

CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE

CALIFORNIA DETECTOR DOG TEAM PROGRAM



Annual Report

July 1, 2019 - June 30, 2020

Pictured: CDFA's six new canines.

Top: Rydar (Los Angeles County), Kernul (Sacramento County), and Tank (Santa Clara County). Bottom:
Taz (Sacramento County), Zenna (Alameda County), and Yeti (San Diego County)

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PURPOSE OF COOPERATIVE AGREEMENT #19-8506-1165-CA

The purpose of cooperative agreement #19-8506-1165-CA is to implement the use of the California Detector Dog Teams (herein referenced as California Dog Teams) to enhance the inspection and detection of pests associated with plant products entering California via parcel delivery facilities and Airfreight terminals. By preventing the introduction of pests, the California Dog Teams play an important role in protecting agriculture, natural habitats, and the economy.

WORK PLAN ACTIVITIES PERFORMED BY THE CDFA

The California Department of Food and Agriculture (CDFA) oversaw and provided guidance for the statewide California Dog Team program and distributed funds through cooperative agreements to county agricultural commissioners (CAC) for the purposes of fulfilling California Dog Team activities as outlined in the CDFA/CAC cooperative agreement. The CDFA verified that all expenses approved for payment to the CAC cooperators were legitimate expenses as outlined in the CDFA/CAC cooperative agreement. The CDFA acted as the liaison between the CAC and the National Detector Dog Training Center (NDDTC) and was responsible for communicating significant pest finds and smuggling information to the United States Department of Agriculture (USDA)/Smuggling Interdiction and Trade Compliance (SITC).

This fiscal year (FY), the CDFA organized and led a small group of county Dog Team supervisors to develop a comprehensive dog program manual. The purpose of this manual is to provide the California Dog Team Program with internal policies for guidance with decision-making and establishing consistent and uniform expectations concerning the use of canines.

WORK PLAN ACTIVITIES PERFORMED BY COUNTY AGRICULTURAL COMMISSIONERS

The California Dog Teams and inspectors were distributed as described in Table 1 and in the map below. Eight of the 14 California Dog Teams worked at parcel facilities for the reporting period (July 1, 2019 – December 31, 2019): Alameda (one team), Contra Costa (one team), Fresno (one team), Los Angeles (three teams), Sacramento (two teams), San Bernardino (one team), San Diego (two teams), Santa Barbara (one team), Santa Clara (one team), and Yolo (inspectors only).

Teams are based in a single county but work regionally to cover over 200 facilities in 32 of 58 California counties or 56.4 % of the total square mileage in California.

TABLE 1: Distribution of California 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	3
Sacramento	Sacramento Valley	2
San Bernardino	Inland Empire Area	1
San Diego	San Diego County	2
Santa Barbara	Santa Barbara County	1
Santa Clara	South Bay Area	1
Yolo	Sacramento Valley	0



***County Dog Team
locations are shaded.**

REPLACEMENTS AND ADDITIONS

Last FY, two handlers (Sacramento and Santa Clara counties) unexpectedly left the Program. The positions were filled this reporting period in September 2019. The new handlers graduated with their canine partners from the NDDTC 10-week class in October 2019.

Additionally, the Program lost two of the four canines replaced last FY. Two of the four canines provided by the NDDTC were discharged. The San Diego County canine was discharged due to lack of working drive and low energy level. The handler received a replacement canine in June 2019. The Alameda County canine was released due to aggression. The handler was finally assigned a replacement canine, six months later, when the Farm Bill was passed.

The Program was also slated to send a new handler back to the NDDTC in April. Again, since the Farm Bill was not passed on time, the class was canceled due to the COVID stay in place federal orders. The position remains open.

Due to these reasons, the program only had two experienced California Dog Teams certified to work in the USPS facilities for the entire FY (Santa Barbara and Los Angeles counties). Therefore, pest finds and rejections are lower than in the past.

Pest interceptions are expected to remain low until the new dogs meet the U.S. Postal Service's (USPS) requirements and acclimate to working in the facility. This progression typically takes a minimum of at least one year.

COVID 19

By the end of March 2020, all California counties were placed under mandatory COVID 19 Shelter-in-Place orders by the Governor.

The COVID 19 restrictions have greatly impacted the Dog Program. All parcel visits ceased in every county for at least two months, from March to June 30, 2020, prime pest interception time. Gradually, permitted work for each county will be modified over time and will vary due to each county's circumstance.

Additionally, Los Angeles county has not been able to send back a new handler for the NDDTC class and all six new canines were required to extend their acclimation phase for lost field training time.

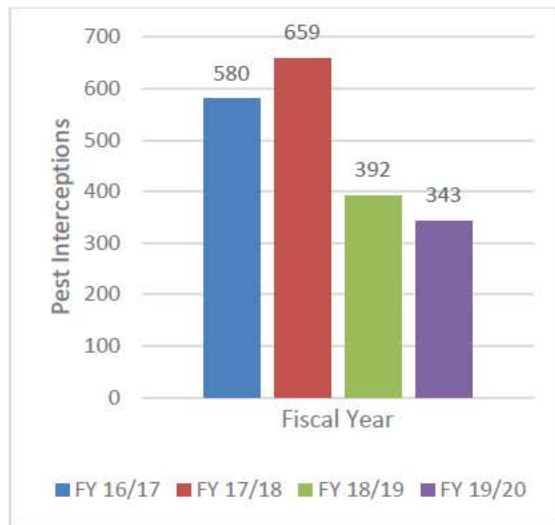
In the past, the NDDTC traveled to California to provide training and the required annual USDA certifications. Since travel was banned, both for the NDDTC and county dog teams, the NDDTC and CDFA are working cooperatively to ensure the teams are certified virtually. Planning began in June 2020, which includes teaching county supervisors to plan, set up, host the tests, operate video equipment and understanding NDDTC documentation and testing forms. The dog teams were broken into five regional groups and tutorial meetings are being held for each group prior to certification. A minimum of 54 county meetings is projected to be held before each group's certification in September 2020 by the NDDTC.

