CALIFORNIA PLANT PEST and DISEASE REPORT

Vol. 9 Numbers 1-2
January to May, 1990

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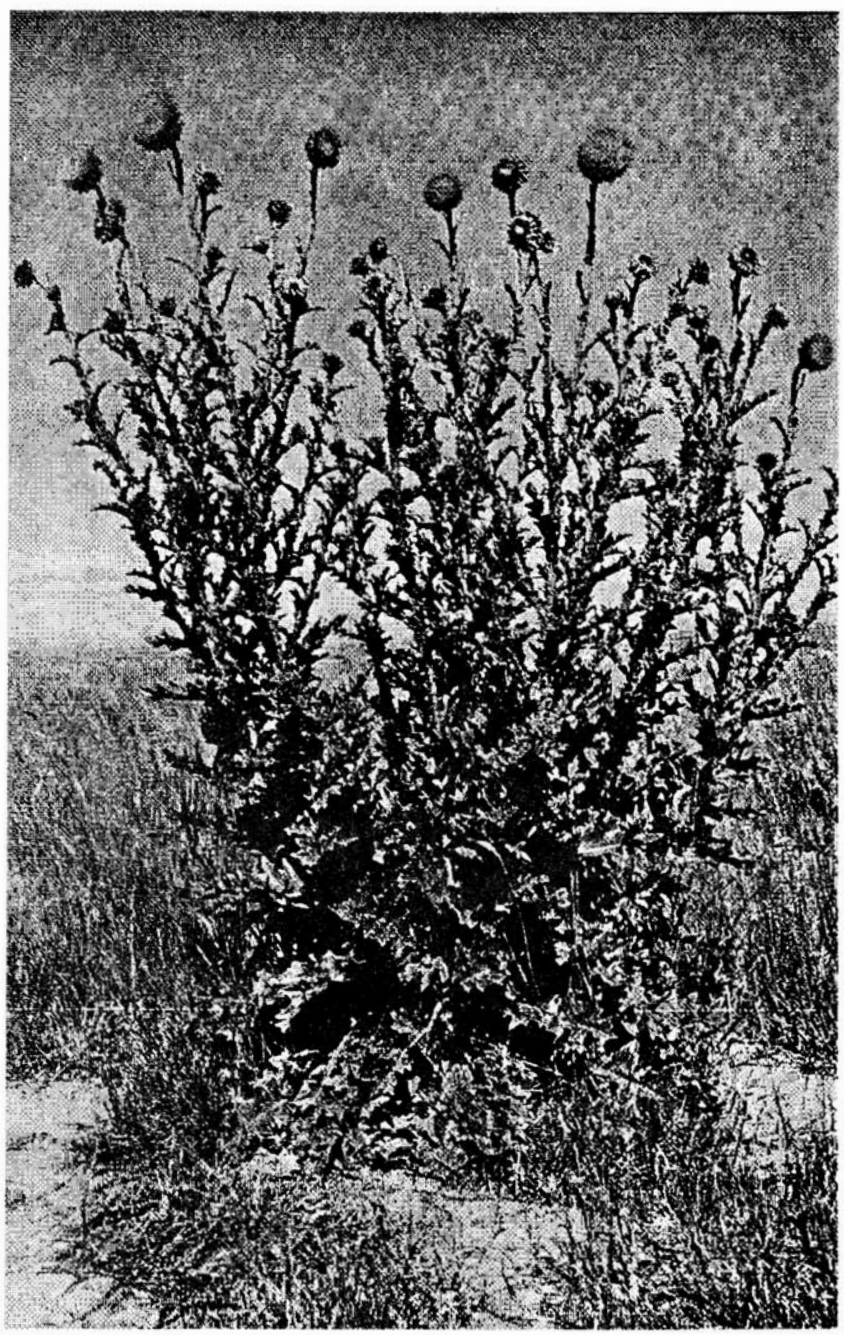
California Department of Food and Agriculture 1220 N Street, Sacramento, California 95814

NOXIOUS WEEDS OF CALIFORNIA



PART 1: DISTRIBUTION MAPS

A-RATED WEEDS

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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BOTANY HIGHLIGHTS

Noxious Weed Maps

The California Department of Food and Agriculture is required, among other things, to prevent the introduction and spread of noxious weeds. To fulfill this mandate CDFA botanist Tom Fuller designed an elegantly simple and efficient method of keeping records. It is still used by the Botany Laboratory to keep track of each of over 97 species of noxious weeds in the state, going back to the earliest recorded occurrence in California of each species.

These permanent records can enable detection biologists to know precisely whether a weed they encounter in the field is a new introduction or one spreading from an established population.

For more than 35 years it was the dream of Tom Fuller to have these records printed and in the hands of field biologists. He also envisioned maps that could be quickly and accurately updated to show the distribution of the noxious weeds and where the new find fits into the overall picture.

Fifteen years ago such maps were prepared by hand and the records compiled, printed and issued to all county and state Plant Pest Detection Personnel and Cooperators as part of Part III (D.T. 6: series) of the Division of Plant Industry Plant Pest Detection Manual. Revising and updating the maps and data sheets was impossible to do by hand with a very limited work force, until the small and efficient personal computer became available.

Tom Fuller retired in 1982 but his dream is being realized by his successor in the Botany Laboratory, Doug Barbe. A personal computer is used to electronically draw the maps and plot the locations of each "A"- and "B"-rated noxious weed in the state. This issue of CPPDR contains all of the "A"-rated weed maps; the "B"-rated weed maps will be included in the next issue.

The data for each weed occurrence, showing the township, range, and section, other locality information, collection date, collector's name, the net and gross acreage of the infestation, and other pertinent information are in preparation and will be issued separately in a future issue of CPPDR.

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4

DETECTION MANUAL
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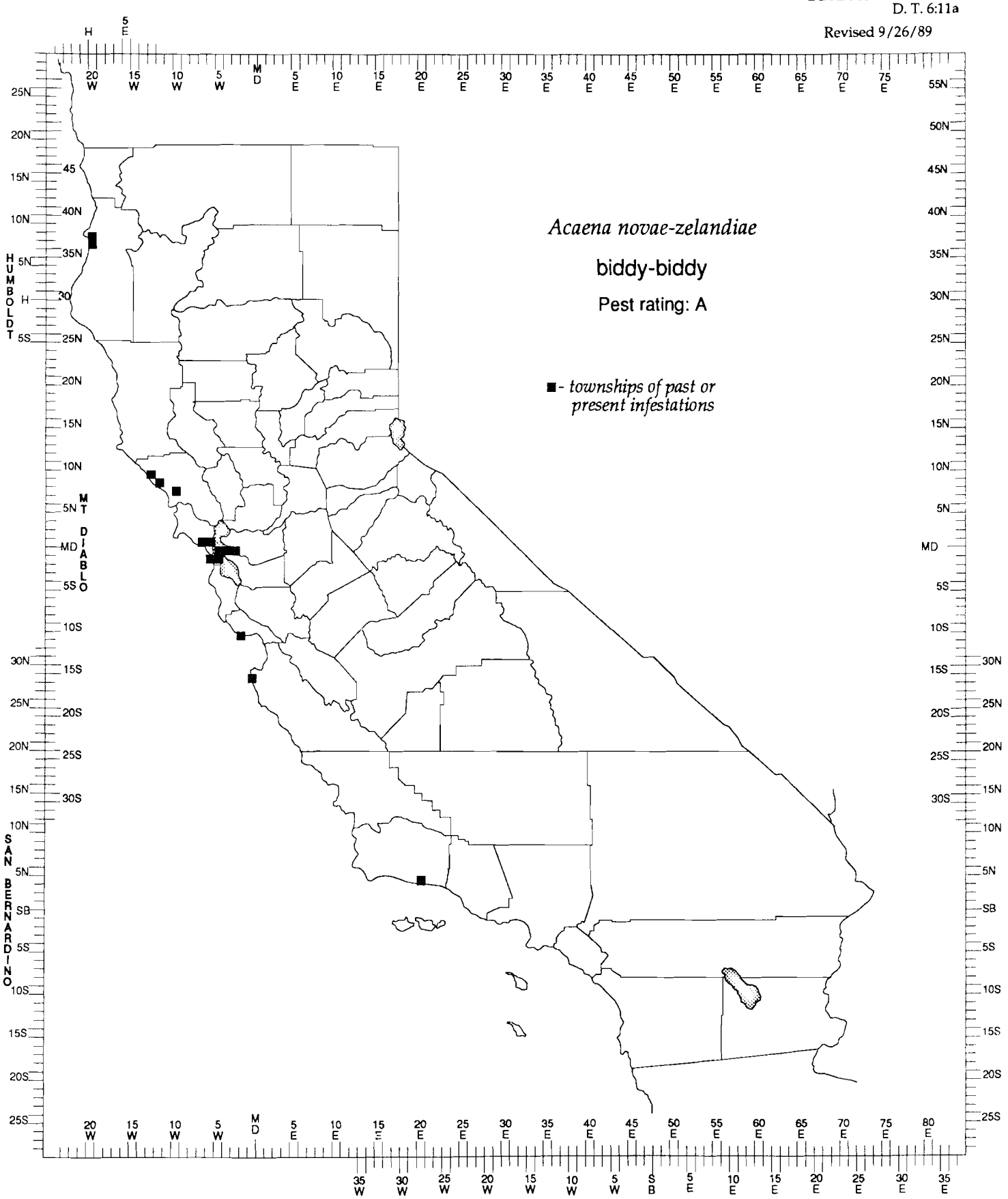

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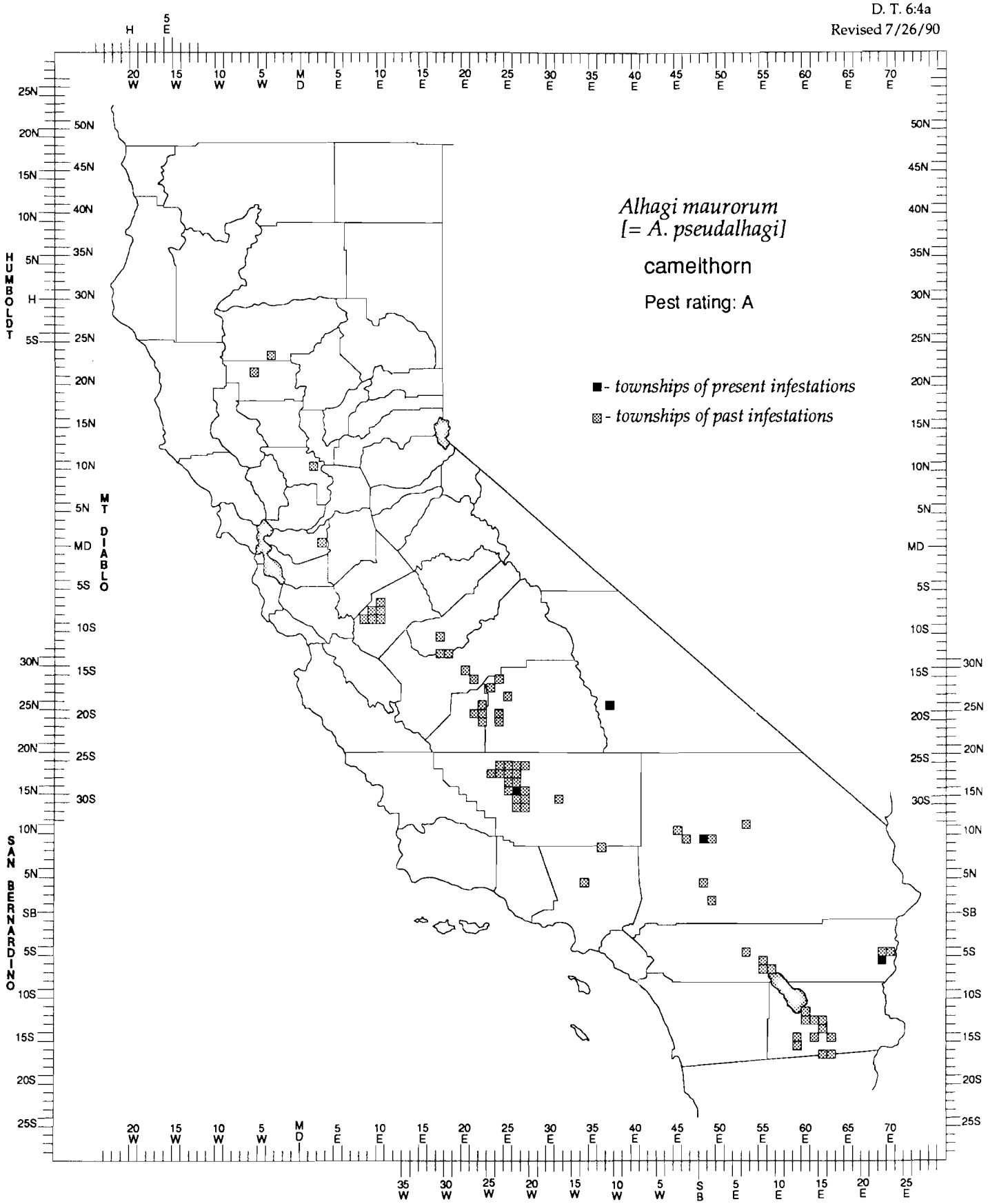

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6

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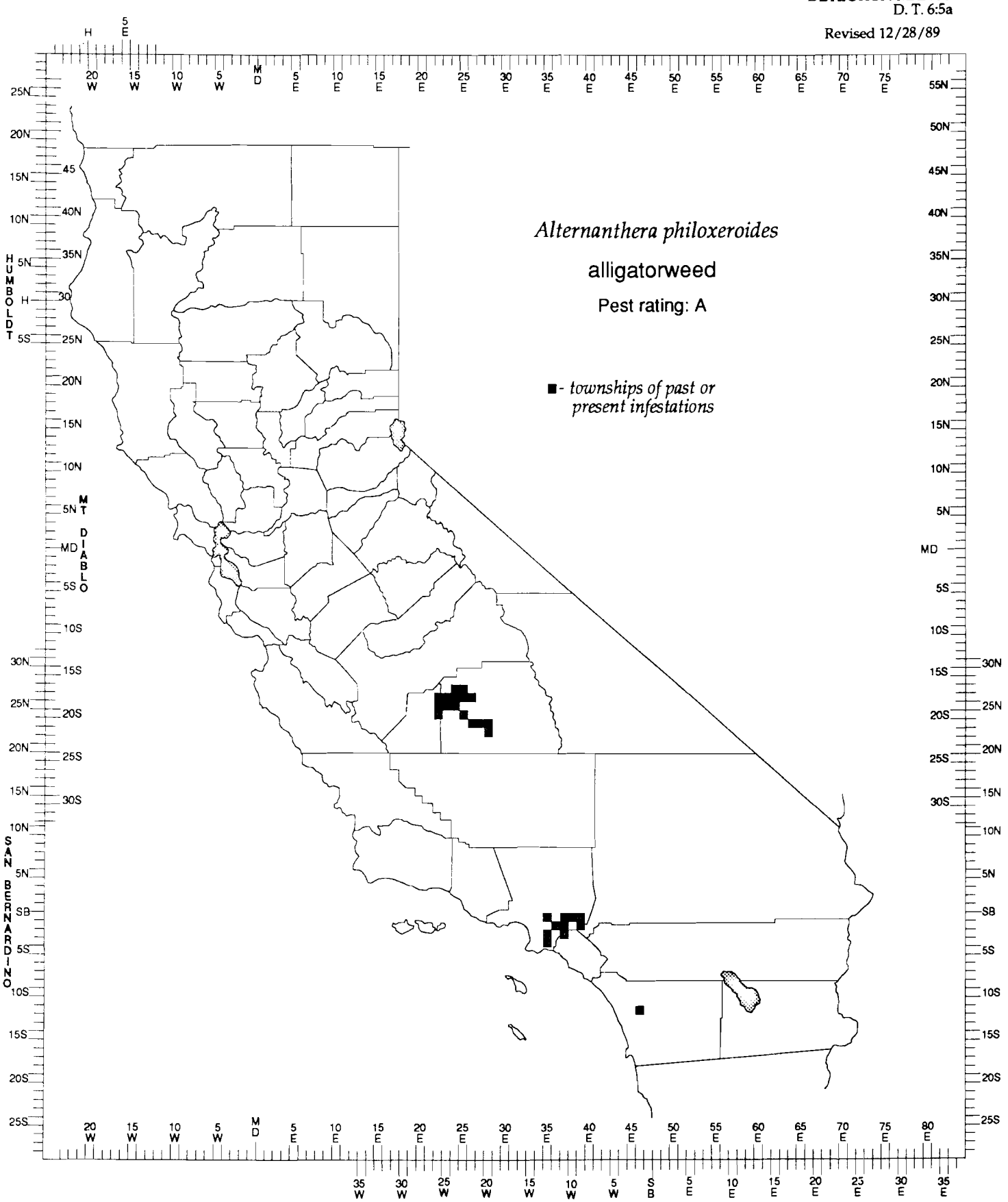

