CALIFORNIA PLANT PEST and DISEASE REPORT

Vol. 7 Numbers 5-6
November-December, 1988

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California Department of Food and Agriculture 1220 N Street, Sacramento, California 94271

NOTICE!

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Correspondence should be addressed to the editorial staff of the California Plant Pest and Disease Report (see address below).

California Plant Pest and Disease Report
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The editor acknowledges the contributions of numerous individuals within the department, without whose cooperation and assistance this project would not be possible.

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Entomological Highlights

IMPORTANT CORRECTION

Unfortunately, in the last issue of CPPDR [7(1-4):10-12], the specific part of the scientific name of ash whitefly was misspelled several times. The correct spelling of the name is as follows: *Siphoninus phillyreae*. The name "*phillyreae*" comes from the name of one of the plant genera (*Phillyrea*) that this whitefly feeds on. The letter "e" is added as suffix to denote the fact that the whitefly feeds on that plant.

NAME CHANGES

The ESA Committee on Common Names recently approved the following common name of "**eucalyptus longhorn beetle**" for *Phoracantha semipunctata*, previously called the eucalyptus borer and the eucalyptus longhorned borer.

SIGNIFICANT FINDS

MEDITERRANEAN FRUIT FLY, *Ceratitis capitata*-(A)- The current situation relative to this pest is summarized in the following reports by John Pozzi:

> A sexually mature male Mediterranean fruit fly (Medfly) was trapped on October 6, 1988, at a new location in the Palm/Culver City area of Los Angeles. The fly was found in a Jackson/trimedlure trap in a lemon tree. CDFA Economic Entomologist Mark Lubinski is credited with finding the Medfly.
>
> In addition, a number of Medfly larvae were found at three new locations. Six second and 57 third instar larvae were found in oranges at three locations in the Palms area. CDFA Entomologist Juan Mercogliano and Inspectors Rick Matsuo, Cathy Rackerby, Chris Rees, and Deric Crawford found the Medfly larvae. CDFA Insect Biosystematist Karen Corwin made the determinations.
>
> On October 6, CDFA applied an aerial treatment of malathion and Staley's bait over a 35 square mile area around the Medfly finds. Releases of sterile Medflies in a 53 square mile area centered in Palms began October 13.
>
> Additional Medfly larvae were found on October 15, 18 and 19 within two miles of the October 6 finds in the Palms/Culver City area. On October 15 and 18, 12 third instar larvae were found in kumquat and three third instar larvae were found in persimmon. On October 19, four second and four third instar larvae were found in orange.
>
> CDFA Economic Entomologist Juan Mercogliano and Inspector Lyndon Ong Yiu are credited with finding the larvae. The determinations were made by Karen Corwin.

In response to these finds in the Palms and Culver City area, Los Angeles County Department of Agriculture and CDFA increased the Jackson/trimedlure and McPhail trap densities to protocol levels in a 100 square mile area.

Miscellaneous Mediterranean Fruit Fly news:

Medfly #1 Project (Van Nuys, California). This project is now completed. Eradication efforts were completed November 14.

Medfly #2 Project (Culver City, California). This project is in full swing. Fifty million sterile Medflies are being released each week. Fruit stripping is being conducted on 1,500 properties. To date, 30 tons of fruit have been stripped and buried. These same 1,500 properties will also be treated with a Diazinon soil drench.

ORIENTAL FRUIT FLY, *Dacus dorsalis*-(A)-The current situation is summarized in the following reports by John Pozzi:

On October 10, 1988, two male Oriental fruit flies (OFF) were trapped in Hacienda Heights, Los Angeles County. Los Angeles County trapper Jose Lopez is credited with finding the flies.

One fly was found in a Jackson/methyl eugenol trap placed in cherry guava, and the other fly was found in a McPhail trap placed in an apple tree. The finds were approximately one-half mile apart in an area with a Jackson/methyl eugenol trap density of five traps per square mile.

In response to these OFF finds, trap densities of Jackson/methyl trap densities were increased to 25 traps in the core square mile. Jackson/methyl eugenol trap density in the 80 square-mile area around the core will remain at five traps per square mile.

CDFA Pest Detection/Emergency Projects personnel began OFF male annihilation treatments on October 13 in a 12 square mile area around both OFF find sites.

CDFA Insect Biosystematist Karen Corwin made the identifications and determined that one of the OFFs was sexually mature, but the other's condition was too poor to determine its sexual maturity.

A sexually mature male OFF was trapped on October 27, 1988, in Pasadena, Los Angeles County. The fly was found in a Jackson/methyl eugenol trap placed in a fig tree. Los Angeles County trapper Ken Grant is credited with finding the fly. Karen Corwin made the determination. Other flies were found earlier that week in the same vicinity.

Jackson/methyl eugenol trap density in the area of the find was 25 traps per square mile. CDFA began OFF male annihilation treatments on October 28 in 1.5 mile radius around the Pasadena find.

MEXICAN FRUIT FLY, *Anastrepha ludens*-(A)-The following reports by John Pozzi review the current situation with respect to MxFF:

A male Mexican fruit fly (MxFF) was trapped on October 19, 1988, in Chula Vista, San Diego County. The fly was found in a McPhail trap placed in a sapote tree. San Diego Department of Agriculture Pest Detection Technician Tim Breuninger is credited with finding the fruit fly.

The fly was found in an area where McPhail trap density is maintained throughout the year at 25 traps per square mile because of the potential threat of Mexican fruit fly being introduced into California.

Insect Biosystematist Eric Fisher determined that it was a wild Mexican fruit fly and that the condition of the testes indicated it was sexually immature.

On October 31, 1988, a sexually mature male MxFF was trapped in San Diego, San Diego County. It was found in a McPhail trap by CDFA Inspector Michael Murphy. The trap was placed in a sapote.

The find site is approximately seven miles north of the fly found on October 19. Insect Biosystematist Karen Corwin made the determination.

Los Angeles County Department of Agriculture trapper Sue Moulton found a female Mexican fruit fly in a McPhail trap on November 29, 1988. The trap was placed in a grapefruit tree in Altadena.

McPhail trap density in the area was five traps per square mile. This find was the first for Los Angeles County in 1988. Insect Biosystematist Karen Corwin determined that the female Mexican fruit fly had slight ovarian development and was unmated.

A sexually mature male Mexican fruit fly was trapped November 29, 1988, in Chula Vista, San Diego County. CDFA trapper Dottie Howard found the fly in a McPhail trap placed in an orange tree.

McPhail trap density in that area of San Diego County is maintained throughout the year at 25 traps per square mile. The find is approximately one-half mile north of a MxFF trapped in Chula Vista on October 19, 1988.

On December 1, 1988, Los Angeles trapper Matt Talle found an unmated female Mexican fruit fly in a McPhail trap in Manhattan Beach. The trap was placed in an orange tree.

McPhail density in the area was five traps per square mile. In response to the finds, the San Diego and Los Angeles County Departments of Agriculture increased the McPhail trap densities to meet protocol levels for new Mexican fruit fly trap finds.

CDFA Insect Biosystematists Karen Corwin and Eric Fisher made the determination.

Three Mexican fruit flies were trapped December 9, 1988, in San Ysidro, San Diego County. The finds were within one mile of the California/Mexico border.

Two MxFFs were found in the same McPhail trap place in a sapote. One of the flies was an unmated female and the other fly was a sexually immature male. On October 21, 1988, a MxFF was trapped at this same location.

In addition, an unmated female fly was trapped tree miles west from the San Ysidro site. It was found in a McPhail trap placed in a sapote. San Diego County Department of Agriculture James Baldas-Rodriquez is credited with the find. CDFA Insect Biosystematist Karen Corwin made the determination.

APPLE MAGGOT, *Rhagoletis pomonella*-(A)-Alameda County operated an intensive trapping area in response to a 1987 apple maggot find in Berkeley. Sonoma and Lake Counties ran intensive trapping zones in 1988 which produced positive catch results similar to those in 1987. Humboldt, Shasta, Siskiyou and Mendocino Counties all shifted trapping to commercial orchard certification.

The shift in emphasis to certification and consequent reduction in the number of traps led to a dramatic decrease in the number of apple maggots trapped. Trinity and Modoc Counties ran AM traps as all-purpose traps as part of their pest detection programs. In Mendocino County, 60 of the 199 traps were operated as all-purpose traps.

The following chart, prepared by John Connell, summarizes the number of apple maggots trapped during 1988 in California. For comparison, the trap results from the 1987 Apple Maggot Control Program intensive area are included.

SUMMARY - 1987 and 1988 APPLE MAGGOT TRAP FINDS

COUNTY	TRAP FINDS		PEAK NUMBER OF TRAPS IN OPERATION	
	1987	1988	1987	1988
Alameda	1	0	903	904
Del Norte	304	0	3,393	0
Humboldt	895	2	5,997	80
Lake	0	1	603	650
Mendocino	21	1	5,913	199
Modoc	1	0	356	150
Shasta	4	2	4,409	132
Siskiyou	80	3	4,963	170
Sonoma	36	27	3,605	1,461
Trinity	19	0	134	2
TOTALS	**1,361**	**36**	**31,490**	**3,748**

STATE RECORDS - UPDATE

INDIAN HOUSE CRICKET, *Gryllodes supplicans*-(C)-This species was found in California for the first time in 1966 in Imperial County. At that time, however, the species was identified as *Gryllodes sigillatus*, now a synonym of *Gryllodes supplicans*. The following contains excerpts taken from "Southwestern Distribution and Habitat Ecology of *Gryllodes supplicans*" by Robert L. Smith and William B. Thomas, which appeared in the Winter, 1988 issue of Bulletin of the ESA:

> The "Indian house" or "decorated" cricket, *Gryllodes supplicans* (Walker), is a common domiciliary species distributed throughout the tropics of the world. This cricket is medium sized (15-21 mm from head to abdominal apex), and is light yellow with distinctive brown markings. Females are apterous and larger than the brachypterous males. *G. supplicans* has a distinctive call which aids in identification of the species.
>
> It is found in urban ecosystems in the arid Southwest from sea level to 750m and is most numerous in high-density residential developments, particularly in Tucson where it has developed explosive populations. It is distributed along the Pacific coast of southern California, and north along the Colorado River into Nevada below 36° N. latitude.
>
> The species was described by Walker from specimens taken in Sri Lanka (Ceylon) (Walker, 1859). Walker and others described several synonyms of *G. supplicans* from the tropics (Vickery and Keven 1983), and one synonym, *G. sigillatus* Walker, was the name by which this species was commonly known until Vickery and Keven published their opinions on the synonymy and priority of the genus.
>
> *G. supplicans* and its synonyms are specifically recorded from Australia, Cuba, Mexico, Florida, and from "hot houses of the USDA" in Washington, D.C.

NEW COUNTY RECORDS

EUGENIA PSYLLID, *Trioza eugeniae*-(Q)- The following reports by John Pozzi summarize recent news relating to this pest:

> Eugenia psyllid was first found in California on May 4, 1988, at a residence in Inglewood, Los Angeles County. Since that initial discovery, it also had been found in Orange and San Luis Obispo Counties.
>
> On September 20, Orange County Department of Agriculture Entomologist Nick Nisson found eugenia psyllid at his residence in Tustin, Orange County. On that same date, the psyllid was found by an Anaheim homeowner. Since its initial discovery in Orange County, the psyllid has been found at residences in Garden Grove and Costa Mesa.
>
> On September 28, San Luis Obispo County Pest Detection Specialist Johna Cochran found the psyllid in Arroyo Grande. San Luis Obispo County Department of Agriculture

initiated a survey and found eugenia psyllid throughout Arroyo Grande and also in Grover City.

