

January 1982

CALIFORNIA

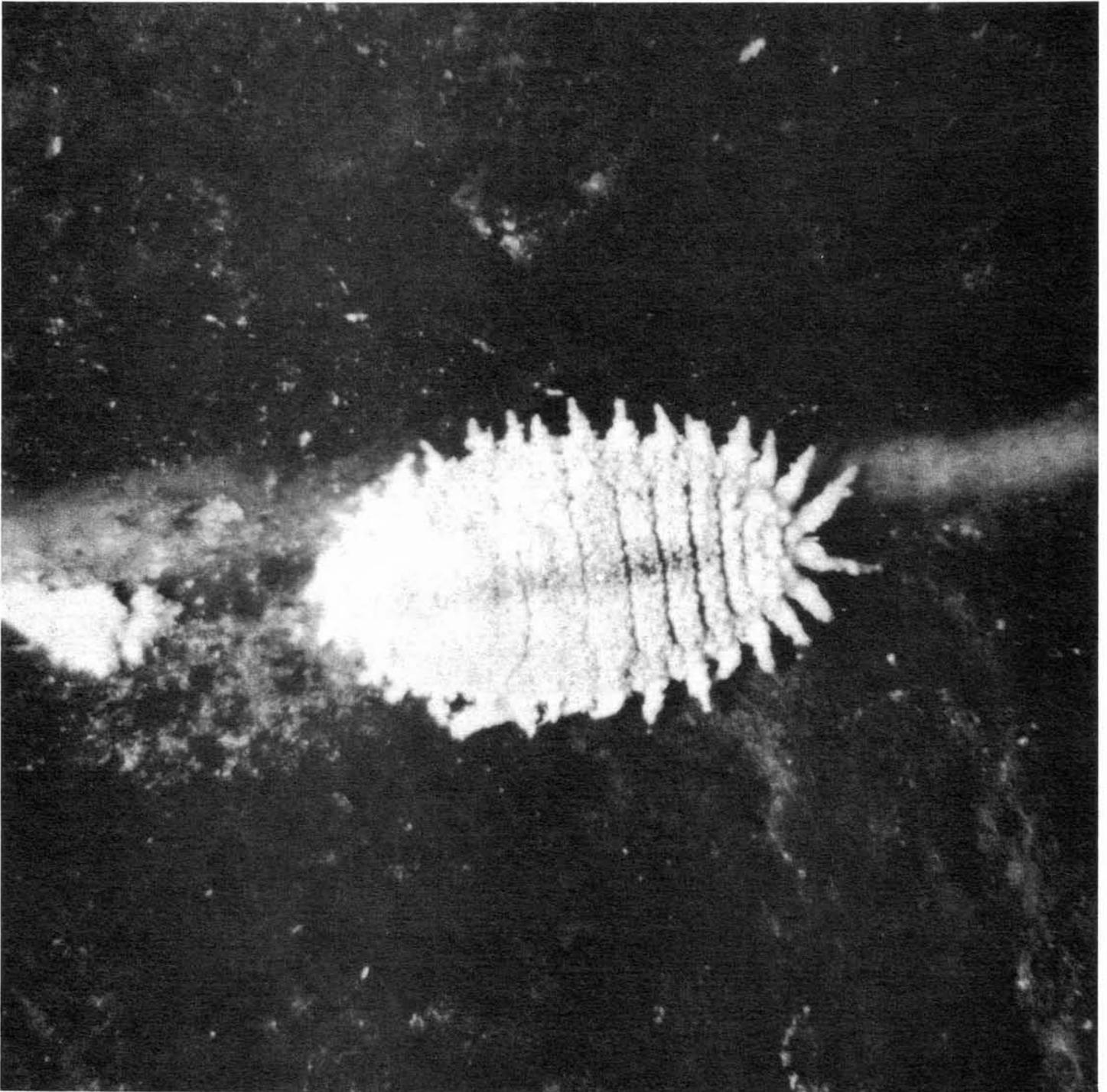
Vol. I, No. 1

# PLANT PEST AND DISEASE REPORT

PUBLISHED MONTHLY BY THE DEPARTMENT OF FOOD AND AGRICULTURE  
DIVISION OF PLANT INDUSTRY • DR. CHARLES S. PAPP AND T. E. TIDWELL, EDITORS

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An adult of the citrus mealybug (*Planococcus citri*), a common pest of ornamental plants and citrus crops.  
(Photo by Ray Gill)