SUMMARY OF DOG TEAM INTERCEPTIONS AT PARCEL FACILITIES

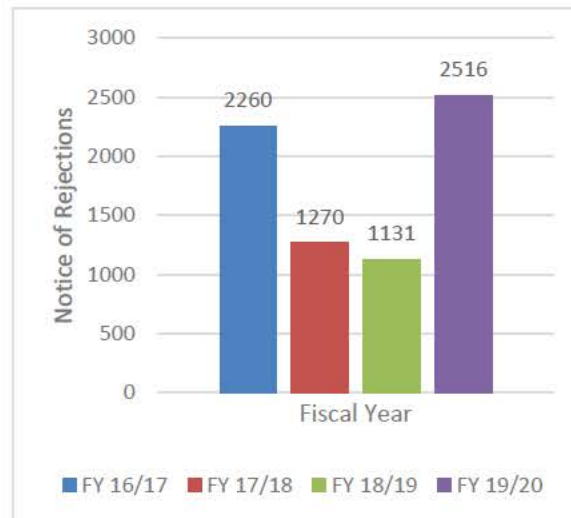
The California Dog Teams continue to demonstrate that unmarked parcels present a high-risk pathway for significant agricultural pests to enter California. During the midpoint of this agreement period, a total of 343 significant pests were intercepted by California Dog Teams (Graph 1). Some of these interceptions involved multiple pest specimens in a single package.

The California Dog Teams alerted on 42,647 marked and unmarked parcels containing agricultural products during this agreement. Of the total alerted parcels, 1,925 were intercepted at USPS facilities and 896 of these packages were unmarked per the USPS requirements. Due to the efforts of the California Dog Teams during this reporting period, 2,516 rejections have been issued for violation of state and federal plant quarantine laws and regulations (Graph 2).

Graph 1: Pest Interceptions



Graph 2: Violation of Plant Laws & Regulations



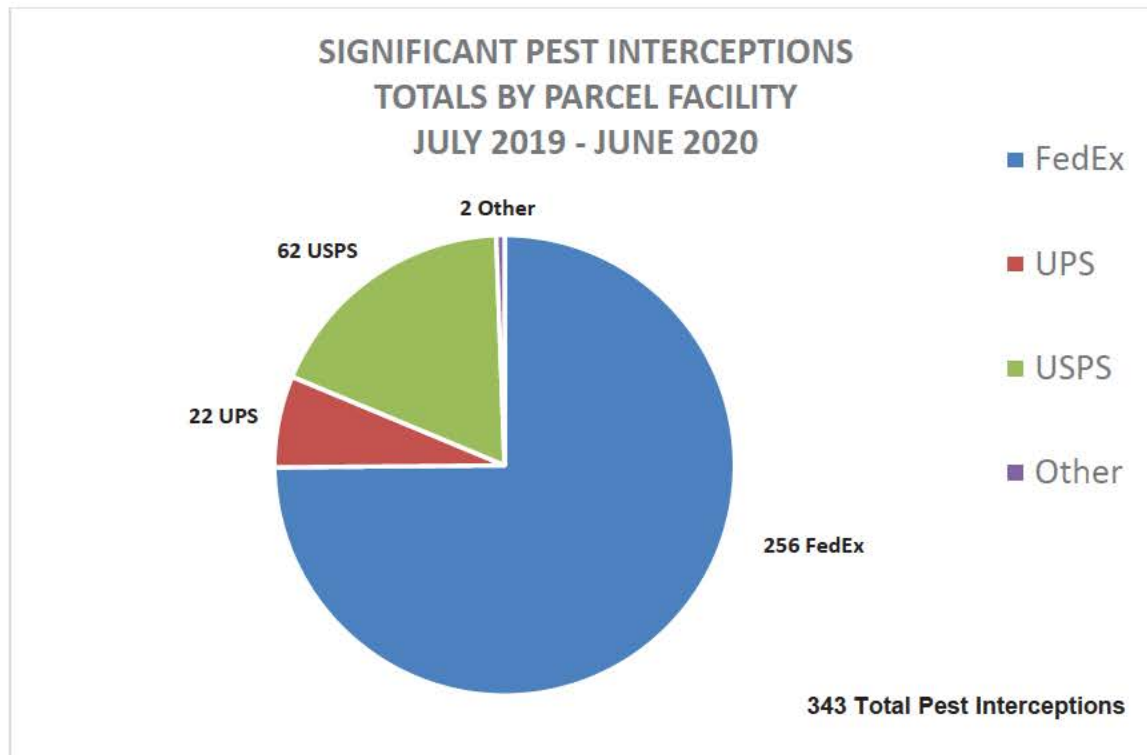
USPS PROGRESS

The CDFA continued laying groundwork for California Dog Teams working at the 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 that the dog alerted on. Although this process is resource-intensive, data collected over the past four years demonstrates that the USPS is the highest risk parcel pathway based on the quantity of pest interceptions (Graph 3) and number of unmarked parcels intercepted.

Because of the risks associated with the USPS, California Dog Teams concentrate their efforts on processing and distribution systems. However, this FY the program has three-fourths of the California Dog Teams training in private parcel facilities to obtain and document working at a consistent 90 percent accuracy rate. This is a baseline requirement of the USPS MOU and takes a minimum of one year of training a new dog.

Graph 3 illustrates the distribution of pest interceptions by the California Dog Teams at different parcel facilities. One-third of the total interceptions were made by only three teams working a USPS facility. Additionally, these three teams worked a USPS facility at a maximum of only 6 days each month. This fact demonstrates the risk of parcels entering California through the USPS, even with the reduced inspection visits.