Eugenia psyllid now has been detected for the first time in Santa Barbara and San Diego Counties.

On November 10, 1988, eugenia psyllid was found at a residence in Montecito. Santa Barbara County Department of Agriculture Biologist Christine Taylor and Supervising Biologist Curtis Sayer spotted it while servicing an insect trap on the property.

San Diego County Department of Agriculture Biologist Zoe Ann Ginsky and Entomologist David Kellum found eugenia psyllid November 22, 1988, at the San Diego Zoo and at nearby residential properties. San Diego Zoo personnel reported finding the psyllid to David.

CDFA Insect Biosystematist Ray Gill made the determinations.

Since first being found on May 4, 1988, in Los Angeles County, eugenia psyllid occurs at years end in Orange, Santa Barbara, San Diego, and San Luis Obispo Counties.

ASH WHITEFLY, *Siphoninus phillyreae*-(Q)- The following report details the situation to December 31 relative to this pest:

Ash whitefly was first reported in California on September 12, 1988, in Van Nuys, Los Angeles County. Since that initial detection, it has been found at three locations in Orange County and one location in San Bernadino County.

On October 10, an Anaheim homeowner brought a whitefly to the Orange County Department of Agriculture. County Entomologist Nick Nisson made the initial identification as ash whitefly and submitted it to CDFA for confirmation.

Since its initial detection in Orange County, Nick Nisson has found ash whitefly infesting two residences in Yorba Buena and Brea. The whitefly was found on pomegranate and ornamental pear.

San Bernadino County Department of Agriculture Biologist Janet Davey found ash whitefly on November 16, 1988, on a homeowner's ash tree in Ontario, San Bernadino County.

CDFA Insect Biosystematist Ray Gill made the final determinations on the ash whitefly. See the Jan-Oct 1988 issue of the CPPDR [7(1-4):10-12] for more information about this whitefly.

RUSSIAN WHEAT APHID, *Diuraphis noxia*-(Q)- Russian wheat aphid (RWA) has been officially confirmed in Yolo County. It was found November 28, 1988, in barley on the agronomy farm at the University of California, Davis. CDFA Insect Biosystematist John Sorensen made the determination.

Earlier this year a researcher at Washington State University reported to CDFA that he had found Russian wheat aphid in insect samples sent from U.C. Davis. The aphid was first detected in California on March 30, 1988, in Calexico, Imperial County.

Frank B. Peairs, Colorado State Cooperative Extension entomologist, in an article in the Colorado State University Cooperative Extension newsletter, noted the following facts about the Russian wheat aphid:

> RWA damages small grains by injecting toxic saliva into plants and then sucking the sap from them. Yield losses of 50 percent or more have been attributed to RWA in 1986, the first year the pest was in Colorado. The aphid also transmits several small grain diseases, including brome mosaic virus and barley yellow dwarf.
>
> Damage to fields first appears as circular areas or strips on stunted, discolored plants. Aphid colonies appear within tightly curled leaves, which have long white streaks.
>
> Under some conditions, infested wheat tillers have a purplish color. Heavily infested plants will have a twisted or distorted appearance (heads having a "fish hook" shape) because the head is trapped by the tightly curled flag leaf sheath. Infestation results in blank heads, and in some cases kills the entire head.
>
> The aphid's habit of causing infested leaves to remain tightly curled not only makes it difficult to achieve good insecticide coverage, but also interferes with the ability of predators or parasites to reach and attack aphids.
>
> As the small grain crop matures, RWA form wings and fly off to find suitable hosts to feed on the emergence of volunteer wheat and fall planting.
>
> Several noncrop grasses can support Russian wheat aphid, at least for short periods of time. Among these are crested wheatgrass, Arizona fescue redondo, spike muhly, blue grama, bluebunch wheatgrass, salina wildrye, green needle, bluebunch wheatgrass and alkali grass. Several of these grasses may be good alternate hosts for RWA.
>
> Current opinion holds that the RWA entered California via winds moving from the Southwestern U.S. through the plains states and west into California.
>
> Winter conditions required to kill Russian wheat aphid populations are currently unknown. The pest will easily survive California's mild winters and thus constitutes a potentially severe problem for small grain production in the State.

Tentative identification of this aphid is a simple matter, since it has shortened cornicles and a dorsal, posteriorly directed, finger-like process on abdominal segment VIII which is as long or longer than the cornicles. This is generally unlike anything else commonly found on grasses in California. However, suspects must be submitted to taxonomic specialists since there are other aphids with similar characteristics.

Figures 1 and 2 in the 1986 CPPDR issue [5(1-2):206-208] illustrate the morphology of this aphid and were published originally by H.J.R. Durr in Phytophylactica 15:81-83, 1983.

Exclusion and Detection

GYPSY MOTH, *Lymantria dispar* -(A)-The following report by Stephen Brown describes two recent GM finds in California:

> On January 6, 1989, Santa Clara County Biologist Larry Yamasaki intercepted five gypsy moth egg masses from a cited and sealed household shipment that originated in Westfield, New Jersey.
>
> Yamasaki, an 18 year veteran, found the GM egg masses on two different picnic benches. The Needles Inspection Station had cited the United Van Lines driver and sealed his trailer for failure to have any documentation, as required by law. Yamasaki determined that some of the eggs were fluid-filled and sent the remainder to the Sacramento laboratory to confirm their viability.
>
> This shipment was moved in violation of the Federal Domestic Gypsy Moth Quarantine, since a live life stage of gypsy moth was found on an undocumented household shipment. With Yamasaki's help, federal prosecution will be pursued in this case.
>
> On January 4, 1989, Contra Costa County Biologist Sue Ziegler inspected an "overflow" shipment of OHAs and found a live GM egg mass on a plastic turtle sandbox. The 4,000 pound shipment was not declared at the border station and had apparently been "sandwiched" between other OHA shipments. Therefore, no 008A was issued.
>
> However, because of Ziegler's good rapport with the homeowner on the first inspection, the homeowner called for a GM inspection anyway. Although we are still investigating this incident, we will expect to pursue federal prosecution when the investigation is completed.
>
> In the past, penalties of $500 have been levied against moving companies for well-documented GM violations.

Since the above episode in the continuing struggle against gypsy moth is so common these days, it would probably be helpful to reiterate the general procedures for submitting gypsy moth finds to the laboratory.

<u>Procedures for Handling Gypsy Moth Finds (Viable and Non-Viable):</u>

1. Issue a rejection notice.

2. Issue a notice to hold materials on premises for all viable finds and where viability may be in question (egg mass).

3. Check the 66-008A for the presence or absence of an OHA document.

4. Submit a lab sample when evidence of any life stage is found. Use the following procedures when

submitting egg masses for confirmation:

a. When removing egg masses, use only enough detergent solution to prevent scattering of eggs.

b. Place the egg mass in a dry container. Do not soak in detergent solution.

c. Using a dissecting scope, forceps and a pin, rupture a small number of eggs to determine if they are filled with fluid.

d. Place the remaining egg mass in alcohol and send it to the lab. Write on the PDR (Pest and Damage Report) under "Remarks" that some of the eggs were examined and found to be filled with fluid. All specimens submitted in the manner described above will be identified as viable or non-viable by the lab.

5. Fill out a PDR on all gypsy moth specimens whether or not they appear to be alive. Before submitting specimens, assure that all life stages are dead. In the "Remarks" section of the PDR include the following information:

a. If egg mass, whether they were examined and filled with fluid.

b. Border station name.

c. Number of the 66-008A.

d. If OHA document was present or absent.

6. Affix the gummed label from the PDR slip to the copy of the 66008A that is mailed to Sacramento.

7. For those samples which are positive and viable for gypsy moth and from shipments accompanied by an OHA document, a copy of the OHA document (if available) with the I.D. number of the PDR noted will be submitted by the inspector to Pest Exclusion, Sacramento.

The Pest Exclusion Branch will notify the USDA of the pest find, provide them with the information necessary to disqualify the person or company that issued the OHA document, and request disqualification.

AVOCADO SEED WEEVIL, *Heilipus lauri*-(A)-The following report by Donna Daniels describes the discovery of this weevil in California:

> A live adult avocado seed weevil was found on November 17, in the Desert and Forest Green House at the University of California, Berkeley Botanical Gardens.
>
> Valerie Brown, CDFA Area Manager, Bay Area Delta District, and Eugene Fife, Exclusion Biologist, toured the gardens on December 19, looking for evidence of the pest introduction. They found two avocado plants in a pot that were grown from seeds

imported from Amistad Park in Costa Rica. The seeds were collected and planted in July 1988. Brown and U. C. Extension Entomologist Benny Fouche dissected the seeds and observed insect damage. The seeds were sent to Terry Seeno, Insect Biosystematist, for further inspection.

The avocado seeds were part of a shipment of 28 exotic plant cuttings and seeds brought back from Costa Rica in July. Since the adult beetle was collected, the avocado plant was moved to another greenhouse on the U. C. campus where it remained until it was submitted to CDFA by U.C. researchers.

VARROA MITE, *Varroa jacobsoni* -(A)- The following table, compiled by Insect Biosystematist Tokuwo Kono, summarizes finds of honey bee tracheal mite and varroa mite for the last half of 1988:

Tracheal Mite and Varroa Mite Laboratory Report
Cumulative Data
July 1, 1988 to December 31, 1988

TRACHEAL MITE

SAMPLE TYPE	NO. SAMPLES	TOTAL DISSECTIONS
Priority I	3	225
Priority II	0	0
Priority III	2	150
Priority IV	1	75
Quarantine	6	500
Projects	0	0
Totals	12	950
African bees	0	0
Others	3	86
TOTALS	**15**	**1,036**

VARROA MITE

SAMPLE TYPE	NO. TRAPS	TOTAL MITES
Priority I	0	0
Priority II	0	0
Priority III	0	0
Priority IV	0	0
Quarantine	112	1,044
Projects	0	0
Totals	112	1,044
African bees	0	0
Others	0	0
TOTALS	**112**	**1, 044**

EXOTIC PEST FINDS IN CALIFORNIA: A SEVEN YEAR PERSPECTIVE

The Pest Detection/Emergency Projects Branch of CDFA, under the direction of Don Henry, is responsible for the detection of new and exotic agricultural pests in the state. One member of the staff, John Pozzi, has been the records keeper for the unit and has, with the help of other staff members, produced some interesting data on exotic pest finds in the state over the last seven years. A similar report was issued with last year's November-December issue of CPPDR. As in last year's CPPDR, a map is also included showing the wide spread dispersal of sterilized Medflies released to aid in the eradication of wild Mediterranean fruit flies in the infested areas of Los Angeles County. While collections of the sterile flies were not as widespread as in 1987, the amount of spread is still phenomenal. A similar map for Mexican Fruit fly is presented on page 98.

The gathering and maintenance of the information used in the database from which these maps and charts were made is a team effort by the following PD/EP staff: Becky Burgess, Jeff Bowen, Amy Haulk, Debbie Haines and Gigi Pasquil.