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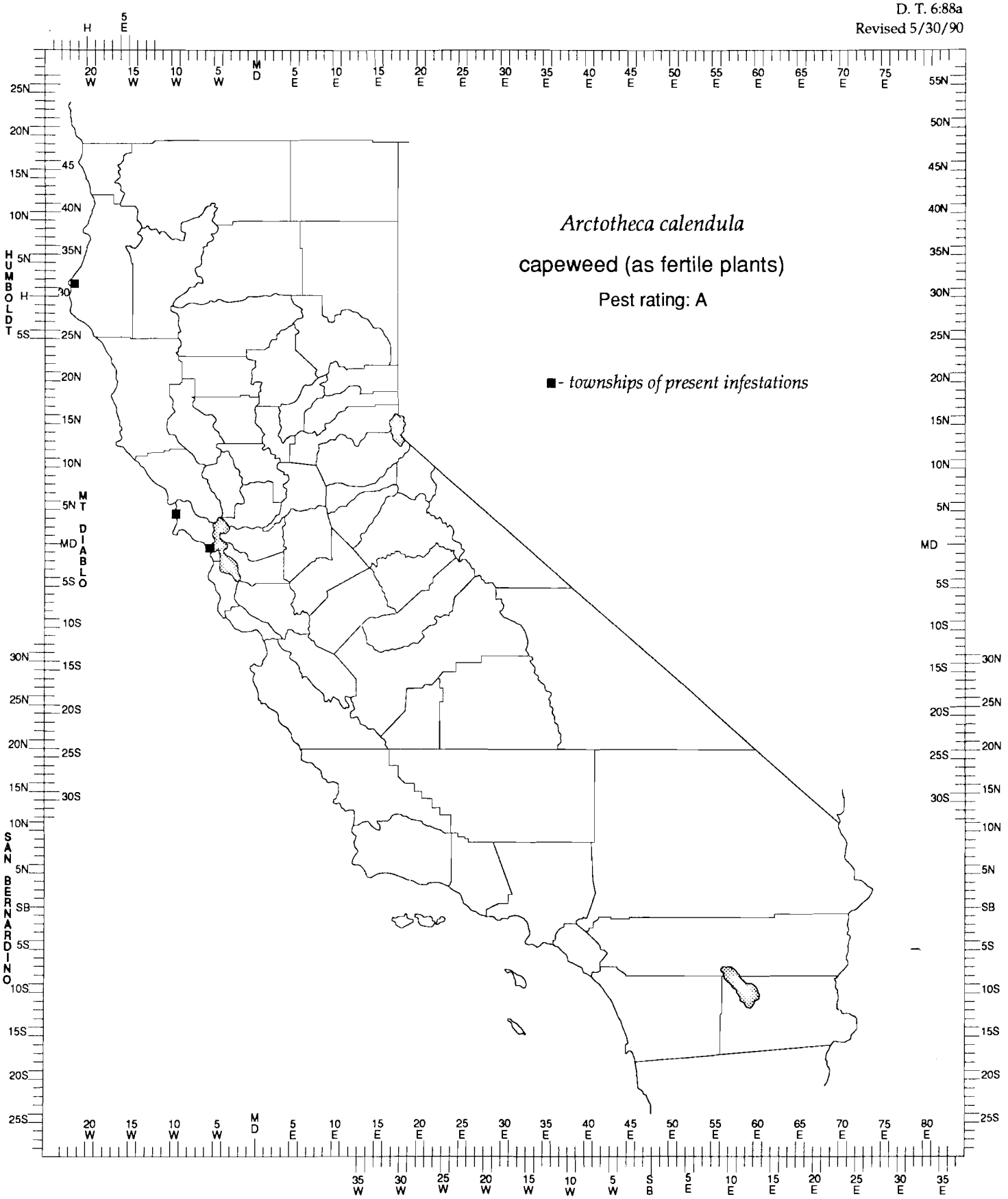

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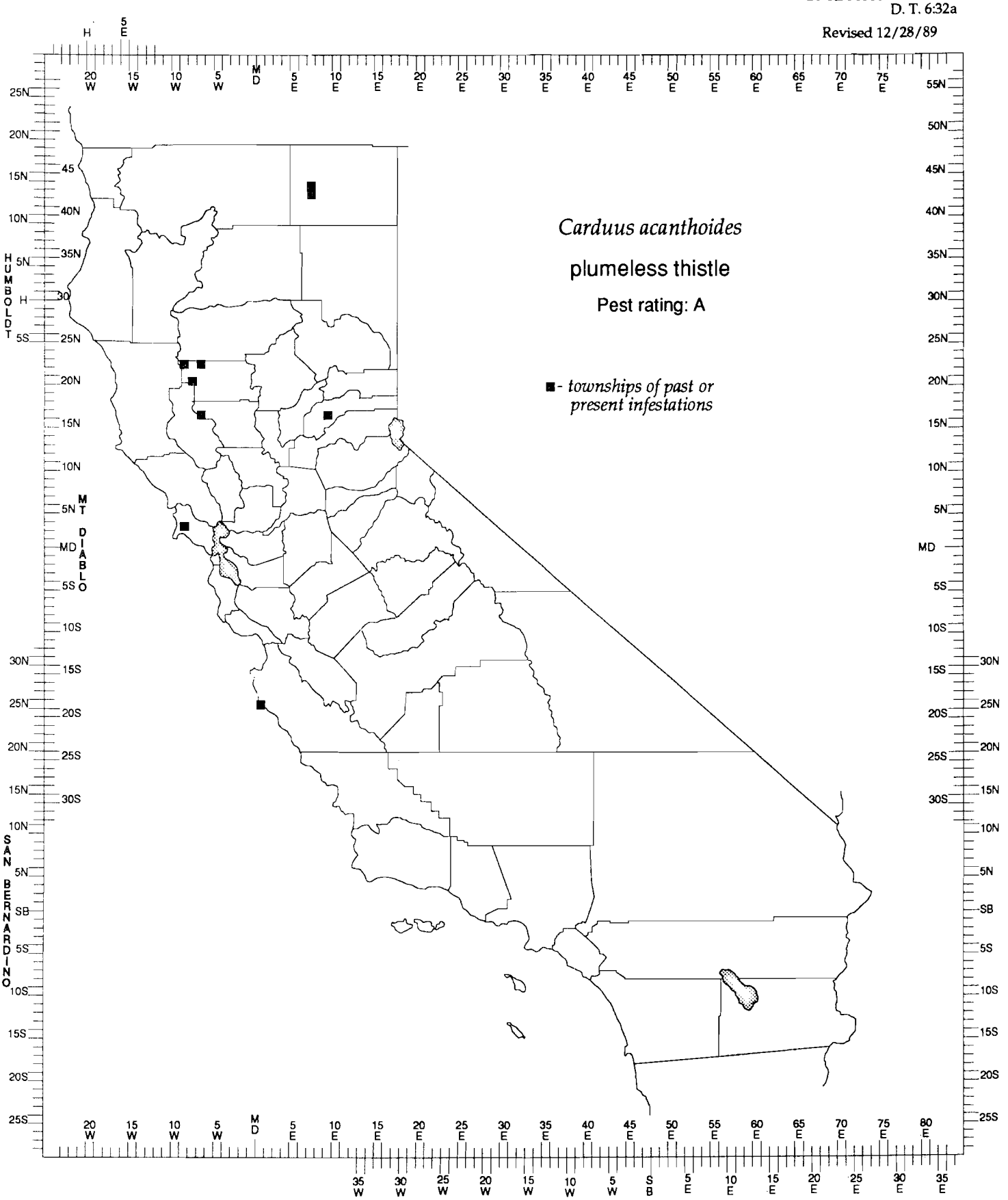

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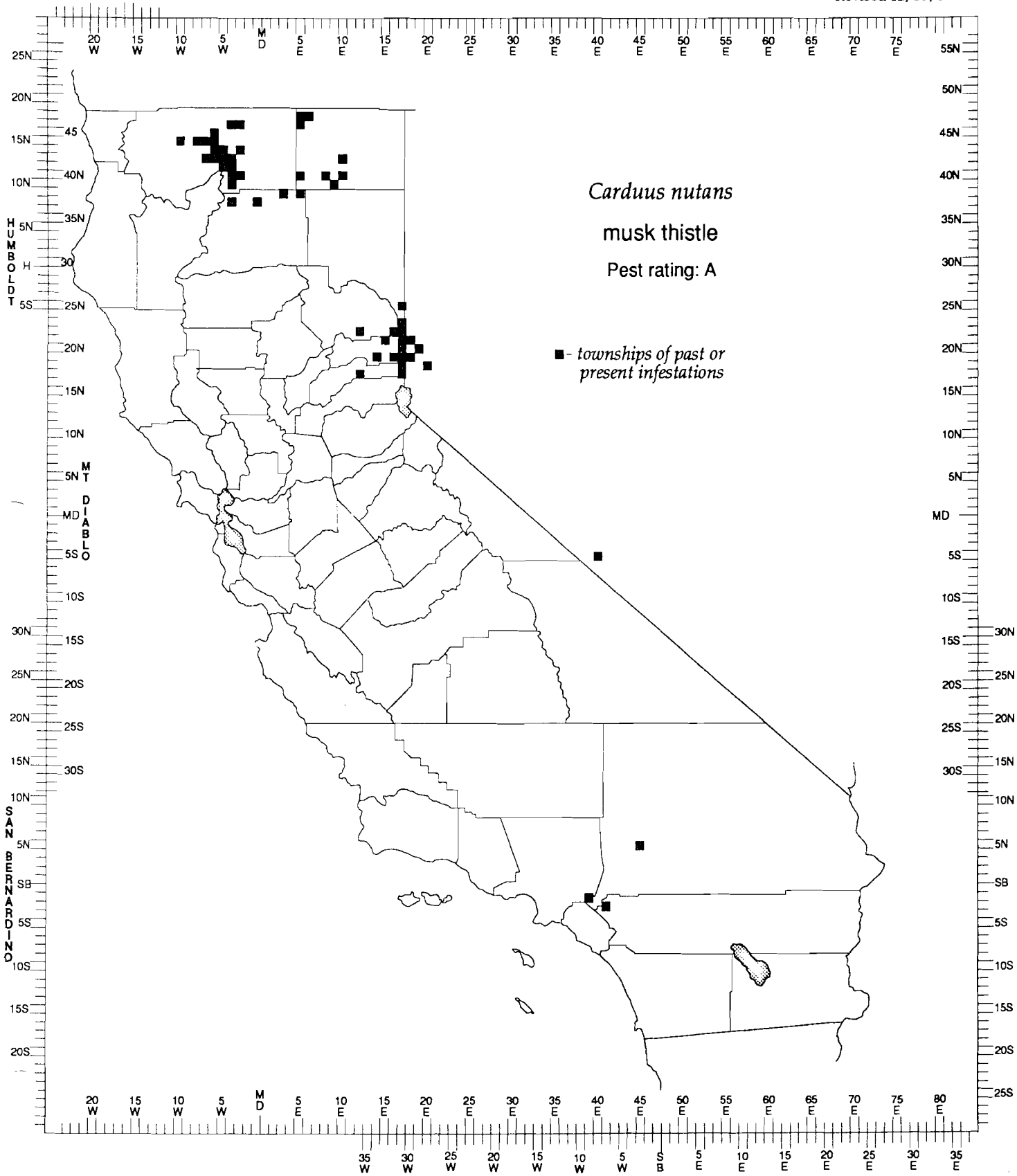

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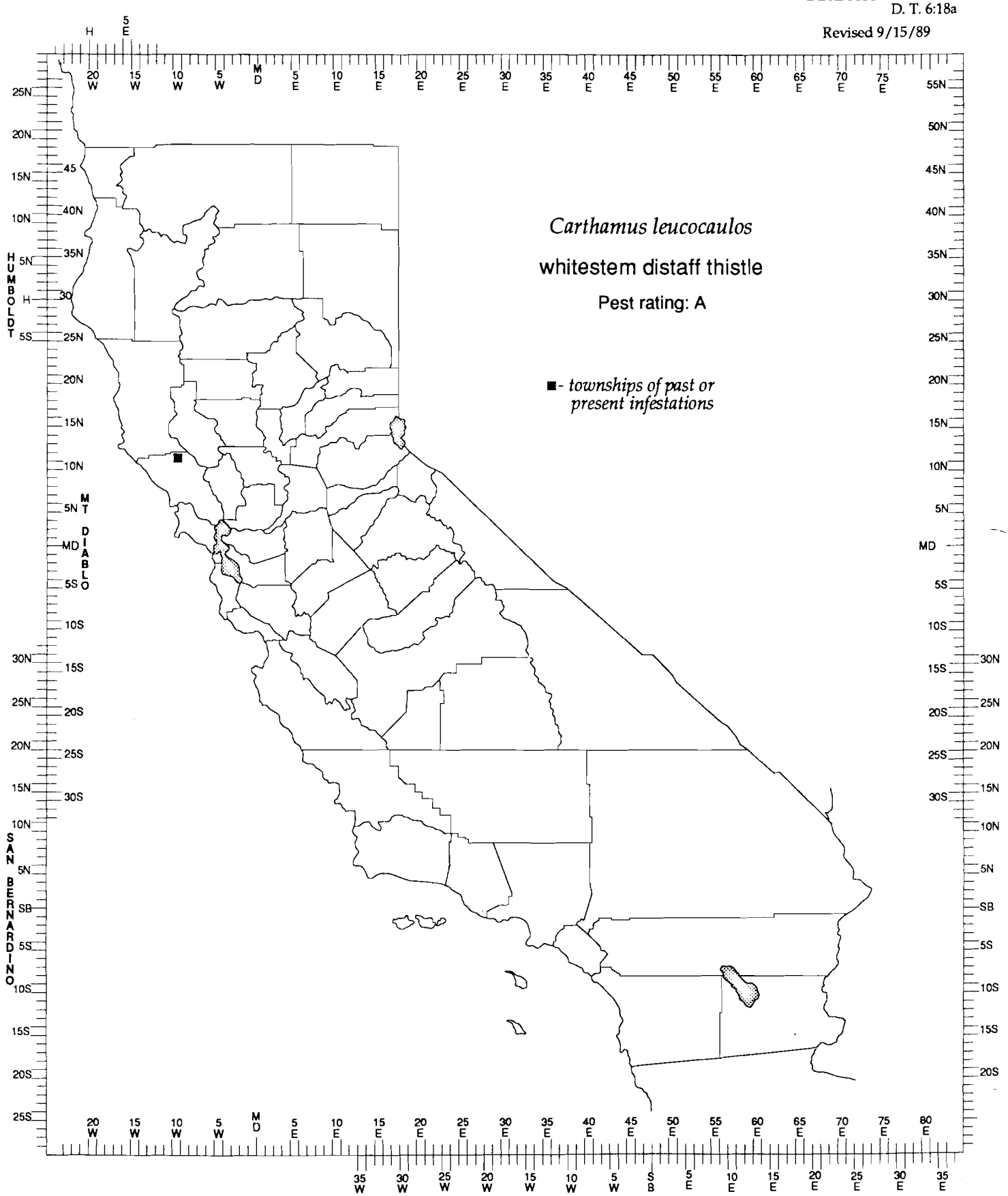

