6

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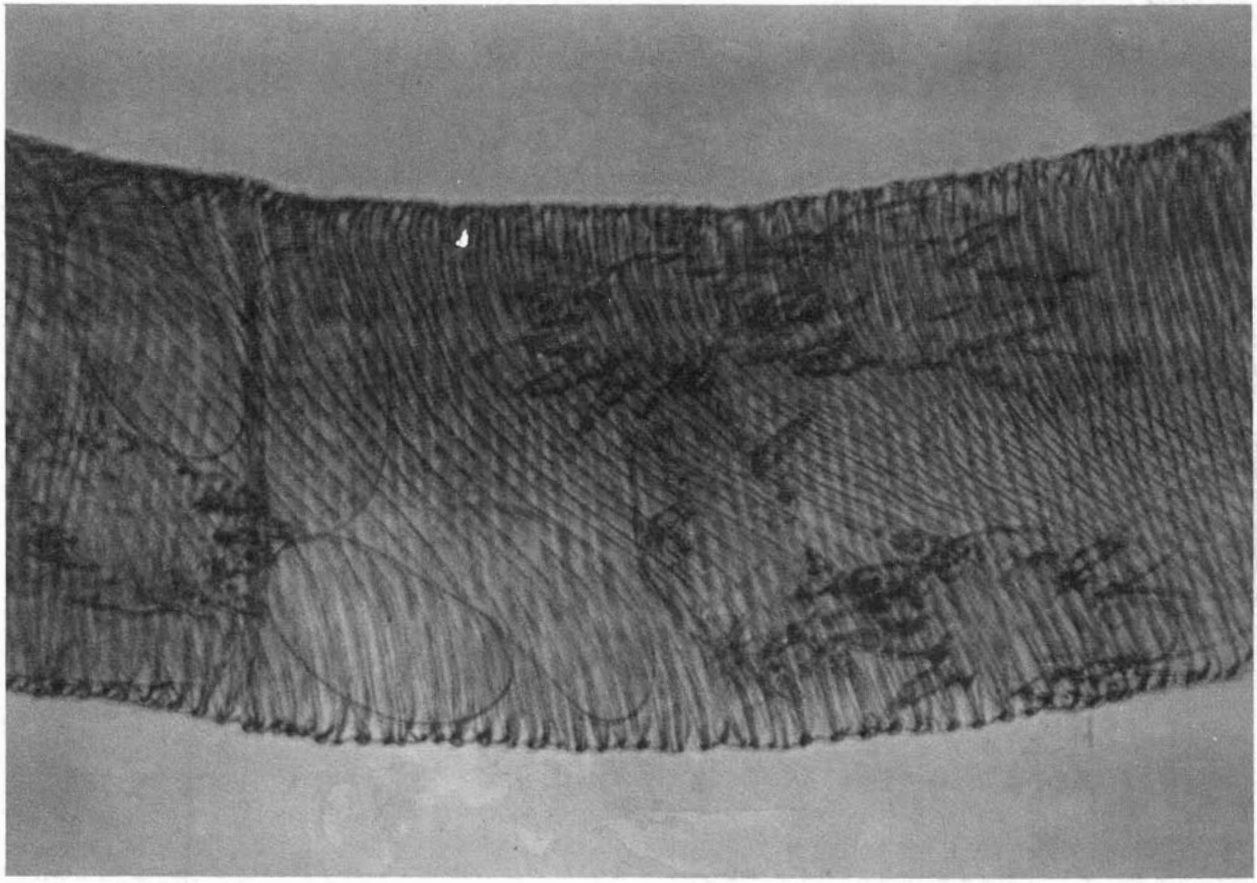
November 1984

CALIFORNIA PLANT PEST and DISEASE REPORT

Acarine Mite.....133
Powdery Scab of Potato.....136
Entomology Highlights.139
New State Records- Asparagus Aphid.....142
Tydeid Mite.....144
New Host Record- Orchid Thrips.....146
Quarantine and Exclusion.....148
Nematology Highlights.161
Fungus Pest Rating Lists.....162

California Department of Food and Agriculture 1220 N Street Sacramento California 95814



Honey bee trachea containing eggs and adults of the honey bee tracheal mite, Acarapis woodi (Rennie). Photomicrograph original at 160X by Tokuwo Kono.

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The editorial staff of C.P.P.D.R. wishes to express its sincere thanks to Dr. Alex M. French who has served as editor-in-chief of this publication for the last two years. On December 1, 1984, Dr. French retired from his "formal" position as State Plant Pathologist and supervisor of the plant pathology laboratory section of the Analysis and Identification Unit, to pursue a long term project in which Dr. French has a deep personal interest. He is currently compiling a sorely needed comprehensive plant disease index for California. Estimated time of completion is 1988. We wish him well on this worthy endeavor.

------the Staff

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Acarine Mite, Acarapis woodi (Rennie)

Ray J. Gill

Detection programs for this serious pest of honey bees have been underway in California for the last month. The programs were initiated at the request of the U.S.D.A. when hives in several states were found infested.

The mite (Acarapis woodi) is one of several species of mites which feed on honeybees. It is, however, the only internal tracheal-feeding species and it is a much more serious pest.

Before being found in the U.S. this year, the mite was known from most of Europe, the Canary Islands, Middle East, north and central Africa, India, Bangladesh, Pakistan, China, northern South America and recently Mexico. The bee feeds on other Apis species of bees besides the common honeybee, and it feeds on the Africanized bee in South America.

The actual effect of the mite on a honeybee colony is not totally understood. It is known, however, that the mites cause a general debilitation and unthriftiness in the hive. The following information on the effects of the mite is taken from a chapter by Leslie Bailey in the book "Honey Bee Pathology", Academic Press, London, 1981.

"There are no outward signs of infestation by Acarapis woodi. Irregular dark stains develop in infested tracheae, the whole of which eventually blacken in infestations of long duration. Such deeply stained tracheae seem brittle compared with normal ones, but apart from these effects, little or no internal damage has been detected in infested bees.

The thoracic tracheae leading from the first thoracic spiracles are the main ducts for air, at least into the thorax, and they undoubtedly supply oxygen to the flight muscles. It has frequently been assumed that numerous mites in these ducts partially suffocate the bee and at least impair its ability to fly. However, this is not supported by direct observation. Bees severely infested with mites forage for pollen and nectar in an apparently normal way and the same proportion of individuals with severely infested tracheae, some with both tracheae infested, occur among flying bees and those from the cluster of the same infested colonies.

Reports of severe damage of colonies by A. woodi abound in beekeeping journals and have become widely accepted, but no experiments were done to measure the effects of the mite until the late 1950's and early 1960's. It was shown then that overwintered infested bees die sooner than uninfested individuals

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Ray J. Gill is an Entomologist with the Analysis and Identification Unit, Sacramento.

and the difference became statistically significant from about March onwards. When colonies are severely infested, most of their adult bees will die slightly earlier than usual, and this may not be sufficiently counter-balanced by the production of new bees. Thus, severely infested colonies dwindle more than usual; and colonies with more than about 30% of their individuals infested are more likely to die in spring that the rest. However, few colonies become so severely infested and it has been estimated that in England and Wales, where incidence of A. woodi is probably as high as anywhere in the world, something less than 2% of colonies can be expected to suffer measurably from infestation. Most of this small proportion survives, and infestation in most of the survivors diminishes during the active season to the usual small amount.

It was popularly supposed, and is still believed by many, that A. woodi causes the crawling and death of bees in summer, leading to severe dwindling of colonies. However, field experiments have shown that infested bees in summer die only a little sooner than uninfested individuals, and they appear normal until they die.

The common occurrence of A. woodi makes it certain that many colonies suffering from any disorder will also be infested to some degree with mites. Some investigations of sick colonies found severely infested in summer with mites showed that, whereas both sick and apparently healthy bees from the colonies were infested about equally with A. woodi, the sick bees only were all infected with chronic paralysis virus. Similarly in northern India, where infestation of Apis cerana with mites resembling A. woodi is common, a "clustering disease", which leads to the death or severe dwindling of colonies in summer, was attributed to the mites. In fact, the mites were often very few or absent from the diseased bees, but all of these were infected with Apis iridescent virus. Many other disorders have similarly been attributed to Acarapis woodi in the past, and they have led to the erroneous concept of 'Acarine' or 'Isle of Wight disease.'

Infested bees have more bacterial infection, particularly in their haemolymph, than uninfested bees and this may sometimes cause disease. The bacteria presumably invade the haemolymph via wounds made by mites in the tracheae. On the whole the bacteria found in the haemolymph correspond with those in the tracheae, not those elsewhere in the bee."

The following report by George Buxton, Acarine Mite Survey Project Leader, summarizes the current program:

ACARINE MITE SURVEY IS ON SCHEDULE

The acarine mite was discovered at the Chandler bee farm, Weslaco, Texas, on July 3, 1984 and confirmed on July 6. This infestation was found by the U.S.D.A. in their Mexican border state survey. Subsequent infestations, traced from Texas, have been found in Louisiana, New York, Florida, South Dakota, Nebraska, and North Dakota.

California crops valued in excess of $1 billion annually depend upon honeybees for pollination. This includes only those crops for which honeybees are rented. Many other crops and wild flora also benefit from bee pollination. California beekeepers operate 10 percent of the nation's honeybee colonies, and annually produce 12 percent of the nation's honey. California beekeepers produce package bees and queen bees used to restock hives in the northern United States and in Canada where bees cannot be overwintered. California annually imports up to 150,000 honeybee colonies from other states to assist in almond pollination.

Tok Kono and his able assistants, Isa Montenegro, Ray Gill and Tom Eichlin, have dissected and examined in excess of 30,000 honeybees, 500 samples, through November. The first sample was processed October 17.

Acarapis woodi (Fig. 1 and cover photo) enters the lungs (tracheae) of the bee through breathing holes (spiracles) located on both sides of the thorax. All Tok and his crew have to do is expose the lungs for preparation and examination. Of course the mite cannot be seen with the naked eye (125 of them end to end total 1 inch).

The USDA has requested that California take 1000 samples (the average request of the other 49 states is 145 samples). California will probably exceed the USDA request. State and county personnel intend to get a reasonable reading on native and itinerant honeybees in California.

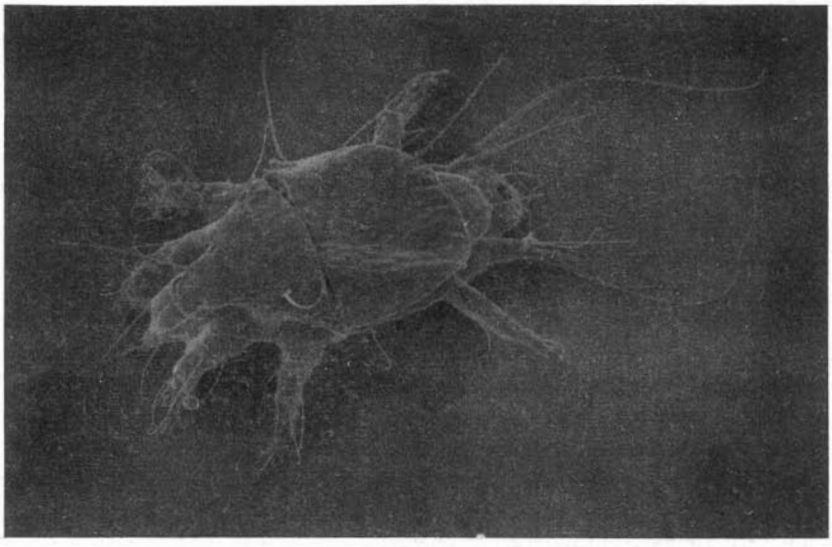

Fig. 1. Scanning electron micrograph of a honey bee tracheal mite male, Acarapis woodi (Rennie). SEM original at 450X by Tokuwo Kono.

POWDERY SCAB OF POTATO

J.B. White, T.T. Tidwell, and C.M. Lai

Powdery scab, an uncommon disease of potato (Solanum tuberosum) in California, was recently discovered for the first time in Siskiyou County. The "B"-rated causal fungus, Spongospora subterranea, was found during a routine inspection of a backyard garden by Jim Massey, Senior Deputy Agricultural Commissioner.

This disease has been reported over the years as occurring infrequently in various other counties including Monterey, Santa Barbara, San Luis Obispo, Kern and Humboldt counties. It is not as common as Common scab (Streptomyces scabies), but is serious enough in seed tuber producing counties to be considered an important pest.

Powdery scab is also of importance in predisposing potatoes to other diseases. It has been reported as a precursor for late-blight (Phytophthora infestans) infections of blight-resistant potato tubers. The open lesions on a potato caused by the disease may be invaded by fungal wound pathogens such as Phoma and Fusarium in storage.

Symptoms of Powdery scab are confined to below ground on potato tubers, stolons and roots. Tuber infections occur on lenticels, areas with wounds, and less frequently, on the eyes. Initial signs of infection are purplish-brown pustules 0.5-2mm in diameter which laterally extend under the periderm forming raised pimplelike lesions. Cells of the host plant enlarge and divide, *forcing the periderm to rupture causing wartlike outgrowths.* These neoplastic outgrowths eventually darken, shrink and dry to form shallow depressions filled with powdery masses of dark brown "spore balls" (cystosori) (Fig. 1). Under cool, humid soil conditions, infected potato eyes produce meristematic tissue forming secondary "tubers" as outgrowths covered with large areas of powdery scab. The symptoms on stolons and roots parallel those on the tubers. Severe infections and ensuing symptoms are favored by moist soil conditions in the early disease stage, and later by gradual drying of the soil.

The causal fungus, Spongospora subterranea, a member of the order Plasmodiophorales, overwinters in soil in the form of cystosori. These bodies are ovoid, irregular or elongate, 19-85 um in diameter and consist of aggregated resting spores (cysts). *Stimulated by the presence of susceptible plant roots, the* cystosori germinate to produce motile primary zoospores which penetrate the cells of roots, root hairs and stolons. Intercellular multinucleate fungal masses (sporangial plasmodia) are formed which create the secondary zoospores to further spread the initial infection. Invasions by the secondary zoospores cause host cell hyperplasia and hypertrophy, resulting in scab lesions and gall-like growth on tubers, stolons and roots (Note Disease Life Cycle Diagram, Fig. 2). The fungus may also infect

and complete its life cycle on other tuber-bearing Solanum species.

