

CPDDR

CALIFORNIA PLANT PEST & DISEASE REPORT

CALIFORNIA DEPARTMENT OF
FOOD AND AGRICULTURE

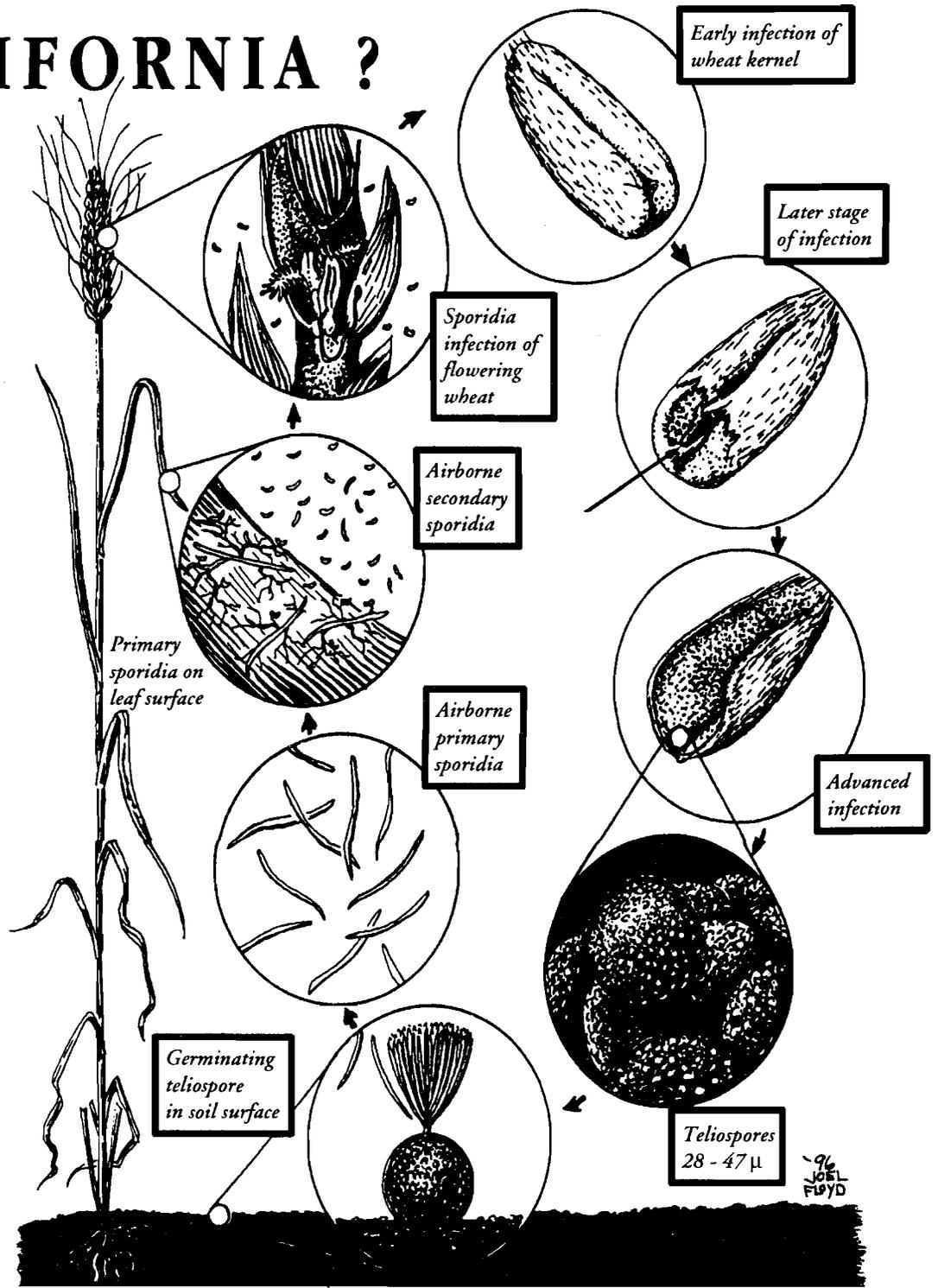
PLANT PEST DIAGNOSTICS CENTER
3294 MEADOWVIEW ROAD
SACRAMENTO, CALIFORNIA
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KARNAL BUNT IN CALIFORNIA ?

ALSO:
The Updated
Pest Ratings of
Noxious Weed
Species
and
Noxious Weed
Seed

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Vol. 14 Numbers 5-6
October-December, 1995

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CALIFORNIA PLANT PEST & DISEASE REPORT

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➤ PLANT PATHOLOGY HIGHLIGHTS ◀

SIGNIFICANT FINDS

KARNAL BUNT, *Tilletia indica* -(A)- This serious pest of wheat has been a subject of survey for a number of years in California, but never found. Unfortunately, the disease was recently found in Arizona. The find was actually made in March of this year, and so does not fall within the time frame of this issue of CPPDR, but since this disease is considered so serious, it was deemed appropriate to include a rough sketch of the problem at this time. An excellent review of the disease by Gerald Holmes, U.C. Extension Farm Advisor and Lee Jackson, Extension Agronomist can be obtained through U.C. Extension, 1050 E. Holtville Road, Holtville, CA 92250-9615. (Also, see CPPDR 4(3):66-67 for an earlier article on Karnal bunt including scanning electron micrographs.)

Due to subsequent surveys initiated because of the Karnal bunt find in Arizona, the disease has been located in several storage facilities in Blythe and Ripley, **Riverside** County, California. (As of April 2, diseased wheat seed from Arizona had contaminated two fields in Imperial County. Although the seed that was used to plant these two fields was positive for karnal bunt, this does not mean that the karnal bunt will manifest itself in these fields this season.)

The following fact sheet was prepared by the USDA staff members involved in the current survey and detection program:

Karnal bunt, or partial bunt, is a fungal disease of wheat, durum wheat, and triticale (a hybrid of wheat and rye). Typically, only a portion of the kernel is affected; this is why the disease is sometimes called partial bunt. The damage is twofold: infected plants produce less grain, and the quality of the grain itself is lessened. Flour made from bunted kernels is discolored and has an unpleasant, though harmless, odor and taste.

Generally, wheat containing more than three percent bunted kernels is considered unfit for human consumption. Wheat containing lower percentages of bunted kernels may be salvaged and combined with healthy grain. Wheat containing any amount of bunted kernels, however, is somewhat reduced in quality.

HISTORY

The disease was first reported in 1931 in wheat-growing areas near the city of Karnal in the Indian State of Haryana. Since then, it has been found in all major wheat-growing States of India, as well as in Pakistan, Iraq, and Afghanistan. The disease may have been present in Mexico since 1970 and has been well established in some areas in northwestern Mexico

since 1982. Federal regulations prohibit entry into the United States of seeds, plants, unprocessed straw, chaff, and products of the milling process (other than flour) of wheat from countries where Karnal bunt is known to occur. These commodities can enter only with a U.S. Department of Agriculture (USDA) permit for scientific purposes.

Countries with Karnal bunt, on the whole, do not suffer enough loss consistently to initiate eradication procedures. Mexico is one exception: scientists there are studying Karnal bunt and developing control programs. But for the others, it is more economical to let some crops be destroyed than to spend hundreds of thousands of dollars to eliminate the disease, especially since these countries export very little wheat.

Although the overall crop losses caused by Karnal bunt might not be severe, the disease has quarantine significance and thus could affect U.S. grain exports. The United States is the world's leading wheat exporter, accounting for one-third of world wheat exports with U.S. exports in fiscal year 1995 valued at \$4.9 billion.

DIRECTION

One reason Karnal bunt is difficult to control is that it is difficult to identify. Infected grain shows none of the symptoms until it has reached maturity. Even then, the disease cannot be detected in plants growing in the field: the grain must be removed from the head and examined. In addition, three other diseases can be mistaken for Karnal bunt: black point, common bunt, and dwarf bunt of wheat. These diseases are already established in the United States.

When checking their crops for Karnal bunt, wheat growers should look for bunted kernels that are fragile, dark in color, and foul smelling. The kernel usually remains whole, although part of the germ may be eroded. Cracks in the surface reveal a black powdery spore mass within the endosperm at the embryo end of the kernel or along the kernel groove.

Any kernels that show signs of contamination should be placed in a plastic bag within a sturdy container and taken to the nearest State regulatory official or to a field office of the Animal and Plant Health Inspection Service's (APHIS) Plant Protection and Quarantine (PPQ) division.

HOW IT SPREADS

Karnal bunt is caused by the smut fungus *Tilletia indica* Mitra (also known as *Neovossia indica*) and is spread by spores. Infection occurs during the flowering stage of the plant, when the developing ovary of a host plant comes into contact with infectious sporidia. The ideal conditions for infection are cool weather and rainfall or high humidity. In soil, the spores may be able to survive as long as five years.

The spores can be carried on a variety of surfaces, plants and plant parts, seeds, soil, elevators, buildings, farm equipment, tools, and even vehicles. Spores and the sporidia

they produce also can be windborne, although the sporidia are fragile and may be able to move only short distances.

RECENT DEVELOPMENTS

On March 8, 1996, scientists with USDA's Agricultural Research Service (ARS) confirmed the presence of Karnal bunt in Arizona in certified durum wheat seed of the variety known as Reva. Suspect seed samples were detected at a seed dealership during routine testing by the Arizona Department of Agriculture. After forwarding samples to the state's agricultural lab, ARS was given samples for testing.

A scientific panel comprised of state, federal and industry technical experts and scientists is being convened to determine further actions.

This find is localized, and emergency quarantines have been instituted on the **infected** properties, seed, farm equipment, planted wheat, and soil associated with the **infected** wheat. State and federal quarantines will be put into place to augment this **emergency** action, and USDA has established a wheat export certification team to develop options for dealing with potential trade issues.

ERADICATION

The following procedures are planned to eradicate an outbreak in the United States. **First**, the area would be quarantined immediately to ensure that no wheat, seeds, or soil **move** from the area. Next, an emergency team would conduct delimiting surveys of the area to determine the exact location of the disease.

All crops in infested fields would be destroyed to eliminate Karnal bunt. The property may be treated to kill any remaining spores. Following treatment, grain infected with Karnal bunt would be used only for non-propagative purposes or would be destroyed. No host crop—wheat, durum, or triticale—would be planted in any contaminated field for a period of five years from the time of infection.

Non-host crops such as alfalfa or cotton should be grown in the interim. Planting wheat varieties that are resistant to the disease would be the ultimate control method. Researchers continue to seek improved wheat varieties that are resistant to Karnal bunt.

SURVEY WORK

APHIS' PPQ officials, in cooperation with State counterparts, have conducted **survey** operations of harvested wheat in a number of States over the past few years to **determine** if Karnal bunt was present. These survey efforts will be continued and intensified.



OLEANDER SCORCH ASSOCIATED WITH *XYLELLA FASTIDIOSA*

Dan Opgenorth
Plant Bacteriologist

During this past year, a new disease problem was reported on oleander in southern California. On well established oleanders, the leaves have a scorched appearance beginning at the tip and moving down the leaf margins (Figs. 1, 2). This would normally be expected under physiological drought conditions. However, we just went through one of our wettest years on record and many symptomatic plantings had adequate irrigation. Thus, other explanations were needed.



Fig. 1. Leaf symptoms of oleander scorch.

Since the leaf symptoms appeared to be similar to Almond Leaf Scorch or Pierce's Disease of grape, it was suggested that it may be worthwhile to try and test for this bacterial pathogen. While moderate ELISA values were obtained from leaf petiole sap, this in itself was not conclusive for *Xylella fastidiosa*. Culturing of the pathogen was also done from leaf petioles and inoculations attempted. Thankfully, this same work was done at U.C. Berkeley by Dr. Alex Purcell because my culture was lost when failing to grow after transfer. While pathogenicity testing has been attempted at CDFR and U.C. Berkeley, no symptoms have as yet been observed. The inoculated plants may need drought stress and hot summer temperatures before the symptoms of this disease can be verified.

The bacterial pathogen (*Xylella fastidiosa*) has been known to be present in southern California since the original settlers first tried to grow grapes. It is also found in many ornamental plants and naturally occurring vegetation (Sherald and Kostka, 1992). So, why have we not noticed Oleander Scorch previously?

About two years ago a new leafhopper was introduced into southern California, probably from the southeastern United States, where it is commonly found. The leafhopper is *Homalodisca coagulata* and it seems to be presently distributed through southern California as far north as

Santa Barbara. This insect is known to be frequently associated with oleander and would seem to be the previously missing part of the disease complex. Insect transmission studies are now being done at U.C. Berkeley and U.C. Riverside to confirm this hypothesis.

Oleander Scorch may be an serious disease with great impact for ornamental and freeway plantings. However, of greater concern is the potential of the introduced leafhopper to feed on commercial vegetable or fruit crops and transmit the bacteria. In other parts of the world closely related strains of *Xylella fastidiosa* are known to cause diseases on these hosts. The presence of this introduced leafhopper in southern California should place us all on alert for more possible scorch type diseases incited by *Xylella* species.

References:

Sherald, J.L. and S.J. Kostka: Bacterial Leaf Scorch of Landscape Trees Caused by *Xylella fastidiosa*.
Journal of Aboriculture 18(2):March 1992.

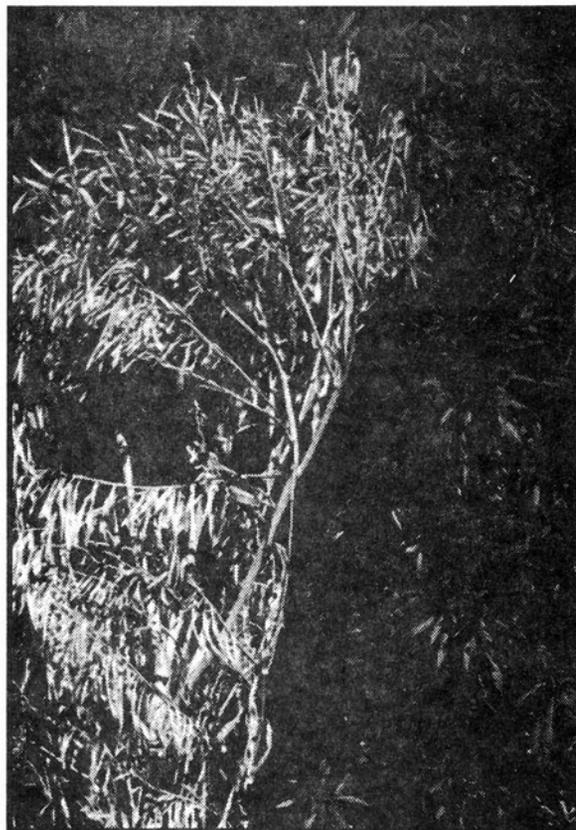


Fig. 2. Diseased oleander showing the symptoms of oleander scorch.