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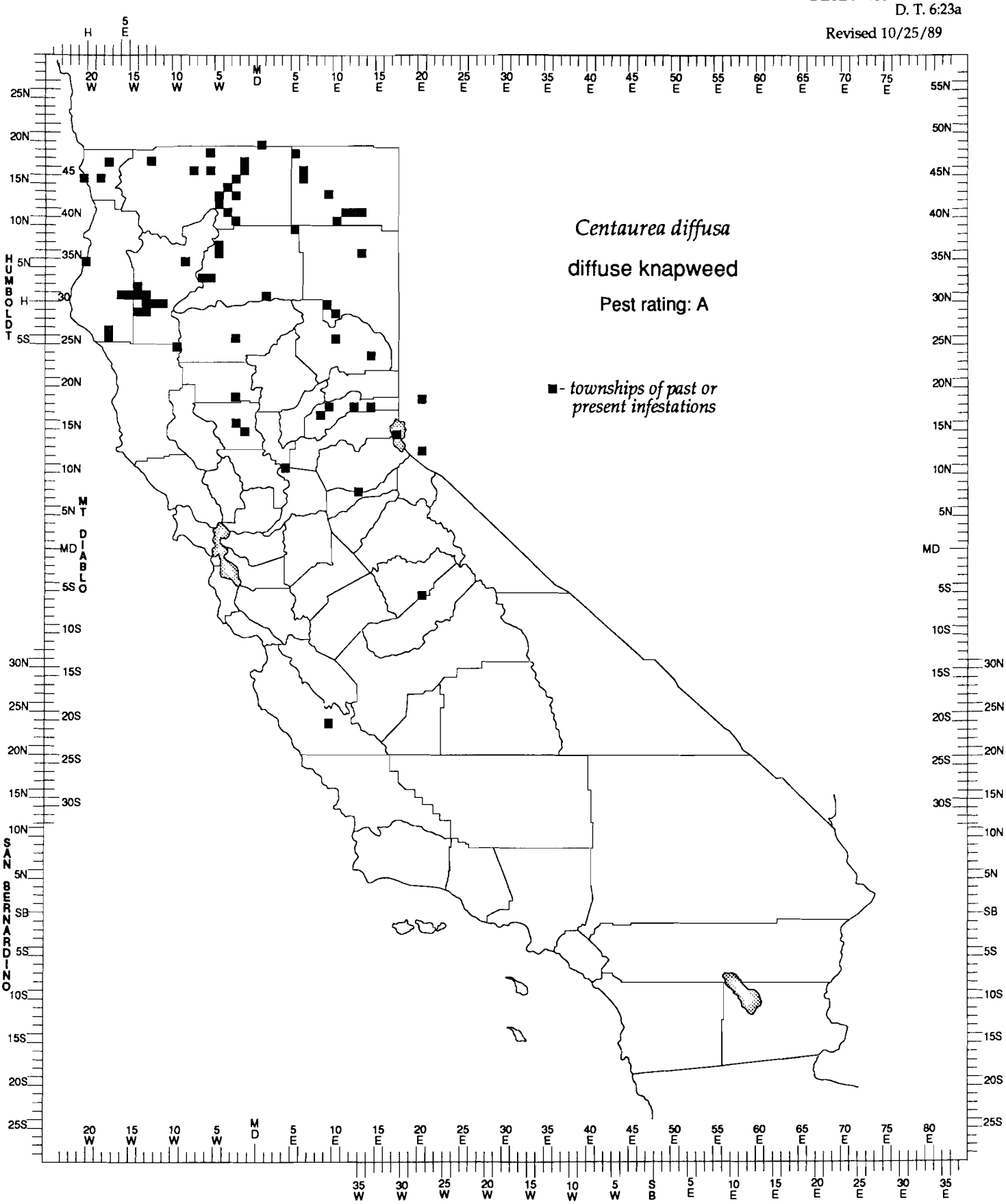

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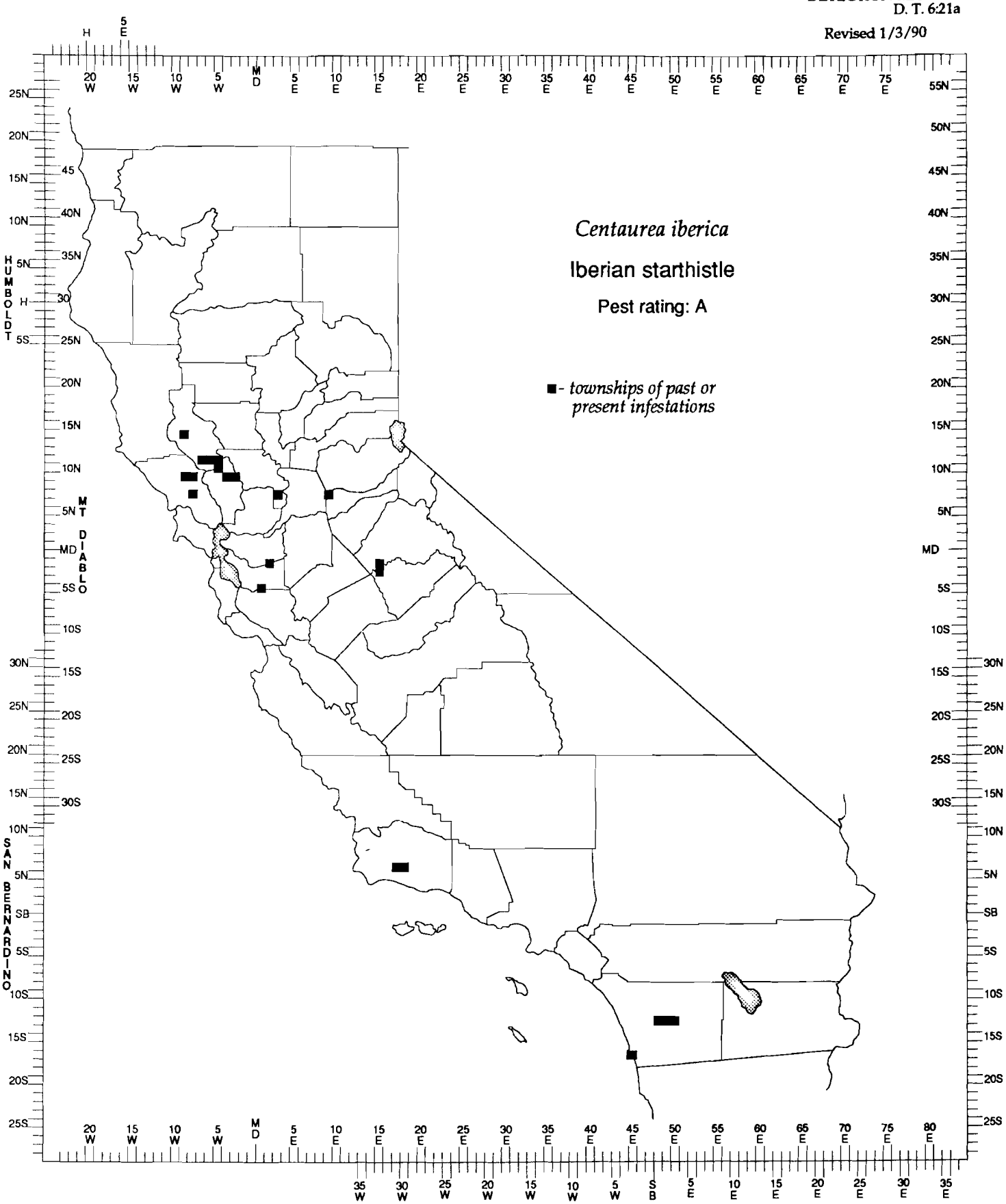

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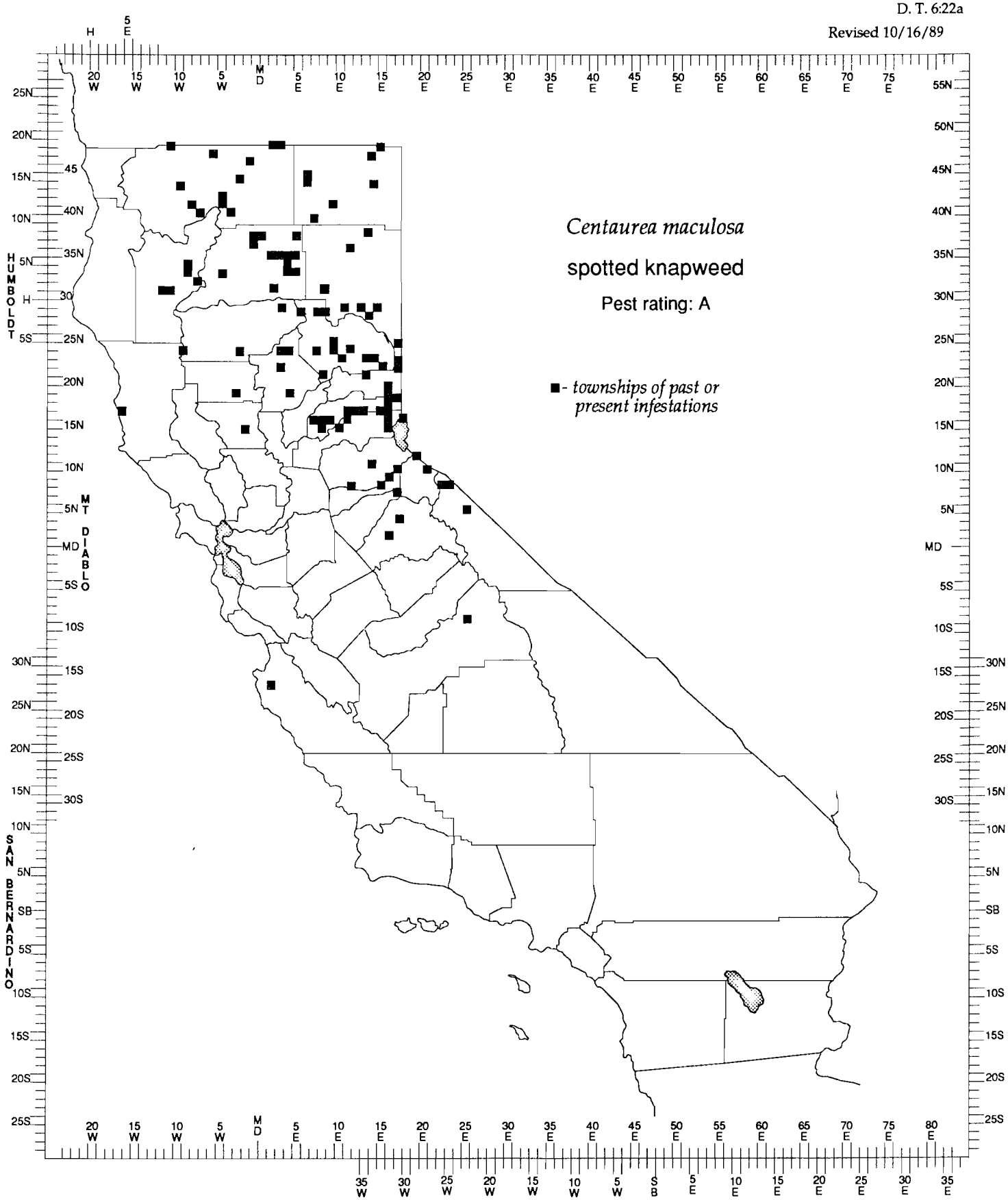

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14

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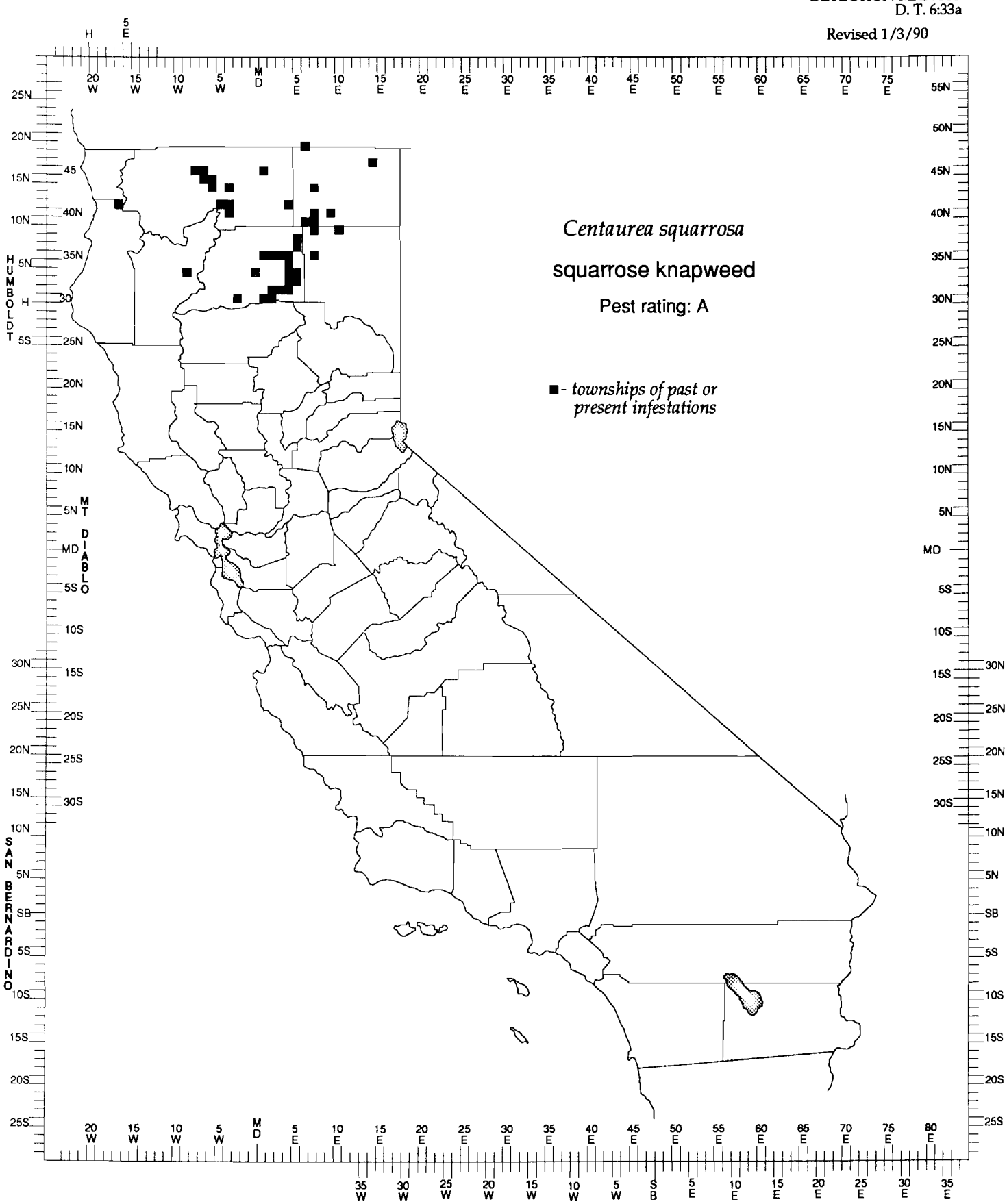

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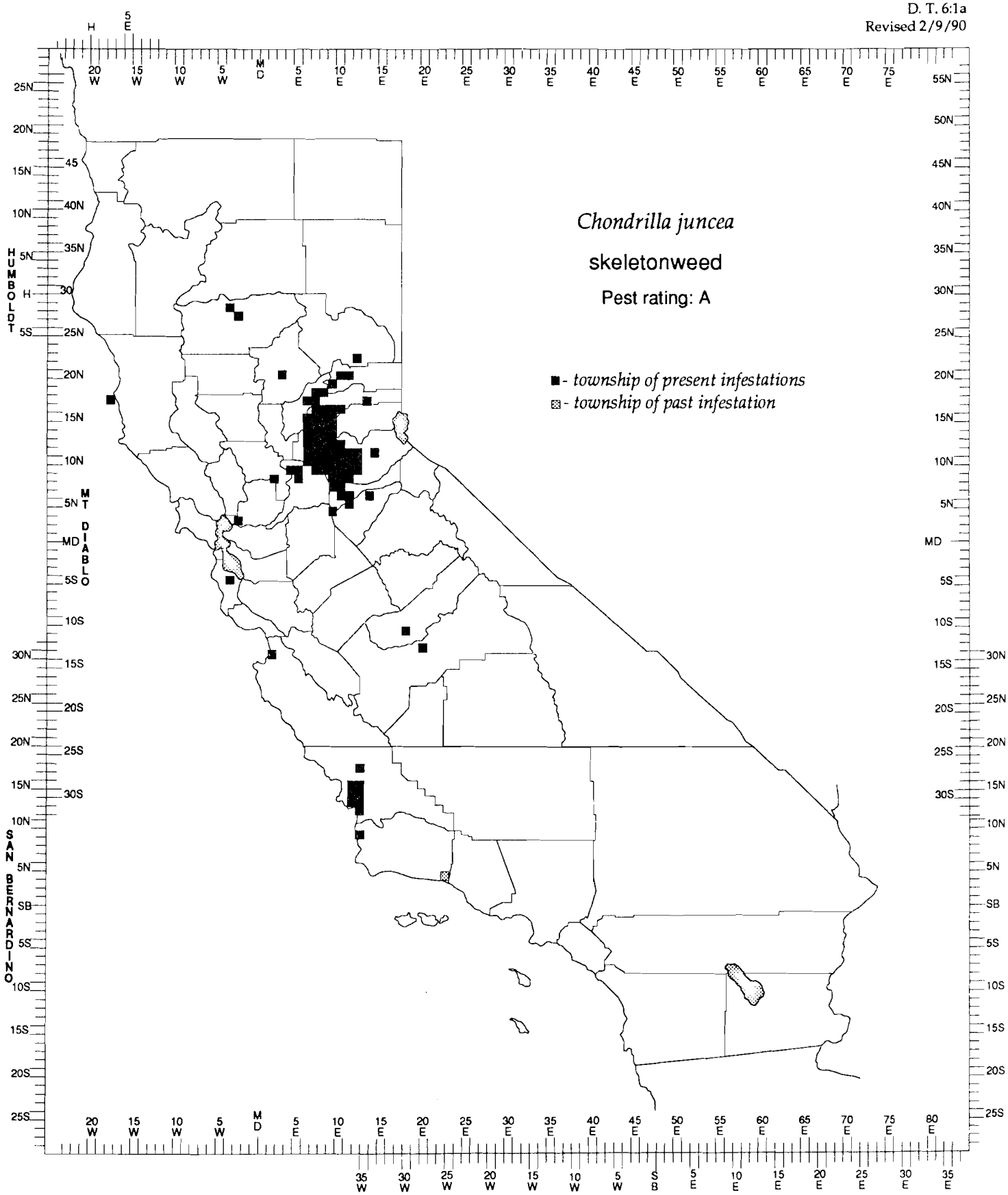