## Citrus Mealybug *Planococcus citri* (Risso)

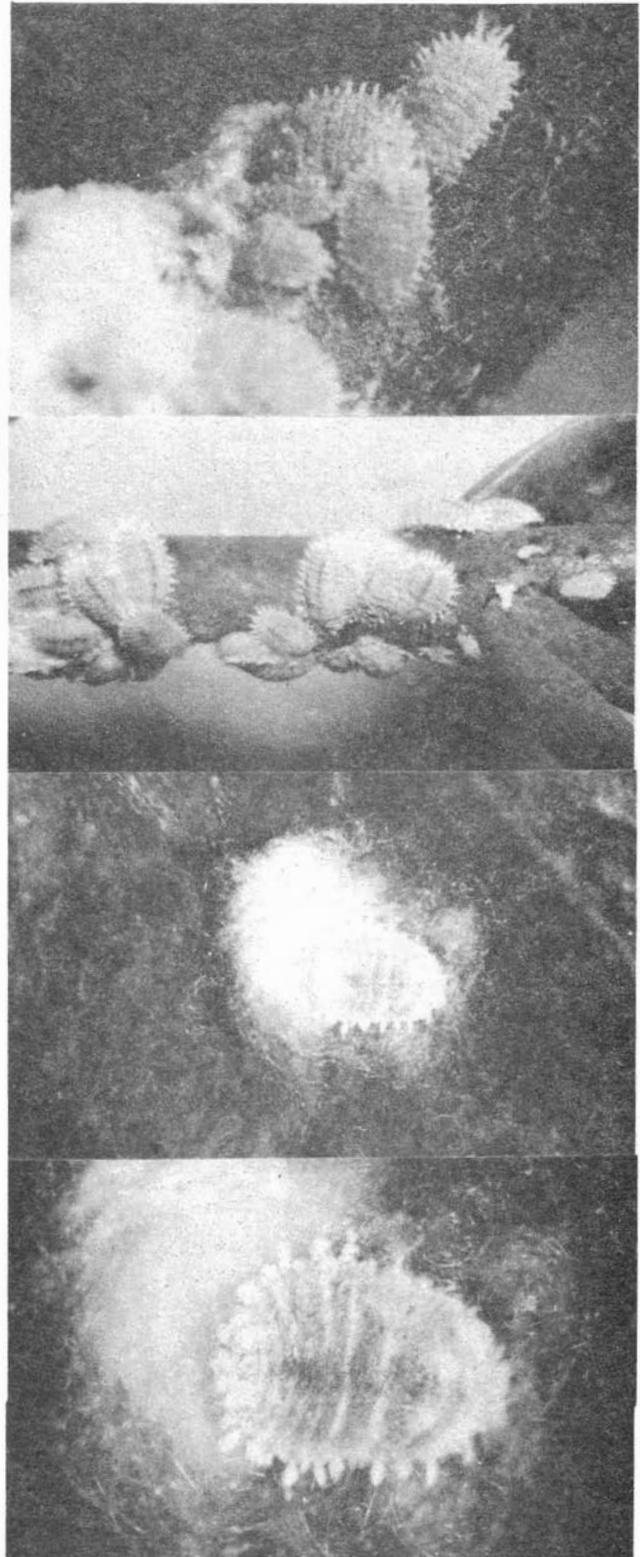
Ray Gill

Citrus mealybug is a serious pest of greenhouse and indoor ornamental plants world wide, and on outdoor ornamental plants in more tropical and subtropical climates. It is a pest of citrus in the Mediterranean area, in Florida, and in coastal Southern California, although in California it is adequately controlled by Leptomastix wasps and by Cryptolaemus ladybeetles. Injury caused by the mealybug is typical of this family of scale insects. Production of honeydew and sooty mold, unsightliness, debilitation of the host, and reduced production and quality of fruit are all caused by this species. For an excellent account of the effects of this species on citrus see Clausen (1915) and Avidov & Harpaz (1969). Citrus mealybug has also been implicated as a vector in several virus-like diseases of tobacco and cacao.

The mealybugs will be found on all aerial parts of the host, although a root infesting strain is mentioned in the literature. There are three to five overlapping generations per year on citrus out-of-doors and probably more generations on indoor plants. Specimens out-of-doors usually overwinter as eggs, but all stages can overwinter. The species is usually biparental, although a parthenogenic race is known.

Citrus mealybug has an apparently endless host list. It is a pest of Citrus in the coastal areas of Southern California and elsewhere, but its favorite host is probably Coleus.

Adult females are 2 to 4 mm long. Adults are covered with a uniform layer of mealy white wax except for the transverse segmental lines and



Explanation of figures: →

NEW PUBLICATION

a well defined band of little or no wax down the midline, giving the appearance of a longitudinal dorsal stripe. The marginal wax filaments are wedge-shaped or triangular, particularly on the abdomen. There are 17 or 18 of these marginal wax filaments on each side, including the caudal pair which are but little longer than the other filaments. The body and ostiolar fluids are yellow or orange in color. A loose, white, cottony caudal ovisac is formed.

Citrus mealy bug is nearly cosmopolitan in distribution on indoor and glass-house plants. In the United States it occurs outdoors in California and in the Southeast. It was a pest of citrus in Florida for many years, and according to Clausen, was probably introduced into California Florida about 1880. It is thought to be native to China.

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FREE COPIES AVAILABLE. INDEX OF PLANT VIRUS DISEASES IN CALIFORNIA by Dennis Mayhew was published in early 1978. This little book (6 x 9" page size, 43 pages, color cover) is Publication No. 78-2 of Laboratory Services, Plant Pathology Laboratory. This publication provides information about plant diseases of virus or mycoplasma etiology that are known to occur in California but may never have been formally published. Copies are still available free of charge. Please direct your request to Dr. Mayhew, Laboratory Services - 340 1220 N Street, Sacramento, California 95814. If you need more than one copy, please do not hesitate to say so.

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Top to bottom:

- Cluster of immature citrus mealybugs.
- Cluster of mature female citrus mealybugs.
- Adult female beginning the formation of the ovisac or egg mass.
- Same, close up.

GENERAL NEMATOLOGY, by Armand Maggenti. - Springer Verlag, New York, Heidelberg, Berlin, 1981. I - X + 372 pages (6 x 9"), 135 figures, hard cover. Part of the "Springer Series in Microbiology". (ISBN No. 0-387-90588-X). Price: \$29.

I am delighted to introduce this handsomely produced book by the internationally known nematologist Dr. Maggenti, Professor of Nematology at the University of California, Davis. I followed its preparation during the past years with a great interest, yet, the final product surprised me a great deal. Dr. Maggenti is presenting a unique survey in an easily comprehended phylogenetic sequence by illustrating the similarities and sequences of development of morphological characteristics of nematodes of every habitat. He describes in detail the evolutionary development of parasitic nematodes from free-living forms. Because this volume covers plant, insect and animal parasites and their free-living counterparts, the reader can view interrelationships among various groups.

Those who do not know Dr. Maggenti as a teacher of this science can have an enjoyable time reading this book and can get acquainted with his unique method of presenting scientific facts in an easily understandable way. This book is a must in your library.

Magnificently illustrated by the author with 135 figures, which are alone a great contribution toward training in the science of Nematology.

---CSP.

Manuscripts are welcome. Address correspondence on insect pests to Dr. Charles S. Papp; on plant diseases to T. E. Tidwell:

Division of Plant Industry, R. 340  
Sacramento, CA 95814  
Phone (916) 445-4521

## HIGHLIGHTS

### *Insects*

GYPSY MOTH (Lymantria dispar) - (A). - 30 collections since the latter part of November through December. In parenthesis the name of the state is indicated if the origin of the specimen was positively traced. Information arranged by counties:

San Diego County: - San Diego, two collections, egg mass and larvae, dead (Massachusetts); La Mesa, dead larva and pupa (New Jersey); El Cajon, dead egg masses (New Jersey); Spring Valley, dead larvae and pupae (Connecticut).

Orange County: - Orange, live egg mass and larva on firewood (New Jersey); Laguna Hills, larval skin on redwood bench (?); egg mass, larva, pupa and adult, presumably dead on driftwood, ladder, boat, barrel (New York); San Juan Capistrano, fence on backyard, egg mass, larva and pupa; area supposedly treated, most eggs of mass had already hatched, leaving empty shells - not dead eggs; Santa Ana, dead larva, pupa and adult on patio chair (Pennsylvania); Mission Viejo, larva and pupa found on patio furniture (Connecticut).