→ ENTOMOLOGY HIGHLIGHTS ←

SIGNIFICANT FINDS

The charts on these two pages represent significant pest species finds up to December 1995, and should complete the records of these species for the year. Other finds are listed in the two previous 1995 issues of the CPPDR.

ORIENTAL FRUIT FLY, *Bactrocera dorsalis*, -(A)-

<u>County</u>	<u>City</u>	<u>Date</u>	<u>#M/F/Stage</u>	<u>Trap</u>	<u>Host</u>	<u>Collector</u>
Santa Clara	San Jose	08/15	1/0	Jackson	cherry plum	Marovic
Orange	Fullerton	08/25	1/0	Jackson	apple	Gonzales
Santa Clara	Cupertino	09/06	0/1	McPhail	apple	Gonzales
Santa Clara	Palo Alto	09/08	1/0	Jackson	apple	Alamo
Ventura	Santa Paula	09/20	0/1	McPhail	fig	Bullicer
Orange	Westminster	09/22	1/0	Jackson	fig	Marovic
Orange	Garden Grove	09/25	1/0	Jackson	orange	Moezi
Orange	Garden Grove	10/12	1/0	Jackson	apple	---
Orange	Garden Grove	10/13	1/0	Jackson	apple	Holsington
Los Angeles	Walnut	10/24	1/0	Jackson	fig	Sanchez
San Diego	San Diego	10/30	1/0	Jackson	orange	Feeley
Los Angeles	Carson	11/01	1/0	Jackson	olive	Rice
Los Angeles	Downey	11/08	2/0	Jackson	guava	Vingua
San Diego	San Diego	11/20	1/0	Jackson	sapote	Clagett

MEXICAN FRUIT FLY, *Anastrepha ludens*, -(A)-

<u>County</u>	<u>City</u>	<u>Date</u>	<u>#M/F/Stage</u>	<u>Trap</u>	<u>Host</u>	<u>Collector</u>
San Diego	San Ysidro	08/18	0/1	McPhail	sapote	Tellez
Los Angeles	East Los Angeles	10/26	1/0	McPhail	sapote	Cardenas
San Diego	National City	11/09	1/0	McPhail	sapote	Whitcomb
Los Angeles	City Terrace	11/14	2/2	McPhail	orange	Lopez
Los Angeles	City Terrace	11/21	6L	---	sapote	Gonzales
San Diego	National City	11/22	1/0	McPhail	guava	Daly
San Diego	National City	11/29	1/0	McPhail	sapote	Chavez
San Diego	National City	11/29	0/1	McPhail	sapote	Sanchez
San Diego	National City	12/01	1/0	McPhail	sapote	Breuninger
San Diego	National City	12/01	0/1	McPhail	sapote	Funk
San Diego	National City	12/04	0/2	McPhail	sapote	Womack

BLACK CHERRY FRUIT FLY, *Rhagoletis fausta*, -(A)-

<u>County</u>	<u>City</u>	<u>Date</u>	<u>#M/F/Stage</u>	<u>Trap</u>	<u>Host</u>	<u>Collector</u>
Tulare	Panorama Heights	08/31	4L	---	<i>P. emarginata</i>	Haines

AFRICANIZED HONEY BEE (AHB), *Apis* "Africanized," -(A)-

<u>County</u>	<u>City</u>	<u>Date</u>	<u>Host</u>	<u>Collector</u>
Imperial	Winterhaven	08/13	tree	Estrada
Riverside	North Shore	09/26	tamarisk (AHB trap)	Bennett
Imperial	El Centro	10/05	fruit tree	Inay
Imperial	El Centro	11/29	hay stacks	Inay/Weathersby
Riverside	Blythe	12/05	alfalfa	Forest

GYPSY MOTH, *Lymantria dispar* -(A)-

<u>County</u>	<u>City</u>	<u>Date</u>	<u>Host</u>	<u>Collector</u>
San Diego	San Diego	08/17	wheelbarrow	Ginsky
Santa Barbara	Montecito	08/18	BBQ	Asakawa
Santa Barbara	Montecito	08/21	wagon	Bronson

PINK BOLLWORM, *Pectinophora gossypiella*, -(A)- Another year has passed and it's time for the annual pink bollworm update [see CPPDR 13(5-6):79,83]. The following report by Dell Clark, represents the 1995 efforts by program personnel.

The final 1995 San Joaquin Valley native pink bollworm finds was 113. The total by county ended up being: 11 in Fresno County; 49 in Kern County; 12 in Kings; 32 in Tulare; none in Madera; and nine in Merced. The desert trap line caught only five natives during the entire season.

The trapping results for Southern California have been summarized in the following table:

<u>Location</u>	<u>Traps</u>	<u># Moths Trapped</u>	<u>Ave. # Moths/Trap</u>
Imperial Valley	36	3,118	65.54
Bard/Winterhaven	31	3,364	87.21
Blythe/Palo Verde Valley	218	7,169	33.04
All American Canal	16	1,206	62.53
I-8 (IV)	10	949	83.04
Keystone Rd. (IV)	6	733	106.90

The cumulative totals of pink bollworm native moths caught in each cotton growing region of Southern California this 1995 season is quite impressive. Here are the numbers to date: Imperial Valley - 169,938; Bard/Winterhaven - 41,557; Blythe/Palo Verde Valley - 235,087; Needles - 8,261.

Maintenance of the pink bollworm colony and repair work are routine daily procedures at the Pink Bollworm Rearing Facility in Phoenix, Arizona. Many experiments are being carried out in order to improve production. Only formaldehyde treated eggs are being set up presently. The larval cut out rate and pattern is similar to before.

GLASSY-WINGED SHARPSHOOTER, *Homalodisca coagulata*, -(Q)- This leafhopper was first recorded from California in March of 1994 at Ventura, **Ventura** County, by Farm Advisor Phil Phillips [CPPDR 13(1-2):8, 9-10]. Later it was found that specimens had been in the state in **Orange** County at least since 1990. For years, the eggs of this leafhopper have been encountered on quarantine nursery shipments arriving the southeastern states and other areas such as Puerto Rico and Costa Rica. The eggs are usually inserted in under the epidermis of the leaf in rows of about 10 to 12 eggs each. These eggs are often hard to see in large shipments, and are probably the source of the California infestations. The sharpshooter is now generally distributed around the Los Angeles-Riverside-Ventura area.

Not only is the sharpshooter developing high populations on some hosts, but it is known to be a rather proficient vector of plant diseases associated with the bacterium *Xylella fastidiosa*, such as Pierce's disease and phony peach in the southeast and citrus blight in Florida. Similar *Xylella*-induced diseases occur in California, including Pierce's disease of grape, almond scorch and alfalfa dwarf. A serious outbreak of a disease of oleanders, called oleander leaf scorch, has recently killed large numbers of oleanders in the Coachella Valley of Riverside County and in several areas, especially near Tustin, in Orange County. See the article in this issue by Dan Opgenorth under Plant Pathology Highlights. Indications are that oleander leaf scorch is also caused by *Xylella*-type bacteria, and the new sharpshooter and its closely related species, *Homalodisca lacerta* (smoke tree sharpshooter), may be spreading the disease. There is concern if the sharpshooter gets into some of the major grape, peach and almond growing areas of the state, that some of these *Xylella* diseases will be spread rapidly, with disastrous results. Currently, the known vector for these diseases in California is the blue-green sharpshooter, *Graphocephala atropunctata*, but it does not commonly feed on these host plants, except for grapes in the coastal areas. Glassy-winged sharpshooter, on the other hand, feeds commonly on these hosts, which could be a greater threat for spreading *Xylella* diseases. A similar disease, called citrus variegated chlorosis, has caused major losses to citrus plantings in the states of Sao Paulo and Minas Gerais in Brazil. Introduction of this disease organism into California would also have devastating results.

The January-June issue of CPPDR goes into some of the history of this sharpshooter, and also into the morphology which separates it from the native smoketree sharpshooter. The text portion covering the morphology in that issue is unfortunately reversed, so the figure captions should be used. The figures for morphological separation of the two species are reproduced here also (Figs. 3, 4). It is easily separated from *lacerta* by the shape of the male aedeagal processes and by the lack of well defined, bright yellow vermiculations on the head. These patterns are dull yellow or tan in color and are diffuse and ill-defined in *coagulata*. The size is different also, *lacerta* is about 2 mm shorter than *coagulata*.

The *Xylella* induced disorders include phony peach, Pierce's disease, almond scorch, alfalfa dwarf, citrus blight, citrus variegated chlorosis, plum leaf scald, ragweed stunt and periwinkle wilt.

Pages 67 and 68 contain a one-sheet answer form produced by Los Angeles County Entomologist Rosser Garrison which covers much of the known information about the sharpshooter.

The next page covers the morphological separations of the two closely related species.

The following list contains selected references about the sharpshooter and the *Xylella* diseases:

- Hopkins, D.L., 1982: Relation of Pierce's disease bacterium to a wilt-type disease in citrus in the greenhouse. *Phytopathology* 72:1090-1092.
- Hopkins, D.L., 1988: Production of diagnostic symptoms of blight in citrus inoculated with *Xylella fastidiosa*. *Plant Dis.* 72(5):432-435.
- Hopkins, D.L., W.C. Adlerz and F.W. Bistline, 1978: Pierce's disease bacterium occurs in citrus trees affected with blight (young tree decline). *Plant Dis. Reporter* 62(5):442-445.
- Lee, R.F., K.S. Derrick, M.J.G. Beretta, C.M. Chagas and V. Rosetti, 1991: Citrus variegated chlorosis: a new destructive disease of citrus in Brazil. *Citrus Industry*. October, pgs. 12,13,15.
- Lefèvre, A.F.V., M.J.G. Beretta, V. Rossetti, R.H. Brlansky and R.F. Lee, 1988: Sharpshooter populations on declinio-affected citrus orchards in Brazil. *Proc. 10th IOVC Conference Riverside, CA.* pp. 388-392.
- Nielson, M.W., 1968: The leafhopper vectors of pathogenic viruses (Homoptera:Cicadellidae) taxonomy, biology, and virus transmission. *USDA. ARS Tech. Bull #1382*, 386 pp. (when this book was published, the *Xylella*-induced diseases were thought to be viruses).
- Purcell, A.H., 1979: Leafhopper vectors of xylem-borne plant pathogens. In: Maramorosch, K. and Harris, K.F. eds., *Leafhopper Vectors and Plant Disease Agents*. Academic Press, New York. 654 pp.
- Yonce, C.E. and C.J. Chang, 1987: Detection of xylem-limited bacteria from sharpshooter leafhoppers and their feeding hosts in peach environs monitored by culture isolations and ELISA techniques. *Envir. Entomol.* 16:68-71.
- Young, D.A. Jr., 1958: A synopsis of the species of *Homalodisca* in the United States (Homoptera:Cicadellidae). *Brooklyn Ent. Soc. Bull.* 53:7-13.



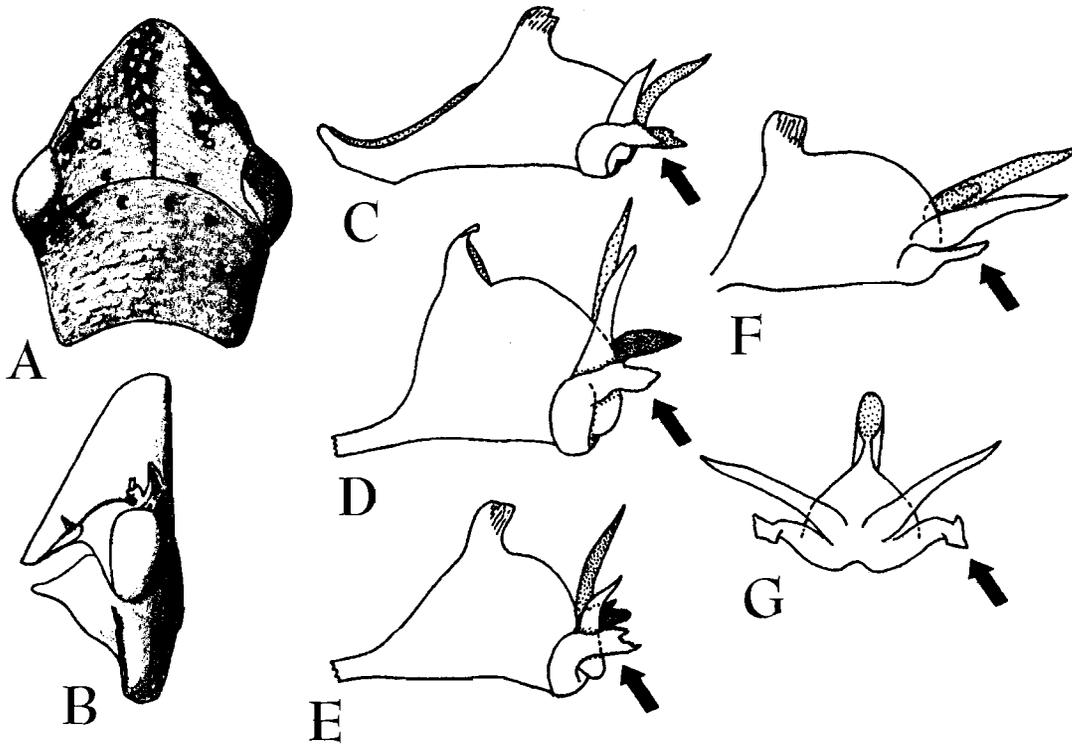


Fig. 3. Glassy-winded sharpshooter, *Homalodisca coagulata*. A-B: Head. C-F: Lateral view of aedeagus. G: Posterior view of aedeagus. Arrow indicates an extra accessory process not found in the smoketree sharpshooter.

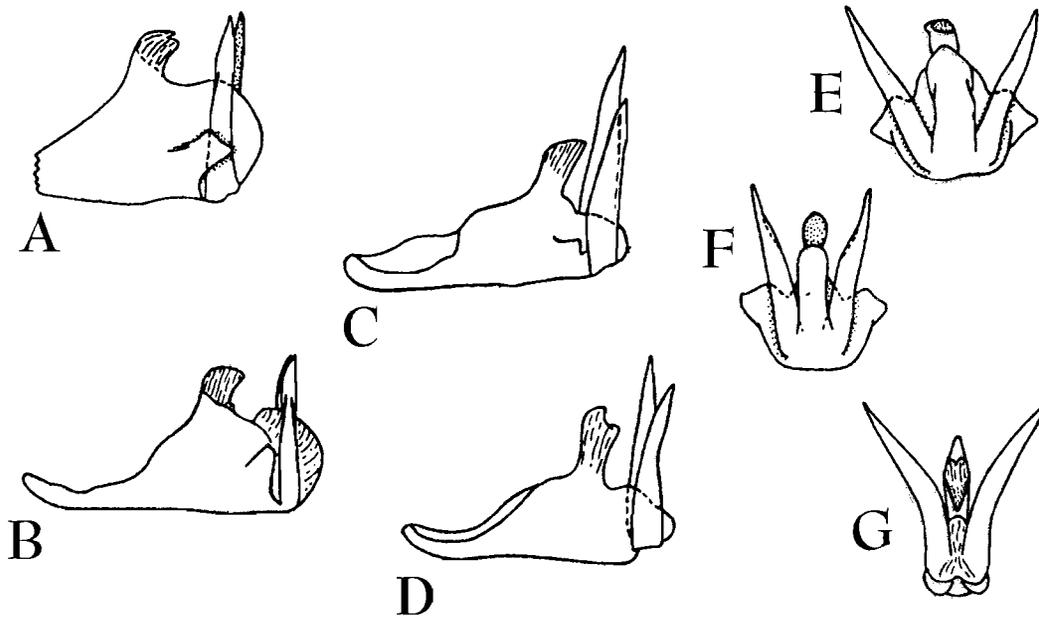


Fig. 4. Smoketree sharpshooter, *Homalodisca lacerta*. A-D: Lateral view of aedeagus. E-G: Posterior view of aedeagus.