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16

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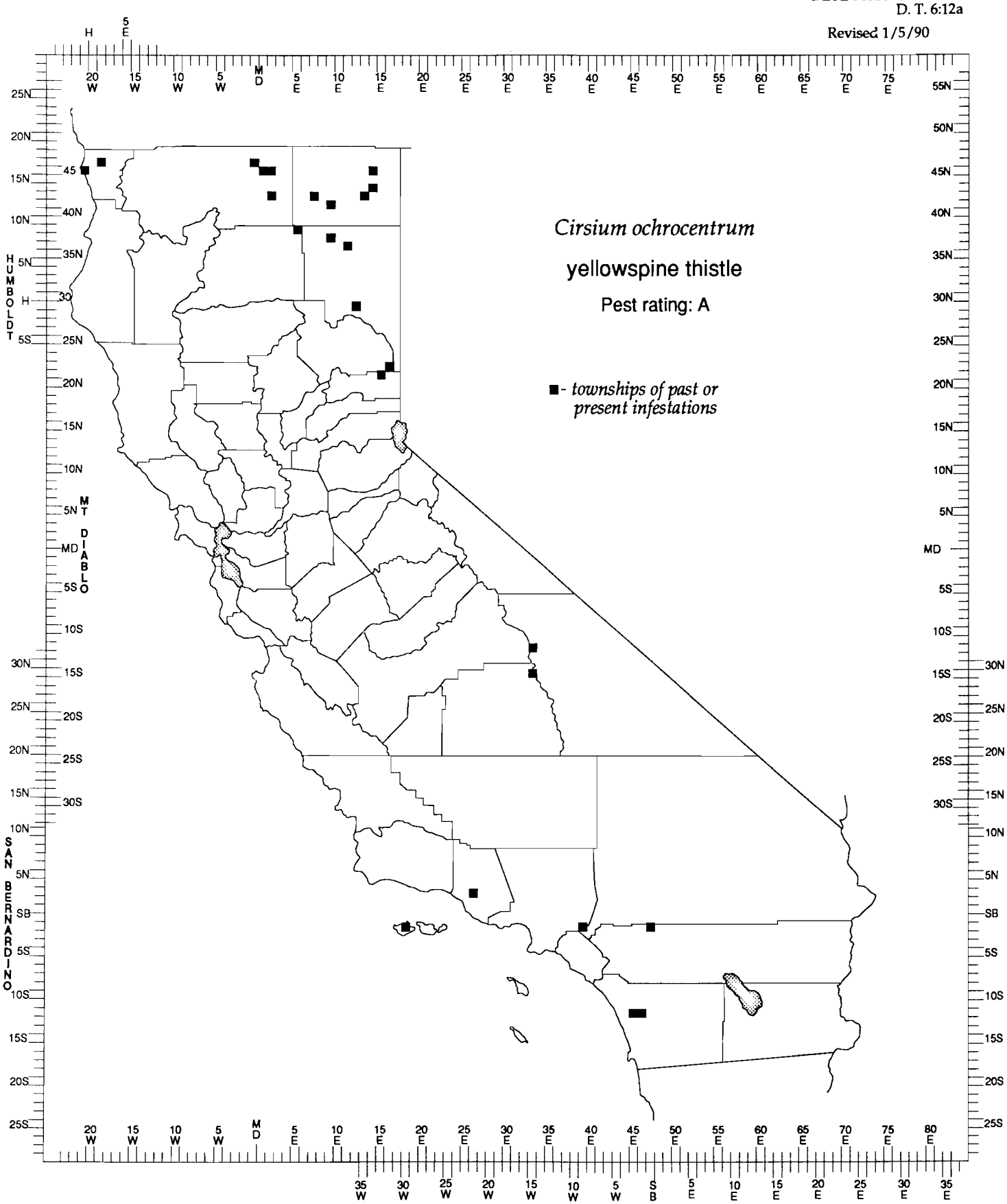

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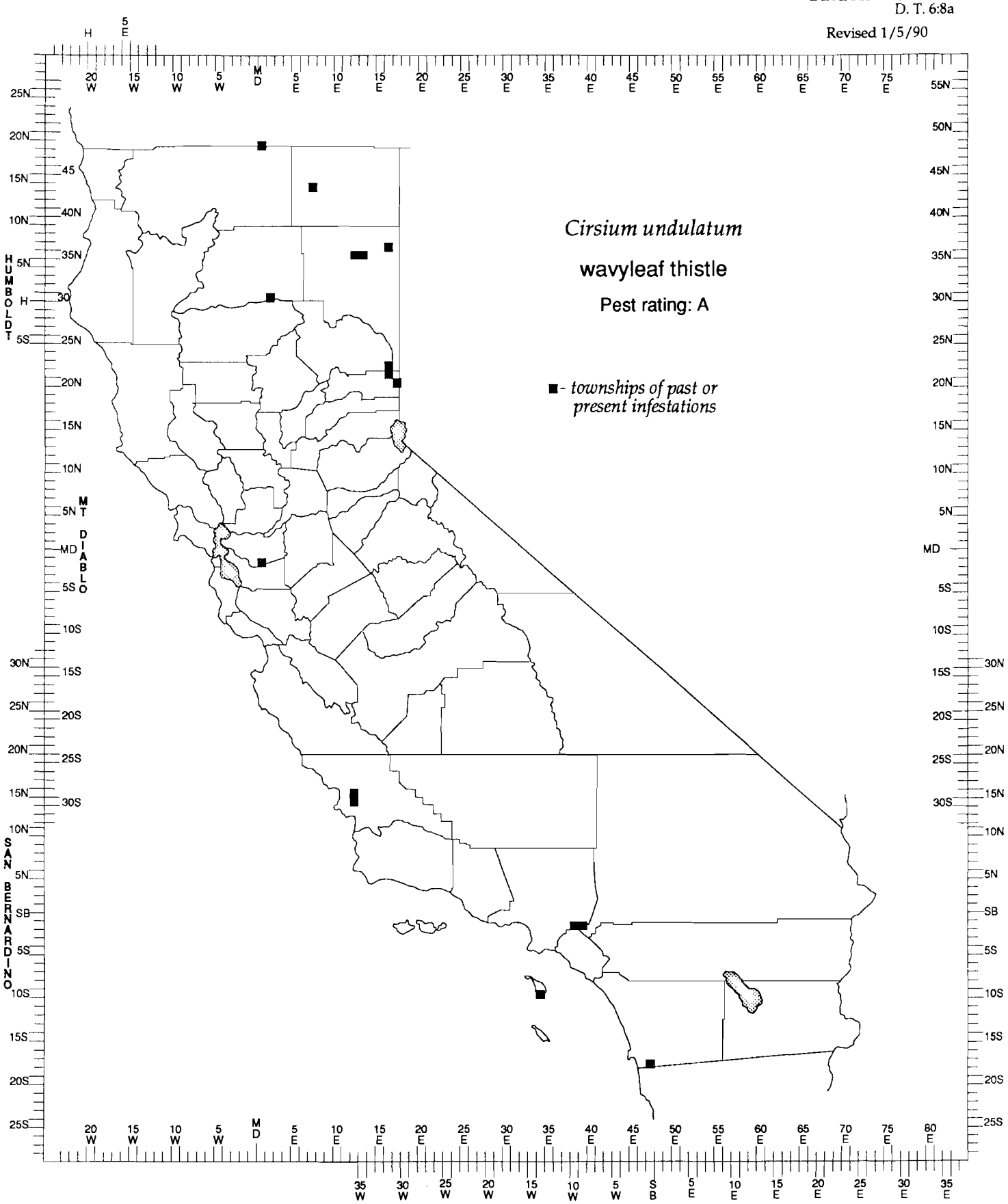

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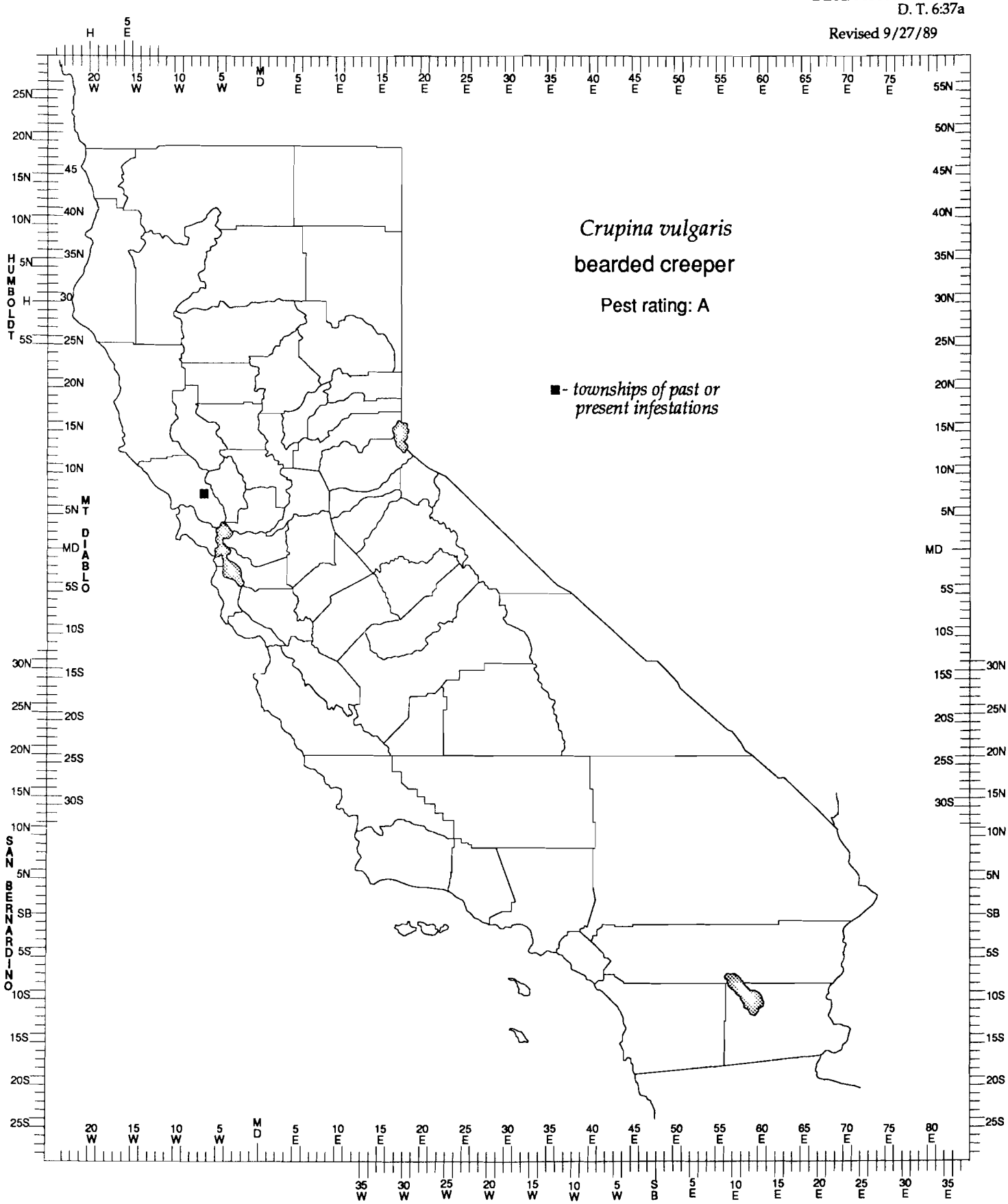

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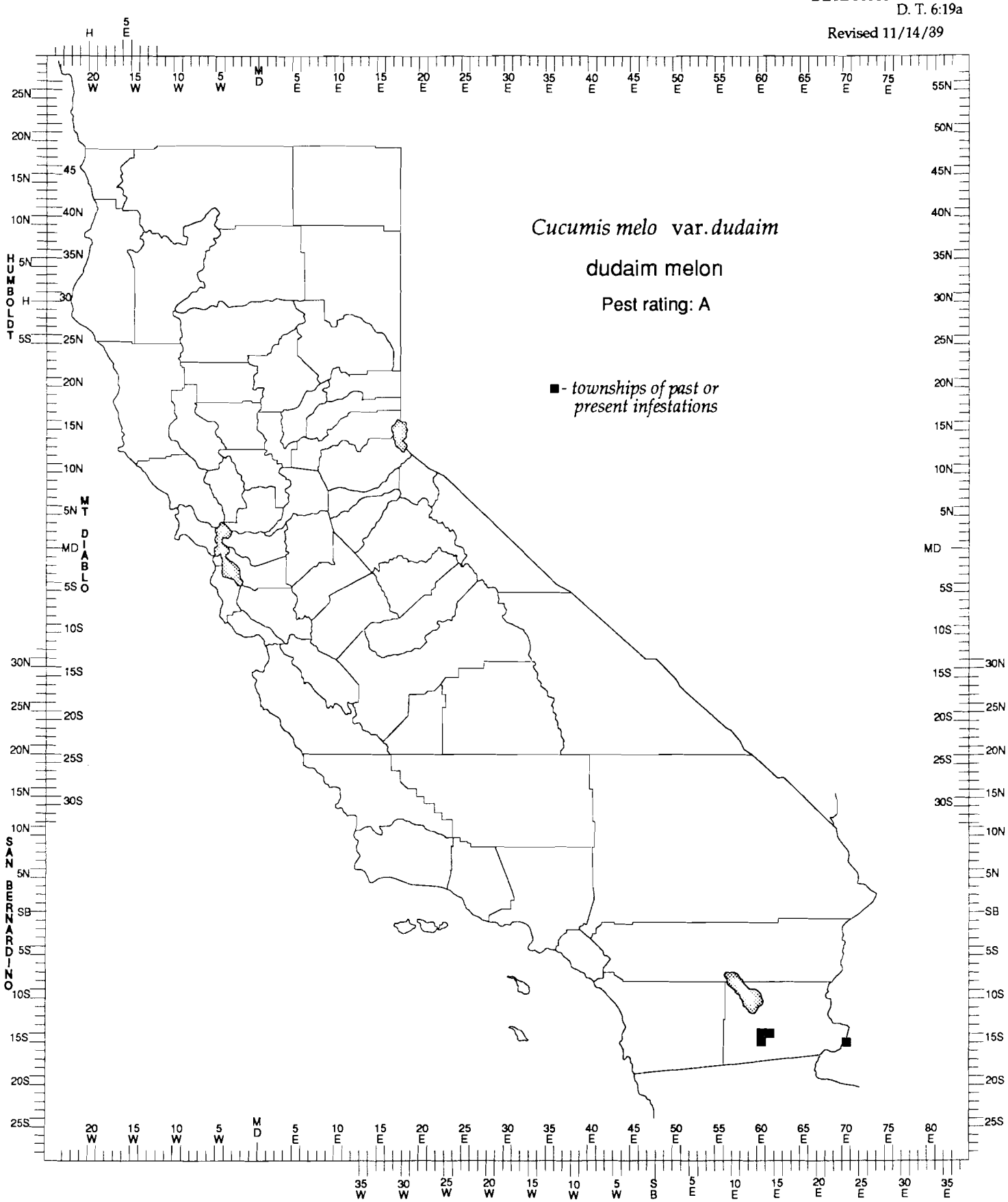