Graph 3: Pest Interceptions Totals by Parcel Facility



The pursuit of search warrants to open parcels when inspectors are unable to gain consent began in FY 14-15 as a pilot program in Santa Clara County (San Jose USPS). All parcels opened with a search warrant contained agricultural material. The CDFA continues to work with the USDA on expanding the ability to seek search warrants at all USPS locations when inspectors are unable to gain consent.

A new call center pilot program was developed and operated in four counties beginning at the end of FY 17-18. The call center supported the California Dog Teams USPS package permissions task. The purpose of the call center was to provide a centralized call center team that efficiently and cost-effectively lessened the burden for individual counties without any loss in customer service or rates of consent. The call center was meant to supplement county efforts to locate individuals and acquire permissions. The call center was staffed by individuals that were hand-picked for the specific task and seasonally employed by the Sacramento County Department of Agriculture.

The call center pilot program was highly successful and increased the percentage of consent rates from two years prior (Table 2).

The call center pilot program ceased in November 2018 due to funding and number of retired dogs that reduced USPS coverage. If adequate funding is received, the call center will be implemented again when more dog teams meet the USPS MOU working requirements.

TABLE 2: Call Center Consent Percentage Rate Increase

County	FY 15-16 (before the call center pilot program)	FY 17-18 (during the call center pilot program)
Alameda	56%	91.2%
San Diego	34%	92.3%
Santa Clara	48%	87.6%
Yolo	71%	91%

Additionally, a statewide USPS consent list was developed and established in FY 17-18. The list provides repeat shippers/businesses the option to sign a “blanket permission” form for any future shipments that counties may encounter. The consent list is updated monthly, and more shippers continue to provide their consent to open all intercepted packages.

SIGNIFICANT PEST INTERCEPTIONS

During this agreement period, California Dog Teams were extremely successful at protecting California’s agriculture by intercepting significant agricultural pests before they could be introduced into California. Table 3 below lists the number and type of actionable pests which includes 71 actionable A-rated pests and 272 actionable Q-rated pests. Of note, our agricultural detector dogs alerted on parcels that yielded pests known to cause serious agricultural and economic impacts such as cedar and Japanese apple rusts, and multiple California first detections of a various plant pathogens.

Table 3: Significant Pest Interceptions

July 1, 2019 – June 30, 2020



Scientific Name	Common Name/Notes	Rating_ID	Origin
<i>Aleurotrachelus anonae</i>	Pupae. White fly	A	SC (4)
Aleyrodidae	Larva and egg tracks	Q	EC, FL, SC, Unknown
<i>Alternanthera</i> /sp.	Joyweed	Q	CO
<i>Ampelomyia viticola</i>	Grape tube gallmaker	Q	MI

Scientific Name	Common Name/Notes	Rating_ID	Origin
<i>Aonidiella orientalis</i>	Oriental scale	A	FL, LA, SC
Aphididae	Immatures	Q	HI (3), MA, OH (2)
Arctiidae	Moth	Q	EC
<i>Arvelius albopunctatus</i>	Tomato stick bug	Q	FL
<i>Aspidiella sacchari</i>	Armored scale	Q	FL
<i>Aspidiotus destructor</i>	Coconut scale	A	FL, NC (4)
<i>Aspidiotus excisus</i>	Aglaonema scale	Q	EC, FL
<i>Aulacaspis tubercularis</i>	Armored scale	A	FL
<i>Aulacaspis yasumatsui</i>	Cycad aulacaspis scale	A	HI
<i>Bephratelloides cubensis</i>	Eurytomid wasp	Q	FL
<i>Carpophilus</i> sp.	Sap beetle	Q	Unknown
Cecidomyiidae	Gall midge	Q	TX
<i>Cercospora</i> sp.	Leaf spot	Q	TX (4)
<i>Ceroplastes floridensis</i>	Florida wax scale	A	MA
<i>Ceroplastes rusci</i>	Fig wax scale	A	HI
<i>Ceroplastes</i> /sp.	Wax scale	Q	EC, FL, HI (2)
<i>Ceroplastes stellifer</i>	Stellate scale	A	HI
Cicadellidae	Sharpshooter eggs	Q	MI, Unknown
Coccidae	Immature female	Q	EC, FL (2), HI (2), MA, MI OH (3), PR, Unknown (17)
<i>Coccus molestus</i>	Soft scale	Q	FL, HI
<i>Colletotrichum grevilleae</i>	Leaf spot	Q	Unknown
<i>Colletotrichum</i> sp.	A <i>Colletotrichum</i> sp. was detected in culture and identified via multigene analysis. This pathogen appears to be undescribed, and potentially new species.	Q	FL, TX (9)
<i>Corythucha</i> sp.	Lace bug	Q	IN
Curculionidae	True weevil	Q	GA, ME, PA
Diaspididae	Immatures	Q	CR, EC (14), FL (7), PR, SC (2)
<i>Dysmicoccus grassii</i>	Mealybug	A	FL
<i>Dysmicoccus neobrevipes</i>	Gray pineapple mealybug	A	CA, FL