LOS ANGELES COUNTY
AGRICULTURAL COMMISSIONER'S OFFICE

New Agricultural Pest for Southern California

Glassy-winged sharpshooter, (*Homalodisca coagulata*) (Figs. 1, 2)

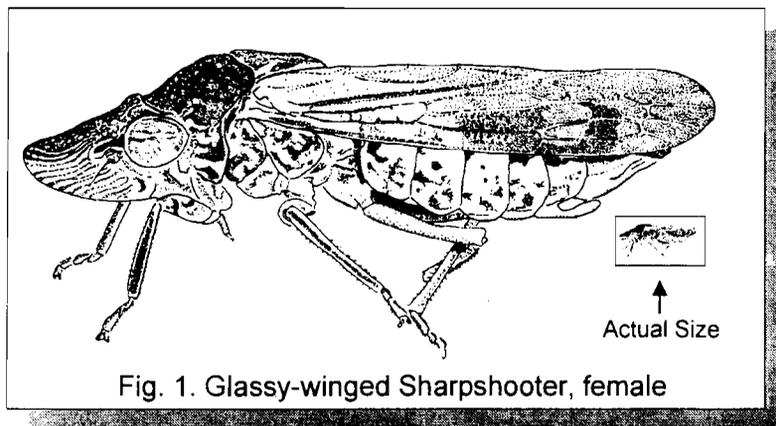


Fig. 1. Glassy-winged Sharpshooter, female

Economic Importance: Originally from the eastern United States, Glassy-winged sharpshooter is a large leafhopper which has piercing, sucking mouthparts. In California, no apparent damage has yet been noticed due to their feeding activities. There is concern that this species may be a vector of certain plant diseases (see below).

In Georgia this leafhopper is also a vector of the bacterium, *Xylella fastidiosa*, also called phony peach

disease and Pierce's disease of grape. In southern California, a different strain of this bacterium causes necrotic conditions to leaves of Oleander. Reports from our area indicate that this pathogen easily kills its host plants. Studies are in progress to determine if this sharpshooter transmits this disease in our area. Should this prove true, than this leafhopper could possibly become a serious pest of ornamental nurseries.

Hosts: At least 73 species of plants in 35 families are known to be favored by this species. In the eastern U. S. both adults and larvae feed on stems and leaves of sunflower, hollyhock, okra, lambsquarters, cotton, corn, cowpeas, oak, ash, silktree, crapemyrtle, and peach. Larvae of the first and second instar apparently do not survive well on woody plants. Adults and older larvae prefer feeding on stems and twigs rather than leaves of plants. Adults are often found feeding alone, but large populations have been observed on a single plant. In California, this leafhopper has been taken on Citrus, Oleander, *Pinus*, Eucalyptus, Sycamore, and *Prunus* and Nick Nisson, Entomologist for the Agricultural Commissioner's Office in Orange County has seen adults line up along terminal twigs of leafless, dormant peaches, as well as on apricot, and carrotwood.

Identification: This pest is easily distinguished from all other species but one, the smoke tree sharpshooter, by its large size (Fig. 1). The male is 11-13 mm long while the female is between 11-14 mm. The general color is brown to black. The

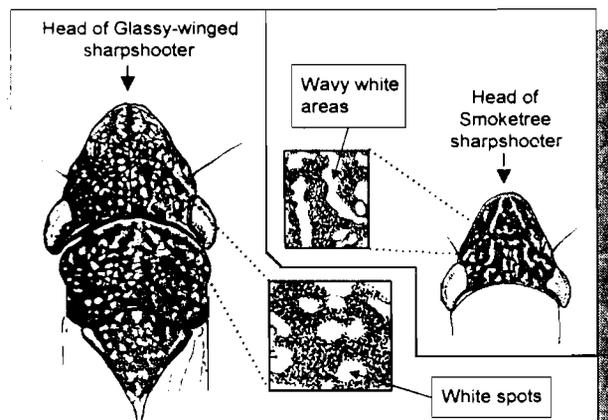


Fig 2 Detail of head of Glassy-winged sharpshooter (left) and Smoke Tree sharpshooter (right)

upper part of the head and thorax are brown or black with numerous ivory or yellowish spots (inset, Fig. 2). This leafhopper is readily separated from its near relative, the smoke tree sharpshooter, *Homalodisca lacerta*, by series of uneven creamy white spots; a series of sinuous marks are found in *H. lacerta* (see inset, Fig. 2).

Life History: In the eastern U. S., the species has been reported as overwintering as adults in wooded areas. In the spring, adults gradually migrated to new hosts until populations built up in March and April. Eggs were laid in April in leaves of herbaceous plants or sometimes in leaves of woody plants. They were laid in clusters in the lower epidermal layer of leaves. In the summer, populations fed on herbaceous plants and occasionally congregated in large numbers on weakened peach trees. After summer hosts dried up, the sharpshooters moved to woody hosts during August, September, and October, at which time populations were greatest in peach orchards. Overwintering habits of large populations on oak are as follows: during cold snaps the insects dropped to the ground overnight, then gradually returned to oak to feed as the temperature rose during the day. In insectary studies females mated only once. Eggs hatched in 12 days. The larval stage averaged 59.5 days in the first generation. The second generation was carried to the fourth larval molt, which was completed in 33.5 days. In the third generation, the larval stage was completed in 72.2 days. Adults lived an average of 60 to 64 days among generations. There appeared to be two complete generations and a partial third annually.

Distribution: Glassy-winged sharpshooter occurs in the eastern United States. It is prevalent in the Southeastern U. S. (Florida, Georgia, North Carolina, South Carolina, Mississippi, Alabama, Texas, Missouri, and Arkansas), but has been taken from Wisconsin and northern Mexico. This species was noticed for the first time in California with a specimen sent in by Santa Barbara County Entomologist Jerry Davidson. Farm Advisor Phil Phillips made the find on *Eucalyptus* spp. in Ventura, Ventura County, on 7 March, 1994. After further investigation this new pest was also found to be established in Fontana, San Bernardino County (28 February 1994), and specimens discovered that had been collected in January 1990 in Irvine, Orange County area. It has since turned up in several parts of Los Angeles and appears to be replacing its smaller near relative, the Smoketree Leafhopper (see under **Comments**).

Comments: This leafhopper probably entered California in nursery stock, as eggs, which are difficult to detect but are frequently intercepted during agricultural quarantine inspections. As of this writing (1996), it appears to have replaced our native smoke tree sharpshooter; at least this last species has not been seen or submitted to county entomologists in Orange and Los Angeles Counties.

Additional Literature:

Gill, R. J. 1994. New state records—Glassy-winged sharpshooter. Calif. Plant Pest & Disease Report 13(1-2):8-11.

Sorensen, J. T., and R. J. Gill. 1996. A range extension of *Homalodisca coagulata* (Say) (Hemiptera: Cicadomorpha: Cicadellidae) to southern California. Pan-Pacific Entomol., *in press*.

NEW STATE RECORDS

ANTS, *Pheidole fervens* -(Q)- and, *Pheidole moerens* -(Q)-

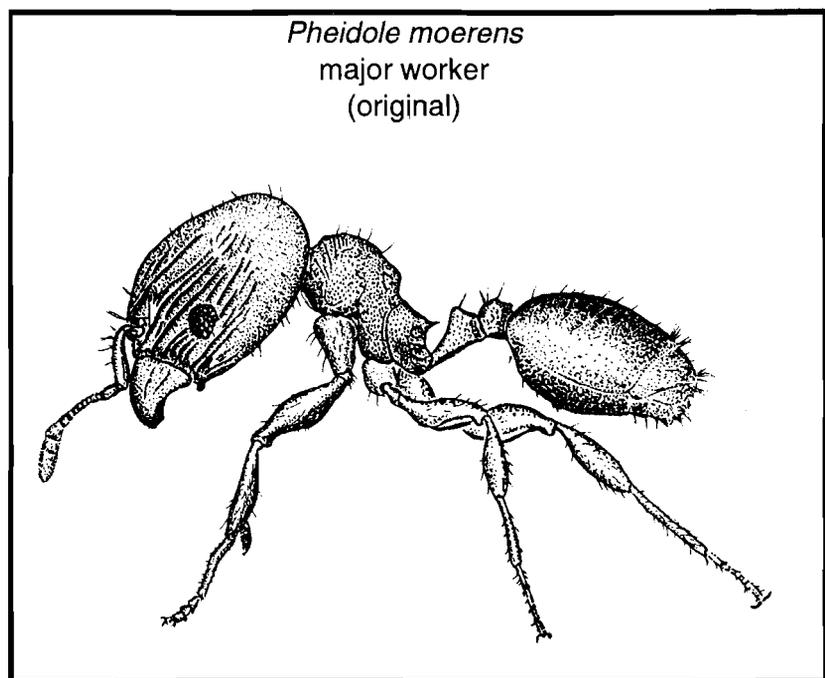
These two new ant species have recently been found established in the State. The collections and tentative identifications were made by a biologist, Michael Martinez, with the Long Beach Department of Parks, Recreation and Marine. The collections were made at Los Angeles and Long Beach, **Los Angeles** County, respectively. Dr. Rosser Garrison, Entomologist with the Los Angeles County Agricultural Commissioner's office, has been involved with the confirmation of these finds and has prepared the following information about the ants:

***Pheidole fervens*:** Mr. Michael Martinez of the Long Beach Parks Department discovered this species along cracks in pavement in downtown Los Angeles; colonies consisting of minor and major workers were found in front of the Bradbury building at 304 Broadway on 24 August 1995. Martinez tentatively identified the species as *P. fervens* and he brought samples to me for identification. I also thought they were *P. fervens* based on a small sample of undetermined *Pheidole* (not *P. megacephala*) from Hawaii which were very likely *P. fervens*. The ants were later confirmed as *P. fervens* by Roy Snelling of the Los Angeles County Museum. We know of no previous bona fide records of this species for Los Angeles, California, or the U.S. This species has never come to my attention in quarantine shipments from Hawaii during the 11 years I've been an entomologist for Los Angeles County.

Majors of *P. fervens* will key to *P. teneriffana* in Snelling [1992:Bull. Southern California Acad. Sci. 91(3):121-125], but that species has a pair of small teeth, each just lateral to the midline on the posteroventral margin of the oral cavity of the head; *P. fervens* lacks these teeth. Included in Figs. 5-8 are illustrations of these differences. I have not been able to distinguish among minors.

***Pheidole moerens*:** The new ant, *Pheidole moerens* Wheeler, is a common terrestrial ant of the Caribbean region and is an extremely common species in Puerto Rico. This species is very similar to *P. floridana*. I suspect that many past shipments with the small non-*megacephala* "C"-

rated *Pheidole* intercepted from Florida have been mis-identified as *P. floridana*. A check of almost all of the previously identified majors of *P. floridana* in the Los Angeles County



collection show them to be *P. moerens*. Martinez brought examples of the Long Beach infestation to me and they agreed with determined material of "*P. floridana* [see above]" in our collection. Wanting to be sure, I arranged to have the Long Beach specimens examined by Roy Snelling. He identified these ants as *P. moerens*. The main difference between these two closely related species is the presence of irregular transverse rugae on the pronotum (best seen in anterodorsal view, see illustrations) in *P. moerens*. *Pheidole floridana* lacks these rugae. These characters are taken from the major workers. I do not know how to diagnose between minors. The data for *P. moerens*: California, Los Angeles County; Shoreline Aquatic Park, Long Beach. They were found nesting in the bark at the base of some *Washingtonia filifera* palms on 8 November, 1995, by Mr. Michael Martinez.

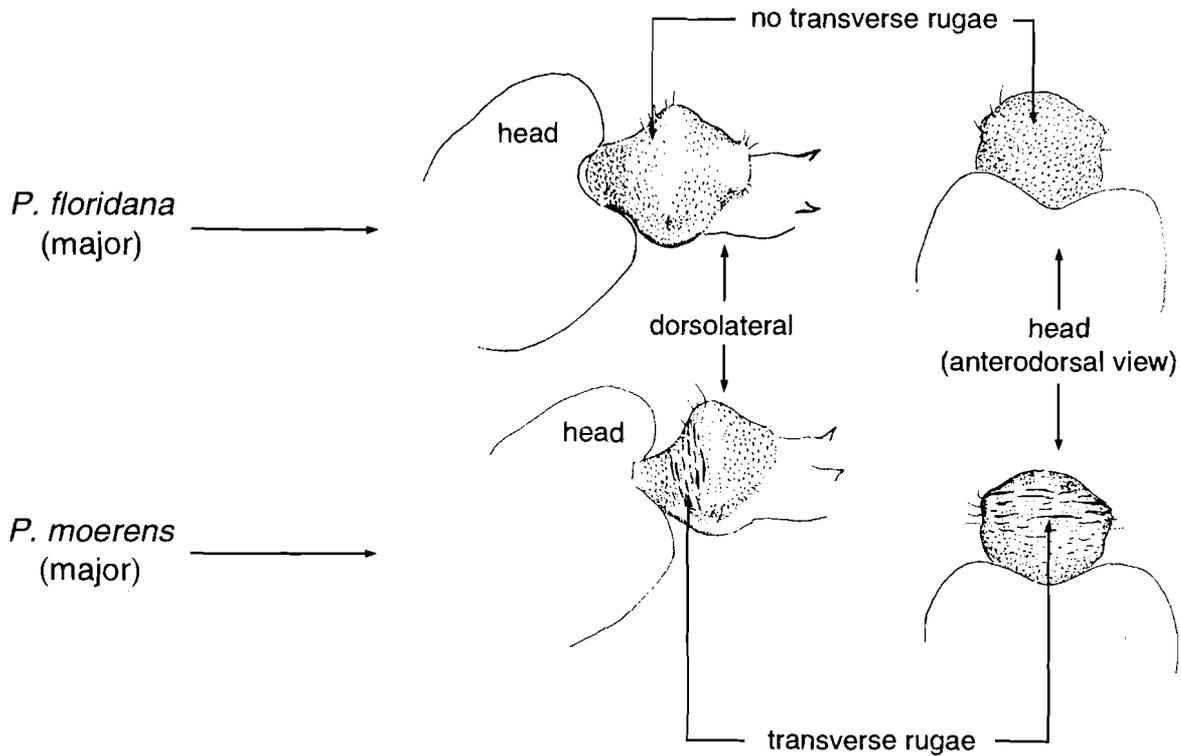


Fig. 5. Comparison of head morphology between *Pheidole fervens* (major) and *P. moerens* (major).