Dissemination of the fungus is through soil and tuber-borne resting spores (cysts) which are viable in the soil for up to six years. Powdery scab occurs in field soils ranging from pH 4.7 to 7.6. To date, no adequate control measures have been developed. Disease resistant potato cultivars exist, but no immune varieties are known. Crop rotation, use of disease-free seed tubers, planting in porous, well drained, uncontaminated soils, use of uncontaminated fertilizers, and soaking seed tubers in various fungicides may reduce the chances of infection.

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Karling, John S. (Editor) The Plasmodiophorales. Hafner Publ. Co. N.J., London. 1968.

Hooker, W.J. (Editor) Compendium of Potato Diseases. American Phytopathological Society St. Paul, MN. 1981.

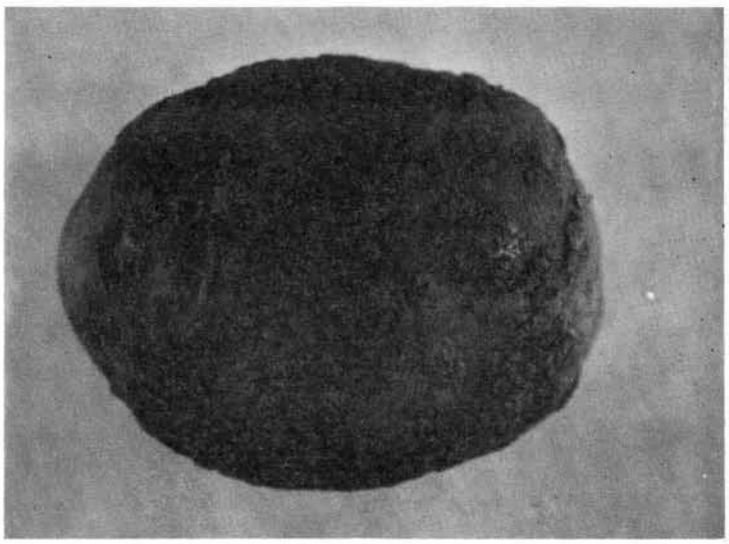


Fig. 1. Powdery lesions containing "spore balls" (Cystosori) of Powdery scab on potato.

J.B. White is an Agricultural Biological Technician, and T.T. Tidwell and C.M. Lai are Plant Pathologists with the Analysis and Identification Unit, CDFA, in Sacramento.

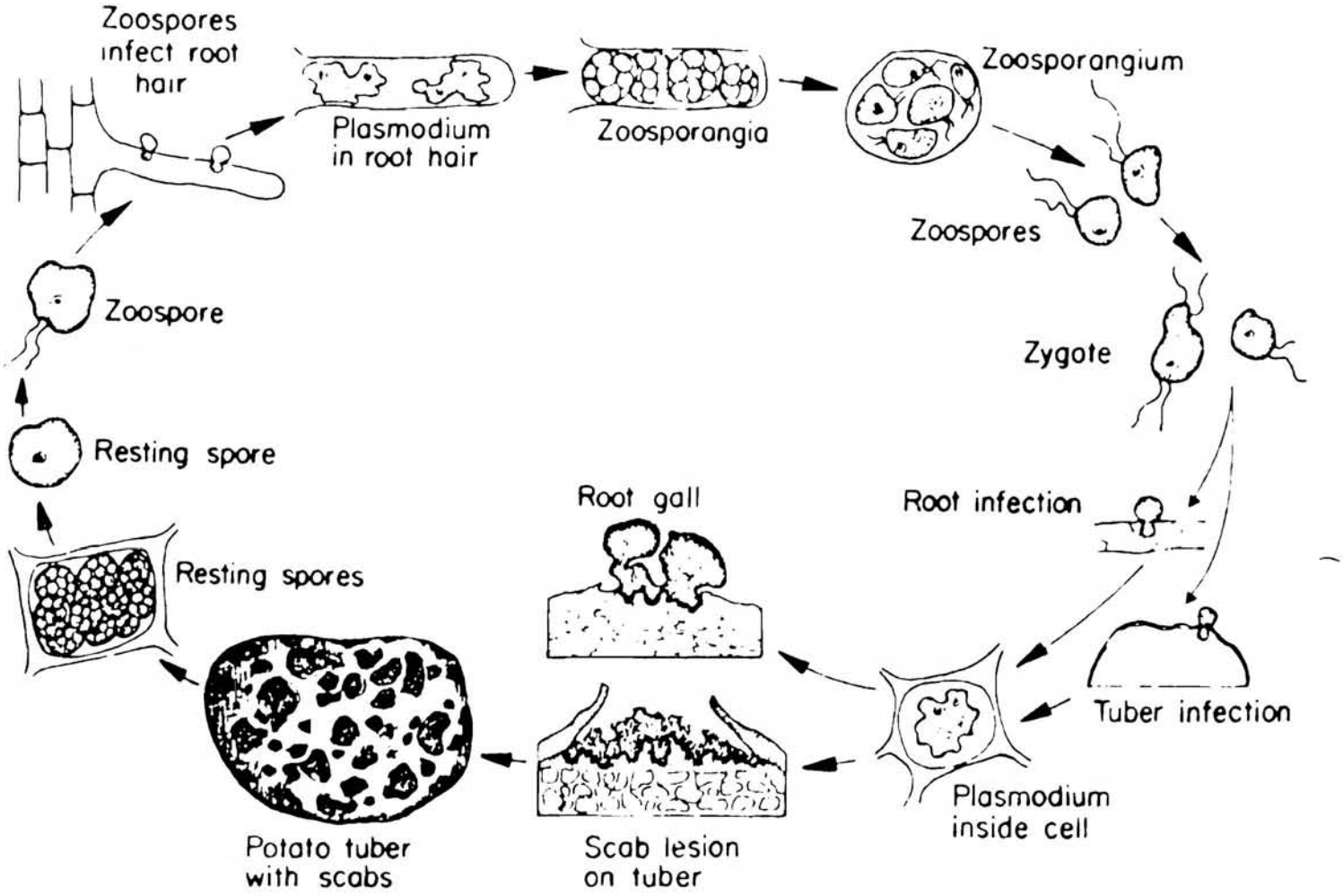
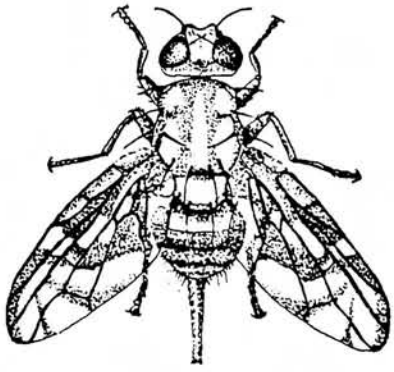
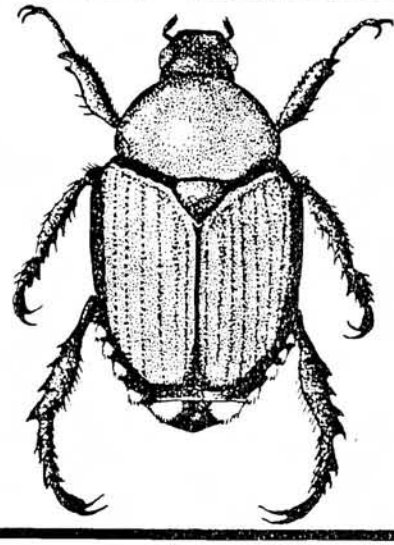


Fig. 2. Life Cycle of Powdery Scab caused by <u>Spongospora subterranea</u> (Courtesy G.N. Agrios and A.P.S., Compendium of Potato Diseases, Copyright, 1981).



Entomology Highlights



ORIENTAL FRUIT FLY, Dacus dorsalis **-(A)-** As already mentioned in the last issue of CPPDR, large numbers of this serious pest have been found in the greater Los Angeles area. During the period of August 27 to November 6, 39 more flies have been trapped there, bringing the total flies trapped in Southern California to 91. The following chart outlines the pertinent data associated with each find:

Location	County	Date	Collector	Stage & Number
Westchester	LA	8/30	R. Inocencio	3 A oo
Inglewood	LA	8/30	R. Inocencio	1 A o
Torrance	LA	8/30	M. Quaglia	1 A o
Wilmington	LA	9/05	D. Lynch	1 A o
Inglewood	LA	9/07	R. Inocencio	1 A o
Westchester	LA	9/07	R. Inocencio	1 A o
Gardena	LA	9/13	M. Kehr	4 A oo
Torrance	LA	9/13	M. Kehr	1 A o
Westchester	LA	9/14	R. Inocencio	1 A o
Pomona	LA	9/14	P. White	1 A o
Torrance	LA	10/11	M. Kehr	1 A o
Torrance	LA	10/12	L. Sundkuist	2 A oo
Anaheim	O	10/12	L. Fernandey	1 A o
Gardena	LA	10/15	Armanious/Medina	2 A oo
Gardena	LA	10/16	N. Armanious	1 A o, 3 A oo
Torrance	LA	10/17	Armanious/Medina	2 A oo
Gardena	LA	10/24	N. Armanious	1 A o, 7 A oo
Gardena	LA	10/25	N. Armanious	1 A o
Gardena	LA	10/31	Armanious/Medina	1 A o
National City	SD	11/01	B. Gardner	1 A o

GYPSY MOTH, Lymantria dispar -(A)- The trapping season for this serious pest has come to an end for the year. As of August 23, only one adult moth was trapped and one non-viable egg mass was found. The following chart summarizes the finds:

Location	County	Date	Collector	Stage
Kensington (El Cerrito)	CC	8/27	R. Mata	A
Felton	SCZ	9/11	L. Gagliasso	EM

JAPANESE BEETLE, Popillia japonica -(A)- Seven dead Japanese beetles were found aboard a military aircraft on 10/2/84 at McClellan Air Force Base, Sacramento. A mechanic discovered the beetles behind a panel in the cockpit that was being removed. McClellan Air Force Base personnel immediately contacted the Sacramento County Agricultural Commissioner's Office. Senior Agricultural Biologist Julie Jensen collected the beetles and delivered them to CDFA, Analysis and Identification for determination.

COTTON BOLL WEEVIL, Anthonomus grandis -(A)- This pest has been the target of pesticide treatments in the desert valleys. As of October 22, acreage treated this year totalled 2635 in the Bard/Winterhaven area and 5053 in the Imperial Valley. The following chart, prepared by Tom Palmer, records the current adult weevil trapping totals for this year and it also gives a comparison of last year's totals:

MONTHLY TRAPPING RECORDS - 1983 & 1984

	-----BLYTHE------		------BARD-------		----IMPERIAL-----	
Month	# Traps	Weevils Trapped	# Traps	Weevils Trapped	# Traps	Weevils Trapped
Jan 83	445	2,927	325	218	352	4
Feb 83	481	182	325	145	352	2
Mar 83	481	198	325	112	352	8
Apr 83	665	77	325	26	352	0
May 83	694	97	325	42	352	4
Jun 83	725	9	325	1	352	0
Jul 83	774	0	325	0	352	0
Aug 83	774	0	325	2	352	0
Sep 83	770	23	387	97	368	0
Oct 83	771	1,054	387	1,628	374	73
Nov 83	813	655	387	2,389	375	297
Dec 83	813	1,605	387	4,355	375	454
Jan 84	813	602	387	2,610	400	264
Feb 84	813	102	387	909	400	24
Mar 84	813	77	387	382	400	70
Apr 84	813	12	229	93	412	1
May 84	536	0	235	29	625	0
Jun 84	674	1	235	5	673	0
Jul 84	773	0	233	15	753	0
Aug 84	773	0	233	23	753	0
Sep 84	820	49	233	384	753	58
Oct 84	820	216	233	1,146	753	265

APPLE MAGGOT, Rhagoletis pomonella -(A)- The trapping season for this pest has also come to a close as the adults are no longer flying. The following report from the CDFA Control and Eradication Unit report outlines the positive apple maggot trap finds up to September 28:

POSITIVE A.M. FINDS

County	Positive Finds
Del Norte	383
Humboldt	187
Mendocino	14
Shasta	3
Siskiyou	84
Trinity	9
TOTAL	680

MINING SCALE, Howardia biclavis -(A)- has again been found in the state. This time it was discovered on Ficus benjamina in a nursery in San Bernardino. The collection was made on October 25 by George Nash. The scale attacks over 200 plant species and can be an economic pest of woody ornamentals. The scale (see the last issue of CPPDR, pg 118) can be very cryptic, since the crawlers tend to settle beneath or burrow under the thin, loose, outer bark layers of the host. As the scale grows it remains under this thin cover, but pushes it upward and gives the bark a subconical appearance if observed from side view.

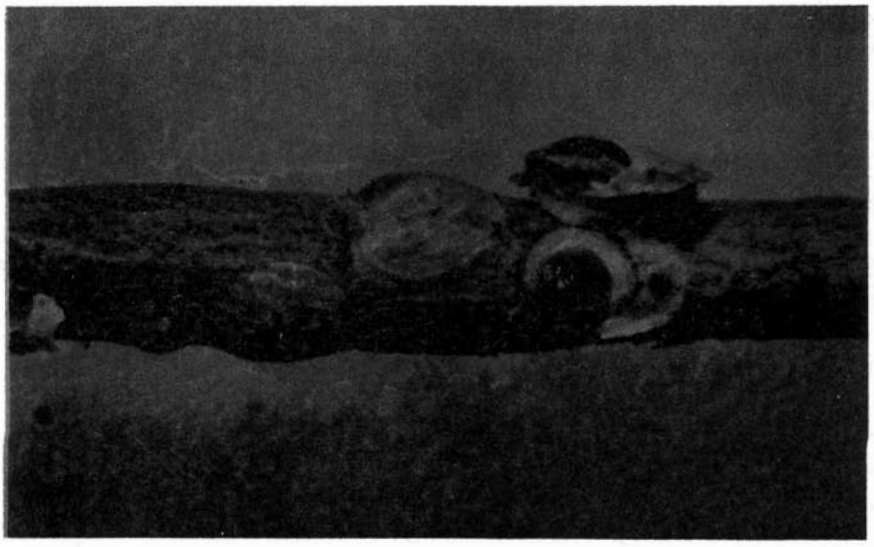


Photo of mining scale showing the camouflage habit. Scale covers on right two specimens have been turned over to show scale body.