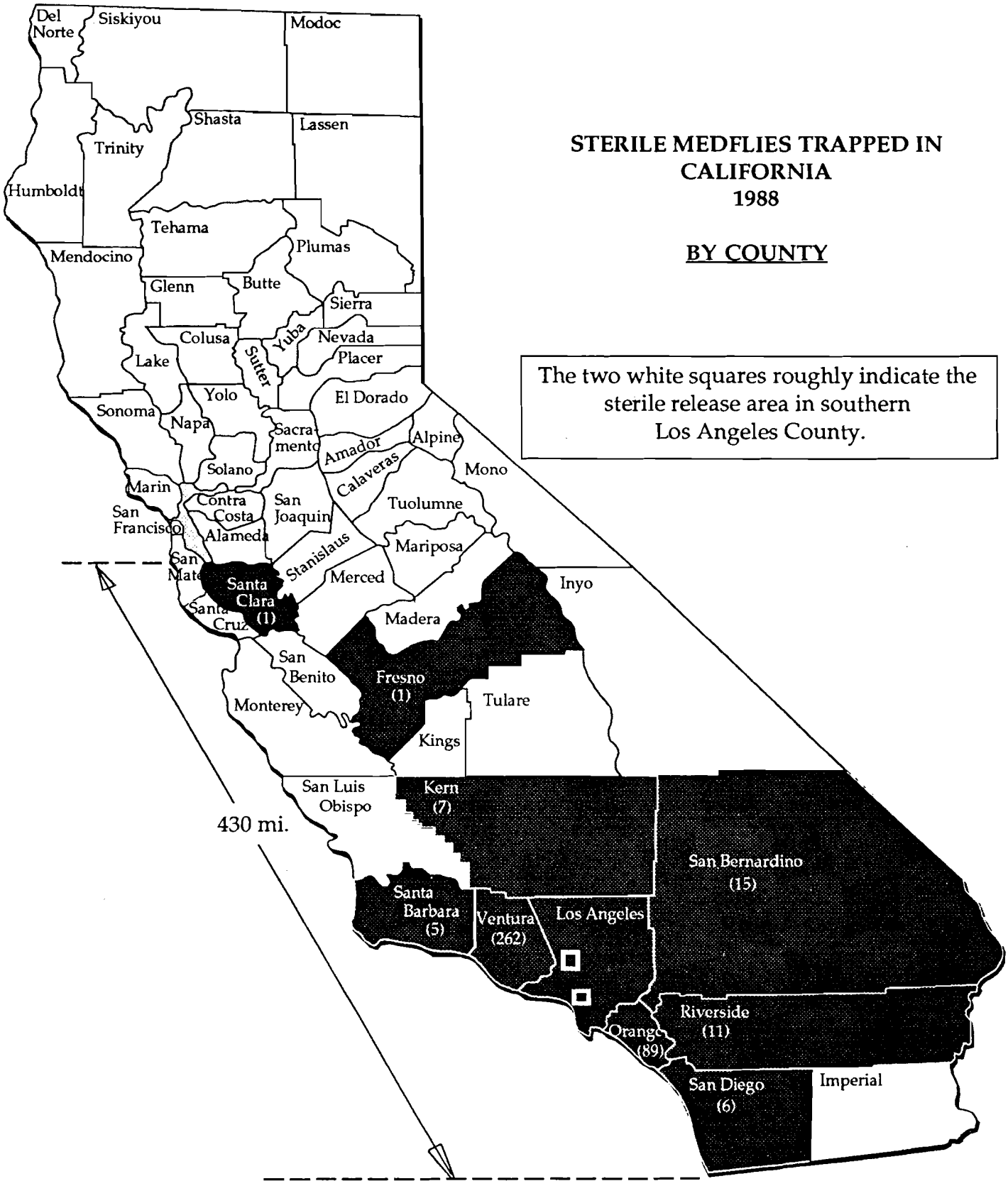
The first report as well as the accompanying map list the trapping locations for the sterile Medflies which had been released in the core treatment area in Los Angeles. Many of the finds are most certainly due to the movement of the flies in cars and trucks. Records for Los Angeles County were recorded separately by the county and are not included here. The graphs indicate comparative finds of exotic pests found this year compared to finds in the six years prior to 1988.

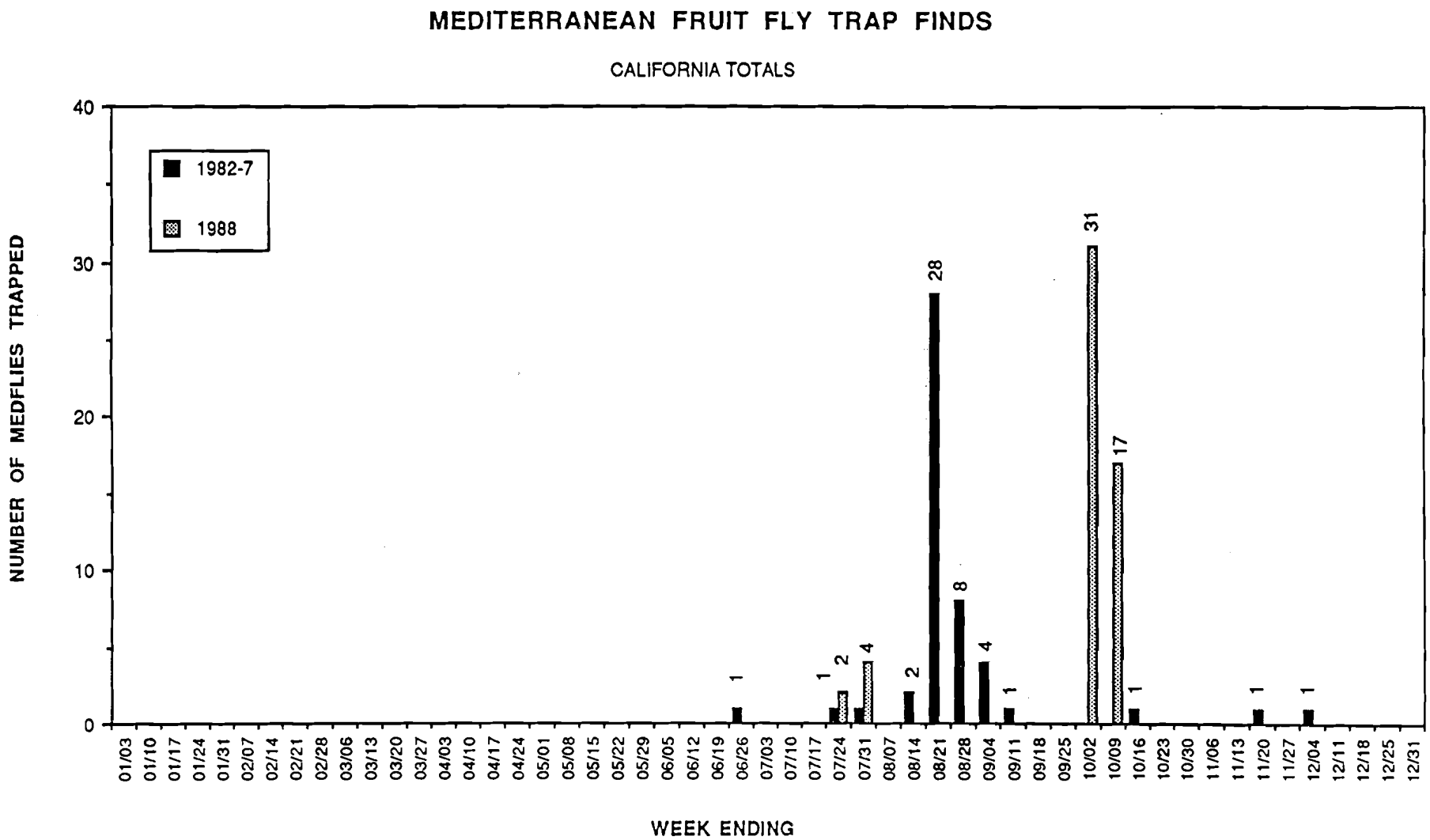
SUMMARY OF STERILE MEDITERRANEAN FRUIT FLY TRAP FINDS-1988

COUNTY -CITY	NUMBER TRAPPED/ COUNTY	-- CITY (TOTALS)
FRESNO	**1**	
Fresno		1
KERN	**7**	
Bakersfield		3
Frazier Park		1
Lebec		1
Mettler		1
Wasco		1
ORANGE	**89**	
Anaheim		8
Anaheim Hill		2
Brea		3
Buena Park		10
Costa Mesa		1
Cypress		1
El Toro		5
Fountain Valley		2
Fullerton		7
Garden Grove		7
Huntington Beach		7
Irvine		3
Irving		1
La Habra		4
La Palma		1
Laguna Beach		2
Laguna Hills		4
Laguna Nigue		1
Los Alamitos		2
Midway City		1
Mission Viejo		1
Newport Beach		1
Orange		2
Placentia		1
Rossmore		1
Santa Ana		4
Stanton		1
Tustin		3
Westminster		3

(continued)

COUNTY -CITY	NUMBER TRAPPED/ COUNTY -- CITY (TOTALS)
	(continued)
RIVERSIDE	**11**
Cathedral City	1
Corona	2
Indio	1
Lake Elsinore	1
Mecca	1
Palm Springs	1
Riverside	4
SAN BERNARDINO	**15**
Alta Loma	4
Chino	2
Los Serranos	1
Montclair	1
Ontario	4
Rialto	1
San Bernardino	1
Upland	1
SAN DIEGO	**6**
Chula Vista	1
Ramona	1
Rancho Santa Fe	1
San Diego	1
San Ysidro	1
Solano Beach	1
SANTA BARBARA	**5**
Carpinteria	1
Goleta	1
Santa Barbara	3
SANTA CLARA	**1**
San Jose	1
VENTURA	**262**
Agoura Hills	5
Camarillo	5
El Rio	2
La Conchita	1
Leeds	2
Malibu	1
Moorpark	20
Newbury Park	2
Oxnard	9
Simi	147
Somis	1
Thousand Oaks	57
Ventura	10


STERILE MEDFLIES TRAPPED IN CALIFORNIA
1988
BY COUNTY
The two white squares roughly indicate the sterile release area in southern Los Angeles County.
430 mi.
Del Norte
Siskiyou
Modoc
Shasta
Lassen
Trinity
Humboldt
Tehama
Plumas
Mendocino
Glenn
Butte
Sierra
Colusa
Yuba
Nevada
Lake
Sutter
Placer
Yolo
El Dorado
Sonoma
Napa
Sacramento
Amador
Alpine
Solano
Calaveras
Mono
Marin
Contra Costa
San Joaquin
Tuolumne
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara (1)
Merced
Inyo
Santa Cruz
Madera
San Benito
Fresno (1)
Tulare
Monterey
Kings
San Luis Obispo
Kern (7)
San Bernardino (15)
Santa Barbara (5)
Ventura (262)
Los Angeles
Riverside (11)
Orange (89)
San Diego (6)
Imperial