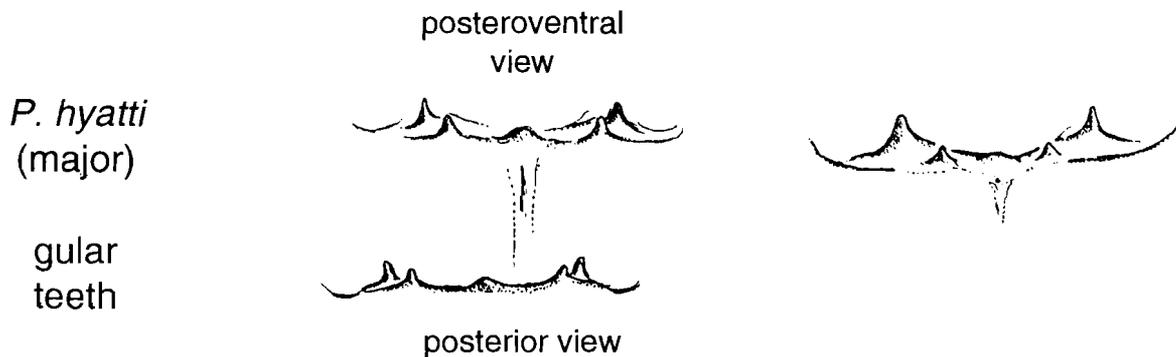


Fig. 6. Illustration of gular teeth of *P. hyatti* (major), the feature that distinguishes it from *P. moerens*.

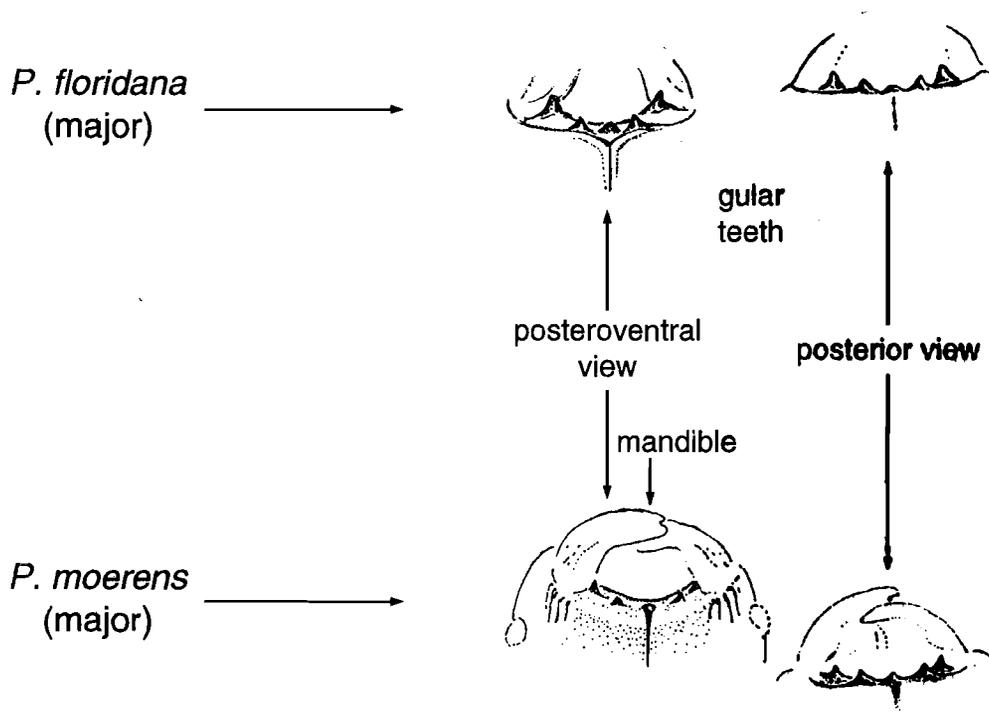


Fig. 7. Comparison of gular teeth between *Pheidole floridana* (major) and *P. moerens* (major).

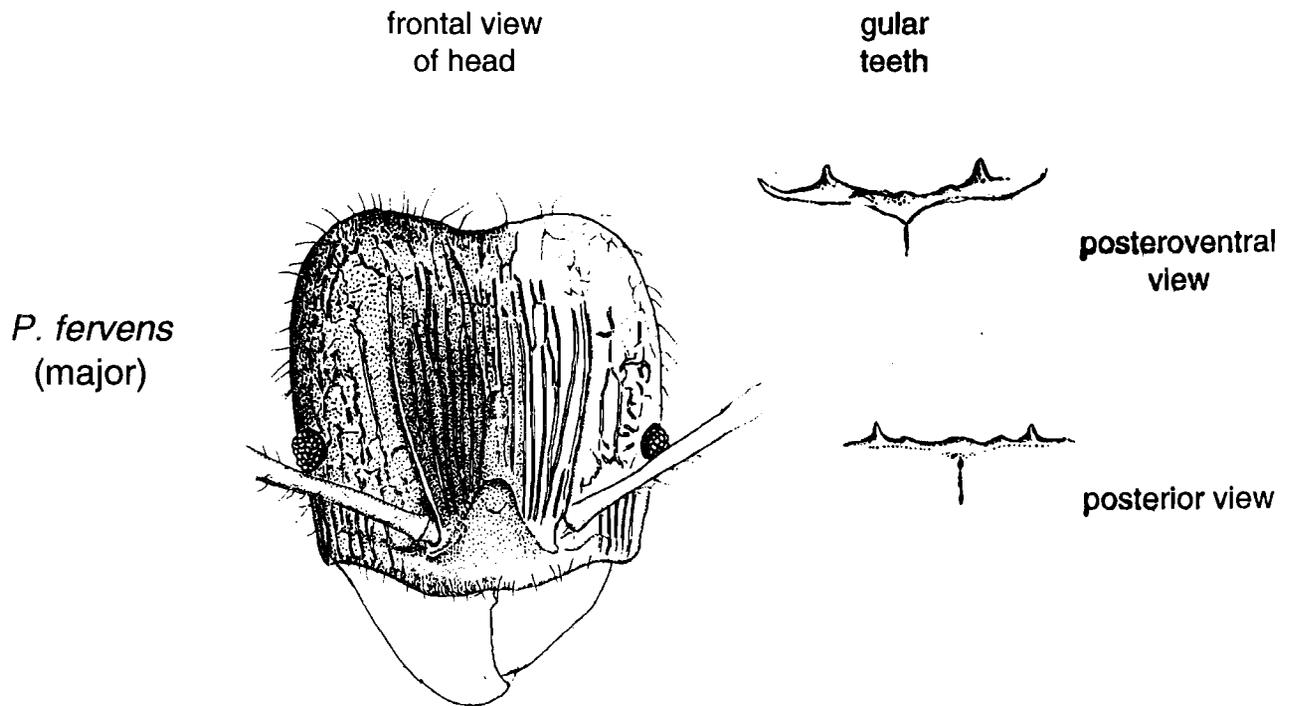


Fig. 8. *Pheidole fervens* (major): showing head and gular teeth.

NEW COUNTY RECORDS

SUCCULENT PIT SCALE, *Asterolecanium stentae*, -(Q)- This pit scale has been found for the first time in Anaheim, **Orange** County. M. Ragasol made the new find on October 26 on *Euphorbia* sp. This species was first noticed in California in Los Angeles County in 1980 when specimens were submitted by a plant hobbyist. The host was listed as cactus, but probably was a euphorbia which resembles cactus. Later, the scale was, in 1988 and 1989, collected from a euphorbia and succulent nursery at Jamul, San Diego County, by County Agricultural Biologist Jim Kenyon. With this new collection in Orange County, it is apparent that the scale is well established on euphorbia succulents in Southern California. The scale was originally described by Louise Russell in 1941 from numerous collections out of southern Africa, where the scale is probably native. Its potential as a pest in California is unknown at the time.

GIANT WHITEFLY, *Aleurodicus dugesii*, -(Q)- Two new county records for this unusual, large whitefly indicate that it is adapting very well to the Southern California environment. J. Solaimani found this giant whitefly on hibiscus in Santa Ana, **Orange** County. The important new find was made on August 30. Also in Orange County, N. Nisson discovered this pest on a new host, a commercial variety of hops, *Humulus lupulus* "Cascade." This significant find was made on October 29. On November 13, a homeowner also found giant whitefly on hibiscus in Los Angeles, **Los Angeles** County, another new county record. Previous records are from various locations in San Diego County [See CPPDR 11(5-6):78-81, 1992].

EXCLUSION

The following "Q" rated insects have been found infesting nursery stock in California during the last part of 1995.

A MEALYBUG, *Nipaecoccus* sp., -(Q)- This species was found in Monterey Park, **Los Angeles** County, by Papilli, Marashi and Sium on October 26. The find was made on a variety of hosts including *Arecastrum romanzoffiana*, *Trachycarpus fortunei* and *Cocos plumosa*. The populations were extremely heavy.

The genus of these mealybug is a large one and is well represented in the Neotropics. Two species are known from California and numerous forms were recently described by Williams and Willink in their 1992 publication, "Mealybugs of Central and South America." The specimens from Los Angeles were studied by Los Angeles County Entomologist Dr. Rosser Garrison, who decided that they did not match the known species. The specimens were sent to Dr. Douglas Williams at the British Museum of Natural History, who confirmed Rosser's findings. The infestation is being monitored and treated.

On the next two pages are the final quarantine interception data for 1995. The table on page 73 lists those interceptions involving tropical fruits. These quarantine lists are developed to keep inspectors and county officials informed on the status of intercepted pests.

"A", "B", and "Q" Rated Pests on Tropical Fruits Intercepted in Quarantine
Late Summer 1995

Rating	Species	Common Name	Date	Origin	County	Host	Collector(s)
Q	<i>Planococcus minor</i>	Pacific mealybug	08/16/95	S.E. Asia	LAX	<i>Garcinia mangostana</i>	Dayyani
Q	<i>Pseudococcus citriculus</i>	a mealybug	08/16/95	S.E. Asia	LAX	<i>Garcinia mangostana</i>	Dayyani
Q	<i>Paraputo</i> sp.	a mealybug	08/16/95	S.E. Asia	LAX	<i>Garcinia mangostana</i>	Dayyani
Q	<i>Planococcus lilacinus</i>	a mealybug	08/16/95	S.E. Asia	LAX	<i>Garcinia mangostana</i>	Dayyani
Q	<i>Planococcus minor</i>	Pacific mealybug	08/18/95	Florida	SMT	<i>Euphoria longan</i>	Loux
Q	<i>Neophacopteron euphoriae</i>	longan pitgall psyllid	08/23/95	---	SFO	<i>Euphoria longan</i>	Estap
Q	<i>Thysanofiorinia nephelii</i>	longan scale	09/07/95	Pennsylvania	SJQ	<i>Euphoria longan</i>	Williamson
Q	<i>Coccus formicarii</i>	a soft scale	09/07/95	Pennsylvania	SJQ	<i>Euphoria longan</i>	Williamson

"A", "B", and "Q" Rated Arthropods and Mollusks Intercepted in Quarantine
August 1995 - December 1995

Rating	Species	Common Name	Date	Origin	County	Host	Collector(s)
A	<i>Ostrinia nubilalis</i>	European corn borer	08/16/95	Ohio	LAX	<i>Zea mays</i>	Papilli
Q	<i>Selenaspis articulatus</i>	rufous scale	08/23/95	Costa Rica	SBA	<i>Zingiber</i> sp.	Cummins
Q	<i>Milviscutulus mangiferae</i>	mango shield scale	08/23/95	Costa Rica	SBA	<i>Zingiber</i> sp.	Cummins
B	<i>Aonidiella aurantii</i>	California red scale	08/23/95	Australia	LAX	<i>Citrus sinensis</i>	Dayyani
Q	<i>Megalopyge opercularis</i>	puss caterpillar	08/24/95	Virginia	SCL	aluminum ladder	Clement
Q	<i>Vinsonia stellerifera</i>	stellate scale	08/28/95	Costa Rica	SBA	<i>Zingiber</i> sp.	Squires
Q	<i>Zachrysia provisoria</i>	a snail	08/28/95	Florida	LAX	<i>Spathiphyllum</i> sp.	Papilli
Q	<i>Amorbia emigratella</i>	Mexican leafroller	08/29/95	Hawaii	LAX	foliage	Papilli
Q	<i>Protaetia fusca</i>	mango flower beetle	08/30/95	Hawaii	SCL	saluyut	Murray
B	<i>Nezara viridula</i>	southern green stink bug	08/31/95	Hawaii	SJQ	<i>Schefflera arboricola</i> fruit	Watkins
Q	<i>Wasmannia auropunctata</i>	an ant	09/02/95	Puerto Rico	LAX		Mehraban
B	<i>Diaphania nitidalis</i>	pickleworm	09/06/95	Florida	SMT	<i>Cucumis sativus</i> wood	Loux
Q	<i>Anoplolepis longipes</i>	longlegged ant	09/07/95	Hawaii	SFO		Olmsted
Q	<i>Aulacaspis</i> sp.	an armored scale	09/07/95	Pennsylvania	SJQ	<i>Nepheleum lappaceum</i>	Allan
Q	<i>Parlatoria ziziphi</i>	black citrus scale	09/15/95	Thailand	SMT	<i>Citrus aurantifolia</i>	Garibaldi
Q	<i>Monomorium floricola</i>	an ant	09/19/95	Hawaii	STA	<i>Anthurium</i> sp.	Tillema
Q	<i>Podissus</i> sp.	a stinkbug	09/19/95	Massachusetts	SCL	BBQ cover	Clement
B	<i>Diaphania nitidalis</i>	pickleworm	09/22/95	Florida	SMT	<i>Cucumis sativus</i>	Loux
Q	<i>Parlatoria ziziphi</i>	black citrus scale	09/25/95	Thailand	SFO	<i>Citrus aurantifolia</i>	Olmsted
Q	<i>Parlatoria ziziphi</i>	black citrus scale	09/27/95	Singapore	SFO	---	Condos
Q	<i>Brevipalpus</i> sp.	a flat mite	10/11/95	C. America	SJQ	<i>Dracaena marginata</i> malonguy	Moretto
Q	<i>Aleurodicus dispersus</i>	spiraling whitefly	10/11/95	Hawaii	SCL	<i>Castanea</i> sp.	Nachand
A	<i>Cydia splendana</i>	chestnut moth	10/12/95	Italy	SMT		Loux
A	<i>Cydia splendana</i>	chestnut moth	10/14/95	Italy	SMT	<i>Castanea</i> sp.	Pendleton
A	<i>Hemiberlesia palmae</i>	tropical palm scale	10/17/95	Costa Rica	SJQ	<i>Dracaena marginata</i>	Reed
Q	<i>Unaspis citri</i>	citrus snow scale	10/18/95	Jamaica	ORA	<i>Citrus</i> sp.	Nestor
Q	<i>Parlatoria cinerea</i>	an armored scale	10/18/95	Jamaica	ORA	<i>Citrus</i> sp.	Nestor
Q	<i>Pyemotes boylei</i>	a pyemotid mite	10/19/95	Hawaii	SAC	<i>Alyxia loivaeformis</i> wood pallets	Bianchi
Q	<i>Probinotermes</i> sp.	a termite	10/24/95	Michigan	SFO		Condos
Q	<i>Pinnaspis uniloba</i>	unilobed scale	10/24/95	Hawaii	ALA	<i>Alyxia loivaeformis</i>	Gonsalves
Q	<i>Acutaspis</i> sp.	an armored scale	10/26/95	Costa Rica	SJQ	<i>Aglaonema</i> sp.	Moretto
Q	<i>Aspidiotus excisus</i>	aglaonema scale	10/26/95	Costa Rica	SJQ	<i>Aglaonema</i> sp.	Moretto
Q	<i>Diastrophus radicum</i>	raspberry root gall wasp	10/26/95	Illinois	HUM	raspberry	Spadoni

BORDER STATIONS

There have been the usual large number of miscellaneous pests intercepted at the border during the latter part of 1995. The following list includes a select few of the more interesting or unusual discoveries made by border station personnel. The first part of the table includes significant finds of *Marmara* sp. that may or may not be the same citrus peel miner that has been a problem in the Coachella Valley, Riverside County [see CPPDR 14(1-2):14-16]. The second part of the table outlines a variety of diverse finds at the border stations, ending with some of the important "A"- rated weed interceptions.