PINK BOLLWORM, Pectinophora gossypiella -(A)- The following report by the Control and Eradication Unit summarizes the catches of non-irradiated moths in the San Joaquin cotton districts for this year:

> "As of October 20, a total of 296 natives have been trapped in the San Joaquin Valley. The total catches by county are: Merced 1, Fresno 3, Kings 5, Tulare 31, and Kern 256. As of last year on October 22, 1983, we had trapped 838 native moths.
>
> The cold weather has slowed up the sterile moth recoveries drastically. This is good and bad. Good in the sense that the natives will not be mating and bad because the steriles will be inactive."

NEW STATE RECORDS

ASPARAGUS APHID, Brachycolus asparagi -(A)- An "A" rated aphid pest, Brachycolus asparagi (asparagus aphid), has been detected for the first time in California. The discovery was made on October 22, 1984 in Hemet, Riverside County. Deputy Agricultural Commissioner Howard M. Cook, Riverside County Agricultural Commissioner's Office, found the aphid on the stems and leaves of an asparagus plant growing in his garden. Dr. Eldon Reeves, Riverside County Entomologist, made the initial identification of the aphid. Final determination was made by the California Department of Food and Agriculture Systematic Entomologist Tokuwo Kono who supplied the following information:

Brachycolus asparagi is a European aphid. Since its collection in New York and New Jersey in 1969, it has spread to Alabama, Delaware, Georgia, Illinois, Indiana, Maryland, Massachusetts, Michigan, Missouri, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Virginia, West Virginia, and finally to Idaho, Oregon, Washington, and now, California.

The asparagus aphid is a very tiny, light green aphid. The winged females are about 1.72mm, or about 15 aphids end-to-end per inch. The wingless females are about 1.82mm, or about 14 aphids end-to-end per inch. The cornicles are very short and barely discernible.

Asparagus officinalis, garden asparagus, is the favored host plant of the asparagus aphid. Heavy populations of this aphid cause stunting, matting, and rosetting of fronds, and death to seedlings. Hosts also include the asparagus ornamental, Asparagus myerii, as a host capable of colonization by the asparagus aphid, and in addition it has been reported that the asparagus aphid will feed on the asparagus ornamentals, A. sprengeri, A. macawania, and A. meleoloides.

A second California location was confirmed on October 22 three miles east of the original find. This collection was made by

Riverside County Agricultural Biologist Gary Foster. Still later it was found in Mecca (six collections) and Thermal (1 collection) in Riverside County.

As survey and delimitation programs continued it was found in Kern County by David Daoud. Collections were made at Bakersfield, Maricopa and Shafter. Thus far all detections have been collected from the host Asparagus officinalis, the garden asparagus.

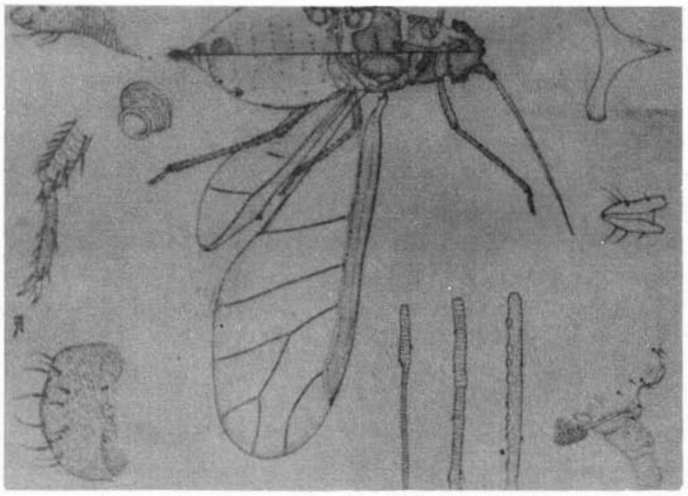


Fig. 1. Photomicrograph of adult alate Brachycolus asparagi.

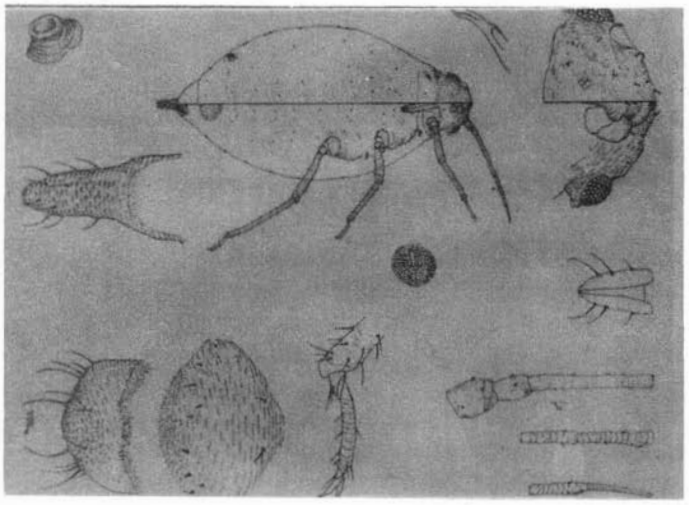


Fig. 2. Morphology of apterous adult B. asparagi.

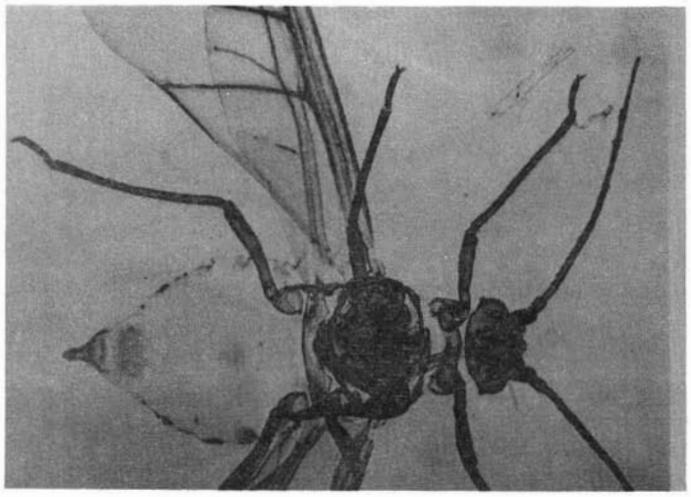


Fig. 3. Morphology of alate adult B. asparagi.

NEW COUNTY RECORDS

PEPPER TREE PSYLLID, Calophya schini -(Q)- This psyllid, which causes pitting and other malformations in the leaves of the California pepper tree, has been found for the first time in Ventura County. The collection was made by Dick Penrose at Ventura on October 18. As this article was being written, yet another submission of this psyllid was made. It was a considerable extension of the range, that is, Berkeley, Alameda County. The collection was made by Dr. Bill Allen, Professor of Entomology, on November 7, 1984 on the University of California, Berkeley campus. For more information about this psyllid and for illustration of the injury see the last issue (V. 3, No. 5) of CPPDR.

A EUCALYPTUS PSYLLID, Ctenarytaina sp. -(Q)- This as yet undescribed psyllid has been found for the first time in Santa Barbara. Collections were made on the Brisbane box (Tristania conferta) by Santa Barbara County Agricultural Biologist Tom Wurster and Plant Pathologist Steve Koike. Earlier California records for this Australian exotic were at San Diego (CPPDR, July, 1983, 2(4):109) and Orange County (CPPDR, March, 1984, 2(2):30). According to Gerry Davidson, Santa Barbara County Entomologist, the nymphs of these species produce white wax on the abdomen.

ICE PLANT SCALE, Pulvinaria mesembryanthemi -(C)- found in three new counties during this period:

Location	County	Date	Collector
Butte City	GL	8/22	S. Protine
Fort Ross	SON	10/03	Breckenridge/ Vernon
Tracy	SJ	9/18	D. Giesing

A TYDEID MITE, Lorryia formosa -(C)- Originally known only from California at Valley Center, San Diego County, this mite has now been found in Orange County. For more information see the November 1983 issue of CPPDR, 2(6):171 and the following report by T. Kono.

A Note on Lorryia formosa Cooreman (Acari: Tydeidae) on Citrus in Orange County, California

The first collection of Lorryia formosa Correman, a mite belonging to the family Tydeidae, in Orange County, California, is reported here. The mite was collected in Irvine, on October 19, 1984, on citrus, by Kerry Musgrove (84J22-26).

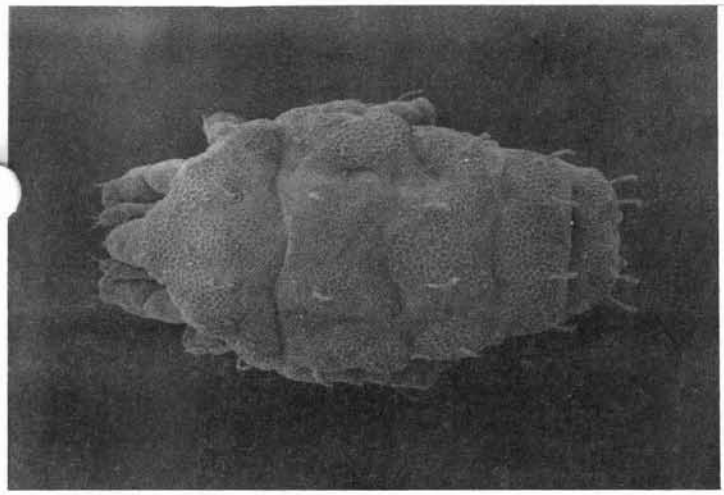
Kono (1983) reported the first California collection of this mite made at Valley Center, San Diego County, on Valencia orange, on September 28, 1983, by Ann Sixtus. Pertinent information and

Kono (1983) reported the first California collection of this mite made at Valley Center, San Diego County, on Valencia orange, on September 28, 1983, by Ann Sixtus. Pertinent information and references were included in the note. Unfortunately, no illustrations were available at that time.

See below for scanning electron micrographs of the dorsal aspect of a female (Fig. 1); close-up of the dorsal surface of the anterior part of the body covered with a reticulate pattern (Fig. 2); and photogrpahs of the mites and cast nymphal skins on the under surface of a citrus leaf (Fig. 3) and on a stem (Fig. 4).

Reference

Kono, T. 1983. Lorryia formosa Cooreman (Acari: Tydeidae), a mite new to California. California Plant Pest and Disease Report 2(6):171-2.



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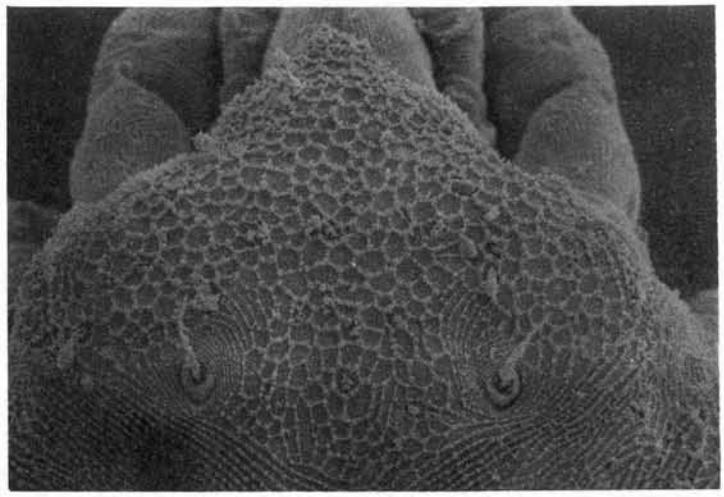

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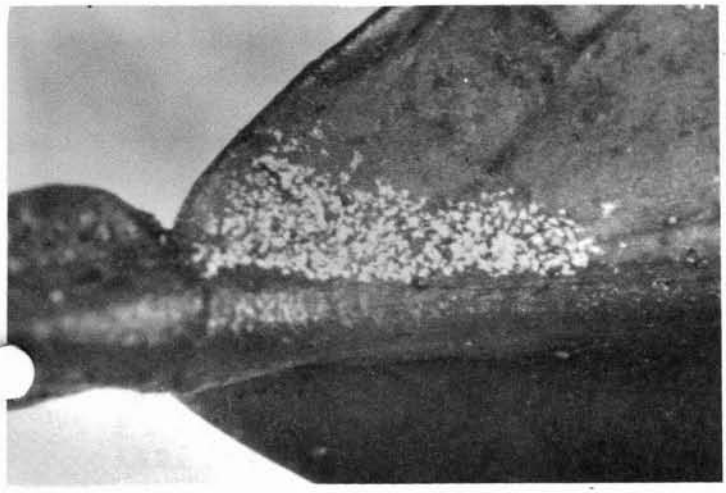

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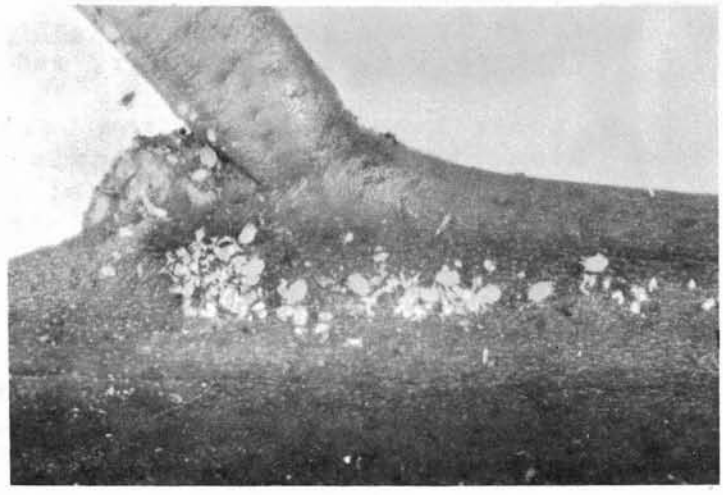

Fig. 4

OTHER FINDS OF SIGNIFICANCE

ORCHID THRIPS, Chaetanaphothrips orchidii -(C)- A new host record on citrus is noted for this thrips species. The following report is by Tok Kono.

