

# Western Plant Diagnostic Network

## First Detector News

A Quarterly Pest Update for WPDN First Detectors

Summer 2014 edition, volume 7, number 3



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Dear First Detectors,

Where do all these pests come from? The 2014 summer edition of the WPDN News features the role that agencies such as the USDA-Plant Protection and Quarantine, Customs and Border Protection, Smuggling Interdiction and Trade, plus the various federal and state agencies, play in protecting United States agriculture, trade, and public health. The discussion of the role of these agencies is followed by examples of the seemingly innocent air-freighting of giant African snails into Los Angeles, the smuggling of citrus budwood from Japan, and a problem with garlic and honey dumping from China. Each story demonstrates how these agencies address these situations to protect the US.

As I always say in my First Detector training sessions, when shopping read the labels and see where your food is coming from. The labels tell much about world trade.

Please find the NPDN family of newsletters at:

[Newsletters](#)

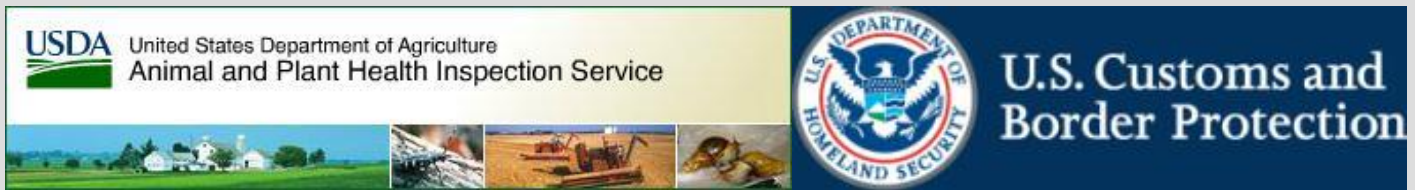


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# Intercepting Pests (Before they can reach you)

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In the [WPDN Fall 2011 newsletter](#), a whole array of agencies that protect United States' agriculture, horticulture, forestry, and food supply is discussed in depth. [Customs and Border Protection](#) (CBP), working with the [USDA Plant Protection and Quarantine](#) (PPQ), do an excellent job considering the immense volume of shipping and air freight entering the US. CBP employs a highly professional staff that monitors international trade and "trade talk," inspects suspect shipments for plant pests, trade violations, hazardous products, non-compliance, etc. If suspect insect pests, pathogens, or weed seeds are found, they are sent to the nearest Plant Protection and Quarantine (PPQ) facility, usually located near the major ports of entry. In the WPDN area, there are PPQ plant inspection stations at Nogales AZ, El Segundo CA (for Los Angeles), South San Francisco CA, San Diego CA, Tiyan, Barrigada GU, Honolulu HI, and SeaTac WA. The new [USDA Animal and Plant Health Inspection Service](#) (APHIS) website is well worth visiting. It describes the work of several related agencies. It also has great links for FAQs, such as [How can I help keep foreign invasive species out of the US?](#), [Find an APHIS publication](#), and [Travel with my pet](#). The [Center for Plant Health Science and Technology](#) (CPHST) provides scientific support for PPQ regulatory decisions and operations, and is the main component of PPQ's Science and Technology core functional area, which also includes the National Clean Plant Network. CPHST is responsible for ensuring that PPQ has the information, tools and technology to make the most scientifically valid regulatory and policy decisions possible. In addition, CPHST ensures PPQ's operations have the most scientifically viable and practical tools for pest exclusion, detection, and management.

Another interesting agency of the USDA APHIS complex is [Smuggling Interdiction and Trade Compliance](#) (SITC, pronounced sit-see). The mission of PPQ's SITC program is to detect and prevent the unlawful entry and distribution of prohibited and/or non-compliant products that may harbor exotic plant and animal pests, disease or invasive species. SITC focuses its anti-smuggling efforts at the Ports of Entry and markets to prevent the establishment of plant and animal pests and diseases, while maintaining the safety of our ecosystems and natural resources. View the above link to learn more about SITC roles in intercepting smuggled agricultural products before and after they reach US markets. If individuals are aware of the potential smuggling of prohibited exotic fruits, vegetables, or meat products into or through the USA, they can help APHIS by contacting the confidential Anti-smuggling Hotline number at 800-877-3835 or by sending an Email to [SITC.Mail@aphis.usda.gov](mailto:SITC.Mail@aphis.usda.gov). USDA will make every attempt to protect the confidentiality of any information sources during an investigation within the extent of the law. In the marketplace, SITC officers conduct inspection surveys and intense trade compliance activities, looking to uncover prohibited or regulated items. This work may lead to trace backs to the Port of Entry in order to identify the distributor. Once a smuggling pathway is identified, it is shut down often resulting in civil and/or criminal prosecution, and recalls to safeguard American agriculture. The market place for SITC encompasses major distribution centers, flea markets, animal/plant and insect trade shows, large and small chain stores, roadside vendors and your neighborhood corner store. On page 5 is an example of the agencies working together in intercepting infested citrus budwood shipped as candy and books.