Scientific Name	Common Name/Notes	Rating_ID	Origin
<i>Exosporium petersii</i>	<i>Exosporium petersii</i> (also known as <i>Pseudocercospora mississippiensis</i>) has not been previously detected in California.	Q	TX (8)
<i>Ferrisia</i> sp.	Mealybug	Q	FL (2), SC
<i>Fiorinia phantasma</i>	Adult females	A	Unknown
<i>Fiorinia theae</i>	Tea scale	A	NC
Flatidae		Q	HI
<i>Frankliniella schultzei</i>	Cotton bud thrips	A	TN
Gastropoda	Juvenile	Q	HI (2)
Gelechiidae	Moth	Q	FL, GA
Ginkgoales	Gymnosperm	Q	Unknown
<i>Gymnosporangium juniperi-virginianae</i>	Cedar apple rust	A	MA MI, OH, GA
<i>Gymnosporangium yamadae</i>	Japanese apple rust	A	ME (2)
<i>Hemiberlesia palmarum</i>	Adult female	A	EC, HI
Hemiptera	True bug	Q	TX
<i>Hendecasis duplicifascialis</i>	Jasmine bud worm	Q	NY
Hesperiidae	Skipper moth	Q	FL
Heteroptera	True bug	Q	FL
Insecta	Insect egg	Q	EC (4), FL (3), HI (5), SC, Unknown (2)
<i>Kwelllingia divina</i>	Bamboo rust	A	FL
<i>Lantanophaga pusillidactyla</i>	Lantana plume moth	Q	NY
Lepidoptera	Moth	Q	FL
<i>Lepidosaphes tokionis</i>	Croton mussel scale	Q	FL
<i>Lopholeucaspis japonica</i>	Japanese maple scale	Q	NC
<i>Maconellicoccus hirsutus</i>	Pink hibiscus mealybug	A	CA, FL (3)
<i>Monomorium</i> /sp.	Ant	Q	GA
<i>Neopestalotiopsis brasiliensis</i>	<i>Neopestalotiopsis</i> sp. aff. <i>brasiliensis</i> detected via genetic analysis of cultured fungi. Potentially a new species.; its closest relatives have never been reported in the U.S. Genetic relatives are known stem rot pathogens.	Q	SC
<i>Nipaecoccus</i> /sp.	Mealybug	Q	HI, SC
Noctuidae		Q	FL (2)
Ortheziidae	Immature female	Q	EC, FL (2),
<i>Parmarion martensi</i>	Slug	A	HI (3)

Scientific Name	Common Name/Notes	Rating_ID	Origin
Pentatomidae	Stick bug	Q	SC
<i>Phakopsora cherimoliae</i>	Rust	Q	FL
<i>Phalacrococcus howertoni</i>	Adult females and immatures	Q	HI, PR
<i>Pheidole</i> /sp.	Ant	Q	HI (6)
<i>Pinnaspis buxi</i>	Boxwood scale	A	EC (3), Unknown
<i>Pinnaspis</i> /sp.	Armored scale	Q	Unknown
<i>Pinnaspis strachani</i>	Lesser snow scale	A	AL, EC (7), FL (2), HI, MS, PR (2)
<i>Planococcus minor</i>	Pacific mealybug	A	EC, HI (2)
Platyhelminthes	Immature	Q	HI
<i>Protopulvinaria longivalvata</i>	Scale	Q	HI
<i>Pseudaonidia trilobitiformis</i>	Trilobe scale	A	EC, HI
<i>Pseudaulacaspis cockerelli</i>	Magnolia white scale	A	FL, HI
<i>Pseudaulacaspis pentagona</i>	White peach scale	A	HI
<i>Pseudocercospora mississippiensis</i>	<i>Pseudocercospora mississippiensis</i> ; a fungal pathogen that causes leaf spot symptoms in host plants.	Q	TX
<i>Pseudocercospora</i> /sp.	<i>Pseudocercospora</i> sp.; a fungal pathogen that causes leaf spot symptoms in host plants	Q	TX (9)
Pseudococcidae	Crawler	Q	AL, CR EC (28), FL (16), HI (15), HN (2), IN, NC, OH, PA, PR, SC (3), Unkwn (3)
<i>Pseudococcus jackbeardsleyi</i>	Mealybug	A	FL (2), HI, Unkwn
<i>Pseudomyrmex</i> /sp.	Ant	Q	FL
Psyllidae	Nymph. No known California Psyllidae with <i>Alpinia purpurata</i> as host.	Q	EC, TN
Pyalidae	Grass moth	Q	FL, PR
Sesiidae	Clearwing moth	Q	MI
<i>Solenopsis invicta</i>	Red imported fire ant	A	FL
<i>Solenopsis</i> /sp.	Ant	Q	HI
<i>Technomyrmex</i> /sp.	Ant	Q	FL, HI
<i>Tetranychus</i> /sp.	Tetranychid mite	Q	HI
Tettigoniidae	Nymph	Q	FL
Thysanoptera	Thrip	Q	LA, TX (2)

Scientific Name	Common Name/Notes	Rating_ID	Origin
Tingidae	Lace bug	Q	AL
Tortricidae	Moth	Q	PR
<i>Tuckerella</i> sp.	Peacock mite	Q	HI
<i>Wasmannia auropunctata</i>	Ant	A	HI
<i>Zasmidium musae</i>	<i>Zasmidium musae</i> was confirmed by the USDA. It is a known pathogen of <i>Musa</i> sp. in Martinique, Tonga, West Indies, The Netherlands, and Saint Lucia. There have been no previous US reports and was recently classified by the USDA as a Quarantined Pest.	Q	EC, TN

343 Total Interceptions

HIGHLIGHTS OF COUNTY DOG TEAM INTERCEPTIONS

California Dog Team interceptions from July 1, 2019 to December 31, 2019 resulted in the interception of 38 A-rated pests and 120 Q-rated pests. These quarantine pests are not known to occur in California. The California Dog Team interceptions were critical in preventing the establishment of these detrimental pests in California. The following narratives detail examples of interesting interceptions during the reporting period.