<u>Pest</u>	<u>Station</u>	<u>Date</u>	<u>Origin</u>	<u>Collector</u>	<u>Host</u>
Leaf miner moth - <i>Marmara</i> sp.	VI	10/01	Florida	Connors	grapefruit
Citrus peel miner - <i>Marmara</i> sp.	VI	12/04	Texas	Dupes	truck
	VI	12/05	Texas	Calvery	truck
	VI	12/09	Texas	Connors	truck
	VI	12/10	Texas	Dupes	truck
	VI	12/11	Texas	Dupes	grapefruit
	VI	12/18	Florida	Dupes	grapefruit
Hickory shuckworm - <i>Cydia caryana</i>	NE	09/06	Texas	Martinez	pecans
	LO	09/27	Arkansas	Hamblet	pecans/husks
European corn borer - <i>Ostrinia nubilalis</i>	YE	09/09	Iowa	Quass	Iowa auto
	TR	09/10	Indiana	Bennett	Calif. RV
	YE	09/20	Iowa	Quass	Calif. RV
	TR	09/22	Illinois	Sage	corn cob
	NE	10/04	Nevada	Cline	ear corn
	BL	10/09	Arizona	Rincon	corn stalks
	YE	10/09	Oklahoma	Khalil	bell peppers
	TR	10/22	Nevada	Anderson	corn cobs
	YE	10/30	Michigan	Blakely	corn stalks
	TR	11/06	Iowa	Rudolph	corn stalks
	WI	11/10	Illinois	Dunham	corn
Pentatomids					
- <i>Thyanta</i> sp.	LO	09/13	Oklahoma	Hamblet	pears
- <i>Podisus</i> sp.	NE	10/23	Iowa	Derichsweiler	U-Haul
- <i>Aelia</i> sp.	VI	10/26	Mexico	Duitsman	papayas
Southern corn rootworm					
- <i>Diabrotica undecimpunctata howardi</i>	TR	09/15	N. Carolina	Rinker	okra
White-footed ant - <i>Technomyrmex albipes</i>	NE	09/19	Georgia	Martinez	yarn
Garden bagworm - <i>Apterona helix</i>	NE	09/21	New York	Urquidi	RV trailer
Casebearing moth - <i>Coleophora</i> sp.	RE	09/22	Michigan	Bledsoe	RV chassis
	HO	11/17	Vermont	Johnson	RV chassis
Drywood termite - <i>Marginitermes</i> sp.	BL	09/27	Mexico	Perez-Argueta	firewood
Red-banded leafroller - Tortricidae	VI	09/30	Arkansas	Gresick	Arkansas RV
Snail pest - <i>Bradybaena similis</i>	WI	10/06	Florida	Clay	houseplants
Surinam roach - <i>Pycnoscelus surinamensis</i>	WI	10/06	Florida	Clay	houseplants

<u>Pest</u>	<u>Station</u>	<u>Date</u>	<u>Origin</u>	<u>Collector</u>	<u>Host</u>
Sweetpotato weevil					
- <i>Cylas formicarius elegantulus</i>	BL	10/18	Louisiana	Villegas	Oregon auto
	BL	11/09	Texas	Vasquez	Texas auto
	BL	11/18	Louisiana	Burt	sweet potatoes
Two-lined spittlebug - <i>Prosapia bicincta</i>	VI	11/03	Arizona	Granger	canteloupes
Reniform nematode					
- <i>Rotylenchulus reniformis</i>	WI	11/05	Texas	Rocha	plants/soil
Borer moth - <i>Diaphania</i> sp.	BL	11/16	Texas	Klingenmeier	spinach plants
Picture-winged fly - <i>Eumecosomyia</i> sp.	BL	11/17	Mexico	Klingenmeier	bulk corn
Boll weevil - <i>Anthonomus grandis</i>	NE	11/19	Texas	Urquidi	Calif. auto
	LO	11/30	Texas	Hamblet	Calif. auto
	NE	12/18	Montana	Cline	Oregon auto
Blackheaded ant					
- <i>Tapinoma melanocephalum</i>	NE	12/12	Florida	Friedman	houseplants
Halogeton - <i>Halogeton glomeratus</i>	TR	08/23	Nevada	Sage	floral
	TR	08/28	Nevada	Grotenrath	plant debris
	TR	09/14	Indiana	Garrison	weed
	TR	09/14	Nevada	Rudolph	floral
	TR	09/23	Oregon	Sage	floral
	LO	11/06	Nevada	Sheppard	floral
Musk thistle - <i>Carduus nutans</i>	TR	08/28	Wyoming	Rudolph	floral
	TR	09/16	Nevada	Ward	alfalfa
	DO	09/17	Oregon	Wood	floral
	YE	10/19	Utah	Holman	mixed hay
Spotted knapweed - <i>Centaurea maculosa</i>	TR	08/29	Wyoming	Knutilla	motorcycle
	TR	09/07	Montana	Knutilla	pump
	HO	10/28	Montana	Stone	floral
Diffuse knapweed - <i>Centaurea diffusa</i>	DO	09/17	Oregon	Vincent	floral
	SM	10/18	Colorado	Hart	weed debris
	LO	11/11	Washington	Hamblet	pickup debris
Onopordum thistle - <i>Onopordum</i> sp.	DO	11/03	Oregon	Wood	hay debris
	DO	11/09	Washington	Tracy	floral
	TR	11/23	Nevada	Bienenfeld	hay debris

STATE OF CALIFORNIA
DEPT. OF FOOD AND AGRICULTURE

DIVISION OF PLANT INDUSTRY
PLANT PEST DIAGNOSTICS BRANCH

·~ BOTANY HIGHLIGHTS ~·

IMPORTANT NOTICE

G. Douglas Barbe
Senior Plant Taxonomist

Your attention is called to the following which may be of concern to you.

The situation involves the rating classification of noxious weed species. This list replaces the IMPORTANT NOTICE of January 7, 1994 and the Noxious Weeds Section of the Consolidated Pest Rating Booklet issued November 21, 1977.

All ratings are based upon information currently available and are subject to change as new information is developed or new weed species are discovered and evaluated. The only "C" rated species on the list are those that are designated noxious weeds in the California Code of Regulations, Title 3, Sections 3854, 3855, and 4500. Species rated "Q" are in accordance with the Assistant Director for Plant Industry Memorandum of January 1, 1980, entitled "Action Oriented Rating System", and Plant Industry Policy Letter 89-2, dated May 1, 1989.

Timely IMPORTANT NOTICES will announce additions and changes to this list, which will become obsolete upon the issuance of the next revision scheduled for January 6, 1997.

STATE OF CALIFORNIA
DEPT. OF FOOD AND AGRICULTURE

DIVISION OF PLANT INDUSTRY
PLANT PEST DIAGNOSTICS BRANCH

**PEST RATINGS OF NOXIOUS WEED SPECIES
AND NOXIOUS WEED SEED**

<u>RATING</u>	<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
B	<i>Acacia paradoxa</i> (= <i>A. armata</i>)	kangaroothorn
A	<i>Acaena anserinifolia</i>	biddy biddy
A	<i>Acaena novae-zelandiae</i> (= <i>A. anserinifolia</i> in part as used previously, and of British and Australian authors.)	biddy biddy
A	<i>Acaena pallida</i> (= <i>A. anserinifolia</i> in part as used previously.)	biddy biddy
A	<i>Achnatherum brachychaetum</i> (= <i>Stipa brachychaeta</i>)	punagrass
B	<i>Acroptilon repens</i> (= <i>Centaurea repens</i>)	Russian knapweed
B	<i>Aegilops cylindrica</i>	jointed goatgrass
B	<i>Aegilops ovata</i> (= <i>A. geniculata</i> and <i>A. neglecta</i> in part)	ovate goatgrass
B	<i>Aegilops triuncialis</i>	barb goatgrass
B	<i>Aeschynomene rudis</i>	rough jointvetch
A	<i>Alhagi maurorum</i> (= <i>A. pseudalhagi</i>)	camelthorn
B	<i>Allium paniculatum</i>	panicled onion
B	<i>Allium vineale</i>	wild garlic

<u>RATING</u>	<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
A	<i>Alternanthera philoxeroides</i>	alligatorweed
B	<i>Ambrosia trifida</i>	giant ragweed
B	<i>Araujia sericifera</i> (Ref. Forster & Bruyns, 1992. Taxon 41:746-749.)	bladderflower
A	<i>Arctotheca calendula</i>	capeweed (as seed or fertile plants)
B	<i>Cardaria chalepensis</i>	lens-podded hoarycross
B	<i>Cardaria draba</i>	heart-podded hoarycross
B	<i>Cardaria pubescens</i>	globe-podded hoarycross
A	<i>Carduus acanthoides</i>	plumeless thistle
A	<i>Carduus nutans</i>	musk thistle
C	<i>Carduus pycnocephalus</i>	Italian thistle
C	<i>Carduus tenuiflorus</i>	Italian thistle
B	<i>Carthamus baeticus</i>	smooth distaff thistle
B	<i>Carthamus lanatus</i>	woolly distaff thistle
A	<i>Carthamus leucocaulos</i>	whitestem distaff thistle
C	<i>Cenchrus echinatus</i>	southern sandbur
C	<i>Cenchrus incertus</i>	coast sandbur
C	<i>Cenchrus longispinus</i> (= <i>C. pauciflorus</i> as used previously.)	mat sandbur
B	<i>Centaurea calcitrapa</i>	purple starthistle
A	<i>Centaurea diffusa</i>	diffuse knapweed
A	<i>Centaurea iberica</i>	Iberian starthistle
A	<i>Centaurea maculosa</i>	spotted knapweed

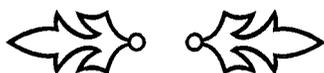
<u>RATING</u>	<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
C	<i>Centaurea solstitialis</i>	yellow starthistle
A	<i>Centaurea squarrosa</i>	squarrose knapweed
B	<i>Centaurea sulphurea</i>	Sicilian starthistle
A	<i>Chondrilla juncea</i>	skeletonweed
B	<i>Chorispora tenella</i>	purple mustard
B	<i>Cirsium arvense</i>	Canada thistle
A	<i>Cirsium ochrocentrum</i>	yellowspine thistle
A	<i>Cirsium undulatum</i>	wavyleaf thistle
C	<i>Convolvulus arvensis</i>	field bindweed
B	<i>Coronopus squamatus</i>	swinecress
A	<i>Crupina vulgaris</i>	bearded creeper
A	<i>Cucumis melo</i> var. <i>dudaim</i>	dudaim melon
B	<i>Cucumis myriocarpus</i>	paddy melon
A	<i>Cuscuta reflexa</i>	giant dodder
C	<i>Cuscuta</i> spp. except <i>C. reflexa</i>	dodder
B	<i>Cynara cardunculus</i>	artichoke thistle
C	<i>Cynodon</i> spp. & hybrids	bermudagrass
B	<i>Cyperus esculentus</i>	yellow nutsedge
B	<i>Cyperus rotundus</i>	purple nutsedge
C	<i>Cytisus scoparius</i>	Scotch broom
B	<i>Elytrigia repens</i> (= <i>Agropyron repens</i>)	quackgrass
A	<i>Euphorbia esula</i>	leafy spurge

<u>RATING</u>	<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
B	<i>Euphorbia oblongata</i>	oblong spurge
A	<i>Euphorbia serrata</i>	serrate spurge
B	<i>Gaura coccinea</i>	scarlet gaura
B	<i>Gaura drummondii</i> (= <i>G. odorata</i> as used previously)	scented gaura
B	<i>Gaura sinuata</i>	wavyleaf gaura
C	<i>Genista monspessulana</i> (= <i>Cytisus monspessulanus</i>)	French broom
B	<i>Gypsophila paniculata</i>	baby's breath
A	<i>Halimodendron halodendron</i>	Russian salttree
A	<i>Halogeton glomeratus</i>	halogeton
A	<i>Helianthus ciliaris</i>	blueweed
A	<i>Heteropogon contortus</i>	tanglehead
A	<i>Hydrilla verticillata</i>	hydrilla
C	<i>Hyoscyamus niger</i>	black henbane
C	<i>Hypericum perforatum</i>	Klamathweed
B	<i>Imperata brevifolia</i>	satintail
C	<i>Iris douglasiana</i>	Douglas iris
C	<i>Iris missouriensis</i>	western blue flag
B	<i>Isatis tinctoria</i>	dyer's woad
C	<i>Iva axillaris</i>	povertyweed
B	<i>Lepidium latifolium</i>	perennial peppergrass
A	<i>Linaria genistifolia</i> ssp. <i>dalmatica</i> (= <i>L. dalmatica</i>)	Dalmatian toadflax