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## Sixty-seven Snails for a Nigerian-Style Barbecue

Officials with the United States Customs and Border Protection reported recently that agriculture specialists at Los Angeles International Airport intercepted 67 Giant African Snails (GAS) in an air cargo shipment. According to authorities, CBP received notice on July 7, 2014 of a shipment of snails, that contained two plastic packages in total weighing just over 35 pounds. The cargo arrived from Lagos, Nigeria, and was to be delivered to the San Dimas CA area, with paperwork stating they were 'Achatina Fulica' and were meant for human consumption, officials stated in a news release. "The significant interception of giant African snails is the first time this pest has been encountered in such large quantity and as a consumption entry by CBP in Los Angeles," said Todd C. Owen, CBP Director of Field Operations. The [WPDN Winter-Spring 2013](#) newsletter discusses GAS on pages 3 and 4, and view this [GeoBeats News](#) video. CBP officials stated that they submitted an urgent sample to the USDA PPQ entomologists/malacologists Patrick Marquez and Greg Bartman at the Los Angeles PPQ plant inspection station, where a PPQ [malacology](#) specialist in Miami, Fred Zimmerman, determined the sample to be [Archachatina marginata var. ovum](#), giant African snails (GAS). Patrick and Greg are both frequent contributors to the WPDN newsletter and have both participated and taught in several WPDN workshops. See this [video](#) (with choir) on live GAS in action.

According to USDA PPQ officials, these snails are native to Africa and can grow to about 8 inches long, 5 inches wide and live to be 10 years old. They are commonly referred to as giant African snail (GAS), banana rasp snail, Margie, West African snail and West African land snail, authorities said.

Agriculture specialists described these snails as a very serious threat to the natural ecosystem, public health and economy. They are carriers of several parasites that are harmful to humans, especially the [rat lungworm nematode](#) that can lead to meningitis. Please watch this video: [Rat lungworm video](#) (following in the series "Animal Planet" are several fascinating videos on other parasites). This video is also included in the WPDN Spring 2013 newsletter regarding the channeled apple snail. If found, handle these snails with latex gloves. If handled without gloves, wash thoroughly with soap and water, and avoid touching your mouth while the slime is on your hands. Due to the threat this snail species presents, the shipment was transferred from CBP officials to the local plant inspection station for final precautionary steps, USDA officials said. "It exemplifies how CBP agriculture specialists protect our nation's agriculture from the introduction of threatening foreign pests, plants and diseases," Owens said. Being one of the world's largest land snails, USDA-PPQ officials said these pests can consume over 500 types of plants, and will even eat the stucco and paint off houses. CBP officials reported that they took measures to quarantine the snails, preventing them from further spreading.

GAS was first introduced into the mainland US in Florida in 1966 by a young boy returning from Hawaii with 3 snails. He planned to raise them as pets. After a long campaign killing 18,000 snails, GAS was eradicated by 1972. GAS returned to FL in September, 2011, in the Miami-Dade area. The Florida Department of Agriculture and the USDA established a Regulated Area and are in the process of eradicating the population. As of August, 2012, over 125,000 GAS from 545 properties in 21 cores (centers of infestation) have been detected and destroyed. Please see this video, Florida Infestation of GAS [Florida Infestation of GAS](#) to understand the danger this snail poses to agriculture, horticulture, stucco, and [health](#).