EXAMPLES OF ALAMEDA/CONTRA COSTA COUNTY DOG TEAM INTERCEPTIONS

Summary of Interception Highlights: Ants from Hawaii

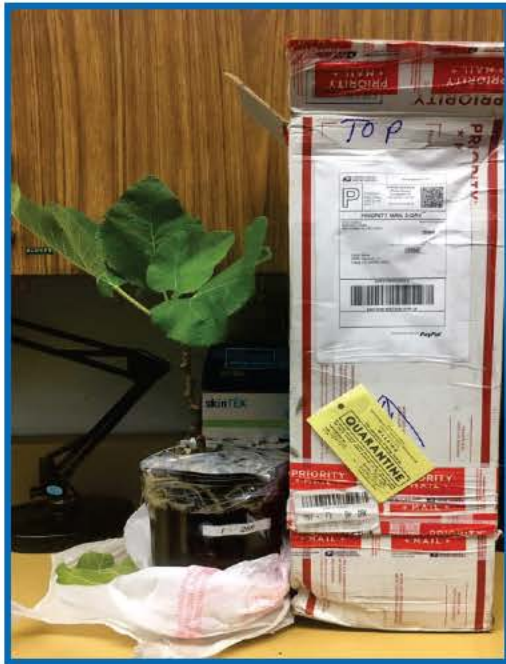
1. *Aonidiella orientalis* (Oriental scale)

Aonidiella orientalis (Oriental scale)

On July 24, 2019, Alameda County Inspectors Lisa Sampson, Gabrielle Palmer, and Julia Dunne along with Contra Costa County Dog Team Inspector/Handler Simone Ackermann and canine Major intercepted a parcel from Louisiana at the USPS facility in Oakland. Inspectors Palmer and Dunne received consent from the shipper to inspect the parcel. The parcel contained a small *Ficus lyrata* (fiddle-leaf fig) plant with roots and soil. The exterior of the parcel lacked the required markings indicating the contents or the growing origin of the contained plant material. Furthermore, the required certifications for Imported Fire Ant and Burrowing and Reniform Nematode Quarantines were not present and therefore lead to the plant being confiscated for further inspection.

Upon closer inspection of the plant, Inspectors Palmer and Dunne found suspect insect pests adhering to the leaves of the plant. Pest samples were collected and submitted to the Plant Pest Diagnostics (PPD) Entomology Laboratory for identification.

The PPD Entomology Laboratory identified the pests as A-rated *Aonidiella orientalis* (Oriental scale).



Left: An intercepted package containing a *Ficus lyrata* (fiddle-leaf fig) plant shipped without proper markings and certification. (Photo courtesy of Alameda County.) Right: Canine Inspector Major hard at work at the USPS facility. (Photo courtesy of Contra Costa County.)

EXAMPLES OF CONTRA COSTA COUNTY DOG TEAM INTERCEPTIONS

Summary of Interception Highlights:

1. Infested plant material from Laos

Infested plant material from Laos

On November 4, 2019, San Joaquin County Agricultural Biologist Joseph Gerald along with Contra Costa County Dog Team Inspector/Handler Simone Ackerman and Dog Major conducted a routine inspection at a DHL facility in Tracy. An international shipment coming from Laos was intercepted. The package was marked with a small sticker stating that the contents consisted of food and lotions. When the package was opened for closer inspection, 37 plant bundles of an unknown variety with dried meat packaged in the center of the plant bundles were found. The plants and meat also contained unknown seeds and were infested with insect pests.

Samples of the plants, seeds, and live insects were sent to the PPD Botany, Seed, and Entomology Laboratories for identification. The insect pests were identified as Q-rated *Carpophilus* sp. and Q-rated Aleyrodidae as well as other non-actionable pests. The plants are pending results from molecular analysis.

The dried meat in the package was given to U.S. Fish and Wildlife for identification and possible action on their end. Due to the origin of the shipment, Smuggling Interdiction and Trade Compliance (SITC) was also notified.



Left: Bundles of unknown plant material with unknown dried meats wrapped inside. Right: Dog Major with the intercepted package. (Photos courtesy of San Joaquin County.)

EXAMPLES OF LOS ANGELES COUNTY DOG TEAM INTERCEPTIONS

Summary of Interception Highlights:

1. *Dysmicoccus neobrevipes* (gray pineapple mealybug)
2. A-rated *Maconellicoccus hirsutus* (pink hibiscus mealybug)
3. Q-Rated Plum Moth Found in an Unmarked Package

***Dysmicoccus neobrevipes* (gray pineapple mealybug)**

On August 23, 2019, Los Angeles County Inspector/Handler Lauren Eckert with canine Sedona, San Diego County Inspector/Handler Kyle Moranton with canine Podder, and Los Angeles County Inspector Karina Narvaez conducted routine parcel inspections at the USPS facility in Santa Clarita. Canine Sedona alerted on an unmarked and uncertified package from an Etsy seller originating from Los Angeles, CA.

Permission was obtained from the shipper to open the parcel for inspection. The inspectors found longans and dates. The shipper also confirmed that Lucky Taro in Los Angeles received the fruit (longans) from Vietnam.

Upon inspection of the longans and dates, Inspector Narvaez found two suspect mealybugs on the longans.

Pest samples were submitted to the PPD Entomology Laboratory where they were identified as A-rated *Dysmicoccus neobrevipes* (gray pineapple mealybug).

Los Angeles County Inspectors intercepted this parcel as a shipment from one resident to another in the same county. There were no accompanying documents at the time of the parcel interception. Following the identification of the pest as A-rated *Dysmicoccus neobrevipes* (gray pineapple mealybug), Los Angeles County Inspectors traced back the intercepted shipment to the original importer, Lucky Taro. Lucky Taro had all the commercial entry paperwork and a phytosanitary certificate indicating irradiation as the treatment allowing the shipment to legally enter the United States. The minimum dose for all insect pests except adults and pupae of the order Lepidoptera is 400 Gray ([USDA Irradiation Treatment](#)).

The United States Department of Agriculture (USDA)/(SITC) was contacted and provided the information.

It is important to note that once shipments have been broken down into smaller shipments/orders, it is hard to distinguish irradiated shipments from non-irradiated ones if paperwork does not accompany them. It is for this reason that inspectors should take precaution and due diligence when intercepting pests in such situations.