Los Angeles County: - Claremont, live and dead egg mass, larvae and pupae found on wooden picnic table (New Jersey); Rancho Palos Verdes, dead egg mass found on stone mushroom in garden (New Jersey); Woodland Hills, dead larva and pupa located on redwood picnic benches (Massachusetts); La Canada, live and dead egg masses, larvae and pupae found on a boat trailer (Massachusetts); Chatsworth, dead pupa and larva on redwood table (New York).

Santa Barbara County: - Two collections in Lompoc. Cast skins and pupa cases found on a tool shed, and dead larva and pupa located on a

grass scythe (both from New York); another find of live egg masses, larvae and pupae found on a redwood planter (Massachusetts). Los Gatos, live egg masses, larvae and pupae found on lawn furniture and child's toys (Massachusetts). Mt. View, live and dead egg masses, larvae, pupae and adults found on a chair, basket, pine cones, paper bags, etc. (New Jersey).

San Mateo County: - Redwood City, dead larvae and pupae found on fender well of tricycle and picnic table (New Hampshire). Foster City, live egg mass found on park bench (Pennsylvania).

Contra Costa County: - Live and dead egg masses and larvae found on patio table in Walnut Creek (Connecticut).

Toulumne County: - Jamestown, egg masses and pupa (condition not reported) found on outdoor commodities (New Jersey).

San Joaquin County: - Manteca, live egg masses found on outdoor ladder (New York). Stockton, dead larva found on picnic table (New York).

Merced County: - Merced, egg masses and larvae (condition not reported) found on work bench (New Jersey).

All of the above identifications made by T. D. Eichlin and R. Somerby.

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MEDITERRANEAN FRUIT FLY (Ceratitis capitata) - (A). - San Mateo, November 12. Two adult males found in Jackson Trap (on olive). Green dye present in head capsule of both; internal organs and muscle tissue desiccated; ovaries irradiated (det. by K. Corwin).

APPLE MAGGOT (Rhagoletis pomonella) - (A). - West Covina, November 11. Live larvae found in apple recently shipped from Illinois (det. by K. Corwin).

MEXICAN FRUIT FLY (Anastrepa ludens) - (A). - 17 collections, all in traps. All sterile specimens, and all trapped in San Diego County, in the vicinity of San Isidro, in experimental McPhail and Jackson traps: 14 males and 26 females (det. by K. Corwin).

A BOSTRICHID BEETLE (Synoxylon sexdentatum) - (Q). - Formerly rated "X". - Hayward, Alameda County, September 17, dead specimens found in maple furniture (det. by T. Seeno, conf. on December 21 by J. M. Kingsolver, USDA).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - (Q). - Four collections on a Freezer, on lawn chair, iron work and wooden table, all shipped from South Dakota (det. by R. Somerby).

EUROPEAN CORN BORER (Ostrinia nubilalis) - (A). - Los Angeles, December 4, live larvae found in corn cobs shipped from Missouri (det. by R. Somerby). - Tracy, San Joaquin Company, December 8, live larvae found in corn stem from Iowa (det. by T. Eichlin).

CHINESE ROSE BEETLE (Adoretus sinicus) - (Q). - One live adult specimen found in Stockton on December 23 by T. Watkins on cut flower from Maui, Hawaii (det. by A. R. Hardy).

TAHITIAN COCONUT WEEVIL (Diocalandra taitensis) - (Q). - Live adult specimen found in coconut in San Luis Obispo on November 5 by R. Skalski; host from Hawaii (det. by F. G. Andrews and T. N. Seeno).

A WEEVIL (Orchidophilus sp.) - (Q). - Origin of host unknown. Live adult specimens found in stem and tubers of Vanda and Paphiopedilum orchids in

Anaheim by R. Allenequi (det. by T. N. Seeno).

A TORYMID SEED CHALCID (Bootanellus sp.) - (X). - Vista, San Diego County, October 14, H. Metcalf found infested seeds of Casuarina stricta recently shipped to a seed company from Kingston, Tasmania, Australia. Further examinations proved that there were some seeds with 30 to 50 adults of this chalcid. Specimens were sent to a specialist, Z. Boucek, British Museum of Natural History, for further examination. Dr. Boucek stated (December 10) that the species is probably new to science (det. by M. Wasbauer and Z. Boucek, BMNH).

AN ANT (Paratrechina fulva) - (Q). - Live adult specimens found on December 30 by Kellam and Murphy in Los Angeles on Areca palm (det. by M. Wasbauer).

LITTLE FIRE ANT (Wasmannia auropunctata) - (Q). - Live adults found by T. Smith in El Cajon, San Diego County on Ficus Decora recently shipped from Florida (det. by M. Wasbauer).

BIG HEADED ANT (Pheidole megacephala) - (Q). - Four collections of this ant, all from San Joaquin County: Lodi with two collections on November 25, where S. K. Barnes found live adults on cut flowers from Hawaii; Oakdale, December 22, S. K. Barnes collected them again on cut flowers from Hawaii; December 23, T. Watkins found specimens in Stockton on cut flowers from Maui, Hawaii (det. by M. Wasbauer).

CLOUDYWINGED WHITEFLY (Dialeurodes citrifolii) - (A). - Los Angeles County: Hermosa Beach, November 13. An average of 7 adult specimen found per lemon leaf by Mr. Kellam; host originally from Iowa (det. by R. Gill).

A MEALYBUG (Pseudococcus elisae) - (Q). - San Diego County, El Cajon, November 12, T. Smith found live adults on

Ficus decora shipped from Florida. Several other finds of Pseudococcus should be mentioned that are undescribed species: all from Los Angeles County. Culver City, November 19, an average of five adults per root of an Orchid, shipped from Hawaii; Los Angeles with two collections, one on November 20 with a count of five adults per root on Orchids displayed in lava rock, and on December 9, 10 nymphs and adults per root of another Orchid from Hawaii (det. by R. Gill).