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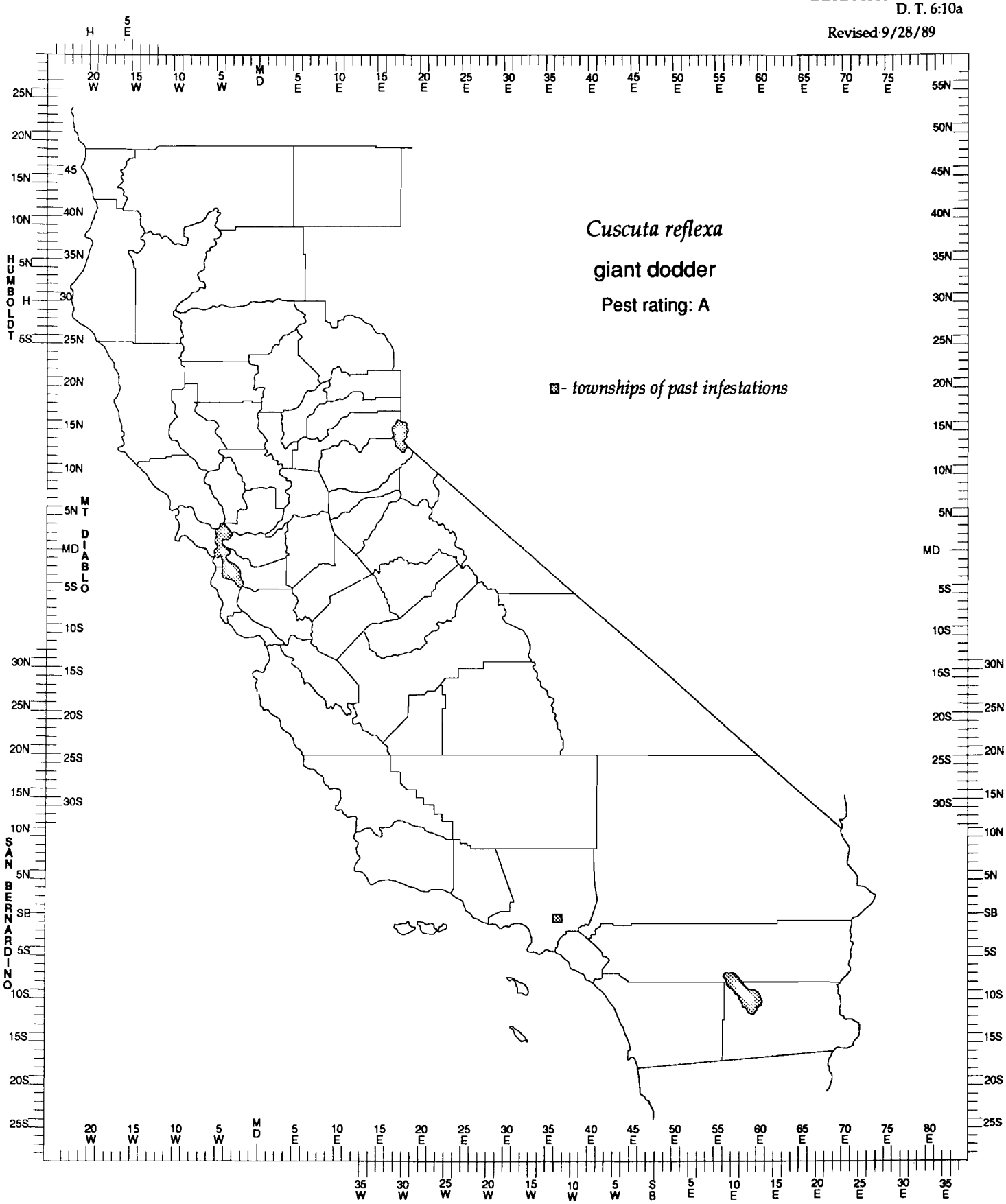

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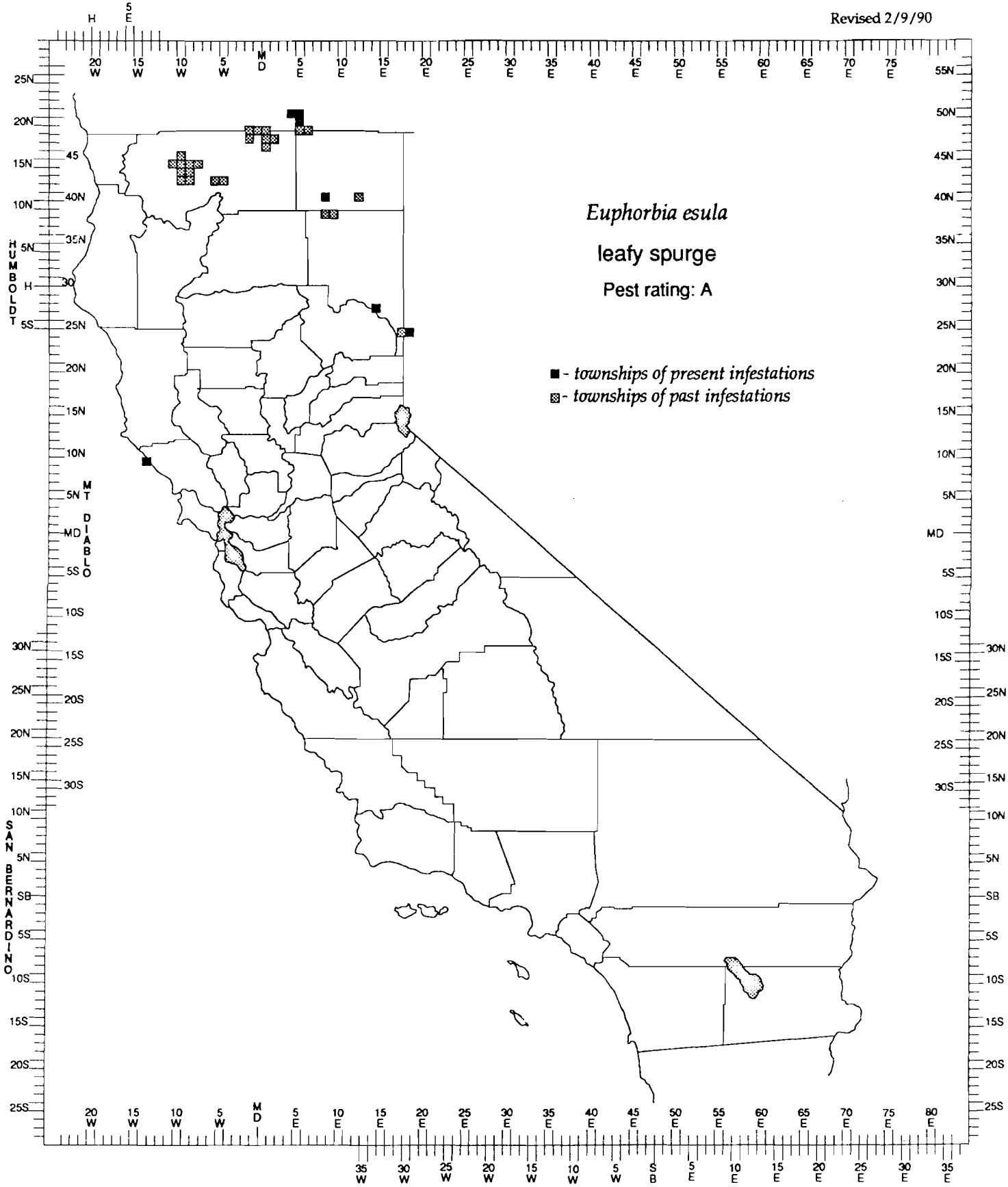

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22

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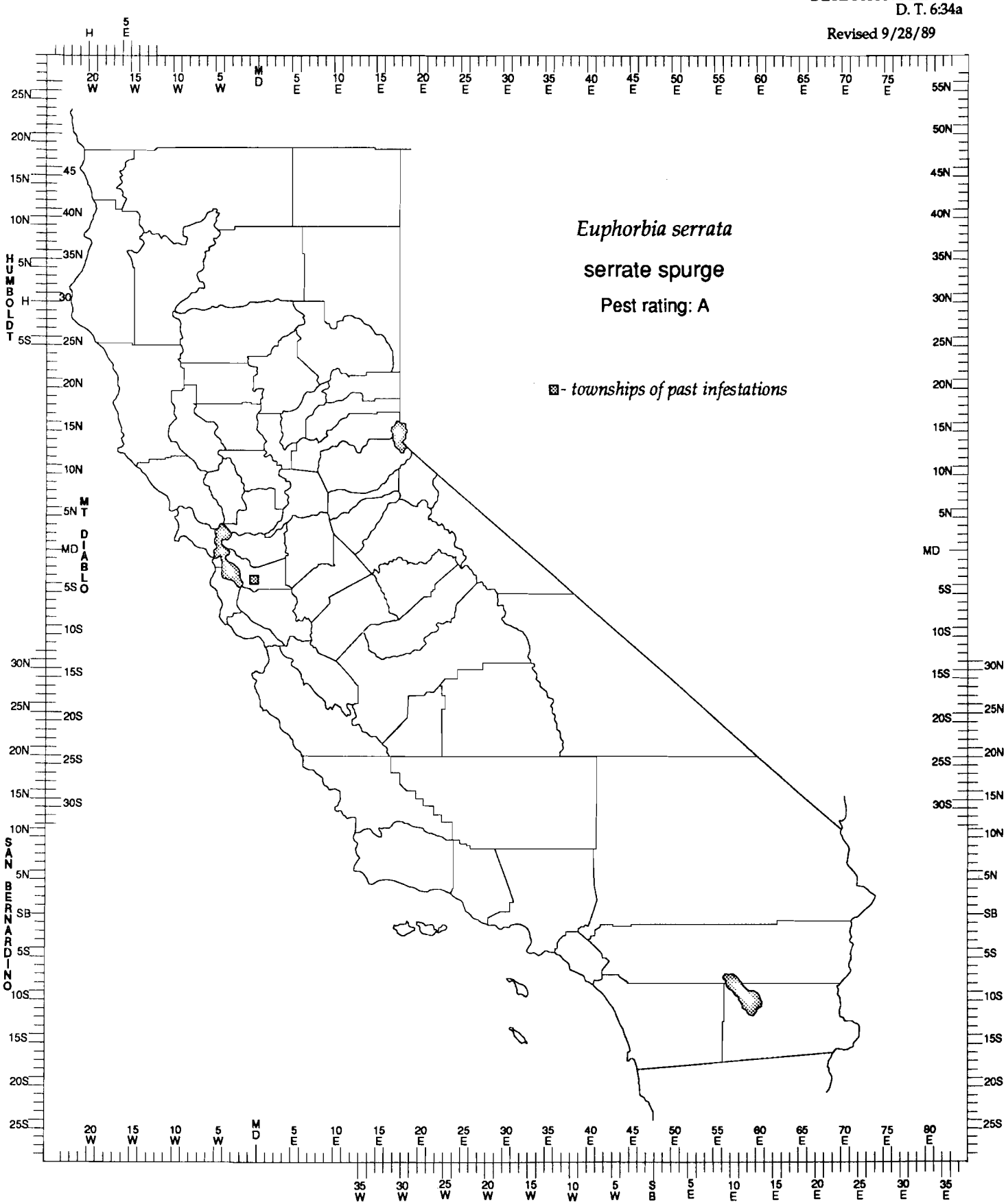

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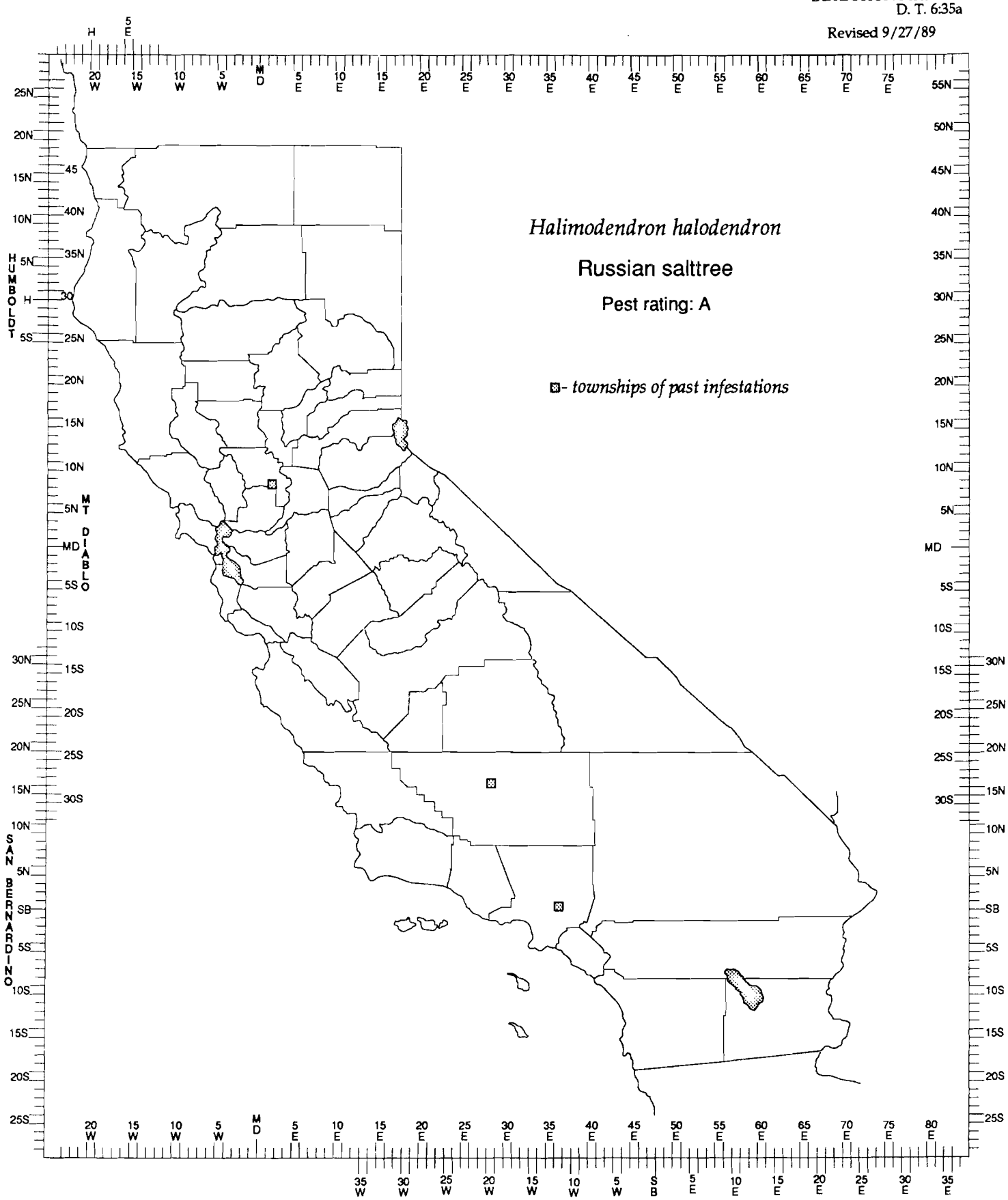

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24

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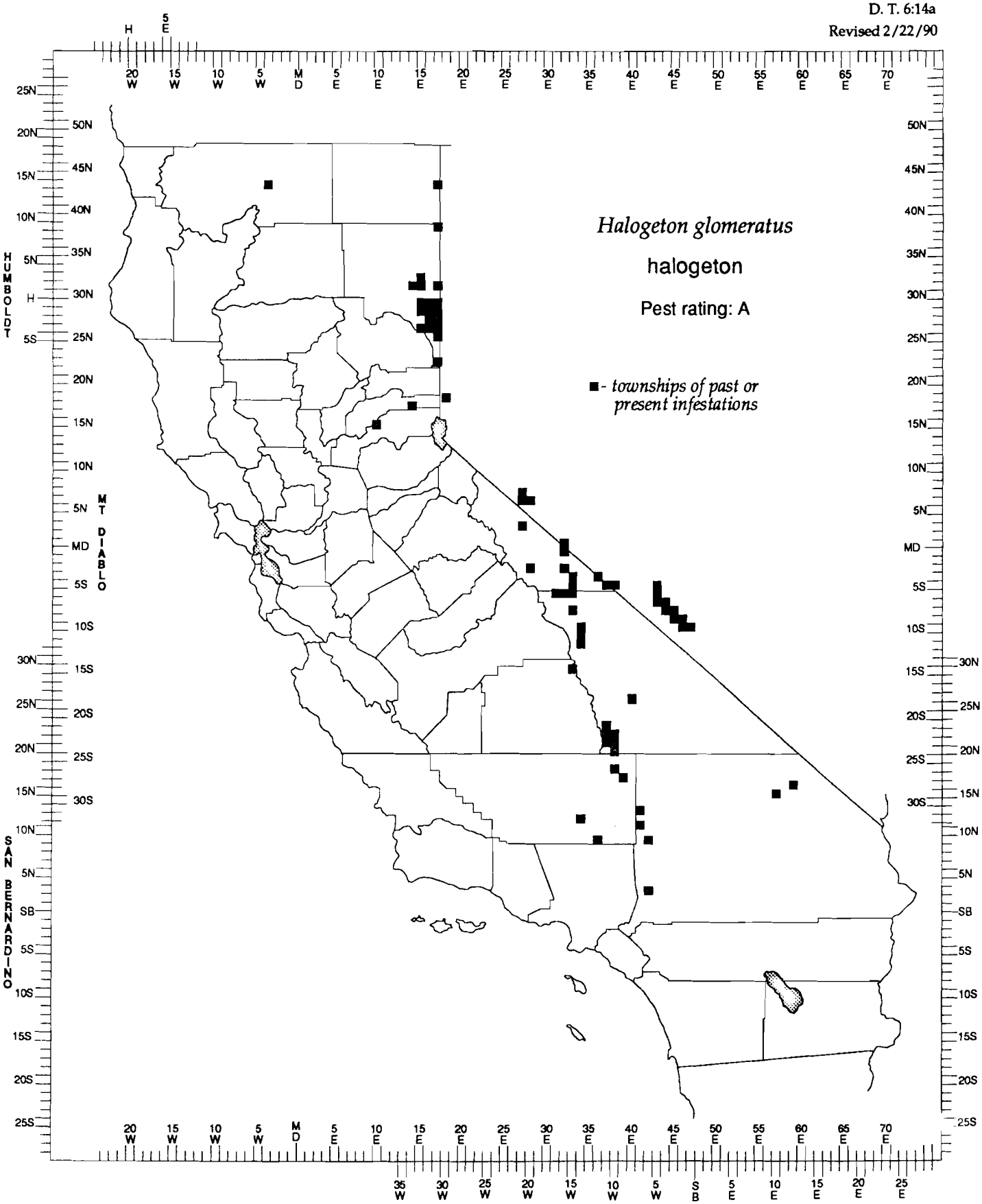