MEDITERRANEAN FRUIT FLY TRAP FINDS
CALIFORNIA TOTALS
1982-7
1988
NUMBER OF MEDFLIES TRAPPED
0
10
20
30
40
1
1
2
4
2
28
8
4
1
31
17
1
1
1
01/03
01/10
01/17
01/24
01/31
02/07
02/14
02/21
02/28
03/06
03/13
03/20
03/27
04/03
04/10
04/17
04/24
05/01
05/08
05/15
05/22
05/29
06/05
06/12
06/19
06/26
07/03
07/10
07/17
07/24
07/31
08/07
08/14
08/21
08/28
09/04
09/11
09/18
09/25
10/02
10/09
10/16
10/23
10/30
11/06
11/13
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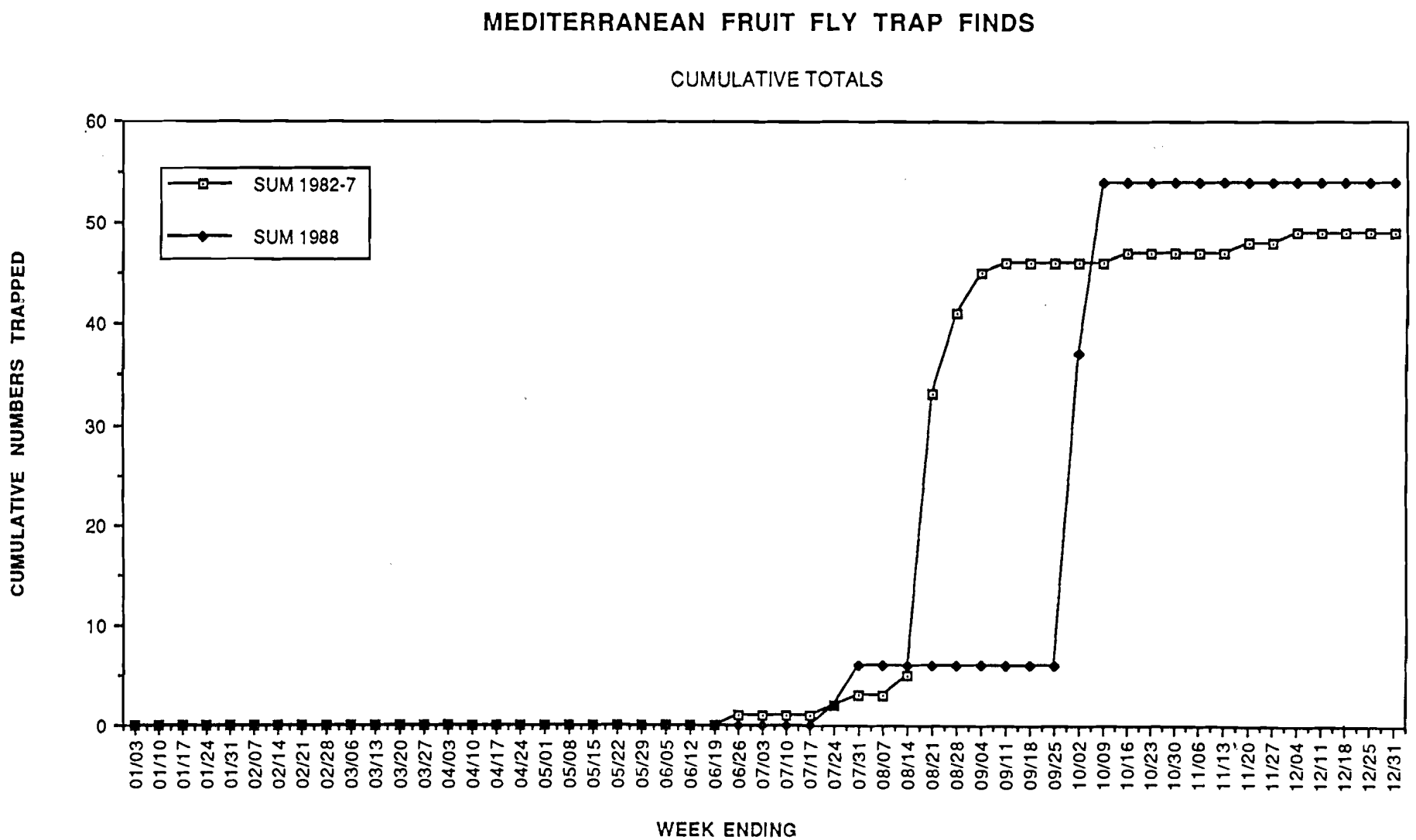
WEEK ENDING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SUM 1982-7