Vietnam origin longans infested with *Dysmicoccus neobrevipes* (gray pineapple mealybug). (Photos courtesy of Los Angeles County.)

A-rated *Maconellicoccus hirsutus* (pink hibiscus mealybug)

On October 18, 2019, Los Angeles County Inspectors Gary Phinney, Karina Narvaez, and Inspector/Handler Lauren Eckert with canine Sedona conducted a routine inspection at a USPS center in the city of Los Angeles. Canine Sedona alerted the inspectors to an unmarked non-commercial box shipped from Arcadia, CA.

After obtaining permission from the shipper, Inspector Narvaez opened the box to find persimmon and guava fruit. Upon closer examination of the fruit, Inspector Narvaez noticed mealybugs on the



Left: Intercepted box containing persimmon and guava fruit. Right: Mealybug found on intercepted persimmon fruit. (Photos courtesy of Los Angeles County.)

persimmons. Pest samples were collected and sent to the PPD Entomology Laboratory where they were identified as A-rated *Maconellicoccus hirsutus* (pink hibiscus mealybug) adult females.

On October 29, 2019, Los Angeles County inspectors conducted a follow-up investigation at the Los Angeles County home harboring the persimmon tree that yielded the infested fruit. Inspectors found a light mealybug infestation on the backyard persimmon tree and sent pest samples to the PPD Entomology Laboratory for identification. Results identified the mealybugs as non-actionable C-rated pests. No pink hibiscus mealybugs were found associated with the persimmon tree.

Q-Rated Plum Moth Found in an Unmarked Package

On March 11, 2020, Los Angeles County Inspectors Gary Phinney and Justin Nguyen, along with Dog Team Inspector/Handler Keri Vigil with canine Rydar, conducted a routine inspection at a FedEx facility in Inglewood. During the inspection, canine Rydar signaled on an unmarked package from New York. Inspectors Phinney and Nguyen opened the box which contained unidentified plant material along with nonagricultural items.

Upon closer inspection, inspectors found a single larva on one of the leaves. A sample of the pest was collected and sent to the PPD Entomology Laboratory where it was identified as Q-rated *Latanophaga pusillidactyla* (plum moth). The infested plant material was confiscated and destroyed via freezing at the Los Angeles County South Gate office. The remaining non-agricultural items in the package were inspected and subsequently released to the receiver.

EXAMPLES OF SACRAMENTO COUNTY DOG TEAM INTERCEPTIONS

Summary of Interception Highlights:

1. Hawaii pests in uncertified package
2. Multiple rated pests in one package

Hawaii pests in uncertified package

On February 28, 2020, Sacramento County Dog Team Inspector/Handler Michelle King along with dog Kernul intercepted a package from Hawaii during a routine inspection at a FedEx facility in Rancho Cordova. Kernul alerted on a package that lacked all proper markings. The only markings present on the package were an illegible APHIS PPQ stamp. The package also lacked any certification that may have accompanied it. The package's contents included an intricately designed garland made from various unidentified flowers and leaves.

Upon closer inspection of the garland, Inspector King found several live scale insects on the leaves and stems. Pest samples were collected and sent to the PPD Entomology Laboratory where they were identified as the following:

- A-rated *Fiorinia phantasma* (phantasma scale)
- A-rated *Pseudaulacaspis cockerelli* (magnolia white scale)
- Q-rated *Phalacroccoccus howertoni* (croton scale)



Left: An unmarked package of flower garlands. Center: Scale insects found on stems and leaves under magnification. Right: Sacramento County Detection dog Kernul. (Photos courtesy of Sacramento County.)

The shipment was reconditioned with the removal of infested plant parts and subsequently released.

Multiple rated pests in one package

On October 17, 2019, Sacramento County Dog Team Inspector/Handler Mariah de Nijs with canine Tazz, Sacramento County Inspector Gideon Rector, and Yolo County Inspector Bill Lyon intercepted an unmarked and uncertified box of fruit from Puerto Rico at the USPS facility in West Sacramento. The fruit and box were in poor condition and heavily infested with suspect insect pests.

Permission was obtained from the receiver to open the box for inspection. The box contained *Mangifera* sp. (mango) fruit, *Annona muricata* (soursop) fruit, and *Melicoccus bijugatus* (genip) fruit with leaves still attached.

Upon inspection of the complete parcel, Inspectors Lyon and Rector found suspect insect pests on the fruit surface, leaves, and bottom of the box. Pest samples were submitted to the PPD Entomology Laboratory where they were identified as the following:

- A-rated *Pinnaspis strachani* (lesser snow scale)
- Q-rated *Phalacroccoccus howertoni* (scale)
- Q-rated Coccidae (scale)
- Q-rated Tortricidae (leafroller)
- Q-rated Pyralidae (moth larvae)



Shipment of *Annona muricata* (soursop), *Melicoccus bijugatus* (genip), and *Mangifera* sp. (mango) fruit from Puerto Rico, infested with multiple pests. (Photos courtesy of Yolo County.)

EXAMPLES OF SAN BERNARDINO COUNTY DOG TEAM INTERCEPTIONS

Summary of Interception Highlights:

1. *Aleurotrachelus anonae* (whitefly)

***Aleurotrachelus anonae* (whitefly)**

On August 14, 2019, San Bernardino County Inspector/Handler Kristina Cummings accompanied by canine Macey and Inspector Fabian Gonzalez intercepted a properly marked and certified package. The package was sent by South Carolina shipper Fast Growing Trees at the FedEx facility in Bloomington and contained a 51 lb. *Malus* sp. (sugar apple) tree.

Upon inspection of the tree, Inspector Gonzalez found suspect insect pests on the tree leaves.

Pest samples were submitted to the Plant Pest Diagnostics (PPD) Entomology Laboratory where they were identified as A-rated *Aleurotrachelus anonae* (whitefly).