A Thrips, Chaetanaphothrips orchidii (Moulton), Found on Grapefruit in Southern California

A species of thrips that is a new pest of grapefruit in California was collected at Fallbrook, San Diego County, California, on September 13, 1984, by T. Russell (84I24-54). The thrips was identified as Chaetanaphothrips orchidii (Moulton) by Dr. W.H. Ewart of the University of California at Riverside.

According to information passed along to Dr. Ewart, "The infestation has been around for about 5 years and is now in several grapefruit groves. Fruits are being severely scarred, particularly where two or more fruits contact each other."

In a telephone conversation with Mr. Steve Nakahara (USDA-ARS), it was learned that there is a slide specimen in the USDA collection which shows that this thrips was collected on grapefruit at Vero Beach, Florida, on February 26, 1940, by Thompson.

This thrips was described by Dudley Moulton (1907) as Euthrips orchidii from four female specimens collected on orchids in a greenhouse in Fruitvale, Alameda County, California, by O.E. Bremner.

Slide-mounted, distended, winged females are about 1.25 mm long. In general it is a light yellow thrips marked with brown at the tips of antennal segments IV, V, VI, all of segments VII, VIII; and with brown on both the fore and hind wings, a narrow area at the base and a wider area in the middle (Fig. 1).

According to Jacot-Guillarmod (1974), this thrips which is known today in the genus Chaetanaphothrips, has been known in Euthrips, Physothrips, Taeniothrips, and Anaphothrips.

It has been reported from California; Washington, D.C.; New York; Kentucky; Florida; Illinois; Louisiana; Surinam; Puerto Rico; Mexico; Scotland; Belgium; England; Holland; France; Norway; Sweden; Denmark; Finland; Czechoslovakia; India; Japan; Hawaiian Islands; Ukraine (Jacot-Guillarmod, 1974).

Jacot-Guillarmod (1974) listed the following habitat: orchids; palms; Chamaeodorea fragrans; Ficaria; Adiantum; Iresine; Begonia; Amaranthus; Commelina nudiflora; Anthurium; Pharbitis cathartica; Passiflora sp.; Litchi chinensis; Heimerliodendron brunonianum; Emilia sonchifolia; Chinchona; Bougainvillea;

parsley; Citrus; sweet potato; grass; Tradescantia; Cyclamen europaeum; Cyclamen indicum; Spathoglottis sp.; Epiphyllum; Hypoxis; Alternanthera sp.; Cattleya labiata; Acer palmatum.

References

Moulton, D. 1907. A contribution to our knowledge of the Thysanoptera of California. U.S.D.A. Bur. Ent. Miscellaneous Papers, Tech. Ser. No. 12, Part III, 39-68.

Jacot-Guillarmod, C.F. 1974. Catalogue of the Thysanoptera of the World (Part 3). Annals of the Cape Provincial Museums. Natural History. Grahamstown, South Africa. 7(3):517-976.

Chaetanaphothrips orchidii

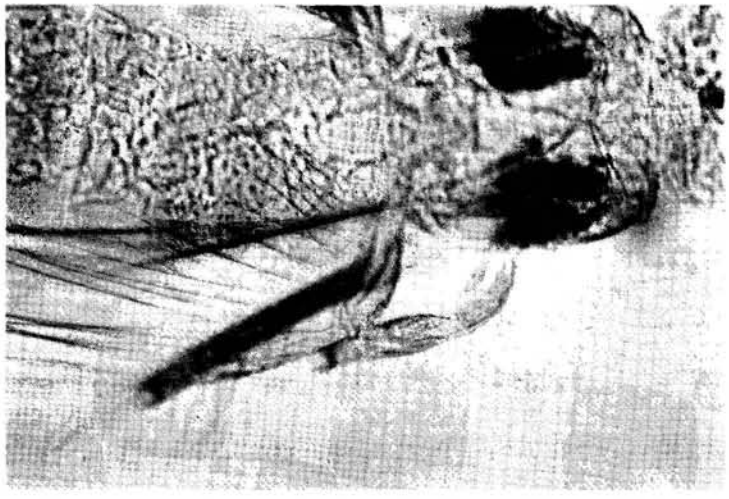

Fig. 1. Close-up of wing showing distinguishing dark markings.

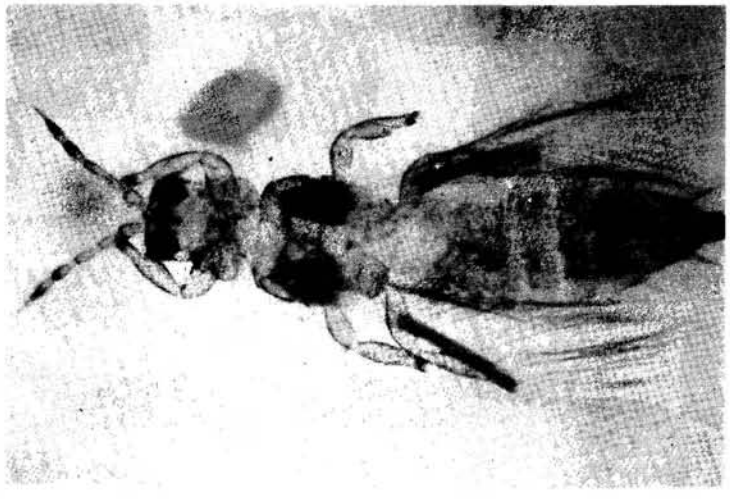

Fig. 2. Photomicrograph of adult female.

QUARANTINE & EXCLUSION

This section, a regular part of every issue of CPPDR, is designed to keep a running record of pests intercepted in quarantine which were found at check points other than the border stations, such as nurseries, post offices and other locations. The section is designed to give credit to the sharp-eyed field personnel who make the interceptions and to give our readers an insight into the staggering numbers of insect pests which otherwise might have entered the state and become established.

However, so many insect samples have been submitted over the summer months that our clerical staff is way behind in tallying the determinations of these samples. Determinations have been made, and the collectors and other proper authorities have been notified, but final tallies have not. Quarantine interceptions for this period will therefore be incorporated when available into some future issues of CPPDR.

BORDER STATIONS

Reading the weekly reports of "happenings" at the California Border Inspection Stations is very enlightening. It is too bad that they cannot all be included here in their entirety. However, we have included here the stories of two unordinary interceptions made by station inspectors during this period.

Donna McMillian of the Truckee Border Station "scored" when she spotted "spotted knapweed" in the "Reno Returnee" lane. The "local" Californian was actually returning from Idaho, with a bouquet of wild flowers. "Sharp-eyed Donna" halted the car and got the "prohibited posies." We catch some of the people, some of the time....

Unusual Interceptions - Mike Ebers of the Needles Inspection Station asked the travelers if they had any nuts in the shell? "Yes, we were parked under a pecan tree and some nuts fell on the hood," replied the driver. Mike found ten nuts in the windshield wiper well!

We also would like to salute the inspectors at the northern part of the state for their extra work load due to the Oregon gypsy moth finds (See CPPDR of Oct, 1984, 3(5):115). See the following report by Dick Brown:

> "Gypsy Moth Workload - Since the gypsy moth infestation has become known in Lane County, Oregon, the workload at Mt. Shasta has changed drastically.
>
> Trucks hauling lumber, wood products, pipe, machinery, etc., (from Oregon) used to be released with a wave of

the hand, after they had stopped, because they represented no quarantine threat to California. (Also, they were not included in the truck count.) Now, every truck must be stopped, and paperwork checked, to establish the origin of the load.

How Many - According to Supervisor Norm Rosenbalm, between 250-350 trucks/day now have to be checked, that were released before. Of these, 25-30 have originated in Lane County, and therefore must be pulled out of the lanes for an egg mass inspection. Each of these trucks is also recorded...company name, unit number, load, origin, destination...an additional paperwork responsibility.

Lumber and lumber products are the main concern; but such things as shakes, metal pipe, plastic pipe, machinery and other items have also been stored outdoors in Lane County. They must be thoroughly inspected, as well.

An RV Problem - It has been reported by the Oregon news media that RV travelers (to California) should be prepared for "up to one hour delay" for gypsy moth inspections. This is not true...delays of even 15 minutes are rare...but now people are telling our inspectors that they are from Roseburg or Medford...even when their license holder says Eugene in bold print...to avoid inspection."

BORDER STATION INTERCEPTIONS

AN ANT	(Paratrechina sp.)	-Q-	16
IMPORTED FIRE ANT	(Solenopsis invicta)	-A-	3
PURPLE SCALE	(Lepidosaphes beckii)	-B-	8
HICKORY SHUCKWORM	(Cydia caryana)	-A-	32
A TORTRICID MOTH	(Tortricidae)	-Q-	3
A WOOLLY BEAR	(Arctiidae)	-Q-	23
GYPSY MOTH	(Lymantria dispar)	-A-	68
A RIBBED COCOON MAKER	(Bucculatrix sp.)	-Q-	3
EASTERN TENT CATERPILLAR	(Malacosoma americanum)	-Q-	12
AN ARCTIID MOTH	(Arctiidae)	-Q-	8
A BAGWORM	(Psychidae)	-Q-	6
AN OLETHREUTINE MOTH	(Olethreutinae)	-Q-	4
WHITE-MARKED TUSSOCK MOTH	(Orgyia leucostigma)	-Q-	3
EUROPEAN CORN BORER	(Ostrinia nubilalis)	-A-	26
AN ANT	(Solenopsis sp.)	-Q-	1
A PYRALID MOTH	(Pyralidae)	-Q-	1
A NOCTUID MOTH	(Noctuidae)	-Q-	3
SOUTHWESTERN CORN BORER	(Diathraea grandiosella)	-A-	2
A TENT CATERPILLAR	(Malacosoma sp.)	-Q-	24
LESSER SNOW SCALE	(Pinnaspis strachani)	-A-	1
CHAFF SCALE	(Parlatoria pergandii)	-B-	9
JAPANESE BEETLE	(Popillia japonica)	-A-	3
A STINKBUG	(Pentatomidae)	-Q-	3
PECAN WEEVIL	(Curculio caryae)	-A-	7
SPOTTED CUCUMBER BEETLE	(Diabrotica 11-punctatata howardi)	-A-	3
A WEEVIL	(Coccotorus scutellaris)	-Q-	1
A CHINCH BUG (nymph)	(Blissus sp.)	-Q-	2
A LYGAEID BUG	(Lygaeidae)	-Q-	1
APPLE MAGGOT	(Rhagoletis pomonella)	-A-	137
A SNAIL	(Bradybaena similaris)	-B-	3
WESTERN CHERRY FRUIT FLY	(Rhagoletis indifferens)	-A-	7
BLACK CHERRY FRUIT FLY	(Rhagoletis fausta)	-A-	1
A SCARAB BEETLE	(Phyllophaga sp.)	-Q-	1
A GRACILLARIID MOTH	(Gracillariidae)	-Q-	2
PINK BOLLWORM	(Pectinophora gossypiella)	-A-	32
A FRUIT MOTH	(Grapholitha sp.)	-Q-	6
VANDA ORCHID SCALE	(Genaparlatoria pseudaspidiotus)	-A-	1
A WEEVIL	(Conotrachelus sp.)	-A-	12
AN OWLET MOTH	(Noctuidae)	-Q-	2
A COCKROACH (nymph)	(Eumycotis sp.?)	-Q-	1
A WEEVIL	(Pachnaeus litus)	-Q-	1
A BURROWING WEBWORM	(Acrolophus sp.)	-Q-	1
ORIENTAL FRUIT FLY	(Dacus dorsalis)	-A-	1
COLORADO POTATO BEETLE	(Leptinotarsa decemlineata)	-A-	1
BOLL WEEVIL	(Anthonomus grandis)	-A-	3
CALIFORNIA RED SCALE	(Aonidiella aurantii)	-B-	8
AN ARMORED SCALE	(Fiorinia sp.)	-Q-	1
ARGUS TORTOISE BEETLE	(Chelymorpha cassidea)	-B-	1
PEPPER MAGGOT	(Zonosemata electa)	-Q-	1
RED-BANDED LEAFROLLER	(Argyrotaenia velutinana)	-Q-	1

BORDER STATION INTERCEPTIONS
CONTINUED

AGLAONEMA MEALYBUG	(Pseudococcus sp. undescribed)	-Q-	1
CAMPHOR SCALE	(Pseudaonidia duplex)	-Q-	1
A TUSSOCK MOTH	(Orgyia sp.)	-Q-	3
A FRUIT MOTH	(Laspeyresia sp.)	-Q-	1
A CECIDOMYIID FLY	(Cecidomyiidae)	-Q-	1
A PIERID MOTH	(Pieridae)	-Q-	1
A CUTWORM	(Euxoa sp.)	-Q-	1
A PYRALID MOTH	(Pyralidae)	-Q-	2
BEAN LEAF BEETLE	(Cerotoma trifurcata)	-A-	1
STRIPED CUCUMBER BEETLE	(Acalymma vittata)	-A-	1
A LEAFMINING MOTH	(Gracillaria sp.?)	-Q-	1
SWEETPOTATO LEAF BEETLE	(Typophorus viridicyaneus)	-Q-	1
SOUTHERN FIRE ANT	(Solenopsis xyloni)	-Q-	1
A SOD WEBWORM	(Crambus sp.?)	-Q-	1
A SHARPSHOOTER	(Cicadellidae)	-Q-	1
A LEAF SKELETONIZER	(Lyonetiidae)	-Q-	2
WALNUT HUSK MAGGOT	(Rhagoletis suavis)	-A-	13
AN OECOPHORID MOTH	(Agonopterix sp.)	-Q-	1
GLOVER SCALE	(Lepidosaphes gloverii)	-B-	2
A WEEVIL	(Curculio sp.)	-A-	10
A LEAFROLLER	(Archips sp.)	-Q-	1
A LEAFROLLER	(Platynota sp.)	-Q-	1
A PICKLEWORM	(Diaphania nitidalis)	-B-	1
CRAZY ANT	(Paratrechina longicornis)	-B-	2
A FRUIT FLY	(Anastrepha sp. prob. ludens)	-A-	2
HACKBERRY GALL PSYLLID	(Pachypsylla sp.)	-Q-	1
A SNAIL	(Lamellaxis sp.)	-B-	1
A WEEVIL	(Anthonomus sp.)	-A-	1
PINE SCALE	(Chionaspis heterophyllae)	-Q-	1
ORIENTAL SCALE	(Aonidiella orientalis)	-Q-	1
KIRKALDY WHITEFLY	(Dialeurodes kirkaldyi)	-Q-	1
PINK SUGARCANE MEALYBUG	(Saccharicoccus sacchari)	-Q-	1
A GRASSHOPPER	(Oedopodinae)	-Q-	1
A WEEVIL	(Curculionidae)	-A-	3
A MEALYBUG	(Dysmicoccus boninsis)	-Q-	1
PARA GRASS SCALE	(Odonaspis saccharicaulis)	-Q-	1
SUGARCANE BORER	(Diatraea saccharalis)	-A-	1