MAGNOLIA WHITE SCALE (Pseudaulacaspis cockerelli) - (A). - Los Angeles County: Panorama City, December 22, two nymphs and adults per leaf of Chrysalidocarpus lutescens from Florida, and on the 24th, 20 adults per leaf of Aracea palm. - Santa Barbara County: Santa Barbara, January 4, specimens (age and number not reported) found on Phoenix palm. San Luis Obispo County: San Luis Obispo, November 11, specimens collected on Coconut cap from Hawaii. Santa Clara County: Mt. View, December 28, live adult specimens found on Areca palm from Florida. San Mateo County: Half Moon Bay, two collections on December 3, specimens on Chrysalidocarpus lutescens shipped from Florida. Contra Costa County: Richmond, November 30, specimens found again on Areca palm of Florida origin (det. by R. Gill).

A MEALYBUG (Rhizoecus americanus) - (Q). - Areca palm and Chrysalidocarpus lutescens produced series of nymphs and adults in Richmond, Contra Costa County on December 7 and 14; Areca palm found with several adult specimens in Los Angeles on December 30. All hosts originated from Florida (det. by R. Gill).

WOOLLY WHITEFLY (Aleurothrixus floccosus) - (A). - San Diego County, La Mesa, December 23, an average of 15 adults per leaf of Citrus (lemon) was found by P. Selsted. Ventura County,

Ojai; J. L. Hillus located numbers of eggs and nymphs between December 2 and 29 on the same host. Alameda County, Oakland, Mr. Musso collected specimens on leaves of tangerines shipped from Vista, San Diego County (det. by R. Gill).

GREEN SHIELD SCALE (Pulvinaria psidii) - (A). - Nymphs found on cut flowers in San Joaquin County, Lodi, by S. K. Barnes who also reported the plants as recently shipped from Hawaii. San Diego County, Escondido, one egg mass and adult per leaf of Ficus benjamina observed by R. Vasques (det. by R. Gill).

A MEALYBUG (Dysmicoccus mackenziei) - (Q). - San Diego County, La Mesa, December 17, M. Dorsey found specimens of this mealybug on Tillandsia imported from Mexico (det. by R. Gill).

MINING SCALE (Howardia biclavis) - (A). - Adult specimens found on November 24 in Richmond, Contra Costa County by Sparkman and Ziegler on Ficus benjamina shipped from Florida (det. by R. Gill).

FLORIDA WAX SCALE (Ceroplastes floridensis) - (Q). - Contra Costa County, Richmond, November 24. Live adults found on leaves of Ficus benjamina by Mr. Sparkman. Host imported from Florida (det. by R. Gill).

RED WAX SCALE (Ceroplastes rubens) - (A). - In Santa Barbara on January 4, S. Piper found adult specimens feeding on Aglaonema plnts of Hawaiian origin. (det. by R. Gill).

A MITE (Aculops fuchsiae) - (Q). - San Mateo County, Menlo Park, November 6, F. Sampson found live specimens on buds, blossoms, leaves, and growing tips of Fuchsia (det. by T. Kono).

A SNAIL (Bradybaena similaris) - (Q). - Two collections in San Diego County, El Cajon, November 12, and December 30

by T. Smith. In both cases adults found associated with Ficus decora (det. by T. Kono).

A SNAIL (Vaginulus occidentalis) - (Q). - From Puerto Rico, found alive on Dracaena massangeana on December 15 by M. Croce in Lodi, San Joaquin County (det. by T. Kono and R. Munkittrick).

#### Weeds

TANSY RAGWORT (Senecio jacobaea) - (B). - NEW RECORD for Nevada County and the Sierra Nevada. July 18, 1981, A. H. Shapiro and W. C. Spaulding collected specimens in Emigrant

Gap, below Lake Spaulding (det. by A. M. Shapiro, verified by J. L. Strother, U.C.).

DIFFUSE KNAPWEED (Centaurea diffusa) - (A). - Washington, Kern County, Kern County, January 5, J. Marks found parts of this plant in a shipment of beehives and pallets. Mature achenes present (det. by D. Barbe).

JAPANESE KNOTWEED (Polygonum cuspidatum) - (B). - Monterey County, Salinas, November 17, H. Agamalian and B. Oliver found this plant at a residence, grown as ornamentals. NEW county record (det. by D. Barbe).

## Boarder Station Interceptions

### Insects

#### BLYTHE:

APPLE MAGGOT (Rhagoletis pomonella) - (A). - Three interceptions, all in mid-November, from Oregon, Iowa, and Massachusetts (det. by K. Corwin).

HICKORY SUCKWORM (Laspeyresia caryana) - (A). - Five interceptions during the second half of November, two from Oklahoma, and three from Texas (det. by T. Eichlin).

#### MT. SHASTA:

APPLE MAGGOT (Rhagoletis pomonella) - (A). - Twelve interceptions, all between mid-November and mid-December. one from Iowa, two from Washington, and nine of Oregon origin (det. by K. Corwin).

JAPANESE MEALYBUG (Planococcus sp. prob. kranunhiae) - (Q). - Immature stages, found on Unshu orange in an automobile from British Columbia en route to San Jose, on December 4 (det. by R. Gill).

A MEALYBUG (Planococcus sp.) - (A). - Immature stages found on Unshu oranges, in two occasions from British Columbia, and one from Washington, with destinations Sacramento, Los Angeles and Palm Springs (det. by R. Gill).

A MEALYBUG (Pseudococcidae) - (Q). - Seven interceptions, one from Oregon, two from Washington, and four from British Columbia. In all cases, early or very stages found on Unshu oranges (det. by R. Gill).

YANON SCALE (Unaspis yanonensis) - (Q). - Fifteen interceptions, all during the month of December. From Canada: nine finds on Unshu oranges and Chinese mandarines purchased in British Columbia, and one in Alberta on Oranges. From Washington: four interceptions, three on Unshu and one on Chinese mandarines; one from Oregon found on Onshu oranges (det. by R. Gill).

HOLLY LEAFMINER (Phytomyza ilicis) - (A). - Throughout November, December, into January 1982 a great number of cut holly was intercepted and found infested with the leafminer. All destined somewhere in California, most of them into the southern half of the State. As far as their origin is concerned, the interceptions may be summarized as follows:

from Alaska .....	1
from Canada (*) .....	7
from Washington .....	52
from Oregon .....	63

PINE TIP MOTH (Rhyacionia buoloana) - (A). - Live larvae of this Olethreutine moth found on pine trees purchased in Oregon, en route to Lakeport (det. by R. Somerby).

