



Retail Nursery Newsletter

An Information Source for Retail Nursery Professionals

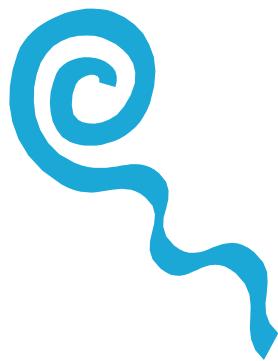
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Healthy Garden— Healthy Home

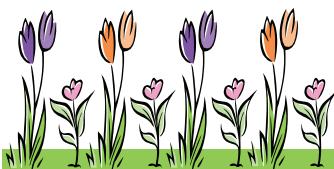
**Helping to improve
water quality in
San Diego County
through the
implementation of
Integrated Pest
Management
practices.**

**It's The Water
That Connects Us!**



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THE CACTUS MOTH

by Cheryl Wilen, UC Area IPM Advisor

The cactus moth (*Cactoblastis cactorum*) is an excellent biocontrol agent that was introduced to Australia and a few other countries to control prickly pear cactuses (*Opuntia* spp). In those locations, prickly pear is seen as a problem, destroying acres and acres of agricultural and range land.



**Cactus moth larva (top)
and adult. From the Cactus
Moth Detection and
Monitoring Network
(CMDMN) located at Mis-
sissippi State University.**

However, recently the moth has been found in the Yucatan Peninsula in Mexico, likely blown in by storm winds. The problem in this case is that it could destroy the native cactus and also could make its way into the U.S. and upset the desert ecosystem in the southwestern.

(Continued on page 2)

HOUSEHOLD ANTS AND THEIR CONTROL

by Dr. John H. Klotz, UCCE Urban Entomology Specialist, UC Riverside

Ants are common pests in and around homes where they can find food, water, and places to nest. They can be a nuisance or a serious problem when they contaminate food or damage structures and surrounding landscape. Some ants even "cultivate" and protect plant pests, such as aphids, scales, and mealybugs, increasing the damage these pests cause. Some ants can inflict painful stings. About 200 kinds of ants exist in California, but only a few are pests.

Ants are social insects that live in colonies. They locate food by random searching. When an ant finds food, it may



Argentine Ant

carry some back to the nest, leaving a scent trail that other ants can follow back to the food source. Many types of ants transport honeydew – a sugary liquid produced by aphids, scales, and mealybugs.

IDENTIFICATION

The most common ant that invades households is the small (3/32-1/8 inch long),

brown Argentine ant. These ants form long trails from their nests to favored food sources, such as syrup, honey, fruits, and other sweets.

The odorous house ant ranks second to the Argentine ant as a household pest and is about the same size. These ants are dark brown to black and produce a strong coconut-like odor when crushed. They also follow distinct trails.

Pharaoh ants are problems in the household because of their preference for sweets, grease, meat, and fat. They are yellowish or light brown to reddish and smaller than the Ar-

(Continued on page 3)

Diaprepes Root Weevil Update

QUARANTINES

Quarantine areas have been expanded and the map boundaries are continuing to change. Please check with the California Department of Food and Agriculture (CDFA) at 1-800-491-1899, for the most recent boundaries. Quarantine areas of San Diego include Carmel Valley, Carlsbad, Del Mar, Fairbanks Ranch, Encinitas (Olivenhain), La Jolla (UTC), and Rancho Sante Fe (Valle de Oro & Circa Oriente).



ADULT DIAPREPES

ERADICATION EFFORTS

Ongoing eradication sprays are being conducted by the CDFA in San Diego County. The first appli-

cation was in September and included Sevin(tm) (Carbaryl) to foliage. The second application was initiated in October; and they are aiming for a third eradication spray in November. The spray areas are 200 meter perimeters from official diaprepes weevil find sites. Property owners are notified before applications are sprayed as well as after their properties are sprayed. Notifications contain information on which insecticides are used on which plants. The CDFA is rotating various insecticides into the program.

PEST DAMAGE



LEAF NOTCHING

Damage from Diaprepes is still quite apparent on several plants within the quarantine zones; in par-

ticular the upper and fresh leaves: citrus, coral tree, Indian hawthorne, some hibiscus and pigmy date palms.

REPORT SIGHTINGS

The public has been instrumental in turning in specimens and helping determine the locations of the infestation in San Diego, Orange and Los Angeles Counties. Persons who observe the insect should put it in a container and contact the CDFA at 1-800-491-1899. In addition, observations of large notching of plant leaves on the upper and outer foliage of plants should also be reported to the CDFA at the 1-800-491-1899.



The Cactus Moth continued from page #1

In the U.S. it is already found in Florida and as far west as Alabama. In Mexico, current control operations include cutting and burning infested pads or whole plants or treating plants with insecticides. Long-term and wider scale control using the sterile insect technique, where sterile cactus moths are introduced into infested areas, is being tested.

If the prickly pear population is reduced or lost there would be a cascading effect on birds and other species that depend on the cactuses for food and shelter. Additionally, soil erosion could be expected due to the loss of roots holding soil in place in the desert.

Nursery staff and landscapers should be on the lookout for

this insect to prevent it from becoming a threat to the native *Opuntia* species.



**Cactus moth larvae on Opuntia pad.
From CMDMN,
Mississippi State University.**

The **mature** larvae are the most distinct life stage. The larvae have orange to red color with dark banding or spots on the body. Younger stages of *Cactoblastis* can be similar to other Lepidoptera spe-

cies. See "Additional information" for excellent photos of the insect and its damage.