SAN JOAQUIN COUNTY BLACK LIGHT TRAP REPORT

DATE	7-29-84	7-30-84	7-31-84	8-5-84	8-6-84	
LOCATION	Belotta	Roberts Island	Manteca	Bellota	Manteca	
TEMPERATURE						
ALFALFA LOOPER Autographa californica						
ARMYWORM Pseudaletia unipuncta	2	3	3	3	9	
BEET ARMYWORM Spodoptera exigua	115	38	55	28	124	
BLACK CUTWORM Agrotis ipsilon	1				2	
CABBAGE LOOPER Trichoplusia ni				1	1	
CLOVER CUTWORM Scotogramma trifolii		6	2			
CODLING MOTH Laspeyresia pomonella						
CORN EARWORM, (ETC.) Heliothis zea						
FALSE CELERY LEAFTIER Udea profundalis		1				
GRANULATE CUTWORM Feltia subterranea						
GRAPE LEAFFOLDER Desmia funeralis						
NAVEL ORANGEWORM Amyelois transitella			2		4	
OMNIVOROUS LEAFROLLER Platynota stultana		1	1	1	1	
PEACH TWIG BORER Anarsia lineatella					3	
ROUGH SKINNED CUTWORM Proxenus mindara	4	4				
SALTMARSH CATERPILLAR Estigmene acrea						
SPOTTED CUTWORM Amathes c-nigrum	1					
SUGARBEET WEBWORM Loxostege sticticalis						
TOBACCO BUDWORM Heliothis virescens						
VARIEGATED CUTWORM Peridroma saucia						
W.YELLOWSTRIPED ARMYWORM Spodoptera praefica	6	5	1	3	8	
Tomato Hornworm Manduca sexta		2				

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SAN JOAQUIN COUNTY BLACK LIGHT TRAP REPORT

DATE	8-6-84	8-12-84	8-15-84	8-16-84		
LOCATION	Roberts Island	Bellota	Roberts Island	Manteca		
TEMPERATURE						
ALFALFA LOOPER *Autographa californica*						
ARMYWORM *Pseudaletia unipuncta*	152	9	20	7		
BEET ARMYWORM *Spodoptera exigua*	260	257	260	152		
BLACK CUTWORM *Agrotis ipsilon*		1		3		
CABBAGE LOOPER *Trichoplusia ni*		1		2		
CLOVER CUTWORM *Scotogramma trifolii*	108	1	38	5		
CODLING MOTH *Laspeyresia pomonella*						
CORN EARWORM, (ETC.) *Heliothis zea*			1			
FALSE CELERY LEAFTIER *Udea profundalis*						
GRANULATE CUTWORM *Feltia subterranea*						
GRAPE LEAFFOLDER *Desmia funeralis*				2		
NAVEL ORANGEWORM *Amyelois transitella*				4		
OMNIVOROUS LEAFROLLER *Platynota stultana*				1		
PEACH TWIG BORER *Anarsia lineatella*				5		
ROUGH SKINNED CUTWORM *Proxenus mindara*	52		30	1		
SALTMARSH CATERPILLAR *Estigmene acrea*	1					
SPOTTED CUTWORM *Amathes c-nigrum*						
SUGARBEET WEBWORM *Loxostege sticticalis*	12					
TOBACCO BUDWORM *Heliothis virescens*						
VARIEGATED CUTWORM *Peridroma saucia*						
W.YELLOWSTRIPED ARMYWORM *Spodoptera praefica*	4	10	4	18		
Tomato Hornworm *Manduca sexta*	2	1	3			
False Corn Earworm *Heliothis phloxiphaga*		1				

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SAN JOAQUIN COUNTY BLACK LIGHT TRAP REPORT

DATE	8-19-84	8-22-84	8-26-84	8-28-84	8-29-84	
LOCATION	Roberts Island	Manteca	Bellota	Roberts Island	Manteca	
TEMPERATURE						
ALFALFA LOOPER Autographa californica						
ARMYWORM Pseudaletia unipuncta	22	5	5	12	3	
BEET ARMYWORM Spodoptera exigua	125	561	209	203	479	
BLACK CUTWORM Agrotis ipsilon	1	1	1		1	
CABBAGE LOOPER Trichoplusia ni		2		1		
CLOVER CUTWORM Scotogramma trifolii	34	2		12	12	
CODLING MOTH Laspeyresia pomonella		1				
CORN EARWORM, (ETC.) Heliothis zea	1	1		9	1	
FALSE CELERY LEAFTIER Udea profundalis	29	2		13	4	
GRANULATE CUTWORM Feltia subterranea						
GRAPE LEAFFOLDER Desmia funeralis		17			9	
NAVEL ORANGEWORM Amyelois transitella		46			123	
OMNIVOROUS LEAFROLLER Platynota stultana				1		
PEACH TWIG BORER Anarsia lineatella		10			38	
ROUGH SKINNED CUTWORM Proxenus mindara	42		1	15	3	
SALTMARSH CATERPILLAR Estigmene acrea			1			
SPOTTED CUTWORM Amathes c-nigrum						
SUGARBEET WEBWORM Loxostege sticticalis	1			1		
TOBACCO BUDWORM Heliothis virescens						
VARIEGATED CUTWORM Peridroma saucia	1					
W.YELLOWSTRIPED ARMYWORM Spodoptera praefica	3	1	4	1	3	
Tomato Hornworm Manduca sexta	3			2		

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SAN JOAQUIN COUNTY BLACK LIGHT TRAP REPORT

DATE	9-3-84	9-4-84	9-5-84	9-9-84	9-10-84	9-10-84
LOCATION	Bellota	Roberts Island	Manteca	Bellota	Manteca	Roberts Island
TEMPERATURE						
ALFALFA LOOPER *Autographa californica*						
ARMYWORM *Pseudaletia unipuncta*	3	3		2		
BEET ARMYWORM *Spodoptera exigua*	358	623	701	724	752	2516
BLACK CUTWORM *Agrotis ipsilon*	1		1	4		
CABBAGE LOOPER *Trichoplusia ni*		1	1	1	2	
CLOVER CUTWORM *Scotogramma trifolii*	2	14	15		10	16
CODLING MOTH *Laspeyresia pomonella*						
CORN EARWORM, (ETC.) *Heliothis zea*	2	10	8		3	4
FALSE CELERY LEAFTIER *Udea profundalis*		13	3	1		24
GRANULATE CUTWORM *Feltia subterranea*			2	2		
GRAPE LEAFFOLDER *Desmia funeralis*			9			
NAVEL ORANGEWORM *Amyelois transitella*		1	73		32	
OMNIVOROUS LEAFROLLER *Platynota stultana*		7	13		2	123
PEACH TWIG BORER *Anarsia lineatella*			9	1		
ROUGH SKINNED CUTWORM *Proxenus mindara*	1	21		2	2	12
SALTMARSH CATERPILLAR *Estigmene acrea*		1				
SPOTTED CUTWORM *Amathes c-nigrum*		1				
SUGARBEET WEBWORM *Loxostege sticticalis*						
TOBACCO BUDWORM *Heliothis virescens*						
VARIEGATED CUTWORM *Peridroma saucia*						
W.YELLOWSTRIPED ARMYWORM *Spodoptera praefica*	7	1	3	5	2	
TOMATOE HORNWORM *Manduca sexta*		1				1
FALSE CORN EARWORM *Heliothis phloxiphaga*					2	

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SAN JOAQUIN COUNTY BLACK LIGHT TRAP REPORT

DATE	9-16-84	9-17-84	9-18-84	9-23-84	9-23-84	9-27-84
LOCATION	Bellota	Roberts Island	Manteca	Bellota	Roberts Island	Manteca
TEMPERATURE						
ALFALFA LOOPER Autographa californica						
ARMYWORM Pseudaletia unipuncta			2	21	17	7
BEET ARMYWORM Spodoptera exigua	579	2332	984	83	245	721
BLACK CUTWORM Agrotis ipsilon	2		2	1	1	2
CABBAGE LOOPER Trichoplusia ni	2	4				
CLOVER CUTWORM Scotogramma trifolii		16	22	2	17	4
CODLING MOTH Laspeyresia pomonella						
CORN EARWORM, (ETC.) Heliothis zea		4	6		8	1
FALSE CELERY LEAFTIER Udea profundalis	2	228	4		13	17
GRANULATE CUTWORM Feltia subterranea	2	4	7	2		6
GRAPE LEAFFOLDER Desmia funeralis						
NAVEL ORANGEWORM Amyelois transitella	2		38			42
OMNIVOROUS LEAFROLLER Platynota stultana		224	4		5	4
PEACH TWIG BORER Anarsia lineatella						68
ROUGH SKINNED CUTWORM Proxenus mindara	4	36		2	1	
SALTMARSH CATERPILLAR Estigmene acrea						
SPOTTED CUTWORM Amathes c-nigrum				1		1
SUGARBEET WEBWORM Loxostege sticticalis		4	2			
TOBACCO BUDWORM Heliothis virescens						
VARIEGATED CUTWORM Peridroma saucia			2	1		
W.YELLOWSTRIPED ARMYWORM Spodoptera praefica					1	

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SAN JOAQUIN COUNTY BLACK LIGHT TRAP REPORT

DATE	9-30-84	10-2-84	10-3-84	10-8-84	10-7-84	10-9-84
LOCATION	Bellota	Roberts Island	Manteca	Bellota	Roberts Island	Manteca
TEMPERATURE						
ALFALFA LOOPER Autographa californica					1	
ARMYWORM Pseudaletia unipuncta	30	26	7	196	9	11
BEET ARMYWORM Spodoptera exigua	57	436	102	55	49	124
BLACK CUTWORM Agrotis ipsilon	3	1	1	6	2	2
CABBAGE LOOPER Trichoplusia ni						
CLOVER CUTWORM Scotogramma trifolii	1	17	2	2	3	1
CODLING MOTH Laspeyresia pomonella						
CORN EARWORM, (ETC.) Heliothis zea		5	1	3		2
FALSE CELERY LEAFTIER Udea profundalis		57	3	3	6	1
GRANULATE CUTWORM Feltia subterranea	1		3	5		3
GRAPE LEAFFOLDER Desmia funeralis						
NAVEL ORANGEWORM Amyelois transitella			3			
OMNIVOROUS LEAFROLLER Platynota stultana		18	1		2	
PEACH TWIG BORER Anarsia lineatella			11			16
ROUGH SKINNED CUTWORM Proxenus mindara	3	15	1	2	6	1
SALTMARSH CATERPILLAR Estigmene acrea						
SPOTTED CUTWORM Amathes c-nigrum	3			14		
SUGARBEET WEBWORM Loxostege sticticalis						
TOBACCO BUDWORM Heliothis virescens						
VARIEGATED CUTWORM Peridroma saucia				2	1	
W.YELLOWSTRIPED ARMYWORM Spodoptera praefica		1				

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SAN JOAQUIN COUNTY BLACK LIGHT TRAP REPORT

DATE	10-14-84	10-15-84	10-21-84	10-21-84	10-22-84	
LOCATION	Bellota	Roberts Island	Bellota	Manteca	Roberts Island	
TEMPERATURE						
ALFALFA LOOPER Autographa californica						
ARMYWORM Pseudaletia unipuncta	25	25	10	3	19	
BEET ARMYWORM Spodoptera exigua	6	70	1	3	9	
BLACK CUTWORM Agrotis ipsilon	3	1	1	1	18	
CABBAGE LOOPER Trichoplusia ni						
CLOVER CUTWORM Scotogramma trifolii		3				
CODLING MOTH Laspeyresia pomonella						
CORN EARWORM, (ETC.) Heliothis zea	1					
FALSE CELERY LEAFTIER Udea profundalis		9				
GRANULATE CUTWORM Feltia subterranea		1		1		
GRAPE LEAFFOLDER Desmia funeralis						
NAVEL ORANGEWORM Amyelois transitella						
OMNIVOROUS LEAFROLLER Platynota stultana						
PEACH TWIG BORER Anarsia lineatella						
ROUGH SKINNED CUTWORM Proxenus mindara	2	3				
SALTMARSH CATERPILLAR Estigmene acrea						
SPOTTED CUTWORM Amathes c-nigrum	1	2				
SUGARBEET WEBWORM Loxostege sticticalis						
TOBACCO BUDWORM Heliothis virescens						
VARIEGATED CUTWORM Peridroma saucia						
W.YELLOWSTRIPED ARMYWORM Spodoptera praefica					1	