#### SMITH RIVER:

HOLLY LEAFMINER (Phytomyza ilicis) - (A). - Six interceptions, one in November, others in December on cut holly in passenger automobiles from Washington (1) and from Oregon (det. by K. Corwin).

#### TRUCKEE:

APPLE MAGGOT (Rhagoletis pomonella) - (A). - Live larvae found in apples from Kentucky, and also in apples from North Carolina on November 4 and November 30 respectively (det. by K. Corwin).

EUROPEAN CORN BORER (Ostrinia nubilalis) - (A). - Live larvae found in corn from Iowa on a pick-up truck on November 19. Additional live larvae located in Indian corn carried by an automobile of California registry on November 18. Vehicles were en route to Stockton and Mariposa, respectively (det. by T. Eichlin).

(\*) includes one each from Nova Scotia, and New Brunswick Provinces. A total of 123 interceptions (det. by K. Corwin).

GYPSY MOTH (Lymantria dispar) - (A). - Live egg masses found in mid-November on two vehicles, both from Connecticut destined to San Francisco and Washington State (det. by T. Eichlin).

#### TULELAKE:

HOLLY LEAFMINER (Phytomyza ilicis) - (A). - One interception in an automobile from Washington en route to Lake Tahoe on December 18 (det. by K. Corwin).

#### WINTERHAVEN:

HICKORY SUCKWORM (Laspeyresia caryana) - (A). - Two interceptions in automobiles returning to California, live larvae found in pecan on December 16. Vehicles destined to San Diego (det. by T. Eichlin).

#### YERMO:

APPLE MAGGOT (Rhagoletis pomonella) - (A). - Live larvae found in apples transported from Wisconsin to Los Angeles. Additional specimens found in apple cargo with apples from Indiana destined also to Los Angeles (det. by K. Corwin).

A TENT CATERPILLAR (Malacosoma sp.) - (Q). - Eggs of this Olethreutine moth found on a travel trailer from Idaho on November 15, en route to Whittier. One live cocoon found on recreational vehicle from New Hampshire destined to San Francisco on December 28. (det. by R. Somerby).

GYPSY MOTH (Lymantria dispar) - (A). - Two interceptions of egg masses and pupae on recreational vehicles. One from Pennsylvania on December 17, destined to Los Angeles, the other on December 16 from Massachusetts en route also to Los Angeles (det. by R. Somerby).

YANON SCALE (Unaspis yanonensis) - (Q). - December 16, Chinese man-

darins purchased in Saskatchewan found in a Canadian automobile on the way to Anaheim (det. by R. Gill).

#### Vertebrates

FERRET. - 12 interceptions in December. Mt. Shasta with eight (three from Washington, 2 from Oregon, one each from Arizona, Tennessee and Kansas). Truckee one specimen from Oregon. Yermo with two interceptions, two specimens from Idaho, and 1 from Nevada.

GERBIL. - Four interceptions, all at Mt. Shasta eight (specimens from Oregon, and three for Washington).

OWL. - One specimen at Mt. Shasta from Oregon.

QUAKER PARROT. - One specimen at Mt. Shasta from Oregon.

#### Weeds

DIFFUSE KNAPWEED (Centaurea diffusa) - (A). - All interceptions at Mt. Shasta. December 17, G. Leslie found seeds on

outside of beehives transported from Washington to Bakersfield (det. by J. Chesi). December 12, G. Leslie found another beehive shipment from Washington with seeds, en route to Bakersfield (det. by B. Hass). December 28, same (det. by J. Chesi). December 29, seeds found in plant included in a floral arrangement originating in Washington, destined to Santa Ana (det. by J. Chesi). December 30, another beehive shipment from Washington, destined to Delhi, produced seeds (det. by D. Barbe).

ONOPORDUM THISTLE (Onopordum sp.) - (A). - Mt. Shasta, December 20, R. C. Barbour intercepted this weed in a floral arrangement originating from Oregon, destined to Fresno (det. by B. Hass).

SPOTTED KNAPWEED (Centaurea malculosa) - (A). - Tulelake, December 27, M. Spooner found a floral arrangement in an automobile returning to California from Oregon, which contained mature achenes of this weed (det. by D. Barbe).

## SUMMARY OF GYPSY MOTH FINDS IN CALIFORNIA FROM JUNE 1981

Dr. Tom Eichlin, before he left for a two months period to do field work on the Gypsy Moth Project in the Santa Barbara area, left, at my request, his notes of records related to recent finds in California. In the CPPR (1981:81) I submitted Tom's list. The list is presented again here in more abbreviated form and contains recently acquired data. Dates: are of the day the identification was completed in the lab. In parenthesis the number refers to the number of specimens found. No detailed locations are presented

here, only the name of the communities arranged by Counties, in alphabetical order.

#### ALAMEDA COUNTY:

Pleasanton, VIII.14.1981 (1)

#### CONTRA COSTA COUNTY:

Clayton, VI. 19.1981. (1)

#### LOS ANGELES COUNTY:

Los Angeles, VI.22.1981. (1)

Windsor Hills, VI.27.1981. (1)

Torrance, VIII.3.1981. (1)

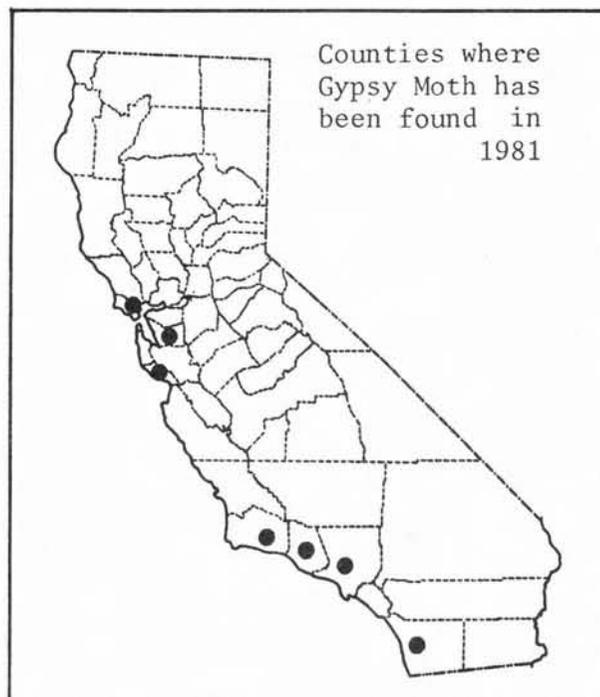
Topanga, VIII.10.1981. (1)