<u>RATING</u>	<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
B	<i>Lythrum salicaria</i>	purple loosestrife
C	<i>Malvella leprosa</i> (= <i>Sida leprosa</i> var. <i>hederacea</i>)	alkali mallow
B	<i>Muhlenbergia schreberi</i>	nimblewill
B	<i>Nothoscordum inodorum</i>	false garlic
B	<i>Nymphaea mexicana</i>	banana waterlily
A	<i>Onopordum</i> spp.	onopordum thistles
A	<i>Orobanche cooperi</i> (= <i>O. ludoviciana</i> var. <i>cooperi</i> = <i>O. multiflora</i> as used in Correll and Johnston's Manual of the Vascular Plants of Texas.)	Cooper's broomrape desert broomrape
A	<i>Orobanche ramosa</i>	branched broomrape
B	<i>Oryza rufipogon</i>	red rice
B	<i>Panicum antidotale</i>	blue panicgrass
A	<i>Peganum harmala</i>	harmel
C	<i>Pennisetum clandestinum</i>	Kikuyugrass
A	<i>Physalis virginiana</i> var. <i>sonorae</i> (= <i>P. subglabrata</i> as used previously.)	smooth groundcherry
B	<i>Physalis viscosa</i>	grape groundcherry
C	<i>Polygonum coccineum</i>	kelp
B	<i>Polygonum cuspidatum</i>	Japanese knotweed
B	<i>Polygonum polystachyum</i>	Himalayan knotweed
B	<i>Polygonum sachalinense</i>	giant knotweed
A	<i>Prosopis strombulifera</i>	creeping mesquite

<u>RATING</u>	<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
B	<i>Rorippa austriaca</i>	Austrian fieldcress
C	<i>Salsola australis</i> (= <i>S. tragus</i> in Jepson Manual)	common Russianthistle
Q	<i>Salsola collina</i>	spineless Russianthistle
C	<i>Salsola paulsenii</i>	barbwire Russianthistle
A	<i>Salsola vermiculata</i>	wormleaf salsola
B	<i>Salvia aethiopis</i>	Mediterranean sage
A	<i>Salvia virgata</i> (= <i>S. pratensis</i> as used previously.)	meadow sage
Q	<i>Salvinia auriculata</i> complex (consisting of <i>S. auriculata</i> , <i>S. biloba</i> , <i>S. herzogii</i> , and <i>S. molesta</i> .)	salvinia
A	<i>Scolymus hispanicus</i>	golden thistle
B	<i>Senecio jacobaea</i>	tansy ragwort
B	<i>Senecio squalidus</i>	Oxford ragwort
B	<i>Setaria faberi</i>	giant foxtail
A	<i>Solanum cardiophyllum</i>	heartleaf nightshade
B	<i>Solanum carolinense</i>	Carolina horsenettle
A	<i>Solanum dimidiatum</i>	Torrey's nightshade
B	<i>Solanum elaeagnifolium</i>	white horsenettle
B	<i>Solanum lanceolatum</i>	lanceleaf nightshade
B	<i>Solanum marginatum</i>	white-margined nightshade
A	<i>Sonchus arvensis</i>	perennial sowthistle

<u>RATING</u>	<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
C	<i>Sorghum halepense</i>	Johnsongrass, and other perennial Sorghum spp. including but not limited to Sorghum alnum and perennial sweet suda grass.
A	<i>Sphaerophysa salsula</i>	Austrian peaweed
A	<i>Striga lutea</i> (= <i>S. asiatica</i>)	witchweed
B	<i>Symphytum asperum</i>	rough comfrey
C	<i>Taeniatherum caput-medusae</i> (= <i>Elymus caput-medusae</i> = <i>T. asperum</i> as used by some authors.)	medusahead
A	<i>Tagetes minuta</i>	wild marigold
C	<i>Tribulus terrestris</i>	puncturevine
B	<i>Ulex europaeus</i>	gorse
B	<i>Viscum album</i>	European mistletoe
A	<i>Zygophyllum fabago</i> (= <i>Z. f. var. brachycarpum</i>)	Syrian beancaper



STATE OF CALIFORNIA
DEPT. OF FOOD AND AGRICULTURE

DIVISION OF PLANT INDUSTRY
PLANT PEST DIAGNOSTICS BRANCH

FEDERAL NOXIOUS WEED REGULATION. 7 CFR 360

The following plants, seeds, or other parts capable of propagation are within the definition of a "noxious weed" under the Federal Noxious Weed Act of 1974 [7 USC 2802(c)]. Listed noxious weeds may be moved into or through the United States only under permit from the USDA Plant Protection and Quarantine programs, and under conditions that would not involve a danger of disseminating the weeds. The federal regulation does not affect the movement of listed noxious weeds that are moved solely intrastate. For material moving within the state, a state permit is required only if the species is also listed as a California noxious weed.

A. Aquatic Weeds:

Azolla pinnata
Eichhornia azurea
Hydrilla verticillata
Hygrophila polysperma
Ipomoea aquatica
Lagarosiphon major
Limnophila sessiliflora
Monochoria hastata
Monochoria vaginalis
Ottelia alismoides
Sagittaria sagittifolia
Salvinia auriculata
Salvinia biloba
Salvinia herzogii
Salvinia molesta
Sparganium erectum

B. Parasitic Weeds:

Aeginetia spp.
Alectra spp.
Cuscuta spp. (See 7 CFR 360.200 for 53 exceptions)
Orobanche spp. (See 7 CFR 360.200 for 13 exceptions)
Striga spp.

C. Terrestrial Weeds:

<i>Ageratina adenophora</i>	<i>Pennisetum polystachion</i>
<i>Alternanthera sessilis</i>	<i>Prosopis alpataco</i>
<i>Asphodelus fistulosus</i>	<i>Prosopis argentina</i>
<i>Avena sterilis</i> (including <i>A. ludoviciana</i>)	<i>Prosopis articulata</i>
<i>Borreria alata</i>	<i>Prosopis burkartii</i>
<i>Carthamus oxyacantha</i>	<i>Prosopis caldenia</i>
<i>Chrysopogon aciculatus</i>	<i>Prosopis calingastana</i>
<i>Commelina benghalensis</i>	<i>Prosopis campestris</i>
<i>Crupina vulgaris</i>	<i>Prosopis castellanosii</i>
<i>Digitaria scalarum</i>	<i>Prosopis denudans</i>
<i>Digitaria velutina</i>	<i>Prosopis elata</i>
<i>Drymaria arenarioides</i>	<i>Prosopis farcta</i>
<i>Emex australis</i>	<i>Prosopis ferox</i>
<i>Emex spinosa</i>	<i>Prosopis fiebrigii</i>
<i>Galega officinalis</i>	<i>Prosopis hassleri</i>
<i>Heracleum mantegazzianum</i>	<i>Prosopis humilis</i>
<i>Imperata brasiliensis</i>	<i>Prosopis kuntzei</i>
<i>Imperata cylindrica</i>	<i>Prosopis pallida</i>
<i>Ipomoea triloba</i>	<i>Prosopis palmeri</i>
<i>Ischaemum rugosum</i>	<i>Prosopis reptans</i>
<i>Leptochloa chinensis</i>	<i>Prosopis rojasiana</i>
<i>Lycium ferocissimum</i>	<i>Prosopis ruizleali</i>
<i>Melaleuca quinquenervia</i>	<i>Prosopis ruscifolia</i>
<i>Melastoma malabathricum</i>	<i>Prosopis sericantha</i>
<i>Mikania cordata</i>	<i>Prosopis strombulifera</i>
<i>Mikania micrantha</i>	<i>Prosopis torquata</i>
<i>Mimosa invisa</i>	<i>Rottboellia exaltata</i>
<i>Mimosa pigra</i> var. <i>pigra</i>	<i>Rubus fruticosus</i>
<i>Nassella trichotoma</i>	<i>Rubus moluccanus</i>
<i>Opuntia aurantiaca</i>	<i>Saccharum spontaneum</i>
<i>Oryza longistaminata</i>	<i>Salsola vermiculata</i>
<i>Oryza punctata</i>	<i>Setaria pallide-fusc.</i>
<i>Oryza rufipogon</i>	<i>Solanum torvum</i>
<i>Paspalum scrobiculatum</i>	<i>Solanum viarum</i>
<i>Pennisetum clandestinum</i>	<i>Tridax procumbens</i>
<i>Pennisetum macrourum</i>	<i>Urochloa panicoides</i>
<i>Pennisetum pedicellatum</i>	



STATE OF CALIFORNIA
DEPT. OF FOOD AND AGRICULTURE

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PLANT PEST DIAGNOSTICS BRANCH

**PEST RATINGS OF NOXIOUS WEED SPECIES
AND NOXIOUS WEED SEED**

"A" Eradication, containment, rejection, or other holding action at the state-county level. Quarantine interceptions to be rejected or treated at any point in the state.

<i>Acaena anserinifolia</i>	biddy biddy
<i>Acaena novae-zelandiae</i> (= <i>A. anserinifolia</i> in part as used previously and of British and Australian authors.)	biddy biddy
<i>Acaena pallida</i> (= <i>A. anserinifolia</i> in part as used previously.)	biddy biddy
<i>Achnatherum brachychaetum</i> (= <i>Stipa brachychaeta</i>)	punagrass
<i>Alhagi maurorum</i> (= <i>A. pseudalhagi</i>)	camelthorn
<i>Alternanthera philoxeroides</i>	alligatorweed
<i>Arctotheca calendula</i>	capeweed, as seed or fertile plants
<i>Carduus acanthoides</i>	plumeless thistle
<i>Carduus nutans</i>	musk thistle
<i>Carthamus leucocaulos</i>	whitestem distaff thistle
<i>Centaurea diffusa</i>	diffuse knapweed
<i>Centaurea iberica</i>	Iberian starthistle
<i>Centaurea maculosa</i>	spotted knapweed
<i>Centaurea squarrosa</i>	squarrose knapweed

"A" Pests (continued)

<i>Chondrilla juncea</i>	skeletonweed
<i>Cirsium ochrocentrum</i>	yellowspine thistle
<i>Cirsium undulatum</i>	wavyleaf thistle
<i>Crupina vulgaris</i>	bearded creeper
<i>Cucumis melo</i> var. <i>dudaim</i>	dudaim melon
<i>Cuscuta reflexa</i>	giant dodder
<i>Euphorbia esula</i>	leafy spurge
<i>Euphorbia serrata</i>	serrate spurge
<i>Halimodendron halodendron</i>	Russian salttree
<i>Halogeton glomeratus</i>	halogeton
<i>Helianthus ciliaris</i>	blueweed
<i>Heteropogon contortus</i>	tanglehead
<i>Hydrilla verticillata</i>	hydrilla
<i>Linaria genistifolia</i> ssp. <i>dalmatica</i> (= <i>L. dalmatica</i>)	Dalmatian toadflax
<i>Onopordum</i> spp.	onopordum thistles
<i>Orobanche cooperi</i> (= <i>O. ludoviciana</i> var. <i>cooperi</i> = <i>O. multiflora</i> Nutt., as used in Correll and Johnston's Manual of the Vascular Plants of Texas.)	Cooper's broomrape desert broomrape
<i>Orobanche ramosa</i>	branched broomrape
<i>Peganum harmala</i>	harmel
<i>Physalis virginiana</i> var. <i>sonorae</i> (= <i>P. subglabrata</i> as used previously.)	smooth groundcherry

"A" Pests (continued)

<i>Prosopis strombulifera</i>	creeping mesquite
<i>Salsola vermiculata</i>	wormleaf salsola
<i>Salvia virgata</i> (= <i>S. pratensis</i> as used previously.)	meadow sage
<i>Scolymus hispanicus</i>	golden thistle
<i>Solanum cardiophyllum</i>	heartleaf nightshade
<i>Solanum dimidiatum</i>	Torrey's nightshade
<i>Sonchus arvensis</i>	perennial sowthistle
<i>Sphaerophysa salsula</i>	Austrian peaweed
<i>Striga lutea</i> (= <i>S. asiatica</i>)	witchweed
<i>Tagetes minuta</i>	wild marigold
<i>Zygophyllum fabago</i> (= <i>Z. f.</i> var. <i>brachycarpum</i>)	Syrian beancaper

"B" Eradication, containment, control or other holding action at the discretion of the commissioner.

<i>Acacia paradoxa</i> (= <i>A. armata</i>)	kangaroothorn
<i>Acroptilon repens</i> (= <i>Centaurea repens</i>)	Russian knapweed
<i>Aegilops cylindrica</i>	jointed goatgrass
<i>Aegilops ovata</i> (= <i>A. geniculata</i> and <i>A. neglecta</i> in part)	ovate goatgrass
<i>Aegilops triuncialis</i>	barb goatgrass
<i>Aeschynomene rudis</i>	rough jointvetch

"B" Pests (continued)

<i>Agropyron repens</i> (see <i>Elytrigia repens</i>)	
<i>Allium paniculatum</i>	panicked onion
<i>Allium vineale</i>	wild garlic
<i>Ambrosia trifida</i>	giant ragweed
<i>Araujia sericofera</i>	bladderflower
<i>Cardaria chalepensis</i>	lens-podded hoarycress
<i>Cardaria draba</i>	heart-podded hoarycress
<i>Cardaria pubescens</i>	globe-podded hoarycress
<i>Carthamus baeticus</i>	smooth distaff thistle
<i>Carthamus lanatus</i>	woolly distaff thistle
<i>Centaurea calcitrapa</i>	purple starthistle
<i>Centaurea repens</i> (See <i>Acroptilon repens</i>)	
<i>Centaurea sulphurea</i>	Sicilian thistle
<i>Chorispora tenella</i>	purple mustard
<i>Cirsium arvense</i>	Canada thistle
<i>Coronopus squamatus</i>	swinecress
<i>Cucumis myriocarpus</i>	paddy melon
<i>Cynara cardunculus</i>	artichoke thistle
<i>Cyperus esculentus</i>	yellow nutsedge
<i>Cyperus rotundus</i>	purple nutsedge
<i>Elytrigia repens</i> (= <i>Agropyron repens</i>)	quackgrass
<i>Euphorbia oblongata</i>	oblong spurge

"B" Pests (continued)

<i>Gaura coccinea</i>	scarlet gaura
<i>Gaura drummondii</i> (= <i>G. odorata</i>)	scented gaura
<i>Gaura sinuata</i>	wavyleaf gaura
<i>Gypsophila paniculata</i>	baby's breath
<i>Imperata brevifolia</i>	satintail
<i>Isatis tinctoria</i>	dyer's woad
<i>Lepidium latifolium</i>	perennial peppergrass
<i>Lythrum salicaria</i>	purple loosestrife
<i>Muhlenbergia schreberi</i>	nimblewill
<i>Nothoscordum inodorum</i>	false garlic
<i>Nymphaea mexicana</i>	banana waterlily
<i>Oryza rufipogon</i>	red rice
<i>Panicum antidotale</i>	blue panicgrass
<i>Physalis viscosa</i>	grape groundcherry
<i>Polygonum cuspidatum</i>	Japanese knotweed
<i>Polygonum polystachyum</i>	Himalayan knotweed
<i>Polygonum sachalinense</i>	giant knotweed
<i>Rorippa austriaca</i>	Austrian fieldcress
<i>Salvia aethiopsis</i>	Mediterranean sage
<i>Senecio jacobaea</i>	tansy ragwort
<i>Senecio squalidus</i>	Oxford ragwort
<i>Setaria faberi</i>	giant foxtail

"B" Pests (continued)

<i>Solanum carolinense</i>	Carolina horsenettle
<i>Solanum elaeagnifolium</i>	white horsenettle
<i>Solanum lanceolatum</i>	lanceleaf nightshade
<i>Solanum marginatum</i>	white-margined nightshade
<i>Symphytum asperum</i>	rough comfrey
<i>Ulex europaeus</i>	gorse
<i>Viscum album</i>	European mistletoe

"C" State endorsed holding action and eradication only when found in a nursery; action to retard spread outside of nurseries at the discretion of the commissioner; reject only when found in a cropseed for planting or at the discretion of the commissioner.