SAN JOAQUIN COUNTY BLACK LIGHT TRAP REPORT

DATE	7-1-84	7-4-84	7-6-84	7-8-84	7-8-84	7-9-84
LOCATION	Bellota	Manteca	Roberts Island	Manteca	Bellota	Roberts Island
TEMPERATURE						
ALFALFA LOOPER Autographa californica						
ARMYWORM Pseudaletia unipuncta	182	39	14	9	19	89
BEET ARMYWORM Spodoptera exigua	1	1	9	5	7	15
BLACK CUTWORM Agrotis ipsilon	9	6	2	1	4	13
CABBAGE LOOPER Trichoplusia ni						
CLOVER CUTWORM Scotogramma trifolii			1			14
CODLING MOTH Laspeyresia pomonella		2		1		1
CORN EARWORM, (ETC.) Heliothis zea				1		
FALSE CELERY LEAFTIER Udea profundalis					1	
GRANULATE CUTWORM Feltia subterranea						
GRAPE LEAFFOLDER Desmia funeralis		3		1		
NAVEL ORANGEWORM Amyelois transitella		13		8		
OMNIVOROUS LEAFROLLER Platynota stultana		2	1	5		
PEACH TWIG BORER Anarsia lineatella		13				
ROUGH SKINNED CUTWORM Proxenus mindara	11	2	13			19
SALTMARSH CATERPILLAR Estigmene acrea			2			118
SPOTTED CUTWORM Amathes c-nigrum	18		1			23
SUGARBEET WEBWORM Loxostege sticticalis						
TOBACCO BUDWORM Heliothis virescens						
VARIEGATED CUTWORM Peridroma saucia	6	4	1	1		5
W.YELLOWSTRIPED ARMYWORM Spodoptera praefica	15	1	1	4		24
Tomato Hornworm Munduca sexta	1					

gb:5/82

SAN JOAQUIN COUNTY BLACK LIGHT TRAP REPORT

DATE	7-15-84	7-16-84	7-17-84	7-22-84	7-22-84	7-23-84
LOCATION	Bellota	Roberts Island	Manteca	Bellota	Manteca	Roberts Island
TEMPERATURE						
ALFALFA LOOPER Autographa californica						
ARMYWORM Pseudaletia unipuncta	2	3	1			2
BEET ARMYWORM Spodoptera exigua	6	220	30	18	5	135
BLACK CUTWORM Agrotis ipsilon	1	2	2			2
CABBAGE LOOPER Trichoplusia ni		2		1		1
CLOVER CUTWORM Scotogramma trifolii		19	1		1	12
CODLING MOTH Laspeyresia pomonella						1
CORN EARWORM, (ETC.) Heliothis zea						
FALSE CELERY LEAFTIER Udea profundalis						
GRANULATE CUTWORM Feltia subterranea				2		
GRAPE LEAFFOLDER Desmia funeralis						
NAVEL ORANGEWORM Amyelois transitella	2		3		1	
OMNIVOROUS LEAFROLLER Platynota stultana		4	1			2
PEACH TWIG BORER Anarsia lineatella						
ROUGH SKINNED CUTWORM Proxenus mindara		25		1		22
SALTMARSH CATERPILLAR Estigmene acrea		30				2
SPOTTED CUTWORM Amathes c-nigrum						
SUGARBEET WEBWORM Loxostege sticticalis			2			
TOBACCO BUDWORM Heliothis virescens						
VARIEGATED CUTWORM Peridroma saucia		3				1
W.YELLOWSTRIPED ARMYWORM Spodoptera praefica	3	2	1	3		
False corn earworm Heliothis phloxiphaga	2				1	2

gb:5/82

NEMATOLOGY HIGHLIGHTS

Regulatory Significant Nematode Identifications From Quarantine Shipments From October 1 to November 30, 1984

Pest	Origin	Assoc. Host	Shipment Size	Interception By	ID Date
Radopholus similis	Hawaii	Neanthebella palms	2150 plts	Santa Barbara County	11/02
R. similis	Hawaii	"Red-green lobster claw" (*Heliconia*?)	1 plt.	San Diego County	11/07
R. similis	Florida	--	--	Blythe Insp. Station	11/09
Rotylenchulus reniformia	Florida	Philodendron	2 plts.	Winterhaven Insp. Sta.	10/12
R. reniformis	Florida	Schefflera	--	Orange County	11/05
R. sp.	Florida	Beaucarnia	--	Orange County	11/27
Xiphinema krugi	Florida	Plants/soil	--	Needles Insp. Station	10/29

New County Records of Nematode Pests October/November

On October 12, *Meloidogye chitwoodi*, Columbia root-knot nematode, was identified from a White Rose potato sample taken from certified seed stored in Riverside County. The seed was grown in Mono County about 20 miles from Bishop. This is a new county record for this nematode which is also known from Siskiyou and Modoc counties.

NEW PEST RATING LIST FOR PLANT DISEASE FUNGI

Alex M. French

The last revision of the CDFA pest rating lists for plant disease fungi was distributed in 1977. We are including herewith a new list which can be removed and placed in your pest rating binder (if you have one).

The common name list (pink pages) has been completely revised to make it more useful. Plant diseases of eleven general types are gathered together under the following headings:

ANTHRACNOSE
CANKER
DOWNY MILDEW
LEAFSPOT
POWDERY MILDEW
ROOT ROT
RUST
SCAB
SEEDLING ROT
SMUT
WILT

Below each of these headings, the host plants are listed alphabetically. For example, if you need to know the pest rating for the cherry leafspot fungus, look under "LEAFSPOT" for "cherry". Many diseases with distinctive common names, such as European canker of apple, Dutch elm disease, or cedar-apple rust, are cross-referenced under that name as well as under the disease type.

On the green pages are listings of organisms presently rated "A", "B", and "Q". Listing the "C" and "D" organisms appears to serve no purpose. In regard to those rated "Q", it should be understood that this is by no means a complete listing, and is subject to constant change as new pathogens are detected or intercepted.

Alex M. French is Principal Plant Pathologist/Nematologist with the Analysis and Identification Unit, CDFA, in Sacramento.

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF PLANT INDUSTRY
12/01/84

PEST RATING LIST - PLANT PATHOGENS: FUNGI

RATING	SCIENTIFIC NAME	DISEASE
C	Albugo candida	White rust of crucifers
C	Alternaria spp.	Leaf spots, blights, and fruit rots of various plants
Q	Anisogramma anomala	Eastern filbert blight
C	Aphanomyces raphani	Black root of radish
B	Armillaria mellea	Armillaria root rot. Oak root fungus
-	Ascochyta imperfecta	See: Phoma medicaginis
-	Ascochyta pinodes	See: Mycosphaerella pinodes
C	Botryosphaeria ribis	Stem canker and dieback of woody plants. Dothiorella rot of citrus fruit
C	Botryotinia convoluta	Rhizome rot of iris
C	Botrytis allii	Gray-mold neck rot of onion
C	Botrytis cinerea	Common gray mold
C	Bremia lactucae	Downy mildew of lettuce
-	Calonectria nivalis	See: Micronectriella nivalis
D	Capnodium spp.	Sooty molds
C	Centrospora acerina	Pansy leaf spot. Storage rot of vegetables
Q	Cephalosporium diospyri	Persimmon wilt
A	Ceratocystis fagacearum	Oak wilt
C	Ceratocystis fimbriata	Mallet-wound canker of almond and apricot. Sweetpotato black rot
A	Ceratocystis ulmi	Dutch elm disease
C	Cercospora beticola	Cercospora leafspot of beets
C	Chrysomyxa rhododendri	European rhododendron rust
C	Chrysomyxa piperiana	Common rhododendron rust
C	Cladosporium carpophilum	Scab of stone fruits
C	Cladosporium cucumerinum	Scab of cucurbits
C	Cladosporium fulvum	Tomato leaf mold
C	Claviceps purpurea	Ergot of cereals and grasses
C	Coccomyces hiemalis	Cherry leafspot
C	Colletotrichum circinans	Onion smudge
-	Colletotrichum gloeosporioides	See: Glomerella cingulata
B	Colletotrichum lindemuthianum	Bean anthracnose
C	Coniothyrium rosarum	Rose graft canker
C	Corticium fuciforme	Red thread/pink patch of grasses
C	Coryneum beijerinckii	Coryneum blight/shothole of

	(=C. carpophilum)	stone fruits
-	Coryneum cardinale	See: Seiridium cardinale
C	Cronartium comandrae	Comandra blister rust on pine (O/I) and Comandra (II/III)
B	Cronartium ribicola	White pine blister rust on pine (O/I) and Ribes (II/III)
-	Cryptosporella anomala	See: Anisogramma anomala
C	Cumminsiella mirabilissima	Rust on mahonia (O/I/II/III)
C	Curvularia spp.	Fading-out of lawn grasses
C	Cycloconium oleaginum	Peacock spot of olive
-	Cytospora leucostoma	See: Leucostoma persoonii
-	Cytosporina armeniaca	See: Eutypa armeniacae
-	Dematophora necatrix	See: Rosellinia necatrix
Q	Deuterophoma tracheiphila	Mal secco of citrus
C	Diaporthe citri	Stem-end rot of citrus
C	Diaporthe gardeniae	Gardenia canker
-	Didymellina macrospora	See: Mycosphaerella macrospora
C	Diplocarpon rosae	Black spot of rose
-	Dothiorella gregaria	See: Botryosphaeria ribis
-	Dothistroma pini	See: Scirrhia pini
A	Elsinoe australis	Sweet orange scab
Q	Elsinoe batatas	Sweetpotato scab
C	Elsinoe fawcetti	Sour orange scab
Q	Elsinoe phaseoli	Lima bean scab
C	Elytroderma deformans	Needle cast of pine
-	Endocronartium harknessii	See: Peridermium harknessii
A	Endothia parasitica	Chestnut blight
-	Entomosporium maculatum	See: Fabraea maculata
A	Entyloma oryzae	Leaf smut of rice
C	Erysiphe cichoracearum	Powdery mildew of cucurbits
C	Erysiphe graminis	Powdery mildew of cereals/ grasses
C	Erysiphe polygoni	Powdery mildew of legumes/ beets/many plants
C	Eutypa armeniacae	Eutypa dieback of apricot/grape
C	Exobasidium vaccinii	Azalea leaf gall
C	Fabraea maculata	Leafspot on pear/quince/ Raphiolepis
C	Fomes annosus	Annosus root disease of many trees
C	Frommea obtusa f. sp. duchesneae	Rust on mockstrawberry (O/I/II/III)
-	Fusarium lateritium	See: Gibberella lateritium
-	Fusarium moniliforme	See: Gibberella moniliformis
-	Fusarium nivale	See: Micronectriella nivalis
C	Fusarium oxysporum	Many special forms; contains pathogens and saprophytes
A	Fusarium oxysporum (Phoenix palm pathotype)	Fusarium wilt of palm
C	Fusarium solani	Many forms; contains pathogens and saprophytes
-	Fusicladium dendriticum	See: Venturia inaequalis

C	Fusicladium carpophilum	Almond scab
C	Fusicladium eriobotryae	Loquat scab
C	Fusicladium photiniicola	Scab on Photinia
-	Fusicladium pyracanthae	See: Spilocaea pyracanthae
C	Ganoderma applanatum	Heart rot of living trees
C	Gaeumannomyces graminis	Take-all of cereals
C	Gibberella lateritium (=G. baccata)	Twig blight of woody plants
C	Gibberella moniliformis (=G. fujikuroi)	Fusarium or pink kernel rot of corn. Root and stalk rot
C	Gibberella zeae	Foot rot and head blight of cereals. Pink ear rot of corn. Stalk rot and seedling blight of corn
C	Gliocladium vermoeseni	Pink rot/bud rot of palms
C	Gloeosporium aridum	Anthracnose of ash
C	Gloeosporium inconspicuum	Anthracnose of elm
C	Gloeosporium quercinum	Anthracnose of oak
-	Gloeosporium ulmeum	See: Gnomonia ulmea
C	Gloeosporium ulmicola	Leafspot of elm
C	Glomerella cingulata	Anthracnose, dieback, ripe fruit rot of many plants
C	Gnomonia platani	Sycamore anthracnose
C	Gnomonia ulmea	Black spot of elm
-	Gnomonia veneta	See: Gnomonia platani
Q	Guignardia citricarpa	Black spot of citrus
C	Gymnoconia peckiana	Orange rust of brambles (0/I/III)
C	Gymnosporangium clavipes	Quince rust (0/I)
A	Gymnosporangium confusum	Hawthorn-juniper rust (0/I - III)
B	Gymnosporangium fuscum	Pear-juniper rust (0/I - III)
A	Gymnosporangium juniperi-virginianae	Cedar-apple rust (III - 0/I)
C	Gymnosporangium libocedri	Pear rust (0/I)
C	Helminthosporium spp.	Leafspot of grasses/cereals
-	Helminthosporium gramineum	See: Pyrenophora graminea
-	Helminthosporium teres	See: Pyrenophora teres
C	Hendersonula toruloidea	Branch wilt of walnut. Canker of madrone
C	Herpotrichia nigra	Brown felt blight of fir
C	Khuskia oryzae	Corn ear rot. Rice kernel spot
C	Kuehneola uredinis	Blackberry stem rust (0/I/II/III)
C	Leptosphaeria coniothyrium	Rose stem canker
C	Leptosphaeria maculans	Black leg/foot rot of crucifers
C	Leptosphaeria nodorum	Septoria nodorum blotch of wheat