**Giant African snail – note the size!  
(and note the protective gloves)**



**Giant African snail – in the flesh!**



**Greg Bartman  
PPQ Entomologist/  
Malacologist**



**The giant African snails air-freighted to LAX from  
Nigeria**



**Patrick Marquez  
PPQ Entomologist/  
Malacologist**



## **Plant Smuggling: a.k.a. “Suitcasing” & “Self-Importation”**

Plant Protection and Quarantine (PPQ) regulates the importation of plants and plant products under the authority of the Plant Protection Act. PPQ maintains its import program to safeguard U.S. agriculture and natural resources from the risks associated with the entry, establishment, or spread of animal and plant pests and noxious weeds. When traveling or mailing fresh goods, make sure you don't have any unintended stowaways. Never bring or mail fresh fruits, vegetables, or plants into the United States without proper clearance from agriculture inspectors. See [Plant Health Import Information](#). On a regular basis we often hear news that animal parts and plants are smuggled along with narcotics and fire arms. Plant smuggling is quite common in certain plant industries, including the grape and fruit tree industries. In the grape industry, [vine mealybug](#) was smuggled into California on table grape material in the early 1990s. It has since spread to most of the grape growing regions in CA. Besides being a direct vine pest, it can also vector several of the [grape leafroll viruses](#). [Plum pox virus](#) (PPV) was illegally imported into Adams County, Pennsylvania, from Europe on prunus budwood, and first detected in 1999. This virus is vectored by many species of aphids and spread very quickly. It spread into PA, NY, and into Canada. After a massive eradication program, PPV was declared eliminated in the US, although the disease is still present in Canada.

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## Citrus Canker in Smuggled Citrus Budwood from Japan

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In April 2004, CDFA was notified by USDA/APHIS that their Safeguarding, Intervention and Trade Compliance Program (SITC) intercepted prohibited citrus budwood from Japan at a postal facility in Daly City, San Mateo County, CA. The package was declared as "candy and chocolates". The USDA laboratory in Beltsville, Maryland, determined that the intercepted budwood was infected with the bacterium, *Xanthomonas axonopodis* pathovar *citri*, the causal agent of [citrus canker](#). Citrus canker outbreaks are prevented and managed in a number of ways. In countries that do not have canker, the disease is prevented from entering the country by exclusion and quarantine measures. In countries with new outbreaks, eradication programs that are started soon after the disease has been discovered have been successful; such programs rely on destruction of affected groves. When eradication has been unsuccessful and the disease has become established, management options include replacing susceptible citrus cultivars with resistant cultivars, applying preventive sprays of copper-based bactericides, and destroying infected trees and all surrounding trees within an appropriate radius.

The shipment was addressed to the residence of a commercial nursery caretaker in Ventura County. Interior Pest Exclusion, USDA and county agricultural staff conducted a joint inspection at the recipient's nursery and residence. During the inspection, more than 3,600 pieces of grafted citrus plants were found and placed on hold. It was alleged that the owner had grafted the rootstock with Japanese citrus budwood. The USDA issued a Destruction Order for all the grafted citrus plants suspected of being propagated using smuggled citrus budwood. Consequently, all citrus plants at the nursery and residence of the shipment receiver were destroyed in accordance with the USDA order, with assistance from the Ventura County Fire Department. The plant smuggler, a Japanese citizen, was told that it was illegal to import the citrus budwood cuttings but boasted, "Nobody's gonna catch it," according to an affidavit filed in U.S. District Court in San Francisco.

The plant smuggler was hoping to grow a Japanese citrus that he could sell in Japan. He was sentenced to one month in prison, a \$5,000 fine and community service that required him to distribute brochures both in Japan and the U.S. that warn about the virus and the consequences of illegally shipping citrus cuttings to the US. His citrus orchards were destroyed. See [CA v. Orchards](#) in LawFuel.

PPQ officials have communicated that if someone is a known or suspected plant smuggler, their passport will be coded for a strip search upon entering the US.



