroyed, and the remaining items in the package were forwarded.

4. Florida Citrus Leaves

On June 25, 2015, Sacramento County Dog Team Inspector/Handler Jennifer Berger with canine Dozer and Yolo County inspectors Bill Lyon, Kevin Martyn, and Lubna Durrani intercepted an unmarked and uncertified package from Florida at the West Sacramento USPS distribution facility. The package originated from Florida and was en route to Elverta, Sacramento County. Inspectors Lyon and Durrani contacted the receiver by telephone and obtained permission to inspect the package.

Pests intercepted on betel leaves

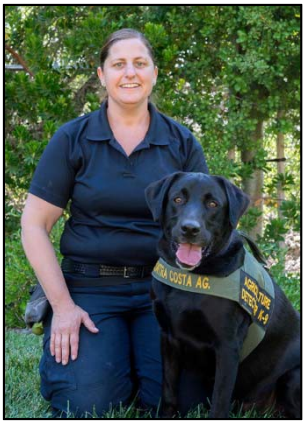
The package contained 100 leaves of *Citrus hystrix* (kaffir lime), 100 stems of *Piper* sp. (betel), 100 stems of *Moringa oleifera* (moringa), 3 roots of *Zingiber officinale* (ginger), 10 stems of *Mentha* sp. (mint) plant, and 10 unidentified plants. Upon inspection of the package, inspectors Lyon, Martyn, and Durrani found live pests on citrus and betel leaves.

Pest specimens were collected from the kaffir lime leaves and betel leaves and submitted to the PPD Laboratory for identification. The PPD Laboratory identified A-rated *Unaspis citri* (citrus snow scale), Q-rated Diaspididae (scale), and Q-rated Psyllidae (psyllids) on citrus leaves and Q-rated *Pheidole* sp. (ant), Q-rated *Aleurovitreus* sp., and Q-rated *Aleurodicus dispersus* (spiraling whitefly) on betel leaves.

A notice of rejection was issued. Infested material was removed from the shipment and destroyed and the remainder reconditioned and released.

Highlights –

Contra Costa and Yolo County Dog Team Interceptions



Contra Costa County inspector/dog handler Mariah de Nijs and canine Cairo work cooperatively with the Yolo County Department of Agriculture to inspect packages at the USPS located in West Sacramento (Yolo County). Mariah and Cairo work nights identifying suspect parcels and Yolo County inspectors work to gain permissions and perform inspections on high-risk packages. Below are highlights of their parcel interceptions, which include:

1. Caribbean Fruit Fly on Guava
2. Florida Avocado Leaves

1. Caribbean Fruit Fly on Guava

On March 11, 2015, Contra Costa County Dog Team Inspector/Handler Mariah de Nijs with canine Cairo intercepted an unmarked and uncertified box of *Psidium* sp. (guava) fruit from Florida at the West Sacramento USPS distribution facility. The box originated from Florida and was en route to Modesto, Stanislaus County. Yolo County inspectors Bill Lyon and Kevin Martyn contacted the receiver by telephone and obtained permission to inspect the box. The box contained 16 fruits of *Psidium* sp., with several visible exit holes.

After refrigeration, the fruit was carefully dissected and 44 live fly larvae from 12 of the 16 fruits were found. Larvae samples were submitted to the Plant Pest Diagnostics (PPD) Laboratory and were identified as an A-rated exotic fruit fly. DNA analysis of the sample was able to identify the larva as either *Anastrepha* suspense or *A. fratercula*.



A notice of rejection was issued due to the following violations and fruit was destroyed:

2. Florida Avocado Leaves

On June 19, 2015, Contra Costa County Dog Team Inspector/Handler Mariah de Nijs with canine Cairo intercepted an unmarked and uncertified package at the West Sacramento USPS distribution facility. The box originated from Florida and was en route to an addressee in Turlock, Stanislaus County. Yolo County inspector Bill Lyon contacted the shipper who explained that the package contained two pounds avocado leaves and was being sent to Denele Analytical Lab in Stanislaus County for testing.

Shipment was moderately infested and upon inspection, suspect pests were intercepted on avocado leaves.

Pest specimens were collected from the leaves and submitted to the PPD Laboratory for identification. Results included live A-rated *Trialeurodes floridensis* (Avocado whitefly) and live C-rated *Coccus hesperidum* (Brown soft scale).

A notice of rejection was issued and the shipment was reconditioned and released.

***A-rated**, a pest of economic or environmental detriment and is either not known to be established in California or it is present in a limited distribution that allows for the possibility of eradication or successful containment.

***Q-rated**, an organism or disorder suspected to be of economic or environmental detriment, but whose status is uncertain because of incomplete identification or inadequate information.

***W-rated**, a species listed as a noxious weed on California Code of Regulation 4500.

***Photos compliments** of Josh Norem, The Furrtographer (http://www.thefurrtographer.com/), Plant Pest Diagnostics Laboratory; Alameda, Contra Costa, Fresno, Los Angeles, San Diego, Santa Clara, Sacramento, and Yolo Counties.

8-28-15

Nick Condos, ROAR Date
California Department of Food and Agriculture
Plant Health and Pest Prevention Services

BETH STONESMITH

Digitally signed by BETH STONE SMITH
DN: c=US, o=U.S. Government, ou=Department of Agriculture, cn=BETH STONE SMITH, 0.9.2342.19200300.100.1.1=12001000124883
Date: 2015.09.01 10:48:43 -07'00'

Beth Stone-Smith, ADODR Date
United States Department of Agriculture
APHIS, Plant Protection and Quarantine

California Detector
Dog Cairo