C	Leptosphaeria salvinii	Stem rot of rice
C	Leucostoma persoonii	Cytospora canker of stone fruits
C	Leveillula taurica	Powdery mildew of tomato
C	Lophodermium pinastri	Needle cast of pine
C	Macrophomina phaseoli	Charcoal rot. Ashy stem blight
C	Marasmius oreades	Fairy rings in lawns
C	Marssonina panattoniana	Lettuce anthracnose
C	Melampsoridium betulinum	Leaf rust of birch
Q	Melanomma glumarum	Glume blotch of rice
C	Micronectriella nivalis	Snow mold, foot rot, seedling blight of cereals and grasses
C	Microsphaera alni	Powdery mildew of lilac, oak, and other plants
C	Microstroma juglandis	Downy leaf spot/yellow leaf blotch of walnut
C	Monilinia fructicola	Brown rot of stone fruit
Q	Monilinia fructigena	European brown rot
C	Monilinia laxa	Blossom and twig blight. Brown rot of stone/pome fruits
C	Monilochaetes infuscans	Sweet potato scurf
C	Mycosphaerella alni	Brown leaf spot of sycamore
C	Mycosphaerella brassicicola	Ringspot on crucifers
C	Mycosphaerella fragariae	Strawberry leaf spot
C	Mycosphaerella macrospora	Iris leaf spot
C	Mycosphaerella pinodes	Ascochyta blight of pea
C	Nectria cinnabarina	Coral spot of woody plants
C	Nectria galligena	Target canker of woody plants. European canker of apple
C	Neofabraea malicorticis	Anthracnose of apple
Q	Neovossia horrida (=Tilletia barclayana)	Kernel smut of rice
Q	Neovossia indica (=Tilletia indica)	Karnal bunt of wheat
-	Nigrospora oryzae	See: Khuskia oryzae
C	Oidium euonymi-japonici	Powdery mildew of Euonymus
C	Ovulinia azaleae	Azalea flower blight
C	Penicillium digitatum	Green mold rot of citrus fruit
C	Penicillium italicum	Blue mold rot of citrus fruit
C	Peridermium harknessii	Western gall rust of pine (O/I)
Q	Peronosclerospora sorghi	Downy mildew of corn/sorghum
C	Peronospora destructor	Downy mildew of onion
C	Peronospora farinosa f. sp. betae (=P. schachtii, P. effusa)	Downy mildew of sugar beet
C	Peronospora parasitica	Downy mildew of crucifers
C	Peronospora trifoliorum	Downy mildew of alfalfa
D	Pestalotia spp.	Weak or secondary parasite

		on many plants
C	Phialophora cinerescens	Carnation wilt
-	Phoma citricarpa	See: Guignardia citricarpa
-	Phoma lingam	See: Leptosphaeria maculans
C	Phoma medicaginis	Spring black stem of alfalfa
-	Phomopsis citri	See: Diaporthe citri
-	Phomopsis gardeniae	See: Diaporthe gardeniae
C	Phomopsis viticola	Phomopsis leaf and cane spot of grape
C	Phragmidium mucronatum	Rust on rose (O/I/II/III)
C	Phyllosticta spp.	Leafspot of many plants
A	Phymatotrichum omnivorum	Ozonium root rot. Texas root rot
C	Phytophthora cactorum	Fruit rot, crown rot, stem canker
C	Phytophthora cinnamomi	Root rot of trees/ornamental shrubs
C	Phytophthora citrophthora	Brown rot gummosis of citrus
B	Phytophthora fragariae	Red stele of strawberry
C	Phytophthora infestans	Late blight of potato/tomato
C	Piricularia grisea	Gray leaf spot of St. Augustine grass
Q	Piricularia oryzae	Rice blast
D	Pithya cupressina	Saprophyte on juniper
B	Plasmodiophora brassicae	Club root of crucifers
C	Plasmopara viticola	Downy mildew of grape
C	Pleospora herbarum	Leaf spot/rot/fruit rot on many plants
C	Podosphaera leucotricha	Powdery mildew of apple/pear/quince
C	Podosphaera oxycanthae	Powdery mildew of stone fruits
C	Polyporus spp.	Heart and sapwood rot of living trees
C	Poria spp.	Poria root/crown rot of fruit trees
C	Pseudocercosporella capsellae	Leafspot of crucifers
C	Pseudoperonospora cubensis	Downy mildew of cucurbits
C	Pseudopeziza medicaginis	Common leafspot of alfalfa
C	Puccinia antirrhini	Snapdragon rust (II/III)
C	Puccinia carthami	Safflower rust (O/I/II/III)
-	Puccinia glumarum	See: Puccinia striiformis
C	Puccinia graminis	Stem rust of cereals (II/III) and barberry (O/I)
Q	Puccinia horiana	White rust of chrysanthemum (III)
C	Puccinia iridis	Iris rust (II/III)
C	Puccinia malvacearum	Hollyhock rust (III)
C	Puccinia pelargonii-zonalis	Geranium rust (II/III)
C	Puccinia purpurea	Rust on sorghum (II/III)
C	Puccinia recondita	Leaf rust of rye/wheat (II/III)

-	Puccinia rubigo-vera	See: Puccinia recondita
C	Puccinia striiformis	Stripe rust of cereals/ grasses(II/III)
C	Pucciniastrum epilobii	Fuchsia rust (III)
C	Pyrenochaeta terrestris	Pink root of onion
C	Pyrenophora graminea	Barley stripe
C	Pyrenophora teres	Barley net blotch
C	Pythium aphanidermatum	Damping-off, root rot of cucurbits/bean. Greasy spot of turfgrass
C	Pythium ultimum	Damping-off and root rot
C	Rhizoctonia solani	Damping-off/root rot/stem canker
C	Rhizopus stolonifer	Rot of sweetpotato/cucurbits
B	Rosellinia necatrix	Dematophora root rot
C	Rhynchosporium secalis	Barley scald
C	Schizophyllum commune	Wood rot
C	Scirrhia pini	Red band needle blight of pine
Q	Sclerophthora macrospora (=Sclerospora macrospora)	Downy mildew of rice/small grains
-	Sclerospora sorghi	See: Peronosclerospora sorghi
C	Sclerotinia camelliae	Camellia flower blight
-	Sclerotinia fructicola	See: Monilinia fructicola
-	Sclerotinia fructigena	See: Monilinia fructigena
-	Sclerotinia laxa	See: Monilinia laxa
C	Sclerotinia sclerotiorum	Cottony rot. Lettuce drop. Celery pink root.
B	Sclerotium cepivorum	White rot of onion/garlic
-	Sclerotium oryzae	See: Leptosphaeria salvinii
B	Sclerotium rolfsii	Southern root rot. Southern blight
C	Seiridium cardinale	Coryneum canker of cypress
C	Septoria apiicola	Late blight of celery
-	Septoria nodorum	See: Leptosphaeria nodorum
C	Septoria tritici	Speckled leaf blotch of wheat
C	Sphacelotheca reiliana	Head smut of sorghum/corn
D	Sphaerobolus spp.	Projectile-fungus (saprophytic)
C	Sphaerotheca pannosa	Powdery mildew of peach/rose
C	Spilocaea pyracanthae	Scab of Pyracantha
B	Spongospora subterranea	Powdery scab of potato
C	Stagonospora curtisii	Leaf spot of Amaryllidaceae
-	Stemphylium botryosum	See: Pleospora herbarum
C	Stereum purpureum	Silver leaf of stone fruits
C	Streptomyces scabies	Potato common scab
A	Synchytrium endobioticum	Potato wart disease
C	Taphrina deformans	Peach leaf curl
C	Thielaviopsis basicola	Black root rot of bean/ cotton/cucurbits
-	Tilletia barclayana	See: Neovossia horrida
C	Tilletia caries	Bunt/stinking smut of wheat
Q	Tilletia controversa	Dwarf bunt of wheat
A	Tilletia indica (=Neovossia indica)	Karnal bunt of wheat

C	Tranzschelia discolor	Rust of Prunus spp. (II/III) and anemone (0/I)
C	Uncinula necator	Powdery mildew of grape
Q	Uredo behnickiana	Orchid rust (III)
A	Urocystis agropyri (=U. tritici)	Flag smut of wheat
B	Urocystis cepulae	Smut of onion
A	Uromyces aloes	Aloe rust (III)
C	Uromyces betae	Beet rust (0/I/II/III)
C	Uromyces fabae	Rust on broadbean/pea/ vetch (0/I/II/III)
C	Uromyces striatus	Rust on alfalfa (II/III)
C	Ustilago avenae	Loose smut of oats
C	Ustilago hordei	Covered smut of barley
C	Ustilago maydis	Corn smut
C	Ustilago nuda (=U. tritici)	Loose smut of barley/wheat
C	Valsa sordida	Cytospora canker of poplar/willow
C	Venturia inaequalis	Apple scab
C	Venturia pirina	Pear scab
C	Verticillium albo-atrum	Verticillium wilt
C	Verticillium dahliae	Verticillium wilt

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PEST RATING LIST - PLANT PATHOGENS: FUNGI

RATING	DISEASE	CAUSAL ORGANISM
A	Aloe Rust	*Uromyces aloes*
	ANTHRACNOSE	
C	Apple	*Neofabraea malicorticis*
C	Ash	*Gloeosporium aridum*
C	Bean	*Colletotrichum lindemuthianum*
C	Elm	*Gloeosporium inconspicuum*
C	Lettuce	*Marssonina panattoniana*
C	Oak	*Gloeosporium quercinum*
C	Sycamore	*Gnomonia platani*
C	Various plants	*Glomerella cingulata* (*Colletotrichum gloeosporioides* --imp. stage)
C	Apple scab	*Venturia inaequalis*
B	Armillaria root rot	*Armillaria mellea*
C	Ascochyta blight of pea	*Mycosphaerella pinodes*
C	Ashy stem blight	*Macrophomina phaseoli*
C	Azalea flower blight	*Ovulinia azaleae*
C	Azalea leaf gall	*Exobasidium vaccinii*
C	Barley net blotch	*Pyrenophora teres*
C	Barley scald	*Rhynchosporium secalis*
C	Barley stripe	*Pyrenophora graminea*
B	Bean anthracnose	*Colletotrichum lindemuthianum*
C	Black leg/foot rot of crucifers	*Leptosphaeria maculans* (*Phoma lingam*--imp. stage)
C	Black root of radish	*Aphanomyces raphani*
C	Black root rot of bean/cotton/cucurbits	*Thielaviopsis basicola*
Q	Black spot of citrus	*Guignardia citricarpa* (*Phoma citricarpa*--imp. stage)
C	Black spot of elm	*Gnomonia ulmea*
C	Black spot of rose	*Diplocarpon rosae*
C	Blossom and twig blight of stone fruits	*Monilinia laxa* (=*Sclerotinia laxa*)
C	Blue mold rot of citrus fruits	*Penicillium italicum*
C	Branch wilt of walnut	*Hendersonula toruloidea*
C	Brown felt blight of fir	*Herpotrichia nigra*
C	Brown leaf spot of sycamore	*Mycosphaerella alni*
C	Brown rot gummosis of citrus	*Phytophthora citrophthora* (and other spp.)
C	Brown rot of stone fruits	*Monilinia fructicola* (=*Sclerotinia fructicola*)

C	Brown rot of stone fruits	Monilinia laxa (=Sclerotinia laxa)
C	Bunt/stinking smut of wheat	Tilletia caries
C	Camellia flower blight	Sclerotinia camelliae
	CANKER	
C	Almond (Mallet-wound canker)	Ceratocystis fimbriata
C	Apple (European canker)	Nectria galligena
C	Apricot (Eutypa dieback)	Eutypa armeniacae (Cytosporina armeniacae --imp. stage)
C	(Mallet-wound canker)	Ceratocystis fimbriata
C	Cypress (Coryneum canker)	Seiridium cardinale (=Coryneum cardinale)
C	Fruit trees (Crown canker)	Phytophthora cactorum
C	Gardenia	Diaporthe gardeniae (Phomopsis gardeniae--imp. stg.)
C	Grape (Eutypa dieback)	Eutypa armeniacae
C	Madrone	Hendersonula toruloidea)
C	Poplar/willow (Cytospora canker)	Valsa sordida
C	Rose (Graft canker)	Coniothyrium rosarum
C	(Stem canker)	Leptosphaeria coniothyrium
C	Stone fruits (Cytospora canker)	Leucostoma persoonii
C	Trees (Crown canker)	Phytophthora cactorum
C	(Target canker)	Nectria galligena
C	Vegetables (Stem canker)	Rhizoctonia solani
C	Woody plants (Canker and die-back)	Botryosphaeria ribis (Dothiorella gregaria--imp.stg.)
C	(Coral spot)	Nectria cinnabarina
A	Cedar-apple rust	Gymnosporangium juniperi-virginianae
C	Celery pink root	Sclerotinia sclerotiorum
C	Cercospora leafspot of beets	Cercospora beticola
C	Charcoal rot	Macrophomina phaseoli
A	Chestnut blight	Endothia parasitica
B	Clubroot of crucifers	Plasmodiophora brassicae
C	Coral spot of woody plants	Nectria cinnabarina
C	Corn ear rot	Khuskia oryzae
C	Corn smut	Ustilago maydis
C	Coryneum blight/shot-hole of stone fruits	Coryneum beijerinckiae
C	Coryneum canker of cypress	Seiridium cardinale (=Coryneum cardinale)
C	Cottony rot	Sclerotinia sclerotiorum

C	Damping-off	Pythium aphanidermatum
C	Damping-off	Pythium ultimum
C	Damping-off	Rhizoctonia solani
B	Dematophora root rot	Rosellinia necatrix (Dematophora necatrix--imp.stg.)
C	Dothiorella rot of citrus fruit	Botryosphaeria ribis
C	Downy leafspot/yellow leaf blotch of walnut	Microstroma juglandis
	DOWNY MILDEW	
C	Alfalfa	Peronospora trifoliorum
Q	Corn/sorghum	Peronosclerospora sorghi (=Sclerospora sorghi)
C	Crucifers	Peronospora parasitica
C	Cucurbits	Pseudoperonospora cubensis
C	Grape	Plasmopara viticola
C	Lettuce	Bremia lactucae
C	Onion	Peronospora destructor
C	Rice/small grains	Sclerophthora macrospora (=Sclerospora macrospora)
C	Sugar beet	Peronospora farinosa f.sp.betae (=P. effusa, P. schachtii)
A	Dutch elm disease	Ceratocystis ulmi
Q	Dwarf bunt of wheat	Tilletia controversa
Q	Eastern filbert blight	Anisogramma anomala
C	Ergot of cereals/ grasses	Claviceps purpurea
Q	European brown rot	Monilinia fructigena (=Sclerotinia fructigena)
C	European canker of apple	Nectria galligena
C	Fading-out of turf-grass	Curvularia spp.
C	Fairy rings in lawns	Marasmius oreades
A	Flag smut of wheat	Urocystis agropyri (=U. tritici)
A	Fusarium wilt of palm	Fusarium oxysporum (Phoenix palm pathotype)
Q	Glume blotch of rice	Melanomma glumarum
C	Gray mold	Botrytis cinerea
C	Gray-mold neck rot of onion	Botrytis allii
C	Greasy spot of turf-grass	Pythium aphanidermatum
C	Green mold rot of citrus fruit	Penicillium digitatum
A	Hawthorn-juniper rust	Gymnosporangium confusum
C	Head blight of cereals	Gibberella zeae
C	Head smut of sorghum/ corn	Sphacelotheca reiliana
C	Heart rot of living trees	Ganoderma applanatum
?	Heart rot of living trees	Polyporus spp.
C	Iris leaf spot	Mycosphaerella macrospora (=Didymellina macrospora)