MARIN COUNTY:

Kentfield, VII.29.1981. (1)  
 Kentfield, VII.22.1981 (1)  
 Novato, VII.29.1981. (1)  
 Mill Valley, VII.29.1981. (1)  
 Novato, VIII.19.1981. (1)  
 Mill Valley, VIII.10.1981. (1)

SANTA BARBARA COUNTY:

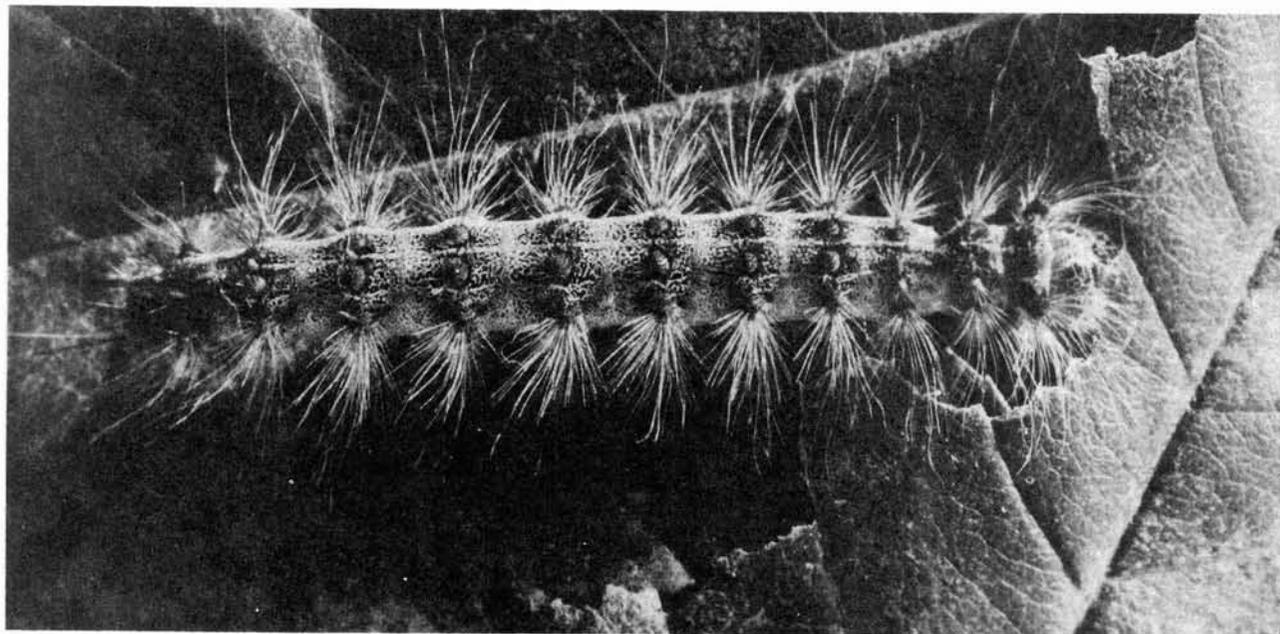
Montecito, VI.25.1981. (6)  
 Montecito, VII.3.1981. (1)  
 Montecito, VII. 3.1981. (1)  
 Montecito, VII.3.1981. (1)  
 Montecito, VII.3.1981. (3)  
 Santa Barbara, VII.21.1981. (1)  
 Santa Barbara, VII.21.1981. (1)  
 Montecito, VII.28.1981. (5)  
 Montecito, VII.28.1981. (1)  
 Montecito, VII.28.1981. (2)  
 Santa Barbara, VII.30.1981. (10)  
 Santa Barbara, VIII.4.1981. (3)  
 Montecito, VII.28.1981. (2)  
 Montecito, VII.28.1981. (3)

SANTA CRUZ COUNTY:

Santa Cruz, VIII.27.1981. (1)

VENTURA COUNTY:

Ojai, VI.24.1981. (1)  
 Oxnard, VIII.6.1981. (1)



Gypsy moth; full grown larva.

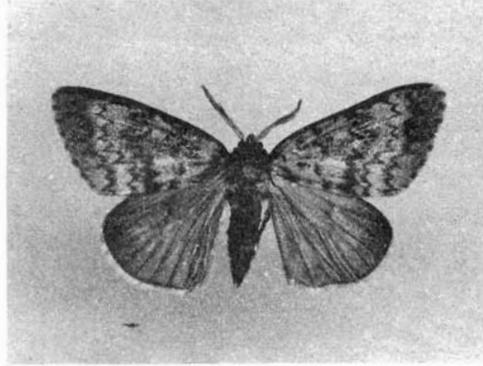
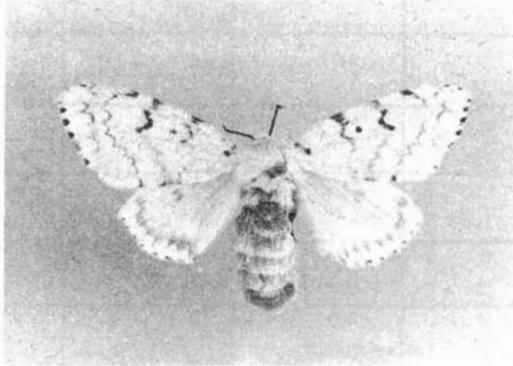
**OREGON AGRI-RECORD — WINTER, 1981:****Gypsy Moth . . .**

In survey operations this year, department entomologists supervised placement and monitoring of more than 3,000 traps for detection of gypsy moth in Oregon. Traps were placed throughout the state, primarily in major population centers.

More than 700 male moths were trapped in or near an infestation site in south Salem. This high number indicates a vigorous infestation has established itself in an area approximately two miles square. It includes residential, commercial and undeveloped natural areas. Additional detections of gypsy moth were made in Albany, Lake Oswego, Portland, and near Arlie in Polk County.

Trapping data this year indicates that the initial gypsy moth infestation in the Cinnamon Hills area of south Salem, which was sprayed with Orthene in the spring, has been brought under control. No male moths were trapped.

Control measures will be needed next year in the two-mile square infested area in south Salem. Failure to eradicate the infestation there could result in its spread throughout western Oregon. Although a final decision has not yet been made as to the type of treatment to be undertaken, it is likely that both ground and air application of chemicals will be needed.