SUM 1988
CUMULATIVE NUMBERS TRAPPED
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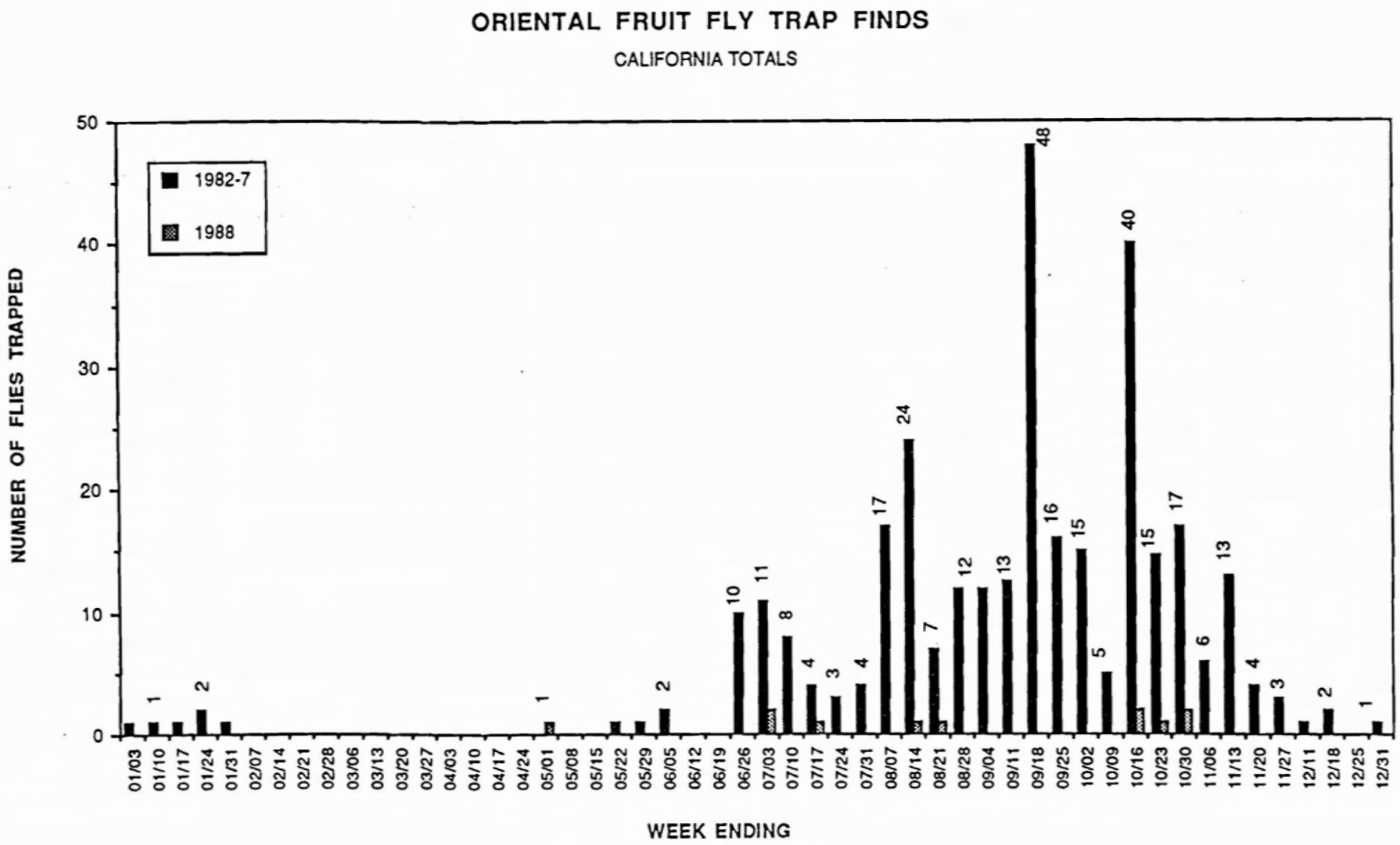
WEEK ENDING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1988
NUMBER OF FLIES TRAPPED
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WEEK ENDING
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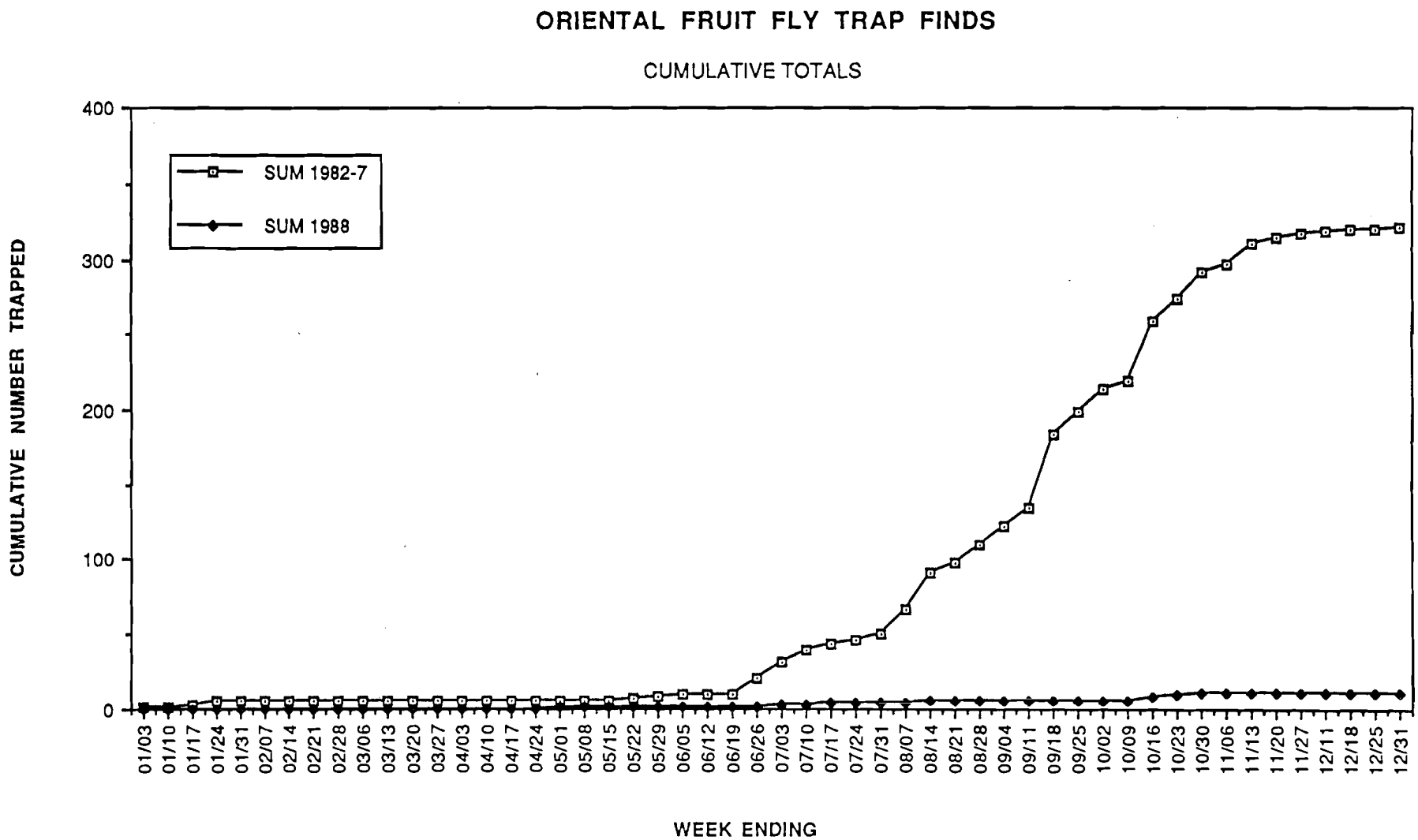
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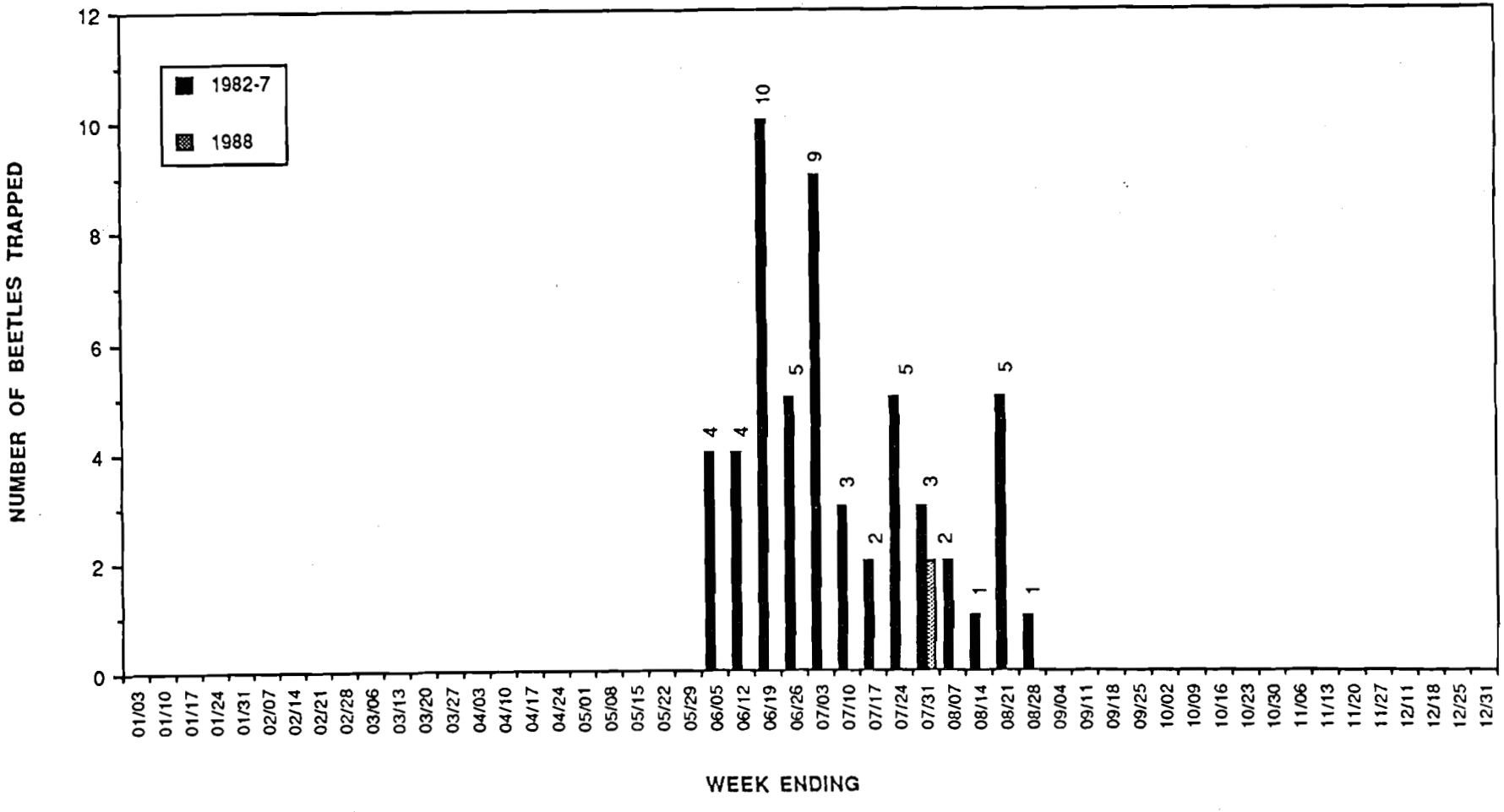
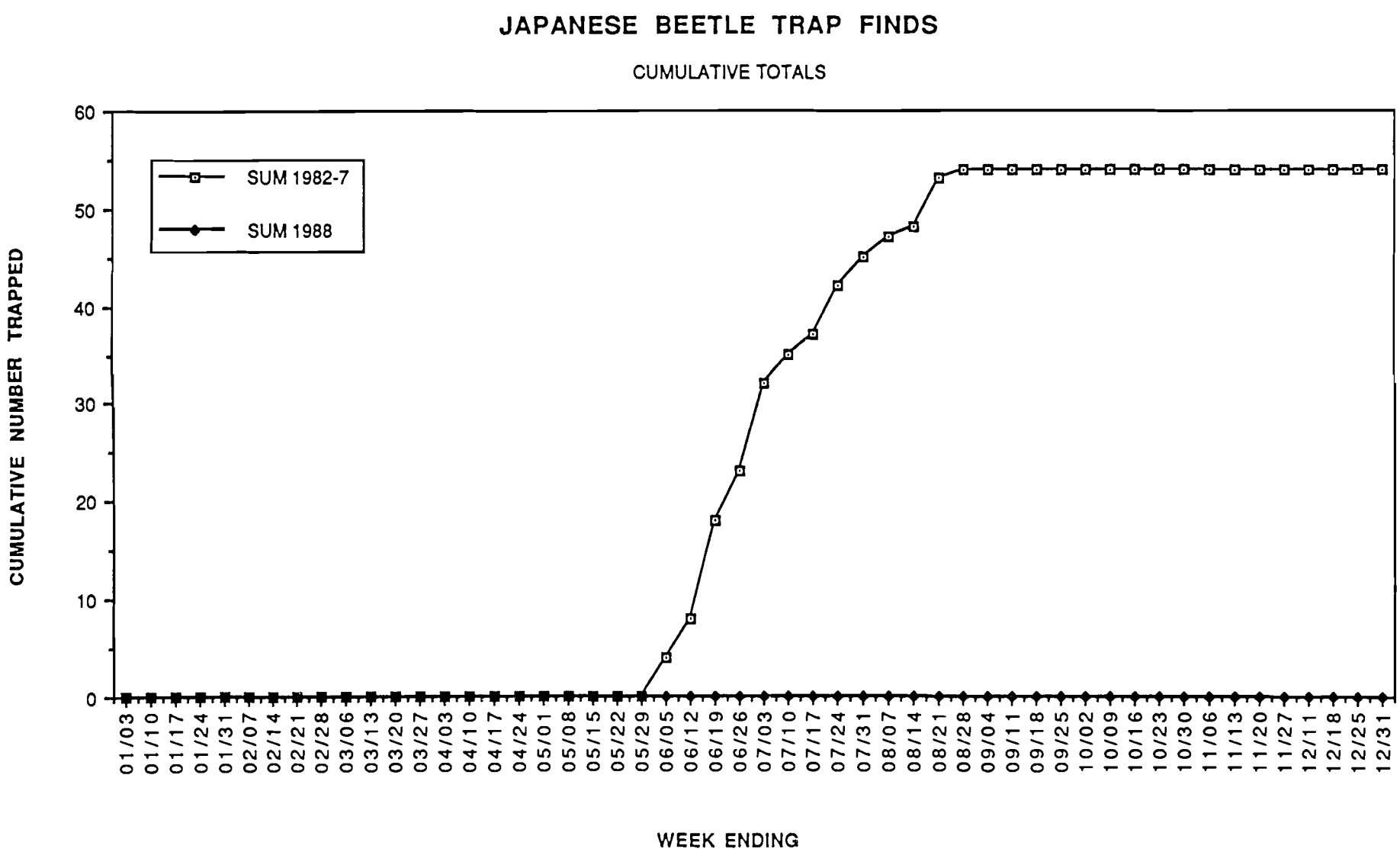
12/31
WEEK ENDING