Photo: CDFA

Citrus plant budded with smuggled budwood



Photo: CDFA

Smuggled citrus burned by Ventura County Fire Department

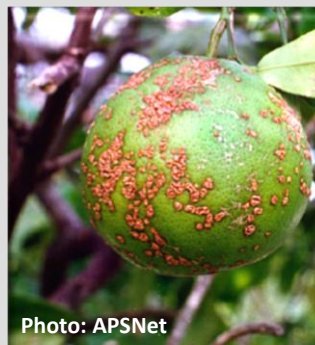


Photo: APSNet

Citrus Canker on grapefruit



Photo: APSNet

Citrus Canker on citrus leaves



Agricultural products are commonly shipped from one country to another. This type of commerce is generally essential to a nation's economy and welfare. The manner in which this is done, however, is not usually left to the whims of the shippers and receivers. Instead, there are laws and regulations that govern the process of exportation and importation. These guidelines are known as trade compliance. The [World Trade Organization](#) (WTO) is the only global international organization dealing with the rules of trade between nations. At its heart are the WTO agreements, negotiated and signed by the bulk of the world's trading nations and ratified in their parliaments. The goal is to help producers of goods and services, exporters, and importers conduct their business. USDA works with foreign governments, international organizations, and the [Office of the U.S. Trade Representative](#) to establish international standards and rules to improve accountability and predictability for agricultural trade. USDA helps facilitate trade policy by:

- Monitoring both bilateral and multi-lateral trade agreements to help ensure that U.S. agriculture reaps the full benefit of trade agreements.
- Partnering with other U.S. government agencies and the private sector in international trade negotiations aimed at eliminating trade barriers and establishing transparent and science-based trading standards.
- Responding to WTO notifications from foreign countries on sanitary, phytosanitary and technical measures that affect agricultural trade.
- Analyzing policies and regulations of major trading partners and examining the impacts of various trade agreements on member countries' agricultural sectors.
- Monitoring the safety and quality of products coming into the U.S. from foreign trading partners is one of the many ways USDA helps protect the American consumer.

Now, with all that said, here is an interesting story about getting “around” trade agreements. The following article is excerpted from Bill Lambrecht's article in the San Francisco Chronicle of April 14, 2014: “Illegal Chinese garlic imports pounding U.S. industry”.

In little more than a year, a single Chinese company has flooded the U.S. market with 60 million pounds of garlic, almost half of it through the Port of Oakland, in a scheme to avoid penalties that protect domestic growers. The dumping of Chinese garlic has severely hurt the U.S. industry. Half of California's biggest garlic packers have disappeared in the past decade, says industry leader Bill Christopher of [Christopher Ranch](#) in Gilroy. The Chinese operation unraveled in December, thanks to detective work by customs agents. It was a rare success for U.S. Bureau of Customs and Border Protection (CBP), which is struggling to contain fraud in the flood of all sorts of Chinese goods arriving at U.S. ports. Foreign companies and their partners on U.S. soil have routinely flouted U.S. trade law, evading penalties designed to protect domestic industries. In the garlic case, [Jinxiang Hejia](#) Company skirted duties of more than \$2 a pound by initially securing favorable terms granted to companies that do not appear to threaten U.S. industries. The Chinese company's first shipment totaled a mere 7,000 pounds. After receiving the favorable terms, Hejia dropped more than 60 million pounds of cheap garlic on the U.S. market from November 2012 to early 2014, shipping records show. That amount is roughly the annual output from Christopher Ranch in Gilroy, California, the country's largest garlic packer. In October, customs agents closely examined shipments arriving in Oakland and New York. They discovered that Hejia was not producing all that garlic, and that packing codes identified a source as another producer - a company responsible for 255 unpaid duty bills amounting to \$12 million.

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Hejia's exports have stopped, but Christopher Farms, now producing a third less garlic than before, fully expects the flow to resume from other Chinese companies outmaneuvering U.S. authorities. "They'll send it from China under one name, and then it will change names on the ship," Christopher said. "Our government is trying to help us, but there are just not enough people to stop the dumping."

In a report to Congress last year, Customs and Border Protection estimated that Chinese companies account for roughly 90 percent of the \$1.79 billion in unpaid U.S. duties. The total includes \$541 million for garlic imports. The report said many importers have "disappeared or dissolved" before paying duty bills and lamented the "increasing complexity" of strategies to defraud the government. The [International Trade Administration](#) of the Department of Commerce is working to resolve this garlic dumping on US markets.

### Bad honey

In skirting antidumping duties, importers evade other rules intended to protect against contaminated products, investigators say. For example, the customs agency seized 100 tons of adulterated honey from a smuggler who began serving a three-year prison term in January after pleading guilty to brokering hundreds of loads of Chinese honey falsely labeled Malaysian or Indian. The smuggler, Jun Yang of Houston, also had \$200,000 worth of Chinese shrimp adulterated with chloramphenicol, a potent antibiotic unapproved for use in food products in the United States.