Gypsy moth. - Upper left: the female; right the male (both wings spread)  
Lower left: egg mass; at right a male in natural position (wings are closed).

-- CSP photos.

## CALIFORNIA BLACK LIGHT TRAP REPORT

For the week ending 12-25-81, 1-1-82, 1-8-82

DATE	12-20-81	12-20-81	12-30-81 to 1-1-82	1-2-82	1-5-82
LOCATION	Manteca	Bellota	Manteca	Bellota	Bellota
TEMPERATURE	65-48		3 nights	rain	
ALFALFA LOOPER <i>Autographa californica</i>				Negative	
ARMYWORM <i>Pseudaletia unipuncta</i>		4	3		
BEET ARMYWORM <i>Spodoptera exigua</i>					
BLACK CUTWORM <i>Argrotis ipsilon</i>	1	2			
CABBAGE LOOPER <i>Trichoplusia ni</i>					
CLOVER CUTWORM <i>Scotogramme trifolii</i>					
CODLING MOTH <i>Laspeyresia pomonella</i>					
CORN EARWORM, (ETC.) <i>Heliothis zea</i>					
FALSE CELERY LEAFTIER <i>Udea profundalis</i>					
GRANULATE CUTWORM <i>Feltia subterranea</i>	20	4	26		
SALTMARSH CATERPILLAR <i>Estigmene acrea</i>					
SPOTTED CUTWORM <i>Amethes c-nigrum</i>					
SUGARBEET WEBWORM <i>Loxostege sticticalis</i>					
TOBACCO BUDWORM <i>Heliothis virescens</i>					
W. YELLOWSTRIPED ARMYWORM <i>Spodoptera praefica</i>					
VARIEGATED CUTWORM <i>Peridroma saucia</i>					1

## PEAR LEAF BLIGHT

James Smith

The disease commonly referred to as Pear Leaf Blight is caused by the fungus Fabraea maculata. Other common names used are Leaf Spot, Entomosporium Leaf Spot, Leaf Scald, Fruit Spot, and Quince Leaf Spot. Primary hosts are pear and quince. Cotoneaster, Photinia, apple, loquat, and others are less frequently attacked. The fungus is thought to have been introduced to North America from Europe or Asia during the 1800's. This disease should not be confused with the leaf blight stage of fire-blight, the bacterial disease caused by Erwinia amylovora, although the common names are similar.

Fabraea sp. is a fungus that forms apothecia on fallen leaves. Two-celled ascospores are released when the apothecia become wet. Usually, it is the conidial stage, Entomosporium maculatum, that is observed. Once seen, the distinctive four-celled conidia (Fig. A), with three of the cells bearing an appendage, are not easily forgotten. The insect-like appearance of the conidia resulted in the name Entomosporium.

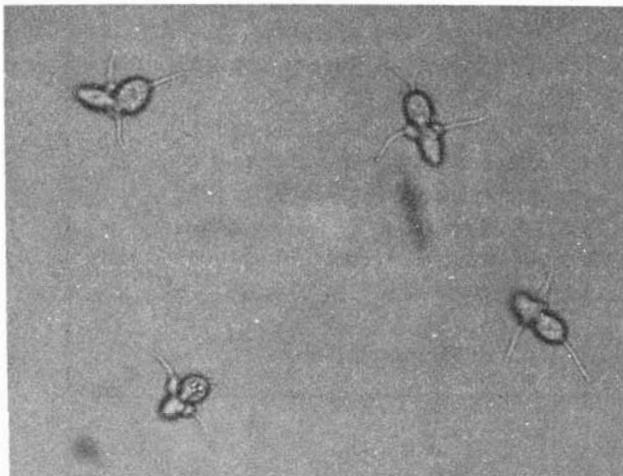


Fig. A. Microscopic view of four-celled conidia and appendages.

In the spring, conidia originate from overwintered twig cankers and old leaves. Initially, leaf symptoms are small, red to purple spots that later may expand to one-fourth inch diameter, becoming sunken, dark brown spots that have red borders (Fig. B).

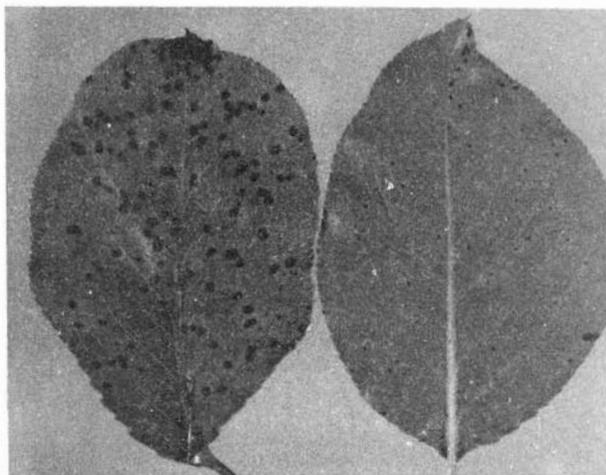


Fig. B. Early leaf symptoms (left-top of leaf, right: bottom of leaf).

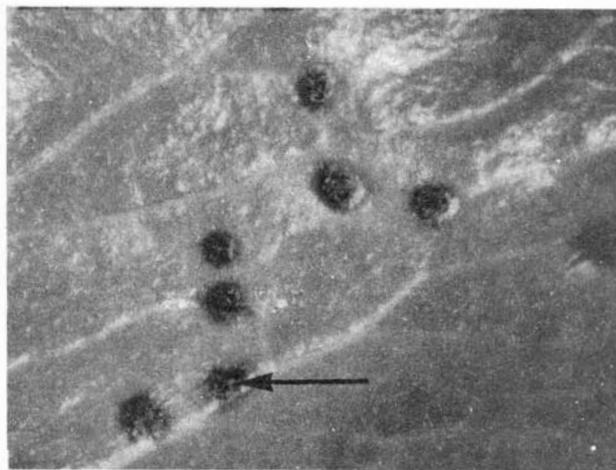


Fig. C. Close-up of leaf spots with spore bearing bodies (acervuli) and spore droplets (arrow).

The conidial spore bearing body is seen as a small black pimple that appears in the center of the leaf spots (Fig. C). The length of time from infection to conidial spore production is about one month. Defoliation occurs if foliar infections are numerous. Twig lesions form about mid-summer on current season's growth from indefinite purple or black areas that coalesce.