A notice of rejection was issued for violating California FAC [Section 6461.5](#) (live pests). The shipment was destroyed on August 16, 2019, via double bagging and put into a dumpster.

Note: Multiple counties have intercepted parcels from Fast Growing Trees with live A- and Q-rated pests. Recently, the Santa Barbara County Dog Team intercepted A-rated *Aleurotrachelus anonae* (whitefly) pests on a Fast Growing Trees shipment ([AQW Report 32-2019](#)).

EXAMPLES OF SAN DIEGO COUNTY DOG TEAM INTERCEPTIONS

Summary of Interception Highlights:

1. *Alternanthera* sp. (joyweed)
2. *Exosporium petersii* (leaf spot pathogen). First interception in California.
3. *Parmarion martensi* (semi-slug)
4. *Kwelllingia divina* (bamboo rust)
5. New Plant Pathogen Found on Intercepted Cut Flowers from Ecuador

***Alternanthera* sp. (joyweed)**

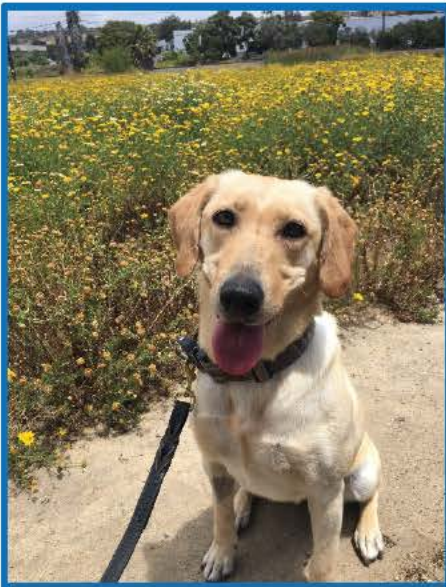
On July 17, 2019, San Diego County Dog Team Inspector/Handler Jeremy Partch with Detector Dog Yeti and Insect Detection Specialist (IDS) Sean Foley intercepted an unmarked parcel from Colorado at a FedEx facility in Carlsbad. The parcel contained a *Pinus ponderosa* (ponderosa pine) seedling, a small pot, and a condolence card. The pine seedling was packaged with roots and soil. All plants with roots and soil coming from Colorado should be accompanied by proper Japanese beetle certification, which the parcel lacked.

Upon further inspection of the shipment, IDS Sean Foley discovered an unknown weed at the base of the pine. The seedling along with the suspect weed were removed and sent to the PPD Botany Laboratory for identification. The rest of the shipment was released to its destination. The PPD Botany Laboratory identified the unknown weed as Q-rated *Alternanthera* sp. (joyweed) but was unable to identify the species due to inconclusive molecular testing of the seed. The pine seedling was later destroyed once the noxious weed was identified.



Pinus ponderosa containing a suspect weed identified as Q-rated *Alternanthera* sp. (Photo courtesy of San Diego County.)

***Exosporium petersii* (leaf spot pathogen). First interception in California**



San Diego Detection Dog, Yeti. (Photo courtesy of San Diego County.)

On August 21, 2019, San Diego County Dog Team Inspector/Handler Jeremy Partch with Detector Canine Yeti, Inspector Greg Terhall, and Insect Detection Specialist II (IDS II) Sean Foley conducted a routine inspection at a FedEx facility in San Diego. During the inspection, two shipments from Texas grower Whites Foliage were intercepted. One shipment contained 20 lbs. of smilax cuttings and the other contained 10 lbs. of smilax cuttings; both without roots or soil which were intended for decorative use. Both packages were properly marked with growing origin, contents, and destined to two different receivers in San Diego County.

Upon closer inspection of the shipments, Inspector Terhall and IDS II Foley found suspect leaf spots on the smilax. Samples were taken and sent to the PPD Plant Pathology Laboratory where they were identified as Q-rated *Exosporium petersii*. Both shipments were inspected thoroughly, reconditioned with the removal of symptomatic

leaves, and put back into the sort for delivery to their destinations.

General Identification Notes: *Exosporium petersii* is a known leaf spot pathogen with worldwide distribution (including Texas) but has not had any previous detections in California.

***Parmarion martensi* (semi-slug)**

On November 26, 2019, San Diego County Dog Team Inspector/Handler Jeremy Partch with Detector Dog Yeti and Insect Detection Specialist II (IDS II) Fran Wade intercepted a properly marked and certified shipment of cut flowers from Hawaii shipper With Our Aloha at a FedEx facility in San Diego. USDA-APHIS PPQ, Limited Permit, Cut Flowers Hilo 840 was present with the shipment.

Upon inspection of the cut flowers, IDS II Wade found a suspect semi-slug on the cut flowers. A pest sample was collected and submitted to the PPD Entomology Laboratory where it was identified as A-rated *Parmarion martensi* (semi-slug).

The shipment was inspected thoroughly, reconditioned, and put back into the sort for delivery to its destination.



A shipment of cut flowers from Hawaii, infested with *Parmarion martensi* (semi-slug). (Photos courtesy of San Diego County.)

***Kwelllingia divina* (bamboo rust)**

On November 12, 2019, San Diego County Dog Team Inspector/Handler Jeremy Partch with canine Yeti and Insect Detection Specialist II (IDS II) Sean Foley intercepted a shipment of 12 properly marked and certified one-gallon *Bambusa* spp. (bamboo) plants from Florida at a FedEx ground facility in San Diego. The shipment was destined for Riverside County.

Upon inspection of the shipment, IDS II Foley found suspect rust on the bamboo plants. A sample was taken and turned into the San Diego County Plant Pathology Laboratory for further identification. Afterwards, the samples were forwarded to the PPD Plant Pathology Laboratory where the rust was identified as A-rated *Kwelllingia divina* (bamboo rust).