<i>Carduus pycnocephalus</i>	Italian thistle
<i>Carduus tenuiflorus</i>	Italian thistle
<i>Cenchrus echinatus</i>	southern sandbur
<i>Cenchrus incertus</i>	coast sandbur
<i>Cenchrus longispinus</i> (= <i>C. pauciflorus</i> as used previously.)	mat sandbur
<i>Centaurea solstitialis</i>	yellow starthistle
<i>Convolvulus arvensis</i>	field bindweed
<i>Cuscuta</i> spp. except <i>C. reflexa</i>	dodder
<i>Cynodon</i> spp. and hybrids	bermudagrass
<i>Cytisus monspessulanus</i> (see <i>Genista monspessulana</i>)	
<i>Cytisus scoparius</i>	Scotch broom

"C" Pests (continued)

<i>Genista monspessulana</i> (= <i>Cytisus monspessulanus</i>)	French broom
<i>Hyoscyamus niger</i>	black henbane
<i>Hypericum perforatum</i>	Klamathweed
<i>Iris douglasiana</i>	Douglas iris
<i>Iris missouriensis</i>	western blue flag
<i>Iva axillaris</i>	poverty weed
<i>Malvella leprosa</i> (= <i>Sida leprosa</i> var. <i>hederacea</i>)	alkali mallow
<i>Pennisetum clandestinum</i>	Kikuyugrass
<i>Polygonum coccineum</i>	kelp
<i>Salsola australis</i> (= <i>S. tragus</i> in Jepson Manual)	common Russianthistle
<i>Salsola paulsenii</i>	barbwire Russianthistle
<i>Sida leprosa</i> var. <i>hederacea</i> (See <i>Malvella leprosa</i>)	
<i>Sorghum halepense</i>	Johnsongrass, and other perennial <i>Sorghum</i> spp. including but not limited to <i>Sorghum almum</i> and perennial sweet sudangrass.
<i>Taeniatherum caput-medusae</i> (= <i>Elymus caput-medusae</i> = <i>T. asperum</i> as used by some authors.)	medusahead
<i>Tribulus terrestris</i>	puncturevine

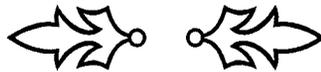
"Q" Temporary "A" action at the state-county level pending determination of a permanent rating.

Salsola collina

spineless Russianthistle

Salvinia auriculata complex
(consisting of *S. auriculata*, *S. biloba*,
S. herzogii, and *S. molesta*.)

salvinia



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**PEST RATINGS OF NOXIOUS WEED SPECIES
AND NOXIOUS WEED SEED**

<u>RATING</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
A	alligatorweed	<i>Alternanthera philoxeroides</i>
B	baby's breath	<i>Gypsophila paniculata</i>
A	beancaper, Syrian	<i>Zygophyllum fabago</i> (= <i>Z. f.</i> var. <i>brachycarpum</i>)
A	bearded creeper	<i>Crupina vulgaris</i>
C	bermudagrass	<i>Cynodon</i> spp. and hybrids
A	biddy biddy	<i>Acaena anserinifolia</i>
A	biddy biddy	<i>Acaena novae-zelandiae</i> (= <i>A. anserinifolia</i> in part as used previously, and of British and Australian authors.)
A	biddy biddy	<i>Acaena pallida</i> (= <i>A. anserinifolia</i> in part as used previously.)
C	bindweed, field	<i>Convolvulus arvensis</i>
B	bladderflower	<i>Araujia sericofera</i>
A	blueweed	<i>Helianthus ciliaris</i>
C	broom, French	<i>Genista monspessulana</i> (= <i>Cytisus monspessulanus</i>)
C	broom, Scotch	<i>Cytisus scoparius</i>
A	broomrape, branched	<i>Orobanche ramosa</i>
A	broomrape, Cooper's	<i>Orobanche cooperi</i> (= <i>O. ludoviciana</i> var. <i>cooperi</i>)

<u>RATING</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
A	broomrape, desert	<i>Orobanche cooperi</i> (= <i>O. multiflora</i> as used in Correll and Johnston's Manual of the Vascular Plants of Texas.)
A	camelthorn	<i>Alhagi maurorum</i> (= <i>A. pseudalhagi</i>)
A	capeweed, as seed or fertile plants	<i>Arctotheca calendula</i>
B	comfrey, rough	<i>Symphytum asperum</i>
A	crupina, common	<i>Crupina vulgaris</i>
B	distaff thistle, smooth	<i>Carthamus baeticus</i>
A	distaff thistle, whitestem	<i>Carthamus leucocaulos</i>
B	distaff thistle, woolly	<i>Carthamus lanatus</i>
C	dodder, all species except giant	<i>Cuscuta</i> spp.
A	dodder, giant	<i>Cuscuta reflexa</i>
B	dyer's woad	<i>Isatis tinctoria</i>
B	fieldcress, Austrian	<i>Rorippa austriaca</i>
C	flag, western blue	<i>Iris missouriensis</i>
B	foxtail, giant	<i>Setaria faberi</i>
B	garlic, false	<i>Nothoscordum inodorum</i>
B	garlic, wild	<i>Allium vineale</i>
B	gaura, scarlet	<i>Gaura coccinea</i>
B	gaura, scented	<i>Gaura drummondii</i> (= <i>G. odorata</i>)
B	gaura, wavyleaf	<i>Gaura sinuata</i>

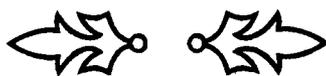
<u>RATING</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
B	goatgrass, barb	<i>Aegilops triuncialis</i>
B	goatgrass, jointed	<i>Aegilops cylindrica</i>
B	goatgrass, ovate	<i>Aegilops ovata</i> (= <i>A. geniculata</i> and <i>A. neglecta</i> in part)
B	gorse	<i>Ulex europaeus</i>
B	groundcherry, grape	<i>Physalis viscosa</i>
A	groundcherry, smooth	<i>Physalis virginiana</i> var. <i>sonorae</i> (= <i>P. subglabrata</i> as used previously.)
A	halogeton	<i>Halogeton glomeratus</i>
A	harmel	<i>Peganum harmala</i>
C	henbane, black	<i>Hyoscyamus niger</i>
B	hoarycress, globe-podded	<i>Cardaria pubescens</i>
B	hoarycress, heart-podded	<i>Cardaria draba</i>
B	hoarycress, lens-podded	<i>Cardaria chalepensis</i>
B	horsenettle, Carolina	<i>Solanum carolinense</i>
B	horsenettle, white	<i>Solanum elaeagnifolium</i>
A	hydrilla	<i>Hydrilla verticillata</i>
C	iris, Douglas	<i>Iris douglasiana</i>
C	iris, western blue flag	<i>Iris missouriensis</i>
C	Johnsongrass, and other perennial <i>Sorghum</i> spp. including but not limited to <i>Sorghum almum</i> and perennial sweet sudangrass.	<i>Sorghum halepense</i>
Q	jointvetch, rough	<i>Aeschynomene rudis</i>

<u>RATING</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
B	kangaroothorn	<i>Acacia paradoxa</i> (= <i>A. armata</i>)
C	kelp	<i>Polygonum coccineum</i>
C	kikuyugrass	<i>Pennisetum clandestinum</i>
C	Klamathweed	<i>Hypericum perforatum</i>
A	knapweed, diffuse	<i>Centaurea diffusa</i>
B	knapweed, Russian	<i>Acroptilon repens</i>
A	knapweed, spotted	<i>Centaurea maculosa</i>
A	knapweed, squarrose	<i>Centaurea squarrosa</i>
B	knotweed, giant	<i>Polygonum sachalinense</i>
B	knotweed, Himalayan	<i>Polygonum polystachyum</i>
B	loosestrife, purple	<i>Lythrum salicaria</i>
B	knotweed, Japanese	<i>Polygonum cuspidatum</i>
C	mallow, alkali	<i>Malvella leprosa</i> (= <i>Sida leprosa</i> var. <i>hederacea</i>)
A	marigold, wild	<i>Tagetes minuta</i>
C	medusahead	<i>Taeniatherum caput-medusae</i> (= <i>Elymus caput-medusae</i> = <i>T. asperum</i> as used by some authors.)
A	melon, dudaim	<i>Cucumis melo</i> var. <i>dudaim</i>
B	melon, paddy	<i>Cucumis myriocarpus</i>
A	mesquite, creeping	<i>Prosopis strombulifera</i>
B	mistletoe, European	<i>Viscum album</i>
B	mustard, purple	<i>Chorispora tenella</i>

<u>RATING</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
A	nightshade, heartleaf	<i>Solanum cardiophyllum</i>
B	nightshade, lanceleaf	<i>Solanum lanceolatum</i>
A	nightshade, Torrey's	<i>Solanum dimidiatum</i>
B	nightshade, white-margined	<i>Solanum marginatum</i>
B	nimblewill	<i>Muhlenbergia schreberi</i>
B	nutsedge, purple	<i>Cyperus rotundus</i>
B	nutsedge, yellow	<i>Cyperus esculentus</i>
B	onion, paniced	<i>Allium paniculatum</i>
A	peaweed, Austrian	<i>Sphaerophysa salsula</i>
B	peppercress, perennial	<i>Lepidium latifolium</i>
C	povertyweed	<i>Iva axillaris</i>
A	punagrass	<i>Achnatherum brachychaetum</i> (= <i>Stipa brachychaeta</i>)
C	puncturevine	<i>Tribulus terrestris</i>
B	quackgrass	<i>Elytrigia repens</i> (= <i>Agropyron repens</i>)
B	ragweed, giant	<i>Ambrosia trifida</i>
B	ragwort, Oxford	<i>Senecio squalidus</i>
B	ragwort, tansy	<i>Senecio jacobaea</i>
B	rice, red	<i>Oryza rufipogon</i>
C	Russianthistle, barbwire	<i>Salsola paulsenii</i>
C	Russianthistle, common	<i>Salsola australis</i> (= <i>S. tragus</i> in Jepson Manual)
Q	Russianthistle, spineless	<i>Salsola collina</i>

<u>RATING</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
A	sage, meadow	<i>Salvia virgata</i> (= <i>S. pratensis</i> as used previously.)
B	sage, Mediterranean	<i>Salvia aethiopsis</i>
A	salsola, wormleaf	<i>Salsola vermiculata</i>
A	salttree, Russian	<i>Halimodendron halodendron</i>
Q	salvinia	<i>Salvinia auriculata</i> complex
C	sandbur, coast	<i>Cenchrus incertus</i>
C	sandbur, mat	<i>Cenchrus longispinus</i> (= <i>C. pauciflorus</i> as used previously.)
C	sandbur, southern	<i>Cenchrus echinatus</i>
B	satintail	<i>Imperata brevifolia</i>
B	Sicilian starthistle	<i>Centaurea sulphurea</i>
A	skeletonweed	<i>Chondrilla juncea</i>
A	sowthistle, perennial	<i>Sonchus arvensis</i>
A	spurge, leafy	<i>Euphorbia esula</i>
B	spurge, oblong	<i>Euphorbia oblongata</i>
A	spurge, serrate	<i>Euphorbia serrata</i>
A	starthistle, Iberian	<i>Centaurea iberica</i>
B	starthistle, purple	<i>Centaurea calcitrapa</i>
B	starthistle, Sicilian	<i>Centaurea sulphurea</i>
C	starthistle, yellow	<i>Centaurea solstitialis</i>
B	swinecress	<i>Coronopus squamatus</i>
A	tanglehead	<i>Heteropogon contortus</i>

<u>RATING</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
B	thistle, artichoke	<i>Cynara cardunculus</i>
B	thistle, Canada	<i>Cirsium arvense</i>
B	thistle, distaff, smooth	<i>Carthamus baeticus</i>
A	thistle, distaff, whitestem	<i>Carthamus leucocaulos</i>
B	thistle, distaff, woolly	<i>Carthamus lanatus</i>
A	thistle, golden	<i>Scolymus hispanicus</i>
C	thistle, Italian	<i>Carduus pycnocephalus</i>
C	thistle, Italian	<i>Carduus tenuiflorus</i>
A	thistle, musk	<i>Carduus nutans</i>
A	thistle, plumeless	<i>Carduus acanthoides</i>
A	thistle, wavyleaf	<i>Cirsium undulatum</i>
A	thistle, yellowspine	<i>Cirsium ochrocentrum</i>
A	thistles, onopordum	<i>Onopordum</i> spp.
A	toadflax, Dalmatian	<i>Linaria genistifolia</i> ssp. <i>dalmatica</i> (= <i>L. dalmatica</i>)
B	waterlily, banana	<i>Nymphaea mexicana</i>
A	witchweed	<i>Striga lutea</i> (= <i>S. asiatica</i>)



STATE OF CALIFORNIA
DEPT. OF FOOD AND AGRICULTURE

DIVISION OF PLANT INDUSTRY
PLANT PEST DIAGNOSTICS BRANCH

PEST RATINGS OF NOXIOUS WEED SPECIES

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>RATING</u>
ACANTHACEAE		
<i>Hygrophila polysperma</i>	miramarweed	(Fed.)
ALISMATACEAE		
<i>Sagittaria sagittifolia</i>	arrowhead	(Fed.)
AMARANTHACEAE		
<i>Alternanthera philoxeroides</i>	alligatorweed	A
<i>Alternanthera sessilis</i>	sessile joyweed	(Fed.)
AMARYLLIDACEAE - See Liliaceae		
APIACEAE		
<i>Heracleum mantegazzianum</i>	giant hogweed	(Fed.)
ASCLEPIADACEAE		
<i>Araujia sericifera</i>	bladderflower	B
ASTERACEAE		
<i>Acroptilon repens</i> (= <i>Centaurea repens</i>)	Russian knapweed	B
<i>Ageratina adenophora</i>	croftonweed	(Fed.)
<i>Ambrosia trifida</i>	giant ragweed	B
<i>Arctotheca calendula</i>	capweed, as seed or fertile plants	A
<i>Carduus acanthoides</i>	plumeless thistle	A
<i>Carduus nutans</i>	musk thistle	A
<i>Carduus pycnocephalus</i>	Italian thistle	C
<i>Carduus tenuiflorus</i>	Italian thistle	C
<i>Carthamus baeticus</i>	smooth distaff thistle	B
<i>Carthamus lanatus</i>	woolly distaff thistle	B
<i>Carthamus leucocaulos</i>	whitestem distaff thistle	A
<i>Carthamus oxyacantha</i>	wild safflower	(Fed.)