When diagnosing this disease in the field, remember that insect injury

such as pear blister mite may have somewhat similar symptoms but usually occur later in the season.

#### References

1. Anderson, Harry W., 1956. Diseases of Fruit Crops. McGraw Hill Book Co., New York. 501 pp.
2. Wescott, Cynthia, 1960. Plant Disease Handbook, Second Edition. D. Van Nostrand Co., New Jersey. 825 pp.

### *First Announcement*

#### **4th ANNUAL CALIFORNIA PLANT DISEASE CONFERENCE**

The 4th Annual California Plant Disease Conference will be held on September 23-24 at Woodlake Inn in Sacramento. This year's program will center on "Urban Plant Pathology," and there will be discussions on topics ranging from ornamentals to shade trees to turf. If you would like to participate, or if your company would like to help sponsor the conference, please write or call:

Dr. Robert Raabe, Program Chairman  
147 Hilgard Hall  
University of California  
Berkeley, CA 94720  
(415) 642-3950

Dr. Dennis Mayhew, Secretary  
Lab Services/Room 340  
1220 N Street  
Sacramento, CA 95814  
(916) 445-4521

Further information will be forthcoming

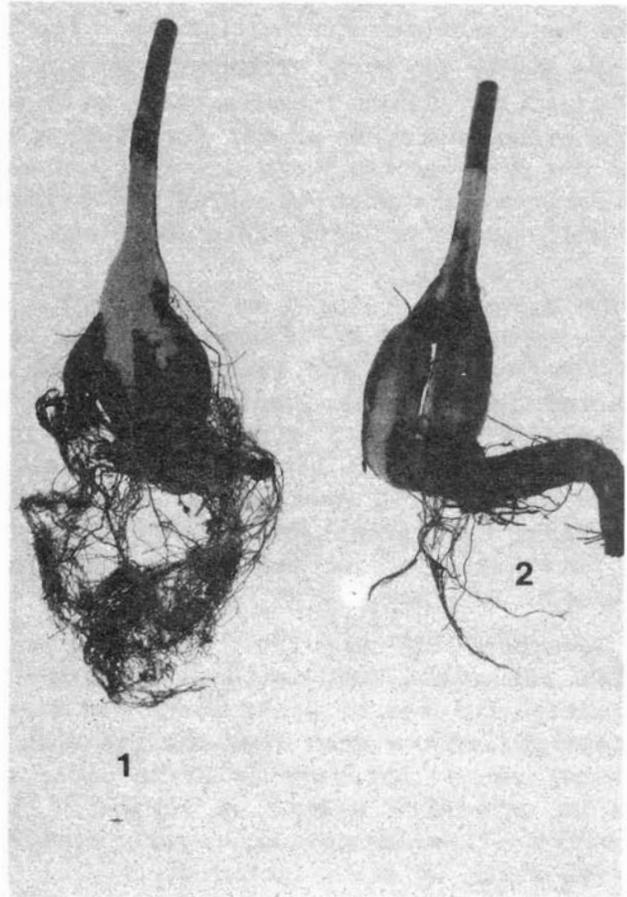
## *Phytophthora palmivora* on Bottle-Tree

H. S. Gill

A serious disease of a Bottle-tree (*Brachychiton populneum*), of the family Sterculiaceae, growing in a backyard planting was recently detected in Palm Springs, California. At a distance, the affected tree exhibited dull, yellowish-green rather than glossy, bright-green foliage. Closer microscopic examination revealed dark brown cankers on its trunk near the soil line. Roots were discolored and severely decayed.

The causal fungus was identified as an A<sup>2</sup> mating type (Morphological Form 1) of *Phytophthora palmivora* (Butler) Butler. It was highly pathogenic to seedlings of *B. populneum* when inoculated with zoospores under greenhouse conditions (Fig. 1).

It is believed that the pathogen was introduced via this infected tree, which was obtained from a local nursery, and has remained undetected until now. This fungus has not been previously reported to occur on any host growing under field conditions in California.



Bottle-tree seedlings. 1. Healthy. 2. Infected with *Phytophthora palmivora*.

Dr. Gill is a Plant Pathologist-Nematologist with the Riverside County Department of Agriculture.

## *About the new format . . .*

The Cooperative Plant Pest Report for California (CPPR) was established in 1978 as a cooperative effort between the United States Department of Agriculture and the California Department of Food and Agriculture. Its purpose was to make available to the interested public information concerning economically important plant pests and their occurrence or introduction into California. It contained much information that was dry and uninteresting to many of our recipients who never read it. Gradually CPPR became an in-house publication and few outsiders found valuable information in it.

On March 1, 1979, I took over the editing of CPPR. Following the format prescribed by the USDA, I conducted a poll among readers both locally and out-of-state on what they would really expect from such a publication. The most common comment was that it is not informative enough. With the February 22, 1980 issue, the first of the short informational articles (by T. D. Eichlin) appeared (p. 18) with a photograph. Others followed; comments were favorable and occasional notes started coming in from the field.

On March 12, 1980, I represented the Department at a USDA meeting for CPPR coordinators for the Western States in Salt Lake City, Utah. It was already rumored that the USDA would cut off its support and all USDA co-sponsored activities as had been conducted in the past, would be stopped with the October 1980 issue. Vol. 3, No. 40 appeared on October 3 with a note by Dr. C. Nichols, Chief of Laboratory Services (p. 197) giving some hint of continuation of the California CPPR. In spite of very limited funds, CPPR kept going -- and growing. More informational articles and more photographs (and illustrations) appeared with the hope that these would make the issues more interesting. Incoming ideas and comments helped to keep the idea alive. So it continued - til now.

November 1981 was the last issue of the old CPPR (Vol 4, with 124 pages). We changed the title and decided to make this monthly report a more usable source of information related to plant pests and diseases. The general outlook for the new format does not differ too much from the old one. The great advantage is that when you receive an issue, you do not have to fight with staples (6 holes on every page!) and uncollated pages or otherwise messed up copies. It will be easier to handle, cheaper to mail, and above all will contain more information, in spite of the old fashioned "dry" material which is still included.

If you have some ideas to write about, ideas useful for others, please come forward and let us have your input. This is not "my" or "his", or "her" paper, it is - "OURS"!  
-- CSP

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