Due to the shipment's destination being in Riverside County, the shipment was placed on hold at the homeowner's residence by Riverside County inspectors pending the laboratory results. The bamboo plants were ultimately chopped, double-bagged, and buried in a landfill once the results indicated the pest was actionable.



Left: *Bambusa* spp. (bamboo) plant from Florida intercepted at a FedEx facility in San Diego County. Center: A-rated *Kwelllingia divina* (bamboo rust) on a bamboo leaf. Top Right: Close-up of bamboo rust on a bamboo leaf. Bottom Right: Magnified photo of *Kwelllingia divina*. (Photos courtesy of San Diego County.)

New Plant Pathogen Found on Intercepted Cut Flowers from Ecuador

On August 16, 2019, San Diego County Dog Team Inspector/Handler Jeremy Partch with Detector Dog Yeti and Insect Detection Specialist II (IDS II) Fran Wade intercepted a shipment of properly marked cut flowers at a FedEx facility in San Diego. The country of origin for the flowers was Ecuador but the shipment was brokered by The Bouqs in Tennessee. Upon inspection of the shipment, IDS II Wade found what appeared to be symptomatic tissue on a single leaf of *Cordyline* sp. (cordyline) in the bouquet. The suspect leaf was removed and sent to the PPD Plant Pathology Laboratory where the pathogen was identified as Q-rated *Zasmidium musae*.

On September 11, 2019, Inspector Partch with Detector Dog Yeti and IDS II Wade intercepted an identical shipment from the same broker and origin at a FedEx facility in San Diego. Upon inspection of the shipment, IDS II Wade found what again appeared to be the same suspect symptomatic tissue on one *Cordyline* sp. (cordyline) leaf in the bouquet. The suspect leaf was removed from the parcel and submitted to the PPD Plant Pathology Laboratory where it was once again identified as Q-rated *Zasmidium musae*.

Both shipments were inspected thoroughly, reconditioned with suspect leaves being removed, and put back into the sort for delivery to destination.

Both instances are the first reported finds of *Zasmidium musae* in the United States. However, *Zasmidium musae* is a known pathogen of *Musa* sp. in Martinique, Tonga, West Indies, Netherlands, and Saint Lucia.



Cut flowers and *Cordyline* sp. (cordyline) with Q-rated *Zasmidium musae*. (Photos courtesy of San Diego County.)

EXAMPLES OF SANTA BARBARA COUNTY DOG TEAM INTERCEPTIONS

Summary of the Interception Highlights

1. *Aleurotrachelus anonae* (whitefly)
2. Multiple Pests on Farmgirl Flower Bouquets
3. Symptomatic palm fronds

***Aleurotrachelus anonae* (whitefly)**

On August 6, 2019, Santa Barbara County Inspector/Handler Christine Tyler accompanied by canine Doomis and Inspector Shawn Jensen intercepted a marked and properly certified parcel from Fast Growing Trees in South Carolina while working at the FedEx facility in Santa Maria. The

parcel contained certifications for burrowing and reniform nematode, Japanese beetle, and imported fire ant quarantines.

Upon inspection of the parcel's contents, Inspector Jensen found two *Persea* spp. (Hass avocado) trees heavily infested with insect pests on the underside of the tree leaves.

Pest samples were submitted to the PPD Entomology Laboratory where they were identified as A-rated *Aleurotrachelus anonae* (whitefly).

The California Department of Food and Agriculture contacted the South Carolina Department of Agriculture and requested they work with Fast Growing Trees (Brighter Blooms) ensuring future shipments are free from pests and properly certified. Multiple counties have recently intercepted parcels from Fast Growing Trees with A- and Q-rated pests.



Multiple Pests on Farmgirl Flower Bouquets

On February 6, 2020, Santa Barbara County Agricultural Inspector Shawn Jensen, accompanied by Dog Team Inspector/Handler Chris Tyler and canine Doomis, conducted a parcel inspection at a UPS facility in Santa Maria. During the inspection, two properly marked parcels containing cut flower bouquets from Farmgirl Flowers in San Francisco were intercepted. The parcels came with a California Snail-Free Master Permit and USDA-APHIS-PPQ light brown apple moth (LBAM) certification. Both bouquets contained cycad leaves as filler plants. Upon closer inspection of the bouquets, Inspector Jensen found multiple pests on the cycad leaves. Pest samples were collected and sent to the PPD Entomology Laboratory where they were identified as the following:

- Q-rated Coccidae (immature female wax scales)
- Q-rated insect eggs
- Q-rated Gastropoda (juvenile snail)

Both bouquets were destroyed by double bagging and burying in the municipal waste.



Left and above: Cut flower bouquet from Farmgirl Flowers. (Photos courtesy of Santa Barbara County.)

Symptomatic palm fronds

On February 19, 2020, Santa Barbara County Dog Team Inspector/Handler Chris Tyler accompanied by dog Doomis, and Inspectors Julia Kosowitz and Sally Leon-Tondro intercepted a parcel at a FedEx facility in Goleta. The parcel was properly marked and certified containing a cut flower bouquet from Hawaii shipper Tropical Flowers Express. An APHIS PPQ limited permit for cut flowers accompanied the shipment. Upon inspection of the bouquet, Inspectors Kosowitz and Leon-Tondro found disease- like symptomatic palm fronds in the bouquet. Infested fronds were collected and submitted to the PPD Plant Pathology Laboratory where Q-rated *Colletotrichum grevilleae* (leaf spot) was identified via PCR sequence analysis.

The shipment was double-bagged and disposed of via deep burial at the landfill.

General Identification Notes of Laboratory: *Colletotrichum grevilleae* causes leaf spots. This species has not been reported previously as having a wide host range, but species generally in the genus *Colletotrichum* are globally dispersed and are known as leaf spot pathogens.

***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.

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

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