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25

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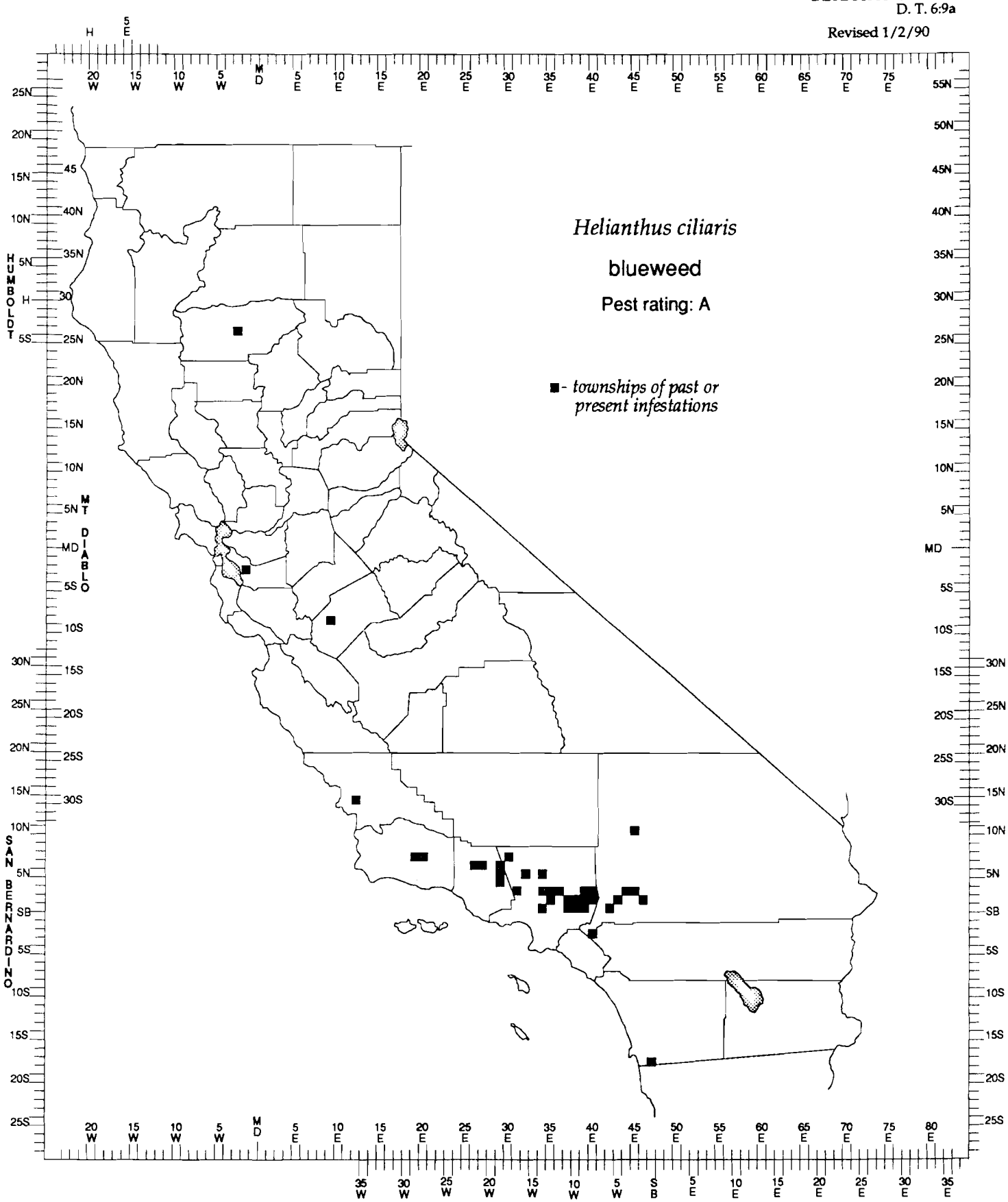

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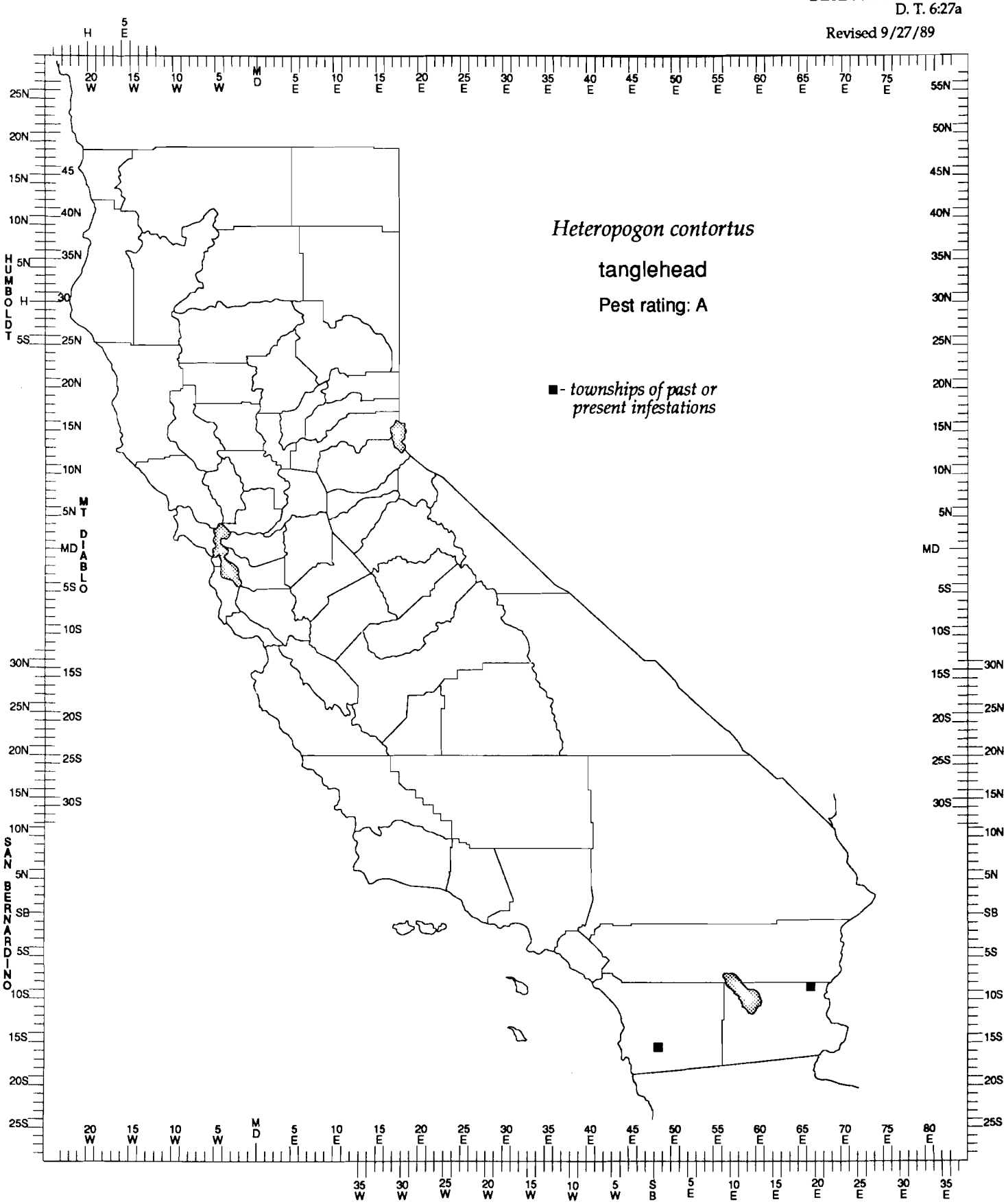

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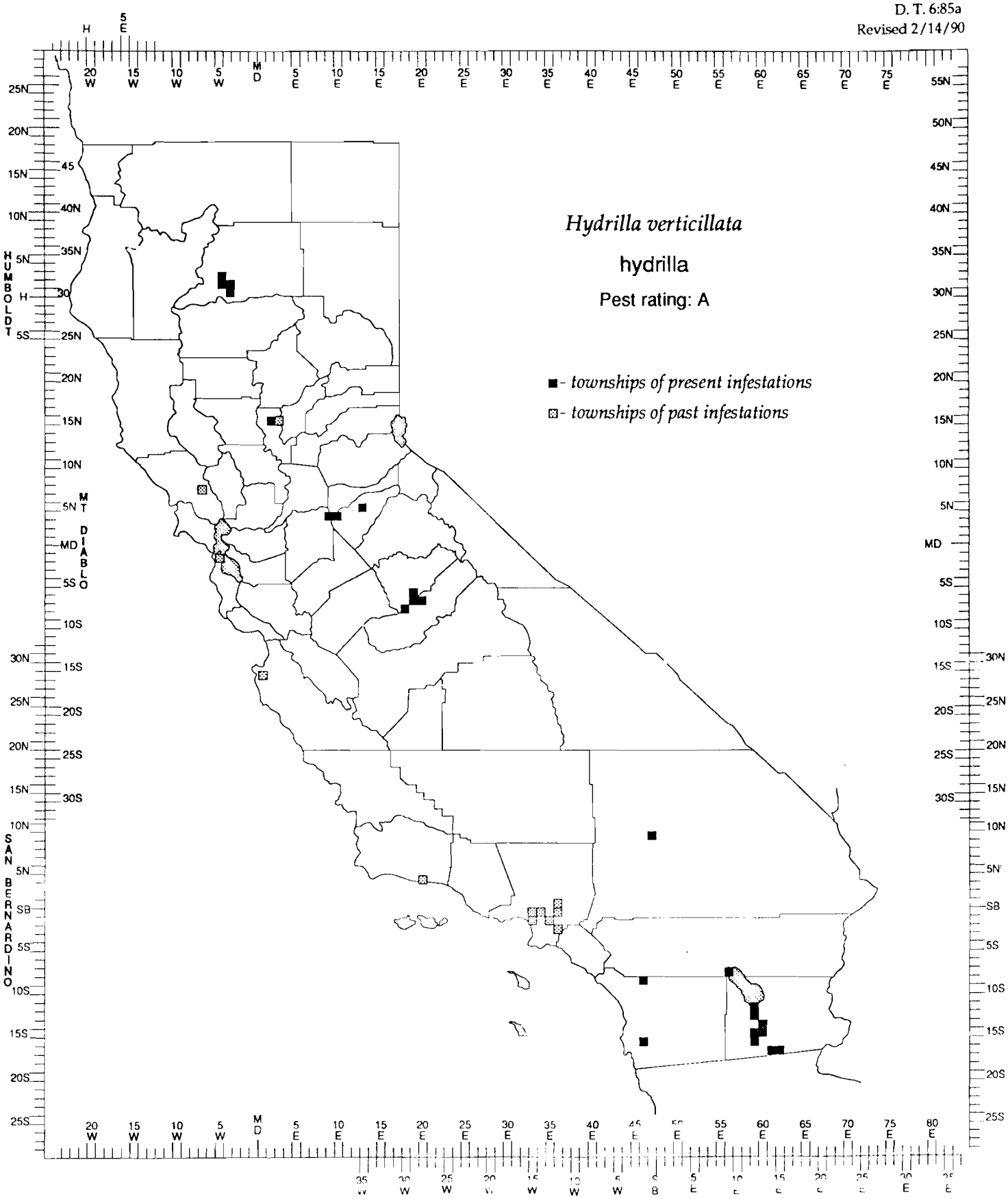

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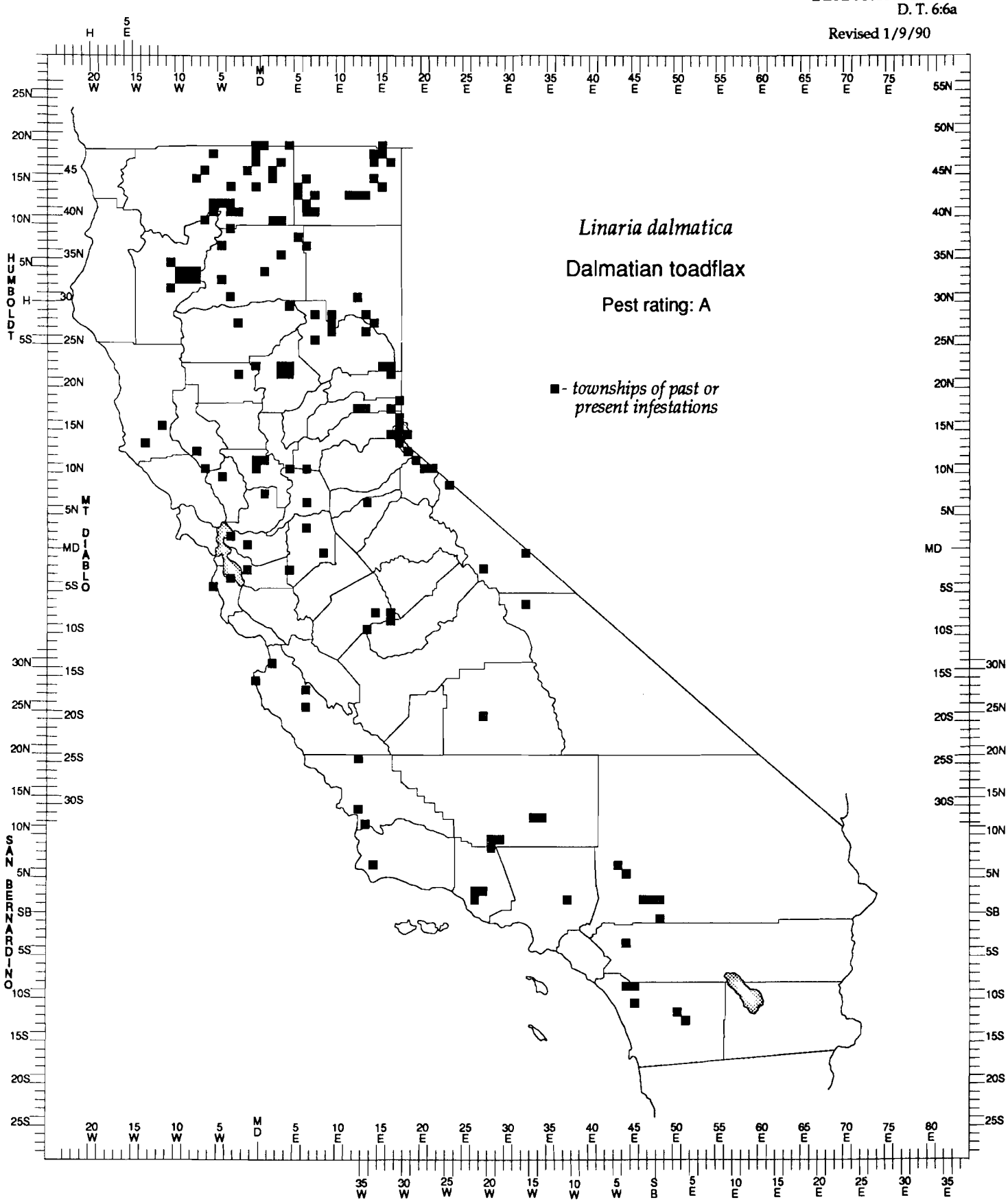