Additional Information

For more information see www.sbs.utexas.edu/philjs/news/pdf/CactusMoth.pdf and <http://www.gri.msstate.edu/research/cmdmn/>

If you think you have cactus moth:

Notify your county's Agricultural Commissioner's office right away. Try to collect larvae or adults for identification. The adult insect can only be identified by experienced taxonomists using microscopic methods.

Ant Control—continued from page #1

gentine or odorous house ant.

The Southern fire ant and California harvester ant are mainly outdoor species, sometimes common in residential areas. Both can sting, the latter being very painful. The fire ant has a yellowish to reddish head and upper body and a dark abdomen. They range in size from 1/16-1/4 inch long. The California harvester ant is large (1/4-5/16 inch long), reddish brown, and prefers to nest in sandy soil. There are several other species of harvester ants in California, which vary in color and are also capable of stinging.

Several species of carpenter ants in California invade houses and cause structural damage when they tunnel into wood. They can be very large, ranging in size from 3/16-5/8 inch long. Unlike termites, carpenter ants do not eat wood; they make tunnels solely for their nests.

CONTROL

The three general methods of ant control are baiting, spraying, and nonchemical prevention. To be effective, ant control must be based on an understanding of what ants like to eat and where they prefer to nest. Food preferences are an important factor in choosing an attractive bait, and it is also important to understand how ants make nests in order to locate the colony. Unfortunately, many of the ant baits and sprays registered for homeowners are not always effective.

Baiting should be the first line of defense, because it targets the entire colony. Baits are formulated as solids or liquids and applied in stations or, in the case of granules, by broadcasting them. To be effective and safe, baits should be placed where ants are trailing or along edges where they prefer to travel, but always only in areas inaccessible to small children and pets.

To achieve wide distribution of the bait so the entire colony will be killed, the bait ingredients

must be slow acting. Some examples of toxicants used in ant baits are hydramethylnon, boric acid, and fipronil. Hydramethylnon breaks down in sunlight, so if it is broadcasted in granular form it should be applied in the evening. Boric acid is most effective at concentrations of 1% or lower. Fipronil is a new class of toxicant that is effective against ants at ultra-low doses.



ANT BAIT

Many of the common household ant pests, such as Argentine ants, odorous house ants, and carpenter ants, have a "sweettooth," so baits containing sugar as an attractant can be very effective. In the case of the Argentine ants, sweet baits are highly attractive year-round. Protein baits are more attractive in the spring when the colony is producing new offspring. Offering a small quantity of each kind of bait and observing which the ants prefer is a good way to determine what to use. Examples of brand name products that use sugars as attractants are Terro and Grant's Ant Stakes. Combat ant baits are protein-based.

Fire ants, Pharaoh ants, and harvester ants are attracted to oil-based products like Amdro. However, because food preferences may change over the short term or seasonally, a good "rule-of-thumb" is to offer the ants a little bit of each to determine which ones they prefer. New products are continually being developed, so be open to testing these as well. The goal is to find a bait that the ants will readily collect and feed on, and ultimately take back to the colony.

Most baits take several days to be distributed so be patient.

If ants are still active after several days, and they are no longer feeding on the bait, it is probably time to consider the second line of defense, sprays. Application of sprays should only occur following an initial baiting program so that the active bait ingredient can be carried into the nest. Several days between baiting and the application of other chemicals are most effective.

In the case of Argentine ants, fire ants and harvester ants, the insecticide can be sprayed directly on their nests in the ground. Odorous house ants, Pharaoh ants and carpenter ants will nest in structures so it is sometimes very difficult to determine where the nest is. One way to find the nest is to feed the ants, using pieces of insect or a drop of sugar water, and then follow them. After collecting the insect or drinking the sugar water, they will head directly back to their nest. Because ants are cryptic by nature, their trails are sometimes difficult to find. But, with a little patience and a lot of determination, both the nest and trails can be located. Since carpenter ants are primarily nocturnal, inspecting at night is the best time for trailing this species.

After the treatment with baits and sprays, there are nonchemical measures, which can significantly add to the overall success of your ant control program. Trimming back vegetation in contact with the house eliminates potential nesting sites, and caulking holes will help to prevent entry. Ants prefer to trail along structural guidelines, such as wires and pipes, and frequently use these elements to enter and travel within a structure to their destination. Sealing off these entry points is an effective nonchemical control strategy. Tanglefoot or Stickem applied as a barrier around trees or shrubs will cut off the ants from a food source (honeydew) and thereby increase the consumption of baits.

HEALTHY GARDEN—HEALTHY HOME

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FREE Point-of-Purchase Educational Materials and Training Workshops Available for Local Nurseries and Garden Centers!

As part of the **Healthy Garden – Healthy Home** Integrated Pest Management (IPM) outreach effort, research based educational materials, and the fixtures necessary to display them, are available to nursery and garden centers throughout San Diego County. Materials include water resistant pest cards and informational tear-off sheets. Pest Card topics include; *Ants, Aphids, Cockroaches, Earwigs, Fleas, Giant Whitefly, Head Lice, Snails & Slugs, Spiders, Termites, Safe Use & Disposal of Pesticides, Lawn Insects, and Gardening with Good Bugs*. Tear-Off Sheet topics include; *General IPM Information, Ants, Snails & Slugs, Aphids, and Preventing Irrigation Runoff*. And coming soon; *Giant Whitefly*.

In addition to these Point-Of-Purchase items, several educational videos ranging in length from 15 seconds to 3 minutes are available for use in your store. Both DVD and video format are available.

Workshops for nursery staff focusing on topics related to IPM and Water Quality are also available for booking.

For more information about any of these opportunities or to make arrangements for your nursery or garden center to participate in this program please contact Scott Parker by phone, 858-694-2184, or email, saparker@ucdavis.edu.



**Sample Pest Cards
Display Racks**