The honey investigation also snared a Southern California business owner, Hung Yi "Katy" Lin, who reported to prison in November after pleading guilty to cheating the government out of \$39 million in import duties on Chinese honey falsely labeled as syrups and sweeteners. After it was imported and stored in warehouses in Los Angeles and Houston, Lin arranged for new labels that described the contents of drums as honey of various origins - but not Chinese, according to court records and investigators. See the honey smuggling operations' legal consequences at ["Honeygate"](#) .

### Pests Updates

On July 14, 2014, Egyptian broomrape, [Orobanche aegyptiaca](#) was detected in a field for processing tomatoes. This is the first detection of this species of broomrape in the United States. In response, the CDFA has formed an Incident Command with the USDA, Solano County Agricultural Commissioner, and the University of California Cooperative Extension.



**Egyptian broomrape blooming  
on tomato host**



**Egyptian broomrape on carrot**



**Tiny Egyptian broomrape seed**

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Pest Alert continues on next page



The scientific name [Orobanche](#) comes from Ancient Greek ὄροβος (orobos, “bitter vetch”) + ἄγκω (ankhō, “strangle”). The rather odd common English name “broomrape” comes from originally being found and described on broom (*Cytisus* spp.) and the flower was the same color as the rapeseed flower. The family [Orobanchaceae](#) contains over 200 species of parasitic herbaceous plants.

The genus *Orobanche* has approximately 150 species, all commonly called broomrape (Musselman, 1994). They cause reductions in crop yield, adversely affect crop quality, and result in loss of cultivated land due to reduced crop alternatives (Scher and Walters, 2010). *Orobanche aegyptiaca* infects roughly 30 broadleaf crops, including many economically important crops such as bell pepper, cabbage, carrot, celery, eggplant, melons, potato, tomato, sunflower, and various legumes. There are reports of 50% yield reduction of watermelon. The symptoms produced by *O. aegyptiaca* are comparable to those of other *Orobanche* species; symptoms are not very distinctive but there may be some yellowing and necrosis of the foliage, general weakening of the plant and reduced fruit production. The presence of broomrape in a field may force farmers to plant a less economical, non-host crop or to leave the field fallow. The presence of broomrape in a shipment or production area can be a trade issue as many countries list non-native *Orobanche* as a quarantine pest.

*O. aegyptiaca* is recorded as a 'serious' or 'principal' weed in Afghanistan, Kuwait, Saudi Arabia, Israel, Jordan and Italy. It is a major problem in at least 10 other countries of the Middle East and Eastern Europe. Because it does not photosynthesize, it can only grow in the presence of appropriate host plants and spends the first portion of its life cycle underground, making it difficult to detect. When the flower spikes emerge from the ground, it is easier to detect. The flower spikes can produce viable seeds as soon as two weeks after the onset of flowering. A single plant can produce over 100,000 seeds that are tiny (~0.3 mm long). They are also sticky and can adhere to other seeds, plant material, fruit, farm equipment, clothing (especially footwear), and vehicles. These seeds can also be spread internally in livestock and during movement of water, soil, and air.

## A New Virus Disease of Cucurbitaceae

Cucumber green mottle mosaic virus (CGMMV) is an important seed borne virus which has been found to be responsible for devastating losses of cucurbitaceous crops throughout Europe and Asia. On July 24, 2013, Cucumber green mottle mosaic virus was diagnosed from a melon seed field in Yolo County, California. This virus has been known since 1935. It was first found in the United Kingdom, but it has since been identified in other European countries, in India, Japan, China, Greece, Korea, Myanmar, and Ukraine. The 2013 find in California is the first time it has been found in the United States. CGMMV belongs to the virus genus, Tobamovirus. This is the group that includes Tobacco mosaic virus, the first virus known to science ([contagium vivum fluidum](#)) and they are known for their long-term survivability. These viruses are transmitted mechanically by wounds made with cutting tools, farming equipment, or chewing insects such as beetles. They can also be passed to other plants by root grafting or any handling of the crop. Sucking insects (e.g., aphids, mites, whiteflies) do not transmit these viruses. Once the virus infects a plant, there is no known cure. Clean, virus-free seed is the best control.

Source: <http://agkc.lib.ku.ac.th/prd/pest/index.php>