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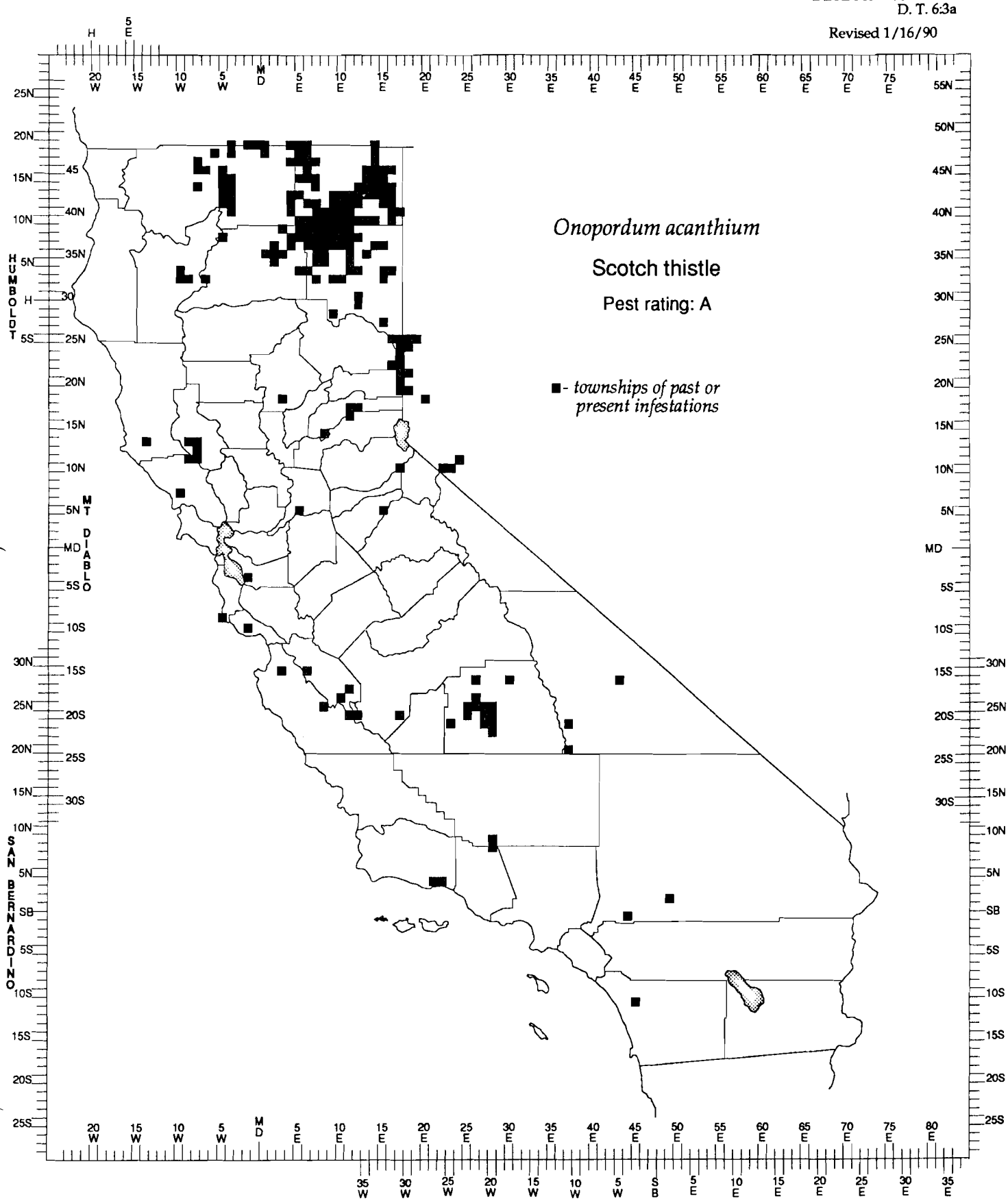

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DIVISION OF PLANT INDUSTRY - ANALYSIS & IDENTIFICATION/BOTANY

30

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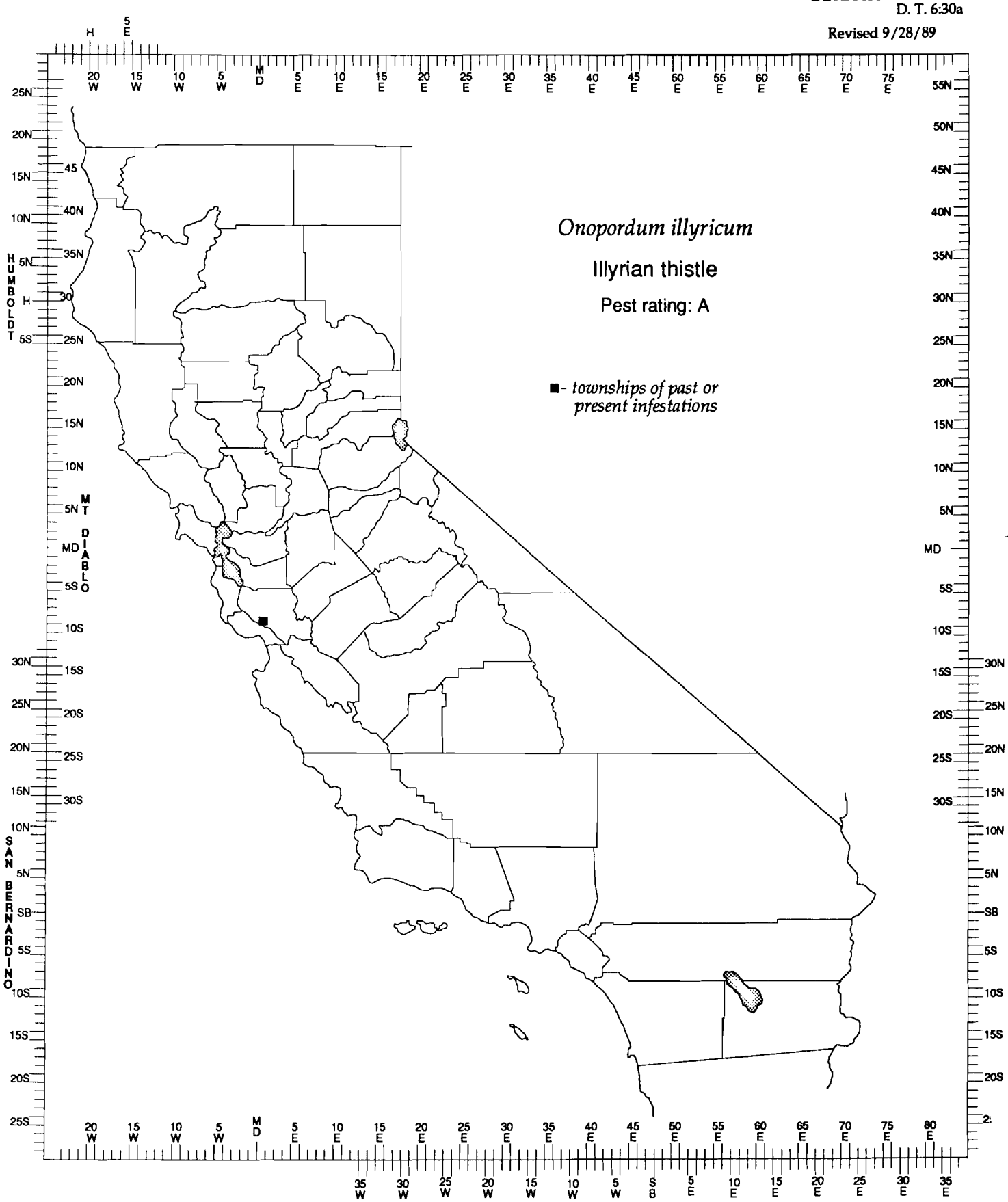

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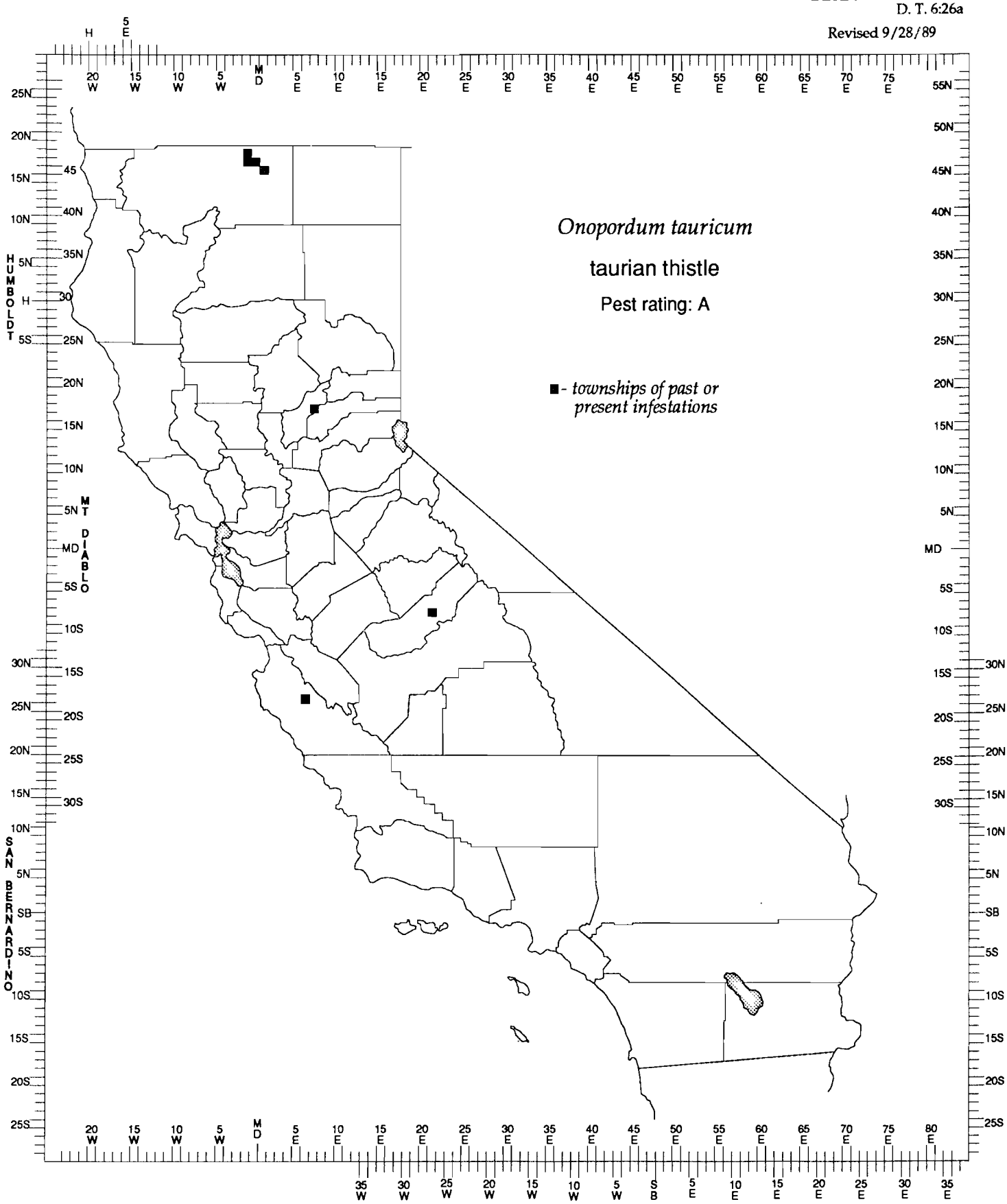

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32

DETECTION MANUAL
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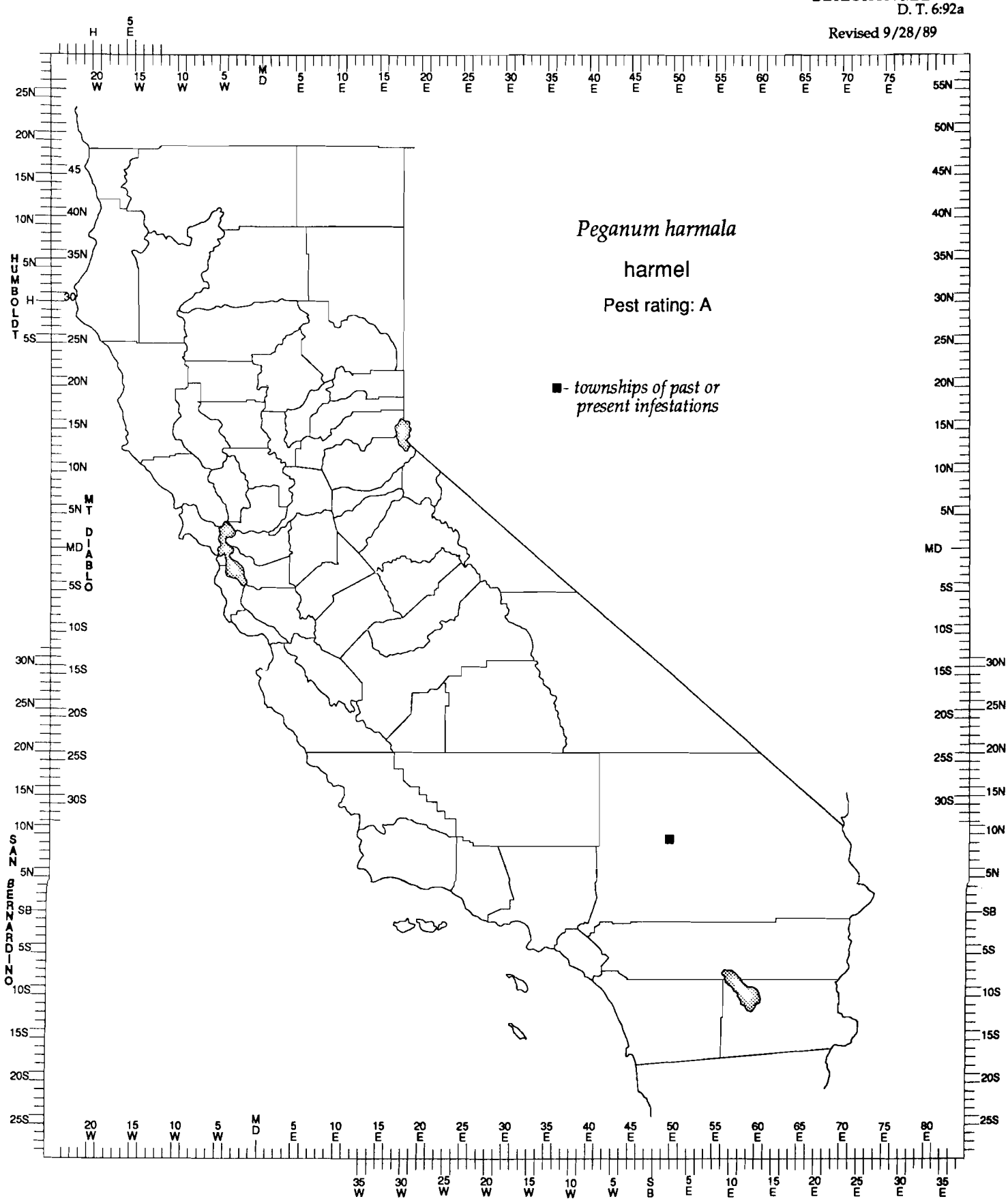

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DETECTION MANUAL
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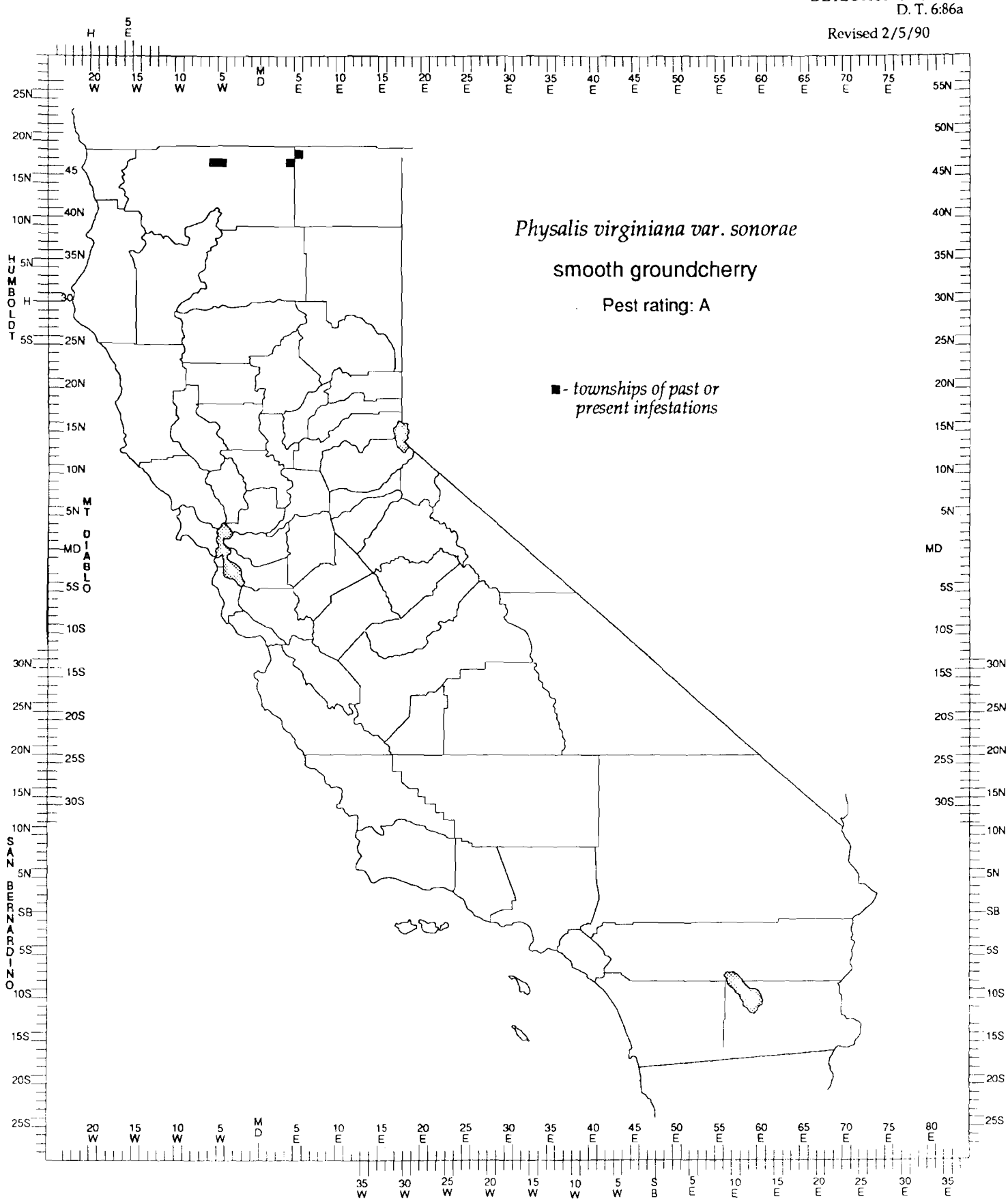