JAPANESE BEETLE TRAP FINDS

CALIFORNIA TOTALS

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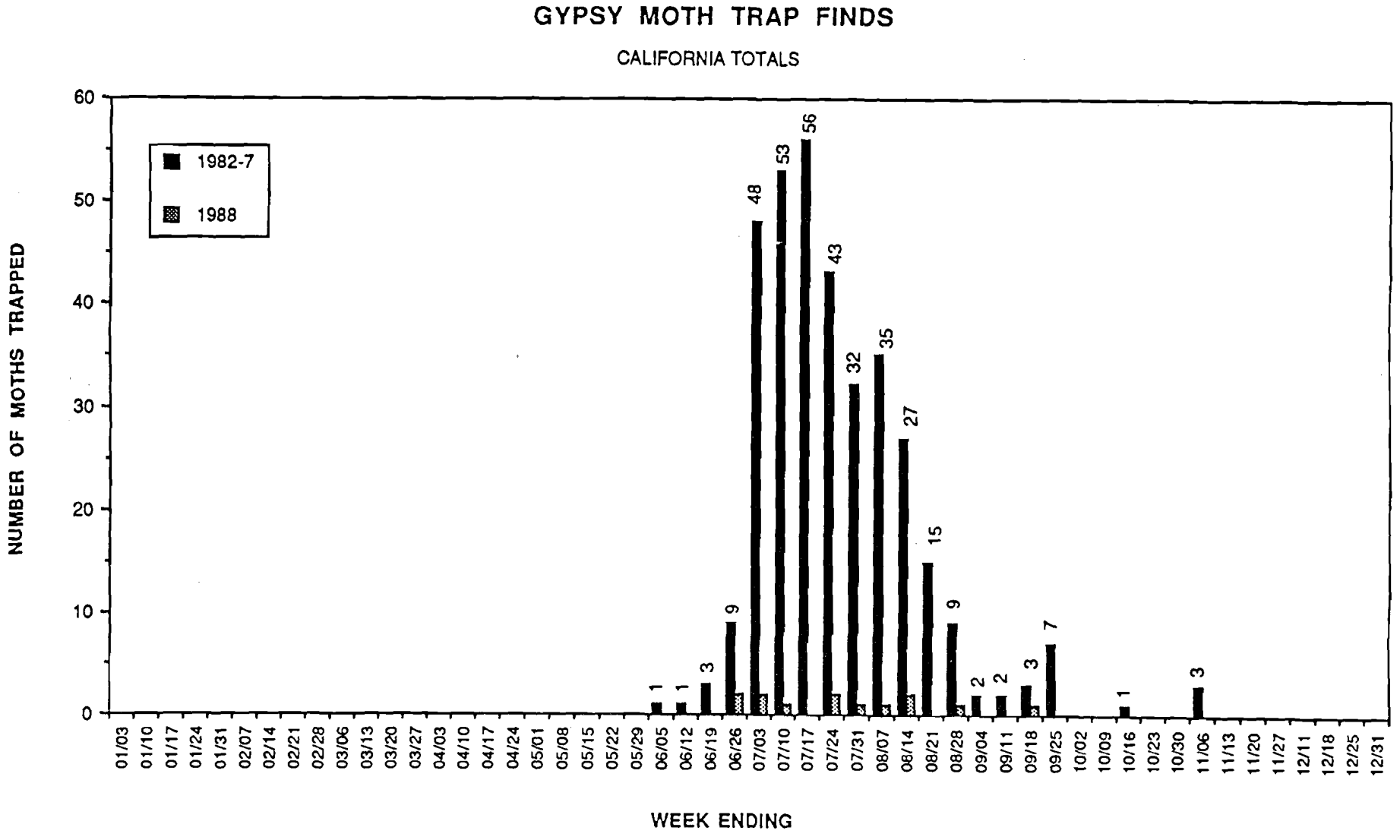
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53
56
43
32
35
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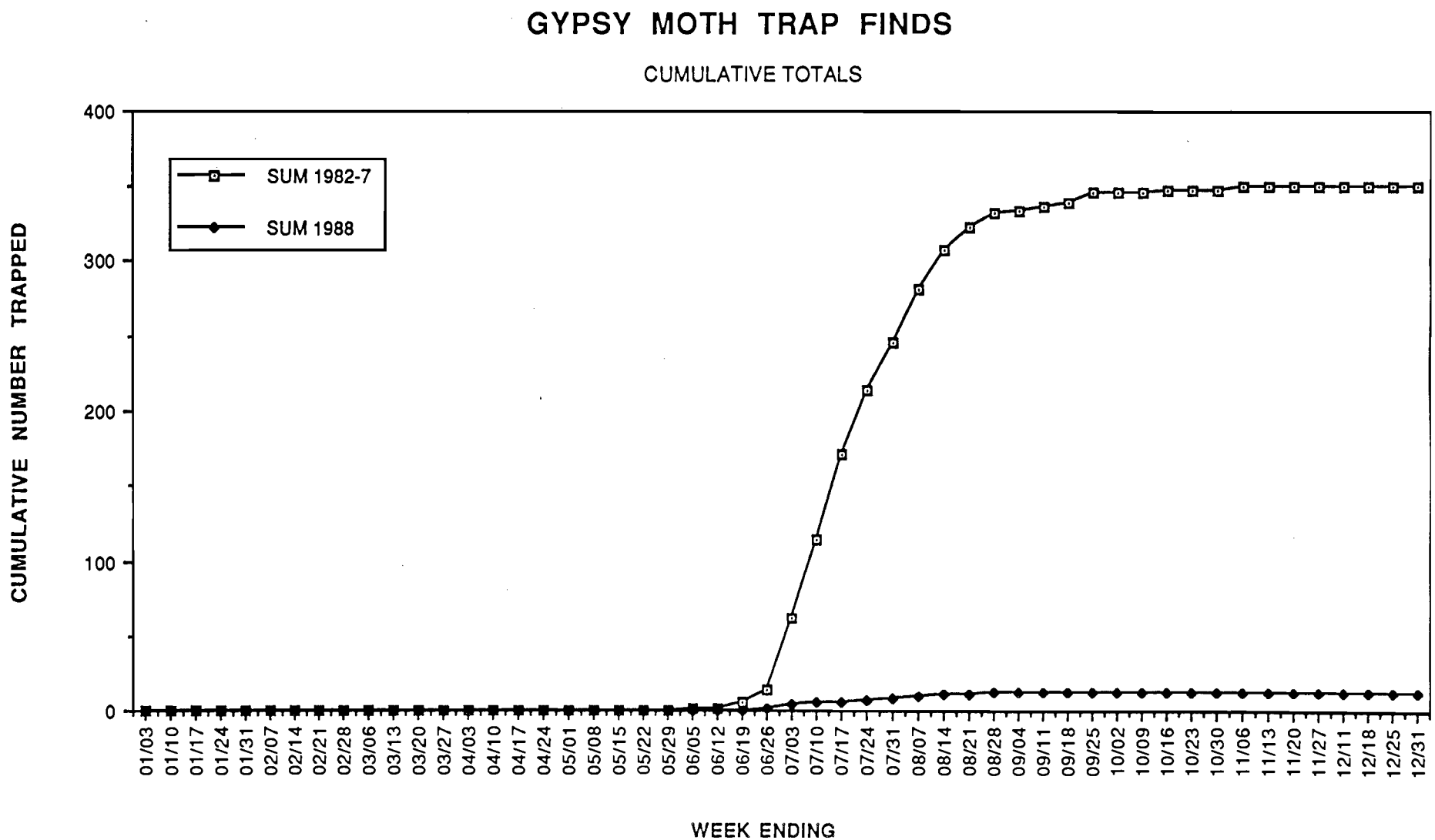
WEEK ENDING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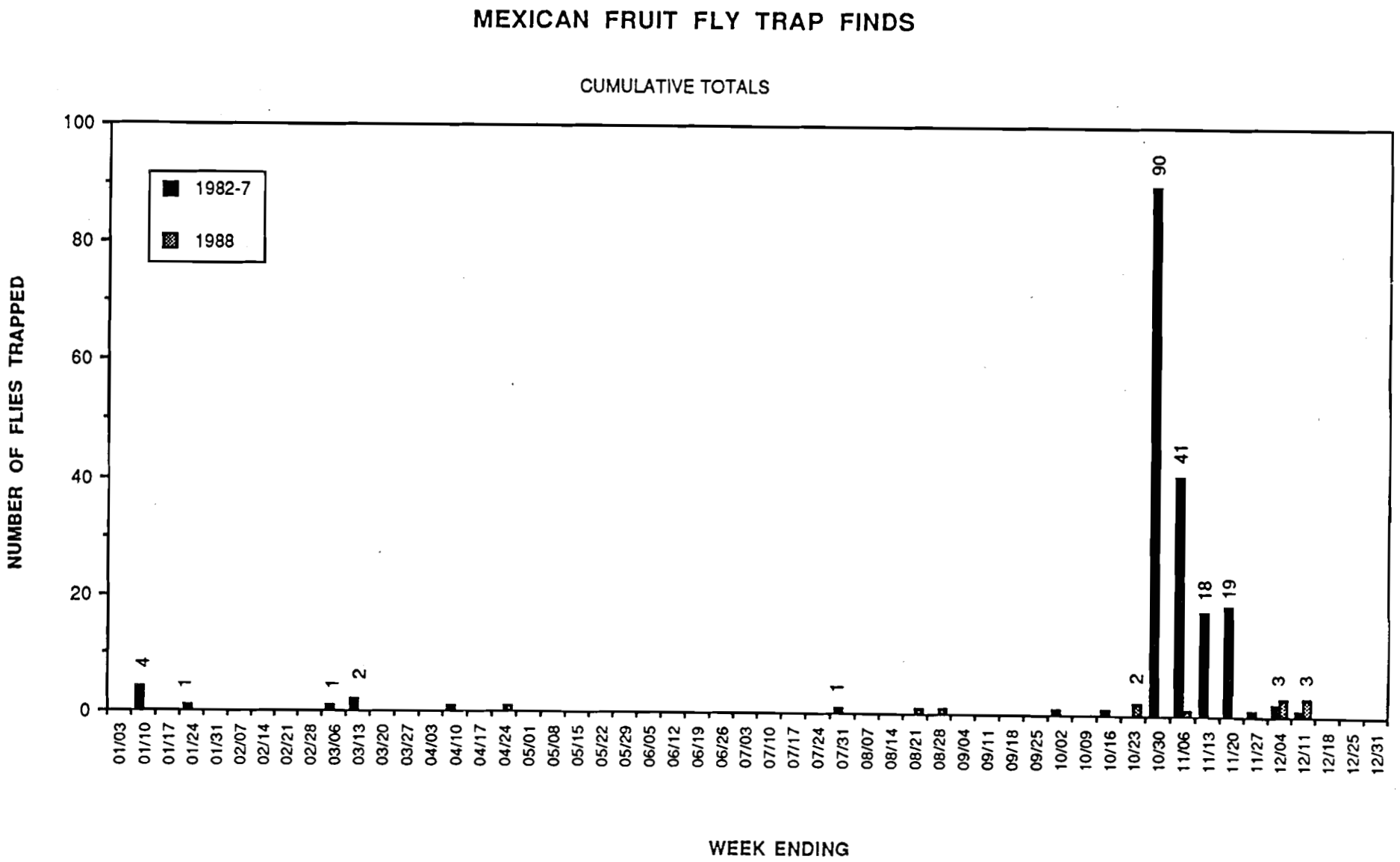
WEEK ENDING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CUMULATIVE TOTALS
1982-7
1988
NUMBER OF FLIES TRAPPED
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0
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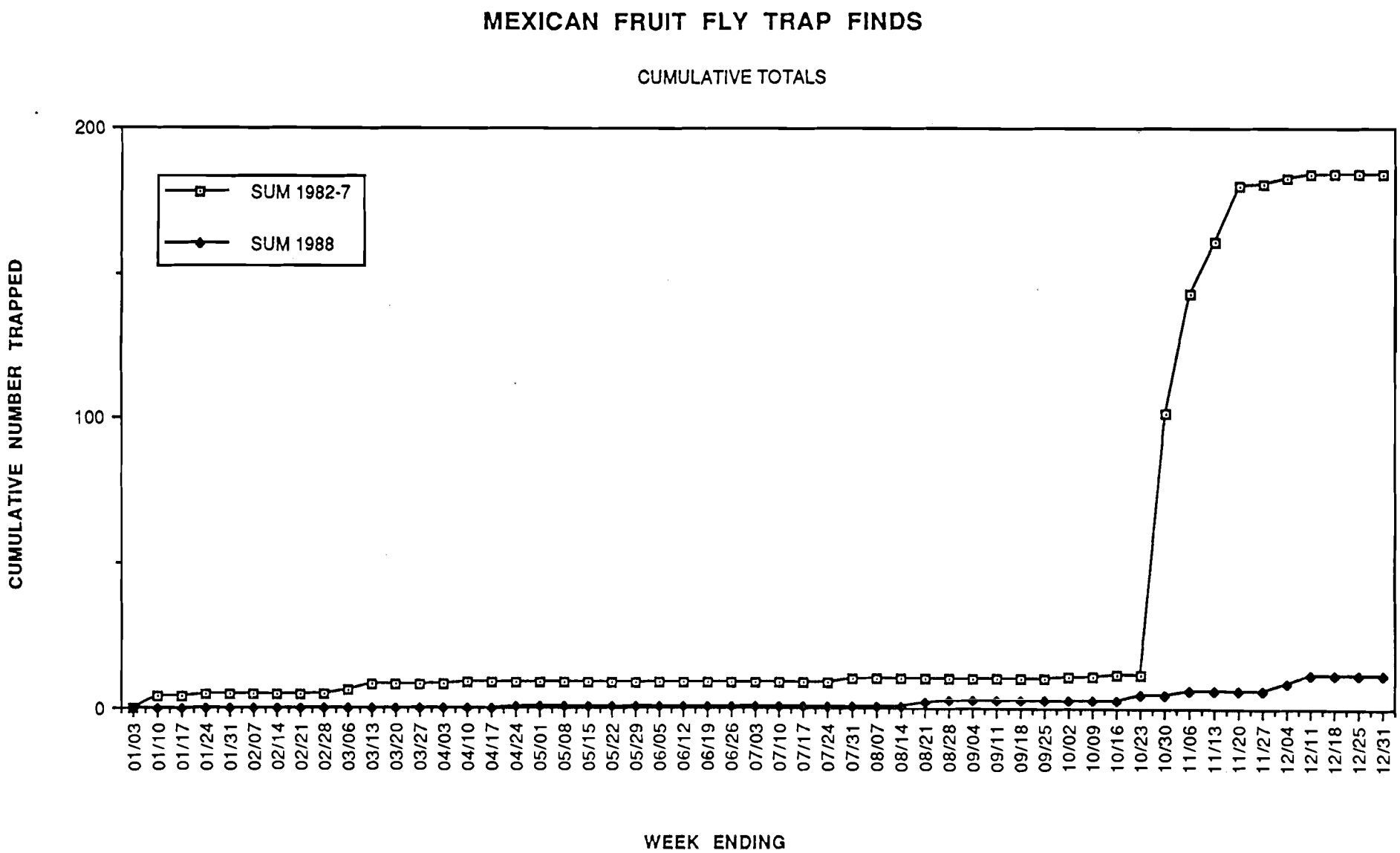
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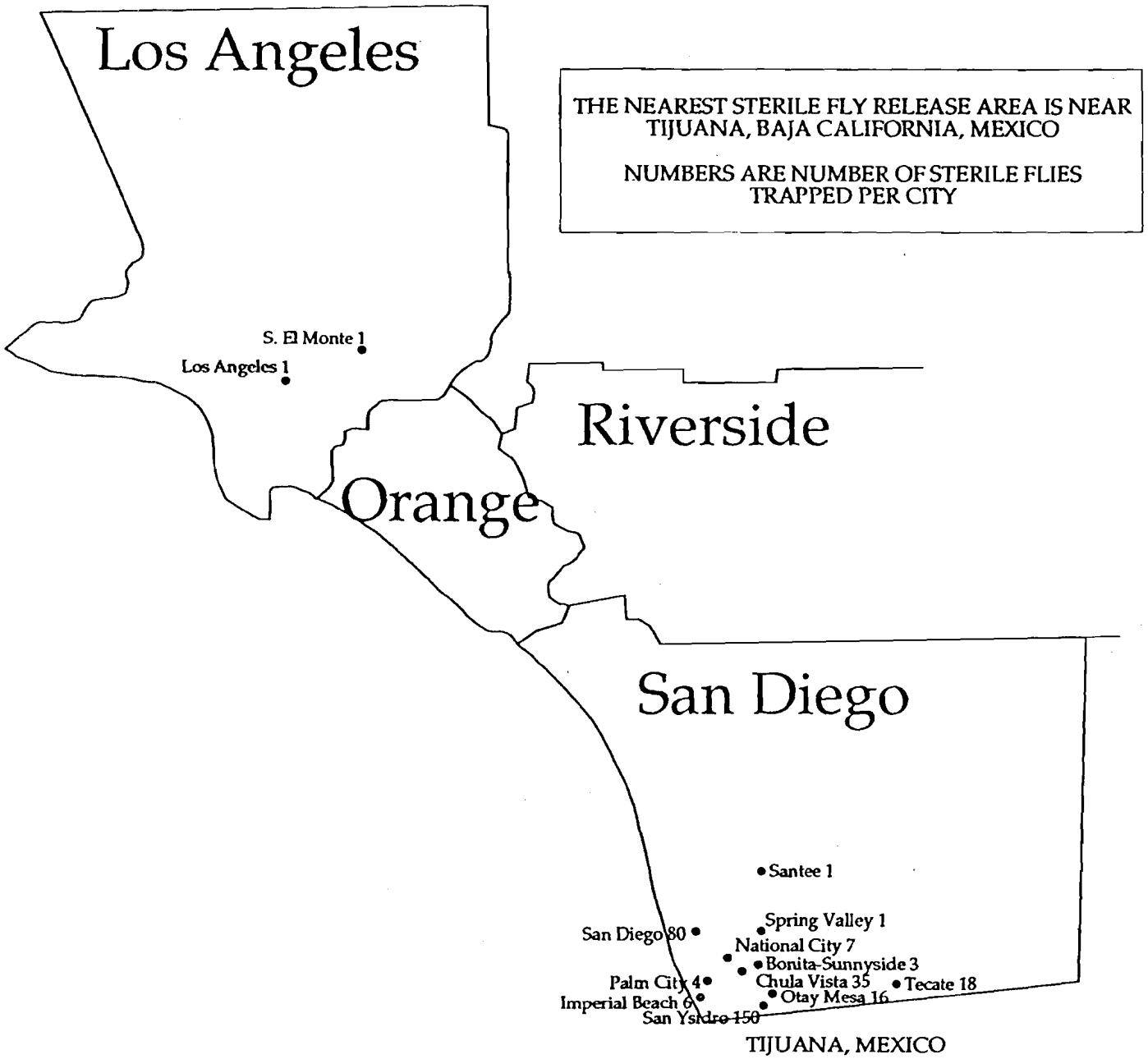
WEEK ENDING