C	Iris rust	Puccinia iridis
A	Karnal bunt of wheat	Tilletia indica (=Neovossia indica)
Q	Kernel smut of rice	Neovossia horrida (=Tilletia barclayana)
C	Late blight of celery	Septoria apiicola
C	Late blight of potato/ tomato	Phytophthora infestans
	LEAFSPOT	
C	Alfalfa	Pseudopeziza medicaginis
C	Amaryllidaceae	Stagonospora curtisii
C	Beet	Cercospora beticola
C	Celery (Late blight)	Septoria apiicola
C	Cherry	Coccomyces hiemalis
C	Crucifers	Pseudocercosporella capsellae
C	Elm (black spot)	Gnomonia ulmea
C	(Leaf spot)	Gloeosporium ulmicola
C	Grape	Phomopsis viticola
C	Grasses/cereals	Helminthosporium spp.
C	Iris	Mycosphaerella macrospora
C	Many plants	Alternaria spp.
C	" "	Cercospora spp.
C	" "	Phyllosticta spp.
C	" "	Pleospora herbarum (Stemphylium botryosum--imp. stage)
C	Olive (Peacock spot)	Cycloconium oleaginum
C	Pansy	Centrospora acerina
C	Pea/vetch	Ascochyta pisi
C	Pear/quince/ Raphiolepis	Fabraea maculata (Entomosporium maculatum--imp. stage)
C	Potato (Late blight)	Phytophthora infestans
C	Rose (Black spot)	Diplocarpon rosae
C	St.Augustine grass	Piricularia grisea
C	Strawberry	Mycosphaerella fragariae
C	Sycamore	Mycosphaerella alni
C	Walnut (Downy leaf-spot)	Microstroma juglandis
C	Lettuce drop	Sclerotinia sclerotiorum
Q	Mal secco of citrus	Deuterophoma tracheiphila
C	Neck rot of onion	Botrytis allii
C	Needle cast of pine	Elytroderma deformans
C	" " " "	Lophodermium pinastri
B	Oak root fungus	Armillaria mellea
A	Oak wilt	Ceratocystis fagacearum
C	Onion smudge	Colletotrichum circinans
A	Ozonium root rot	Phymatotrichum omnivorum
C	Peach leaf curl	Taphrina deformans
B	Pear-juniper rust	Gymnosporangium fuscum
Q	Persimmon wilt	Cephalosporium diospyri
C	Pink patch of grasses	Corticium fuciforme
C	Pink kernel rot of corn	Gibberella moniliformis
C	Pink root of onion	Pyrenochaeta terrestris
C	Pink rot/bud rot of palm	Gliocladium vermoeseni
A	Potato wart disease	Synchytrium endobioticum

	POWDERY MILDEW	
C	Apple/pear/quince	Podosphaera leucotricha
C	Cereals/grasses	Erysiphe graminis
C	Cucurbits	Erysiphe cichoracearum
C	Euonymus	Oidium euonymi-japonici
C	Grape	Uncinula necator
C	Legumes	Erysiphe polygoni
C	Lilac	Microsphaera alni
C	Oak	Sphaerotheca lanestris
C	"	Microsphaera alni
C	Peach	Podosphaera oxycanthae
C	"	Sphaerotheca pannosa
C	Stone fruits	Podosphaera oxycanthae
C	Tomato	Leveillula taurica
B	Powdery scab of potato	Spongospora subterranea
D	Projectile fungus (saprophytic)	Sphaerobolus spp.
C	Red band needle blight of pine	Scirrhia pini (Dothistroma pini--imp. stage)
B	Red stele of strawberry	Phytophthora fragariae
C	Red thread/pink patch of grasses	Corticium fuciforme
C	Rhizome rot of iris	Botryotinia convoluta
Q	Rice blast	Piricularia oryzae
C	Rice kernel spot	Khuskia oryzae
C	Ringspot on crucifers	Mycosphaerella brassicicola
	ROOT ROT	
C	Avocado	Phytophthora cinnamomi
C	Annosus root disease	Fomes annosus
B	Armillaria root rot	Armillaria mellea
C	Bean (Black root rot)	Thielaviopsis basicola
C	Celery (Pink root)	Pyrenochaeta terrestris
C	Cereals (Foot rot)	Micronectriella nivalis
C	(Take-all)	Gaeumannomyces graminis
C	Corn	Gibberella moniliformis
C	"	Gibberella zeae
C	Cotton (Black root rot)	Thielaviopsis basicola
C	Cucurbits (Black root rot)	Thielaviopsis basicola
B	Dematophora rot	Rosellinia necatrix
C	Fruit trees	Poria spp.
C	Fusarium root rot	Fusarium oxysporum
C	" " "	Fusarium solani
B	Garlic (White rot)	Sclerotium cepivorum
C	Grasses	Micronectriella nivalis
C	Iris (Rhizome rot)	Botryotinia convoluta
C	Onion (Pink root)	Pyrenochaeta terrestris
B	(White rot)	Sclerotium cepivorum
A	Ozonium	Phymatotrichum omnivorum
C	Radish (Black root)	Aphanomyces raphani
B	Strawberry (Red stele)	Phytophthora fragariae
B	Southern blight	Sclerotium rolfsii

C	Trees/shrubs	Phytophthora cinnamomi
C	Turfgrass	Curvularia spp.
C	"	Helminthosporium spp.
C	"	Rhizoctonia solani
C	Watermold root rot	Phytophthora spp.
C	Watermold root rot	Pythium spp.
C	Rot of sweet potato/ cucurbits	Rhizopus stolonifer
	RUST	
C	Alfalfa	Uromyces striatus
A	Aloe	Uromyces aloes
C	Anemone	Tranzschelia discolor
C	Barberry	Puccinia graminis
C	Beet	Uromyces betae
C	Birch	Melampsoridium betulinum
C	Brambles (Orange rust)	Gymnoconia peckiana
C	(Stem rust)	Kuehneola uredinis
C	Broadbean/pea/vetch	Uromyces fabae
A	Cedar-apple	Gymnosporangium juniperi-virginianae
	Cereals/grasses	
C	(Leaf rust)	Puccinia recondita
C	(Stem rust)	Puccinia graminis
C	(Stripe rust)	Puccinia striiformis
	Chrysanthemum	
Q	(White rust)	Puccinia horiana
C	Crucifers (White rust)	Albugo candida
C	Fuchsia	Pucciniastrum epilobii
C	Geranium	Puccinia pelargonii-zonalis
A	Hawthorn-juniper	Gymnosporangium confusum
C	Hollyhock	Puccinia malvacearum
C	Iris	Puccinia iridis
C	Mahonia	Cumminsiella mirabilissima
C	Mock strawberry	Frommea obtusa f.sp. duchesneae
Q	Orchid	Uredo behnickiana
C	Pear	Gymnosporangium libocedri
B	Pear-juniper	Gymnosporangium fuscum
C	Pine (Comandra blister rust)	Cronartium comandrae
B	(White pine blister rust)	Cronartium ribicola
C	(Western gall rust)	Peridermium harknessii
C	Prunus spp.	Tranzschelia discolor
C	Quince	Gymnosporangium clavipes
	Rhododendron	
C	(Common rust)	Chrysomyxa piperiana
C	(European rust)	Chrysomyxa rhododendri
C	Rose	Phragmidium mucronatum
C	Safflower	Puccinia carthami
C	Snapdragon	Puccinia antirrhini
C	Sorghum	Puccinia purpurea
	SCAB	
C	Almond	Fusicladium carpophilum

C	Apple	Venturia inaequalis
C	Cucurbits	Cladosporium cucumerinum
Q	Lima bean	Elsinoe phaseoli
C	Pear	Venturia pirina
C	Photinia	Fusicladium photiniicola
C	Potato (common scab)	Streptomyces scabies
B	(Powdery scab)	Spongospora subterranea
C	Pyracantha	Spilocaea pyracanthae
C	Sour orange	Elsinoe fawcetti
A	Sweet orange	Elsinoe australis
Q	Sweet potato	Elsinoe batatas
C	Stone fruits	Cladosporium carpophilum
	SEEDLING ROT	
	Cereals/grasses	
C	(Snow mold, seedling blight)	Micronectriella nivalis
C	(Take-all)	Gaeumannomyces graminis
C	Corn	Gibberella zeae
C	Crucifers	Leptosphaeria maculans
C	Pea	Mycosphaerella pinodes
	Various plants	
C		Fusarium roseum
C		Fusarium solani
C		Macrophomina phaseoli
C		Pythium spp.
C		Phytophthora spp.
C		Thielaviopsis basicola
C	Septoria blotch of wheat	Leptosphaeria nodorum
C	Shothole of stone fruits	Coryneum beijerinckii
C	Silver leaf of stone fruits	Stereum purpureum
	SMUT	
	Barley	
C	(Covered smut)	Ustilago hordei
C	(Loose smut)	Ustilago nuda
	Corn	
C	(Common smut)	Ustilago maydis
C	(Head smut)	Sphacelotheca reiliana
C	Oats (Loose smut)	Ustilago avenae
B	Onion	Urocystis cepulae
	Rice	
Q	(Kernel smut)	Neovossia horrida (=Tilletia barclayana)
A	(Leaf smut)	Entyloma oryzae
	Sorghum	
C	(Covered smut)	Sphacelotheca sorghi
C	(Head smut)	Sphacelotheca reiliana
	Wheat	
Q	(Dwarf bunt)	Tilletia controversa
A	(Flag smut)	Urocystis agropyri (=U. tritici)
A	(Karnal bunt)	Tilletia indica (=Neovossia indica)
C	(Loose smut)	Ustilago nuda

C	(Stinking smut)	Tilletia caries
C	Snow mold of cereals/ grasses	Micronectriella nivalis (Fusarium nivale--imp.stg.)
D	Sooty mold	Capnodium spp.
B	Southern root rot, southern blight	Sclerotium rolfsii
C	Speckled leaf blotch of wheat	Septoria tritici
C	Spring black stem of alfalfa	Phoma medicaginis (=Ascochyta imperfecta)
C	Stem-end rot of citrus fruits	Diaporthe citri
C	Stem rot of rice	Leptosphaeria salvinii (Sclerotium oryzae--imp.stg.)
C	Strawberry leaf spot	Mycosphaerella fragariae
A	Sweet orange scab	Elsinoe australis
C	Sweet potato black rot	Ceratocystis fimbriata
C	Sweet potato scurf	Monilochaetes infuscans
C	Take-all of cereals	Gaeumannomyces graminis
A	Texas root rot	Phymatotrichum omnivorum
C	Tomato leaf mold	Cladosporium fulvum
C	Twig blight of woody plants	Gibberella lateritium (Fusarium lateritium--imp.stg.)
B	White rot of onion/ garlic	Sclerotium cepivorum
Q	White rust of chrysanthemum	Puccinia horiana
C	White rust of crucifers	Albugo candida
	WILT	
C	Carnation	Phialophora cinerescens
C	Fusarium wilt	Fusarium oxysporum
A	Oak	Ceratocystis fagacearum
A	Palm	Fusarium oxysporum (Phoenix palm pathotype)
Q	Persimmon	Cephalosporium diospyri
C	Verticillium wilt	Verticillium albo-atrum
C	" "	Verticillium dahliae
C	Walnut branch wilt	Hendersonula toruloidea

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF PLANT INDUSTRY
12/01/84

PEST RATING LIST - PLANT PATHOGENS: FUNGI

"A" - An organism of known economic importance subject to state (or commissioner when acting as a state agent) enforced action involving eradication, quarantine regulation, containment, rejection, or other holding action.

Ceratocystis fagacearum	Oak wilt
Ceratocystis ulmi	Dutch elm disease
Elsinoe australis	Sweet orange scab
Endothia parasitica	Chestnut blight
Entyloma oryzae	Leaf smut of rice
Fusarium oxysporum (Phoenix palm pathotype)	Fusarium wilt of palm
Gymnosporangium confusum	Hawthorn-juniper rust
Gymnosporangium juniperi-virginianae	Cedar-apple rust
Neovossia indica	Karnal bunt of wheat
Phymatotrichum omnivorum	Ozonium root rot
Synchytrium endobioticum	Potato wart disease
Urocystis agropyri	Flag smut of wheat
Uromyces aloes	Aloe rust

"B" - An organism of known economic importance subject to eradication, control or other holding action at the discretion of the individual county agricultural commissioner, *or* subject to state endorsed holding action and eradication only when found in a nursery.

Armillaria mellea	Oak root fungus
Colletotrichum lindemuthianum	Bean anthracnose
C onartium ribicola	White pine blister rust
Gymnosporangium fuscum	Pear-juniper rust

Phytophthora fragariae	Red stele of strawberry
Plasmodiophora brassicae	Club root of crucifers
Rosellinia necatrix	Dematophora root rot
Sclerotium cepivorum	White rot of onion/garlic
Sclerotium rolfsii	Southern root rot
Spongospora subterranea	Powdery scab of potato
Urocystis cepulae	Onion smut

"Q" - An organism or disorder requiring temporary "A" action pending determination of a permanent rating. The organism is suspected to be of economic importance but its status is uncertain because of incomplete identification or inadequate information.

Anisogramma anomala	Eastern filbert blight
Cephalosporium diospyri	Persimmon wilt
Deuterophoma tracheiphila	Mal secco of citrus
Elsinoe batatas	Sweetpotato scab
Elsinoe phaseoli	Lima bean scab
Guignardia citricarpa	Black spot of citrus
Melanomma glumarum	Glume blotch of rice
Monilinia fructigena	European brown rot
Neovossia horrida	Kernel smut of rice
Peronosclerospora sorghi	Downy mildew of corn/ sorghum
Piricularia oryzae	Rice blast
Puccinia horiana	White rust of chrysanthemum
Sclerophthora macrospora	Downy mildew of rice/ small grains
Tilletia controversa	Dwarf bunt of wheat
Uredo behnickiana	Orchid rust