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>RATING</u>
<i>Centaurea calcitrapa</i>	purple starthistle	B
<i>Centaurea diffusa</i>	diffuse knapweed	A
<i>Centaurea iberica</i>	Iberian starthistle	A
<i>Centaurea maculosa</i>	spotted knapweed	A
<i>Centaurea repens</i> (See <i>Acroptilon repens</i>)		
<i>Centaurea solstitialis</i>	yellow starthistle	C
<i>Centaurea squarrosa</i>	squarrose knapweed	A
<i>Centaurea sulphurea</i>	Sicilian starthistle	B
<i>Chondrilla juncea</i>	skeletonweed	A
<i>Cirsium arvense</i>	Canada thistle	B
<i>Cirsium ochrocentrum</i>	yellowspine thistle	A
<i>Cirsium undulatum</i>	wavyleaf thistle	A
<i>Crupina vulgaris</i>	bearded creeper	A
<i>Cynara cardunculus</i>	artichoke thistle	B
<i>Helianthus ciliaris</i>	blueweed	A
<i>Iva axillaris</i>	povertyweed	C
<i>Mikania cordata</i>	mile-a-minute	(Fed.)
<i>Mikania micrantha</i>		(Fed.)
<i>Onopordum</i> spp.	onopordum thistles	A
<i>Scolymus hispanicus</i>	golden thistle	A
<i>Senecio jacobaea</i>	tansy ragwort	B
<i>Senecio squalidus</i>	Oxford ragwort	B
<i>Sonchus arvensis</i>	perennial sowthistle	A
<i>Tagetes minuta</i>	wild marigold	A
<i>Tridax procumbens</i>	coatbuttons	(Fed.)

BORAGINACEAE

<i>Symphytum asperum</i>	rough comfrey	B
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BRASSICACEAE

<i>Cardaria chalepensis</i>	lens-podded hoarycress	B
<i>Cardaria draba</i>	heart-podded hoarycress	B
<i>Cardaria pubescens</i>	globe-podded hoarycress	B
<i>Chorispora tenella</i>	purple mustard	B
<i>Coronopus squamatus</i>	swinecress	B
<i>Isatis tinctoria</i>	dyer's woad	B
<i>Lepidium latifolium</i>	perennial peppergrass	B
<i>Rorippa austriaca</i>	Austrian fieldcress	B

CACTACEAE

<i>Opuntia aurantiaca</i>	jointed pricklypear	(Fed.)
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<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>RATING</u>
CARYOPHYLLACEAE		
<i>Drymaria arenarioides</i>	alfombrilla	(Fed.)
<i>Gypsophila paniculata</i>	baby's breath	B
CHENOPODIACEAE		
<i>Halogeton glomeratus</i>	halogeton	A
<i>Salsola australis</i> (= <i>S. tragus</i> in Jepson Manual)	common Russianthistle	C
<i>Salsola collina</i>	spineless Russianthistle	Q
<i>Salsola paulsenii</i>	barbwire Russianthistle	C
<i>Salsola vermiculata</i>	wormleaf salsola	A
COMMELINACEAE		
<i>Commelina benghalensis</i>	Benghal dayflower	(Fed.)
COMPOSITAE - See Asteraceae		
CONVOLVULACEAE		
<i>Convolvulus arvensis</i>	field bindweed	C
<i>Ipomoea aquatica</i>	water spinach	(Fed.)
<i>Ipomoea triloba</i>	little bell	(Fed.)
CRUCIFERAE - See Brassicaceae		
CUCURBITACEAE		
<i>Cucumis melo</i> var. <i>dudaim</i>	dudaim melon	A
<i>Cucumis myriocarpus</i>	paddy melon	B
CUSCUTACEAE		
<i>Cuscuta reflexa</i>	giant dodder	A
<i>Cuscuta</i> spp. except <i>C. reflexa</i>	dodder	C
<i>Cuscuta</i> spp. (see 7CFR 360.200 for 53 exceptions.)	dodder	(Fed.)
CYPERACEAE		
<i>Cyperus esculentus</i>	yellow nustedge	B
<i>Cyperus rotundus</i>	purple nustedge	B

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>RATING</u>
EUPHORBIACEAE		
<i>Euphorbia esula</i>	leafy spurge	A
<i>Euphorbia oblongata</i>	oblong spurge	B
<i>Euphorbia serrata</i>	serrate spurge	A
FABACEAE		
<i>Acacia paradoxa</i> (= <i>A. armata</i>)	kangaroothorn	B
<i>Aeschynomene rudis</i>	rough jointvetch	B
<i>Alhagi maurorum</i> (= <i>A. pseudalhagi</i>)	camelthorn	A
<i>Cytisus scoparius</i>	Scotch broom	C
<i>Galega officinalis</i>	goatsrue	(Fed.)
<i>Genista monspessulana</i> (= <i>Cytisus monspessulanus</i>)	French broom	C
<i>Halimodendron halodendron</i>	Russian salttree	A
<i>Mimosa invisa</i>	giant sensitive plant	(Fed.)
<i>Mimosa pigra</i> var. <i>pigra</i>	catclaw mimosa	(Fed.)
<i>Prosopis strombulifera</i>	creeping mesquite	A
<i>Prosopis</i> spp. (see Federal list for 25 named species.)	mesquite	(Fed.)
<i>Sphaerophysa salsula</i>	Austrian peaweed	A
<i>Ulex europaeus</i>	gorse	B
GRAMINEAE - See Poaceae		
GUTTIFERAE - See Hypericaceae		
HYDROCHARITACEAE		
<i>Hydrilla verticillata</i>	hydrilla	A
<i>Lagarosiphon major</i>		(Fed.)
<i>Ottelia alismoides</i>		(Fed.)
HYPERICACEAE		
<i>Hypericum perforatum</i>	Klamathweed	C
IRIDACEAE		
<i>Iris douglasiana</i>	Douglas iris	C
<i>Iris missouriensis</i>	western blue flag	C

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>RATING</u>
LABIATAE - See Lamiaceae		
LAMIACEAE		
<i>Salvia aethiopis</i>	Mediterranean sage	B
<i>Salvia virgata</i> (= <i>S. pratensis</i> as used previously.)	meadow sage	A
LEGUMINOSAE - See Fabaceae		
LILIACEAE		
<i>Allium paniculatum</i>	panicked onion	B
<i>Allium vineale</i>	wild garlic	B
<i>Asphodelus fistulosus</i>	onionweed	(Fed.)
<i>Nothoscordum inodorum</i>	false garlic	B
LORANTHACEAE - See Viscaceae		
LYTHRACEAE		
<i>Lythrum salicaria</i>	purple loosestrife	B
MALVACEAE		
<i>Malvella leprosa</i> (= <i>Sida leprosa</i> var. <i>hederacea</i>)	alkali mallow	C
MELASTOMATACEAE		
<i>Melastoma malabathricum</i>		(Fed.)
MYRTACEAE		
<i>Melaleuca quinquenervia</i>	cajeput; broadleaf paper bark tree	(Fed.)
NYMPHEACEAE		
<i>Nymphaea mexicana</i>	banana waterlily	B
ONAGRACEAE		
<i>Gaura coccinea</i>	scarlet gaura	B
<i>Gaura drummondii</i> (= <i>G. odorata</i> as used previously)	scented gaura	B

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>RATING</u>
<i>Gaura sinuata</i>	wavyleaf gaura	B
OROBANCHACEAE		
<i>Aeginetia</i> spp.		(Fed.)
<i>Orobanche cooperi</i> (= <i>O. ludoviciana</i> var. <i>cooperi</i>) (= <i>O. multiflora</i> as used in Correll & Johnston's Manual of the Vascular Plants of Texas.)	Cooper's broomrape Cooper's broomrape desert broomrape	A
<i>Orobanche ramosa</i>	branched broomrape	A
<i>Orobanche</i> spp. (See 7CFR 360.200 for 13 exceptions.)		(Fed.)
POACEAE		
<i>Achnatherum brachychaetum</i> (= <i>S. brachychaeta</i>)	punagrass	A
<i>Aegilops cylindrica</i>	jointed goatgrass	B
<i>Aegilops ovata</i> (= <i>A. geniculata</i> and <i>A. neglecta</i> in part)	ovate goatgrass	B
<i>Aegilops triuncialis</i>	barb goatgrass	B
<i>Avena sterilis</i> (incl. <i>A. ludoviciana</i>)	animated oat	(Fed.)
<i>Cenchrus echinatus</i>	southern sandbur	C
<i>Cenchrus incertus</i>	coast sandbur	C
<i>Cenchrus longispinus</i> (= <i>C. pauciflorus</i> as used previously.)	mat sandbur	C
<i>Chrysopogon aciculatus</i>	pilipiliula	(Fed.)
<i>Cynodon</i> spp. & hybrids	bermudagrass	C
<i>Digitaria scalarum</i>	African couchgrass	(Fed.)
<i>Digitaria velutina</i>	annual couchgrass	(Fed.)
<i>Elytrigia repens</i> (= <i>Agropyron repens</i>)	quackgrass	B
<i>Heteropogon contortus</i>	tanglehead	A
<i>Imperata brasiliensis</i>	Brazilian satintail	(Fed.)
<i>Imperata brevifolia</i>	satintail	B
<i>Imperata cylindrica</i>	cogongrass	(Fed.)
<i>Ischaemum rugosum</i>	murainograss	(Fed.)
<i>Leptochloa chinensis</i>	Asian sprangletop	(Fed.)
<i>Muhlenbergia schreberi</i>	nimblewill	B
<i>Nassella trichotoma</i>	serrated tussock	(Fed.)
<i>Oryza rufipogon</i>	red rice	B
<i>Oryza longistaminata</i>	red rice	(Fed.)
<i>Oryza punctata</i>	red rice	(Fed.)

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>RATING</u>
<i>Panicum antidotale</i>	blue panicgrass	B
<i>Paspalum scrobiculatum</i>	kodo millet	(Fed.)
<i>Pennisetum clandestinum</i>	Kikuyugrass	C
<i>Pennisetum macrourum</i>	African feathergrass	(Fed.)
<i>Pennisetum pedicellatum</i>	kyasumagrass	(Fed.)
<i>Pennisetum polystachion</i>	missiongrass	(Fed.)
<i>Rottboellia exaltata</i>	itchgrass	(Fed.)
<i>Saccharum spontaneum</i>	wild sugarcane	(Fed.)
<i>Setaria faberi</i>	giant foxtail	B
<i>Setaria pallide-fusca</i>	cattailgrass	(Fed.)
<i>Sorghum halepense</i>	Johnsongrass, and other perennial <i>Sorghum</i> spp. including but not limited to <i>Sorghum almum</i> and perennial sweet sudangrass.	C
<i>Stipa brachychaeta</i> - See <i>Achnatherum</i>		
<i>Taeniatherum caput-medusae</i> (= <i>Elymus caput-medusae</i> = <i>T. asperum</i> as used by some authors.)	medusahead	C
<i>Urochloa panicoides</i>	liverseedgrass	(Fed.)
POLYGONACEAE		
<i>Emex australis</i>	three-cornered jack	(Fed.)
<i>Emex spinosa</i>	devil's thorn	(Fed.)
<i>Polygonum coccineum</i> (= <i>P. amphibium</i> var. <i>emersum</i> as used in the Jepson Manual)	kelp	C
<i>Polygonum cuspidatum</i>	Japanese knotweed	B
<i>Polygonum polystachyum</i>	Himalayan knotweed	B
<i>Polygonum sachalinense</i>	giant knotweed	B
PONTEDERIACEAE		
<i>Eichhornia azurea</i>	peacock water hyacinth	(Fed.)
<i>Monochoria hastata</i>		(Fed.)
<i>Monochoria vaginalis</i>	monochoria	(Fed.)
ROSACEAE		
<i>Acaena anserinifolia</i>	biddy biddy	A
<i>Acaena novae-zelandiae</i> (= <i>A. anserinifolia</i> in part as used previously, and of British and Australian authors.)	biddy biddy	A

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>RATING</u>
<i>Acaena pallida</i> (= <i>A. anserinifolia</i> in part as used previously.)	biddy biddy	A
<i>Rubus fruticosus</i>	wild blackberry	(Fed.)
<i>Rubus moluccanus</i>	wild raspberry	(Fed.)
RUBIACEAE		
<i>Borreria alata</i>		(Fed.)
SALVINIACEAE		
<i>Azolla pinnata</i>	mosquito fern	(Fed.)
<i>Salvinia auriculata</i> complex	salvinia	Q
<i>Salvinia auriculata</i> (included in the <i>Salvinia biloba</i> <i>S. auriculata</i>	giant salvinia	(Fed.)
<i>Salvinia herzogii</i> complex as used <i>Salvinia molesta</i> by California.)		
SCROPHULARIACEAE		
<i>Alectra</i> spp.		(Fed.)
<i>Limnophila sessiliflora</i>		(Fed.)
<i>Linaria genistifolia</i> ssp. <i>dalmatica</i> (= <i>L. dalmatica</i>)	Dalmatian toadflax	A
<i>Striga lutea</i> (= <i>S. asiatica</i>)	witchweed	A
<i>Striga</i> spp.	witchweeds	(Fed.)
SOLANACEAE		
<i>Hyoscyamus niger</i>	black henbane	C
<i>Lycium ferocissimum</i>	African boxthorn	(Fed.)
<i>Physalis virginiana</i> var. <i>sonorae</i> (= <i>P. subglabrata</i> as used previously.)	smooth groundcherry	A
<i>Physalis viscosa</i>	grape groundcherry	B
<i>Solanum cardiophyllum</i>	heartleaf nightshade	A
<i>Solanum carolinense</i>	Carolina horsenettle	B
<i>Solanum dimidiatum</i>	Torrey's nightshade	A
<i>Solanum elaeagnifolium</i>	white horsenettle	B
<i>Solanum lanceolatum</i>	lanceleaf nightshade	B
<i>Solanum marginatum</i>	white-margined nightshade	B
<i>Solanum torvum</i>	turkeyberry	(Fed.)
<i>Solanum viarum</i>	tropical sodaapple	(Fed.)

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>RATING</u>
SPARGANIACEAE		
<i>Sparganium erectum</i>	exotic burreed	(Fed.)
UMBELLIFERAE - See Apiaceae		
VISCACEAE		
<i>Viscum album</i>	European mistletoe	B
ZYGOPHYLLACEAE		
<i>Peganum harmala</i>	harmel	A
<i>Tribulus terrestris</i>	puncturevine	C
<i>Zygophyllum fabago</i>	Syrian beancaper	A