STERILE MEXICAN FRUIT FLIES TRAPPED IN CALIFORNIA 1988

BY CITY OR TOWN



BOLL WEEVIL, *Anthonomus grandis*-(A)-The following excerpt was taken from the issue of Boll Weevil News and describes boll weevil finds in the State for 1988 and the following table compares boll weevil trap catches for the last four years:

> Within the Southwest Boll Weevil Project, a monthly maximum of 6,162 traps were deployed in 43,661 acres of cotton in California during the 1987 growing season. Cotton acreage increased by 8,000 acres in 1987. A total of 4,067 weevils were caught in commercial planting, 54 in desert traps.
>
> Weevil catches remained extremely low (21) until October when the annual fall migration of weevils into California from infested regions began. Fall migration was heavy this year, particularly in the Blythe area where approximately 80 % of the weevil captures were within a mile of the Colorado River, indicating fly-in's. Due to this factor, total catches and acres treated increased in 1987 as compared to 1986. See Tables 1 and 2 below.
>
> No in-field infestations were found in California, although weevil recovery patterns in several fields in Blythe were indicative of an infestation. Suspect fields were trapped at high densities during spring of 1988.
>
> In all areas, plowdown compliance is very good.
>
> In the cotton growing areas of the San Joaquin Valley, 3,320 traps are monitored by County Agricultural Commissioner's personnel for the possible introduction of boll weevil.

Table 1

Boll Weevil Catch Summary
for California for 1985, 1986, 1987 and 1988

	WEEVIL CATCHES			
County	1988	1987	1986	1985
Imperial	65	269	21	1,660
Bard/Winterhaven	77	786	237	13,159
Blythe	435	3,001	151	1,309
Coachella	0	11	71	5
Needles	0	1	45	-
Totals	**577**	**4,068**	**525**	**14,714**

(continued)

Table 2

Boll Weevil Acreage Treatment Summary
For California for 1985, 1986, 1987 and 1988

County	1988	1987	1986	1985
Imperial	880	1,660	780	12,107
Bard/Winterhaven	960	1,473	5,019	30,393
Blythe/Palo Verde	7,037	8,246	1,864	16,769
Coachella	0	50	1,400	0
Needles	0	0	293	-
Totals	**8,877**	**11,429**	**9,356**	**59,269**

SIGNIFICANT FINDS IN OTHER LOCATIONS

AFRICANIZED HONEY BEE, *Apis mellifera scutellata*-(Q)- A swarm of Africanized honey bees (AHB) was collected on a ship from Guatemala at Tampa, Florida, on October 31. This was the third swarm of AHB found in Florida since September 26, 1988. AHB survey and detection efforts are continuing in the Port Everglades, Florida, area. Since a suspected AHB swarm flew away on October 20, ten feral colonies have been located and submitted for identification. Eradication procedures are being implemented.

NEW THRIPS IN HAWAII

Two species of thrips (*Scirtothrips dorsalis* and *Rhipiphorothrips pulchellus*) new to Hawaii and the Western Hemisphere were reported from Maui and Oahu on November 3. These new pests will be referred to the Biological Assessment and Taxonomic Support staff to determine proper PPQ response.

ENTOMOLOGY LABORATORY DETERMINATIONS FOR THE CALENDAR YEAR 1988

PROJECTS:

Fruit Fly

Western Cherry Fruit Fly	2
Oriental Fruit Fly	11
Mexican Fruit Fly	0
Mediterranean Fruit Fly	435
Apple Maggot	4
Caribbean Fruit Fly	0
Melon Fly	0

(continued)

Gypsy Moth	15
Woolly Whitefly	4
Boll Weevil	1,050*
Japanese Beetle	4
White Garden Snail	3
Fire Ant	1,576
Africanized Honeybee	0
SURVEYS:	
General	2,236
Detection Survey	4,912
Extension Service	67
Black Light Trap	3
Khapra Beetle - Visual	0
Trogotrap	542
General Fruit Fly	142
NURSERY:	427
QUARANTINE:	
Interior	3,859
Border	9,146
Port	492
GENERAL:	
Forestry	17
Foreign Countries	0
Universities	1,481
Other States	330
Museums	269
OTHER:	6
TOTAL:	**27,033**

THE NUMBER OF A PESTS RECORDED WAS	1,523
THE NUMBER OF B PESTS RECORDED WAS	184
THE NUMBER OF Q PESTS RECORDED WAS	1,290
THE NUMBER OF C PESTS RECORDED WAS	5,614
THE NUMBER OF D PESTS RECORDED WAS	867
THE NUMBER OF S PESTS RECORDED WAS	819
THE NUMBER OF P PESTS RECORDED WAS	2,147
THE NUMBER OF N PESTS RECORDED WAS	126

THE REMAINDER REPRESENT UNLOGGED IDENTIFICATIONS.

*BOLL WEEVIL NUMBERS REPRESENT SPECIMENS, NOT SUBMISSIONS.

BORDER STATIONS

BORDER STATION INTERCEPTIONS

Thousands of cars and trucks pass through the California border stations every week. The possibility of these vehicles carrying exotic pests is tremendous. The following two charts list the commodities rejected at two of the busier border stations during one week in October (charts indicate origin, commodity, reason for rejection and inspector):

HORNBROOK (HO)

Rejections:
OR fallow deer (12/no permit) by C. Hamilton.
OR Hood River apples (no cert) by D. Whitman.
OR Texas grapefruit (no cert) by D. Whitman.
OR Lane County firewood (no cert) by C. Hamilton.
OR mahonia plants (no cert) by D. Middleton.
OR Hood River apples (no cert) by A. Rojas.
OR Hood River apples (no cert) by D. Middleton.
OR Hood River apples (no cert) by D. Middleton.
OR Hood River apples (no cert) by C. Hamilton.
OR Hood River apples (no cert) by L. Baker.
OR Florida tangelos (no cert) by R. Peffer.

BLYTHE (BL)

Rejections:
FL ferrets (6) by L. Ebert.
NC ferret by L. Sanchez.
LA ferret by W. Walker.
AZ firewood (live insects) by M. Deleon.
GA pecans (no cert) by L. Sanchez.
TX oranges/grapefruit (no cert) by B. Litchfield.
TX palm trees (live insects) by A. Guthrie.
FL houseplants (no cert) by L. Wadley.
MEX peppers (live scales) by D. Gaona.
MEX tangerines (no cert) by D. R. Day.
MEX bell peppers (no cert) by D. R. Day.
MEX tangerines (no cert) by D. R. Day.
MEX tangerines (no cert) by D. Gaona.
MEX tangerines (no cert) by A. Sandoval.
MEX tangerines (no cert) by D. Gaona.
MEX firewood (live ants) by L. Sanchez.
NO ORIGIN HHGS by G. Moline.
DOM REP sour oranges (prohibited) by B. Hinsley.

Rejections of plant material is not always a simple matter, as the following incident will indicate:

> Trucker Zapped - Last week, on Friday, a truck hauling nursery stock from Texas pulled into the Blythe Station. PQS Beverly Litchfield checked the bills and asked the driver to pull over for the customary inspection. Bev found live scale insects, issued a rejection notice, and informed the trucker that he would have to wait for a Sacramento lab determination. The driver said, "I don't have time to wait," and chose to return out of state with his infested plants.
>
> Six days later, PQS Dennis Day was handed bills for processed corn flour by (you guessed it!) the same trucker. Denny's sixth sense served him well. He asked the driver to open up for inspection. Meanwhile, Denny checked the bills of the next truck in line. He noted that the paperwork was the same bills of lading, same shipper, same items, same destination. In fact, they were photocopies.
>
> By this time, the doors of the first truck were open. Flora, not flour, was found in abundance! The driver was issued a citation for failure to declare quarantined items from Texas. Once again, the Blythe crew demonstrated the alertness that results in significant interceptions and rejections. The Sacramento staff passes along another "Well Done" to the Blythe bunch.

In considering sheer numbers of border interceptions, look at the following chart covering van and storage lines carrying outdoor household articles (OHA) likely to be infested with gypsy moth:

SUMMARY OF SEPTEMBER 1988
GYPSY MOTH REGULATORY ACTIVITIES AT
CALIFORNIA BORDER AGRICULTURAL INSPECTION STATIONS

(REPORT DATE: 10-17-88)

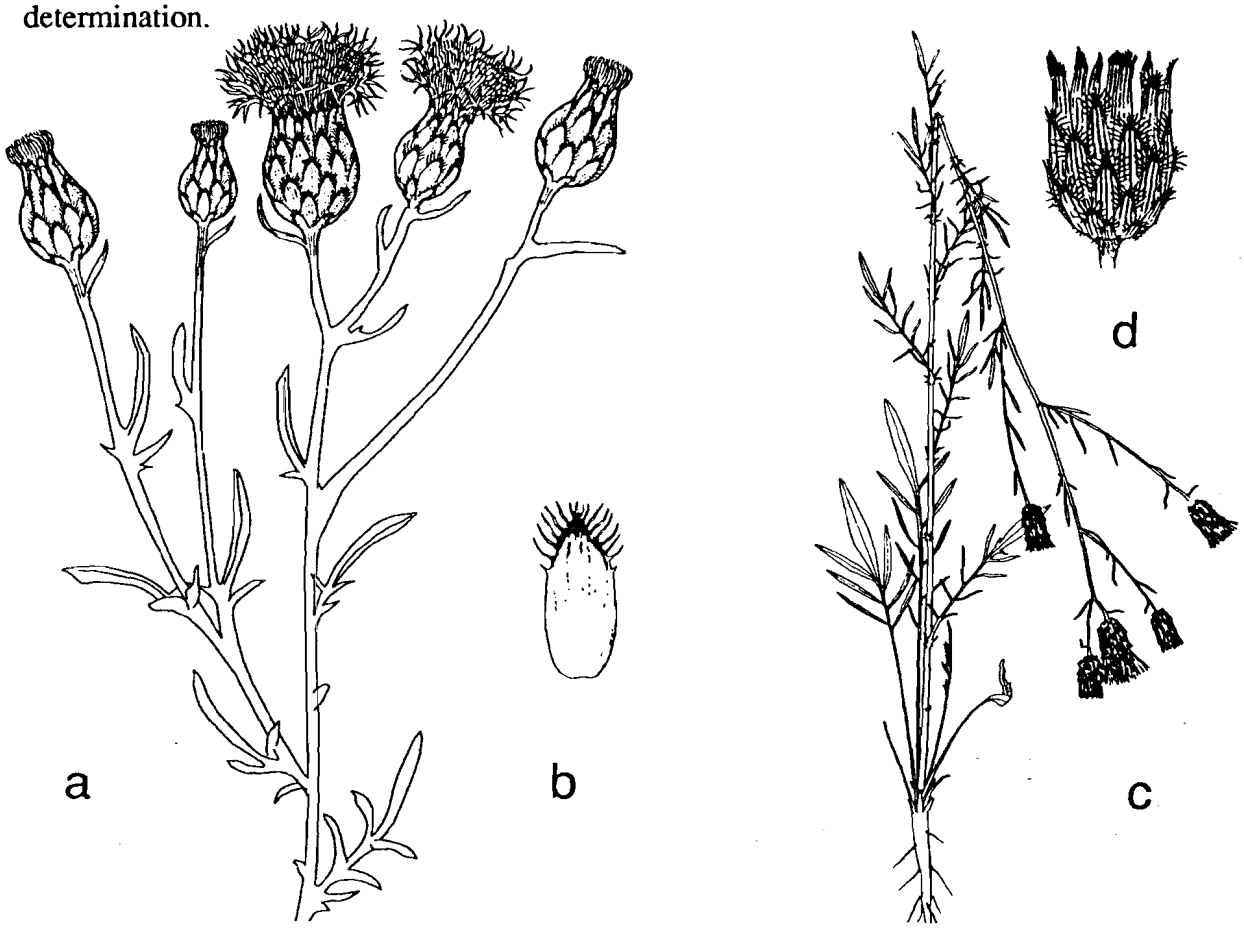
TOTAL COMMERCIAL SHIPMENTS	2,735
NUMBER CERTIFIED	2,034
PERCENTAGE	74%
TOTAL SHIPMENTS FROM HIGH RISK AREAS (H.R.)	2,092
TOTAL NUMBER WITH OHA'S (H.R.)	1,238
TOTAL NUMBER WITHOUT OHA'S (H.R.)	854
NUMBER WITH OHA CERTIFIED (HIGH RISK)	1,117
PERCENTAGE	90%
NUMBER OFFICIAL DOCUMENTATION (OHA DOC PCO)	22
PERCENTAGE	2%
NUMBER WITHOUT OHA CERTIFIED (H.R.)	681
TOTAL NUMBER OF LOW RISK SHIPMENTS	643
NUMBER CERTIFIED (LOW RISK)	236
PERCENTAGE	37 %
TOTAL CITATIONS ISSUED	46
TOTAL CITED SHIPMENTS (COUNTS)	54

Botany Highlights

NEW COUNTY RECORDS

SPOTTED KNAPWEED, *Centaurea maculosa*-(A)- The following report by John Pozzi describes this new county record:

> Spotted knapweed has been detected for the first time in Alpine County. One site is on CALTRANS right-of-way on Highway 88 near Woodfords, about 200 feet west of the temporary CDFA border station. The other location is approximately one mile south of Sierra Pines Market on CALTRANS right of way on Highway 88, near Markleeville.
>
> The nearest previously known locations for spotted knapweed are in Amador and Placer Counties.
>
> The knapweed was found on November 2, 1988, by CDFA Associate Agricultural Biologist Robin Breckenridge. Doug Barbe, Senior Plant Taxonomist, made the determination.



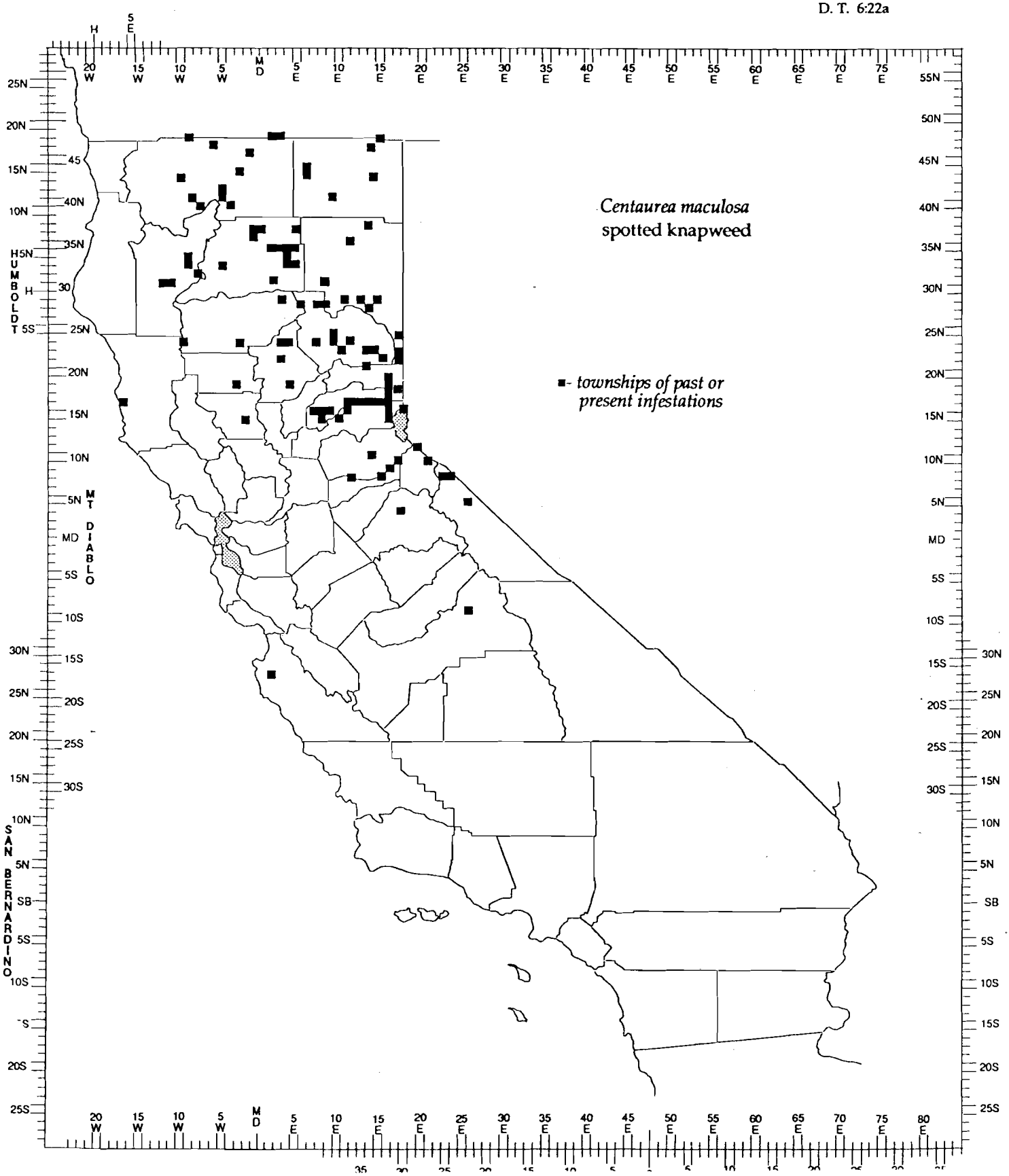
Centaurea maculosa. a, flower heads, b, an outer phyllary, c, over view of growth habit, d, close up of the phyllary arrangement of the flower head.

(Drawings adapted from Moore and Frankton, 1974, *The Thistles of Canada*, Research Branch, Canada Dept. Agriculture Monograph #10 and from Hitchcock et al, 1955, *Vascular Plants of the Pacific Northwest: 5, Compositae*, University of Washington Press, Seattle).

STATE OF CALIFORNIA • DEPARTMENT OF FOOD AND AGRICULTURE

DIVISION OF PLANT INDUSTRY - ANALYSIS & IDENTIFICATION/BOTANY

DETECTION MANUAL
D. T. 6:22a



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Department of Food and Agriculture
Analysis and Identification Branch
1220 N Street, Room 340
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Sacramento, CA 94271-0001

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Name, title: _____
Affiliation: _____
Department: _____
Address: _____
City, State, Zip: _____