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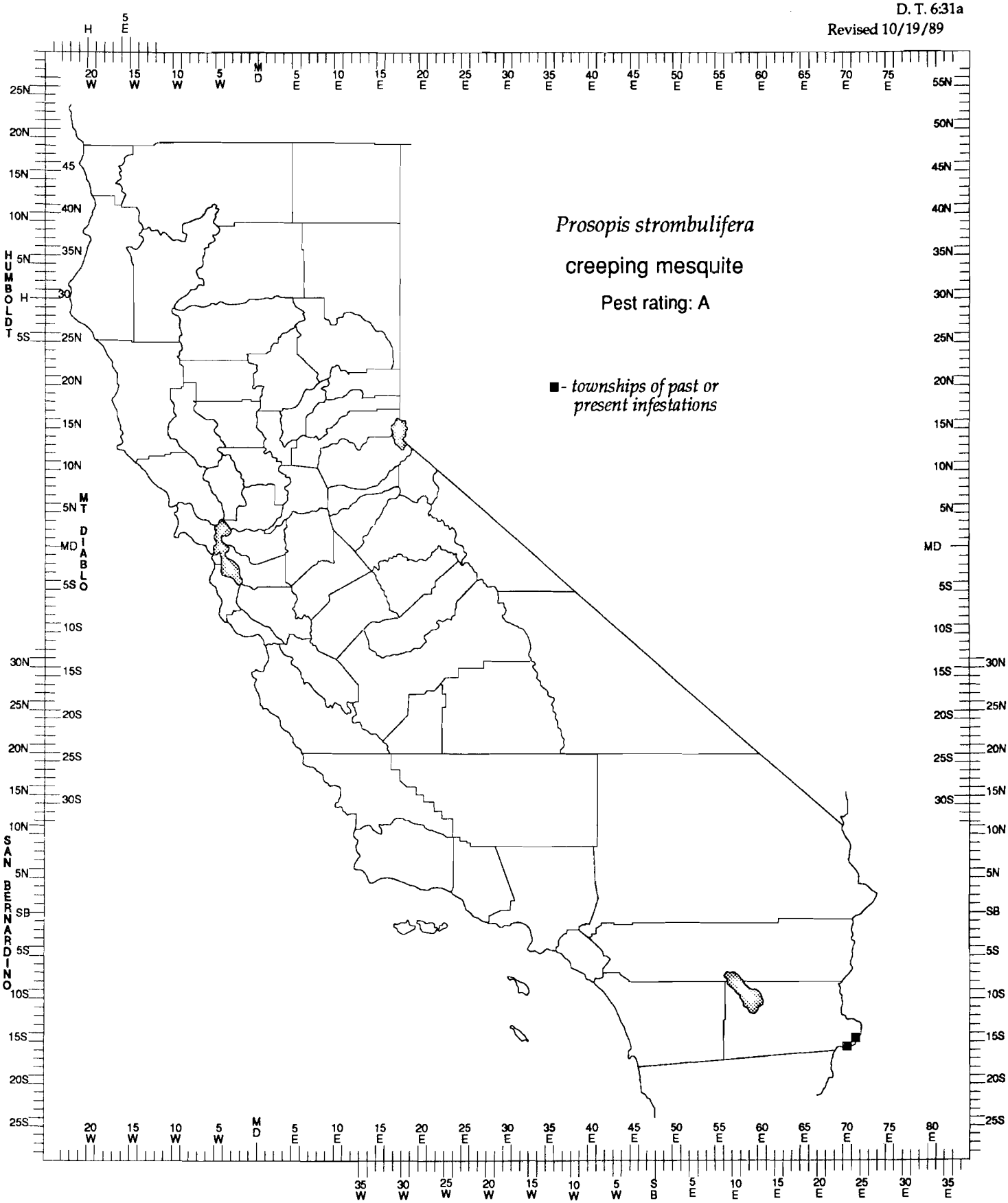

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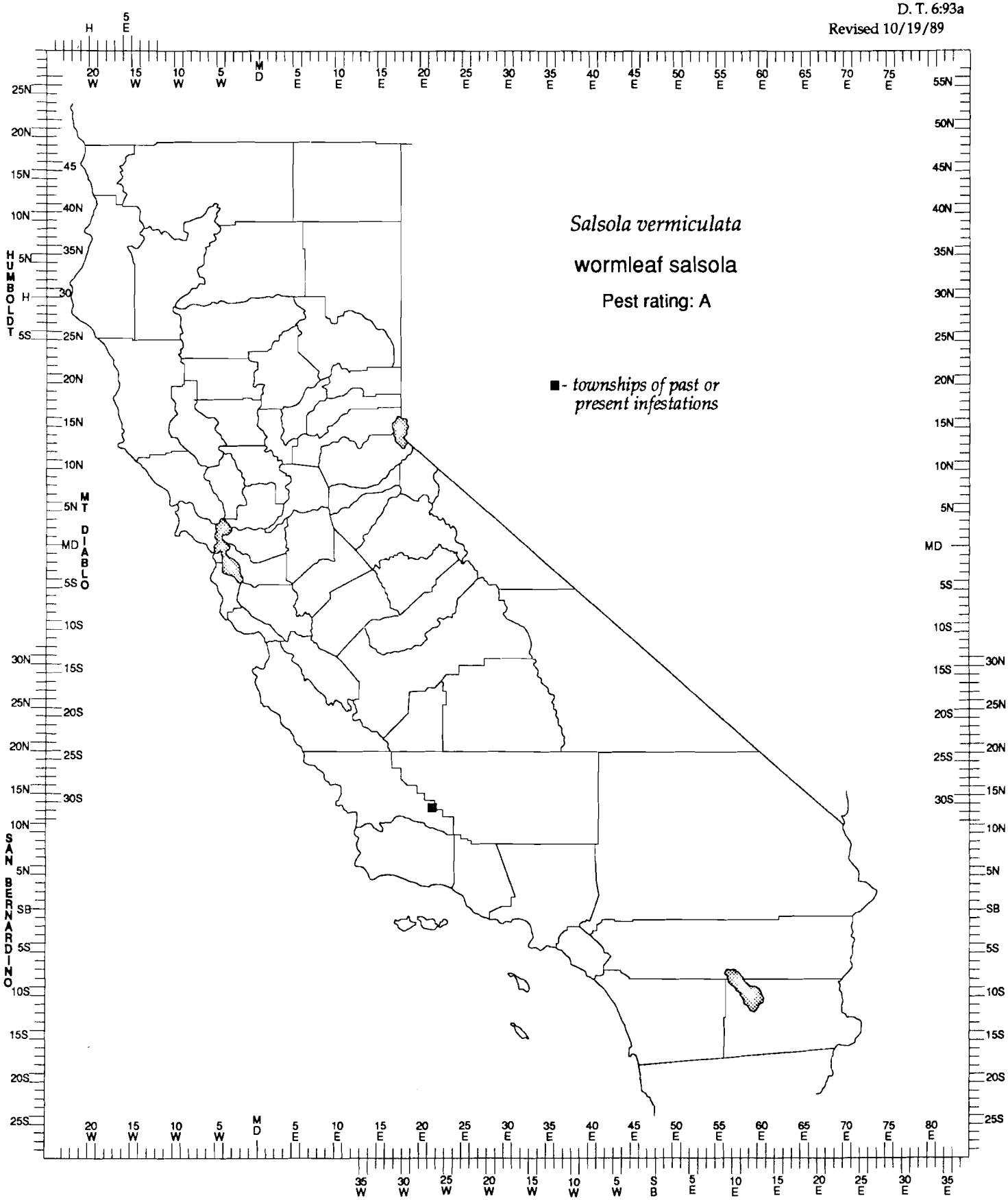

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DIVISION OF PLANT INDUSTRY - ANALYSIS & IDENTIFICATION/BOTANY

36

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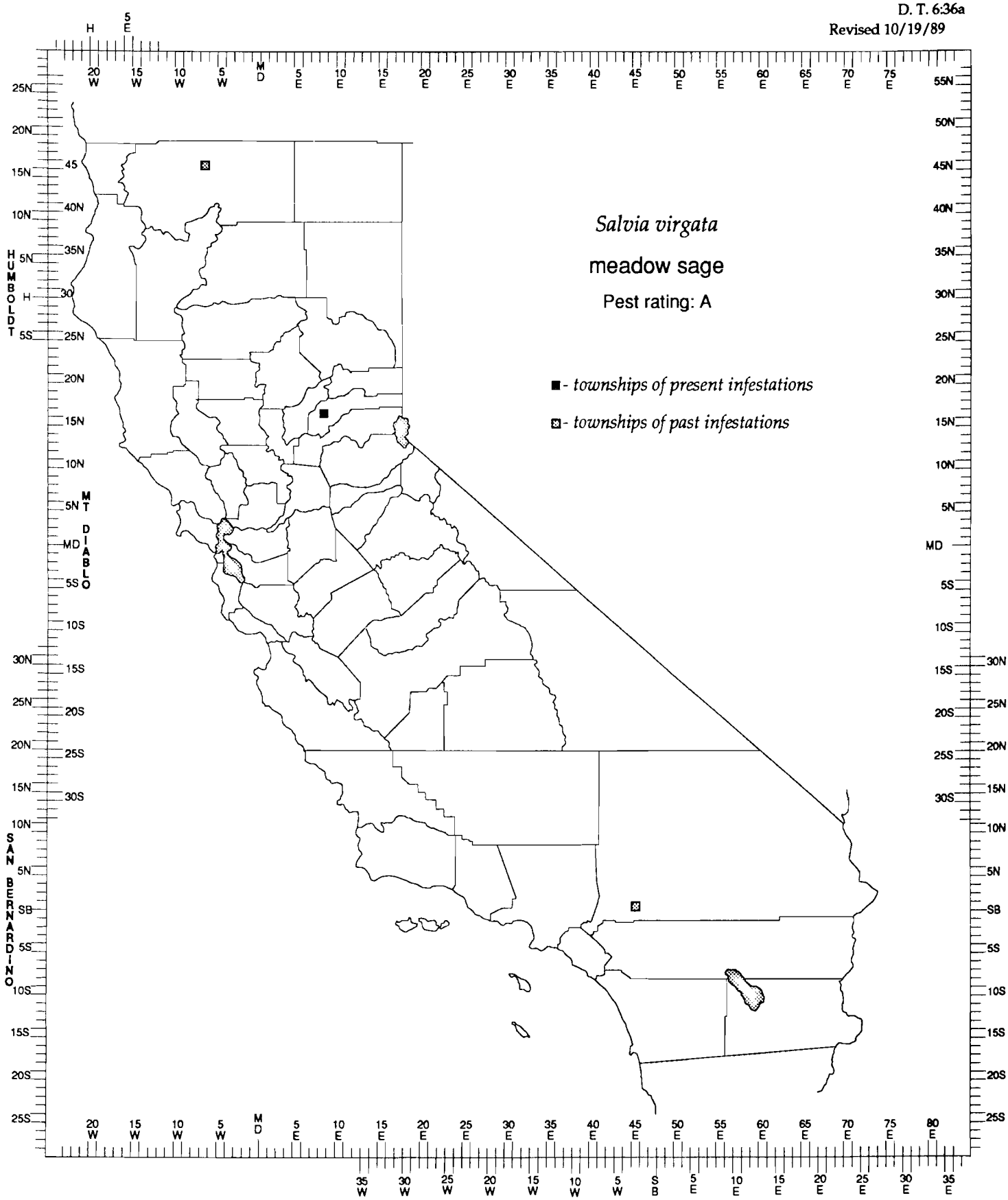

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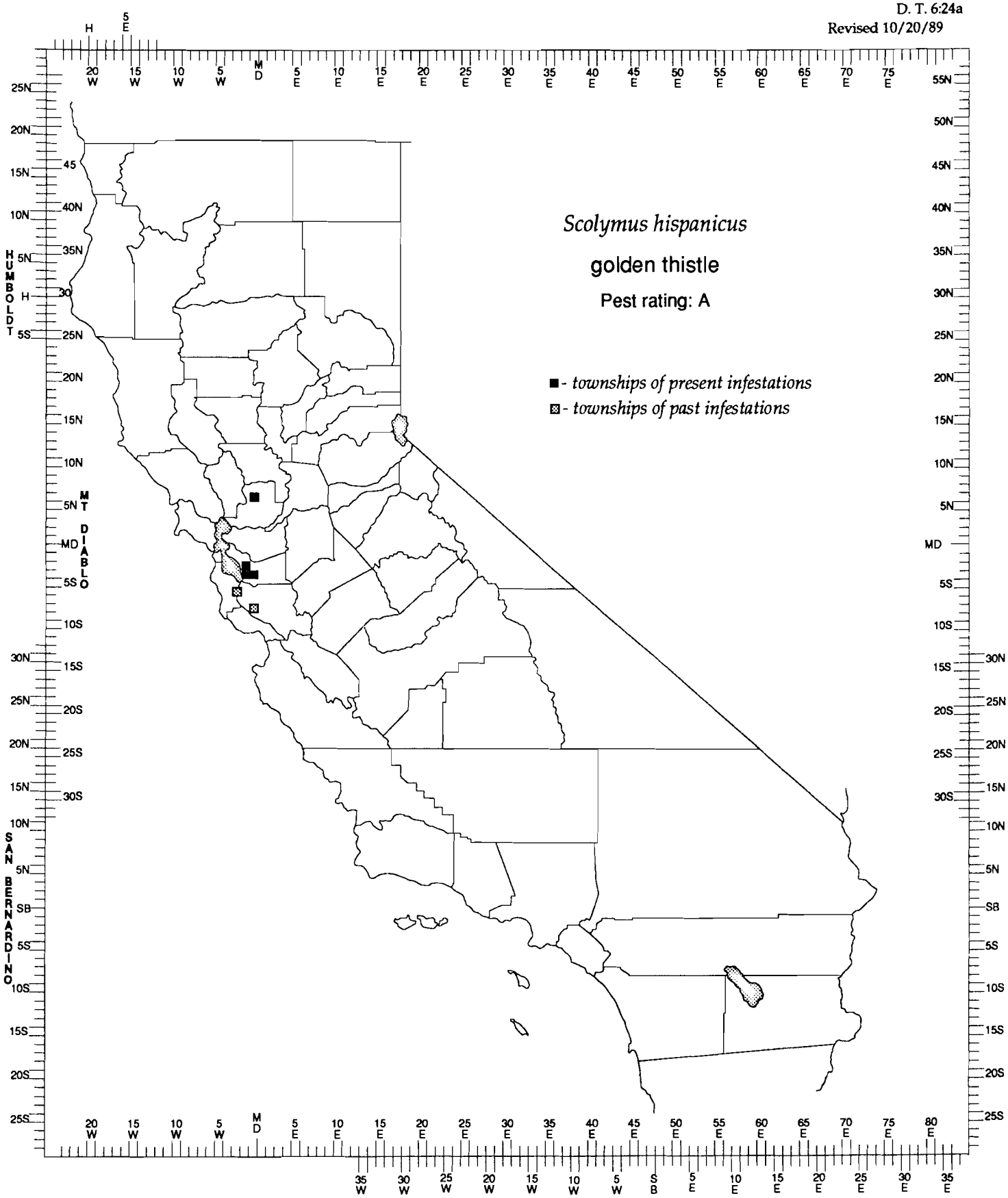

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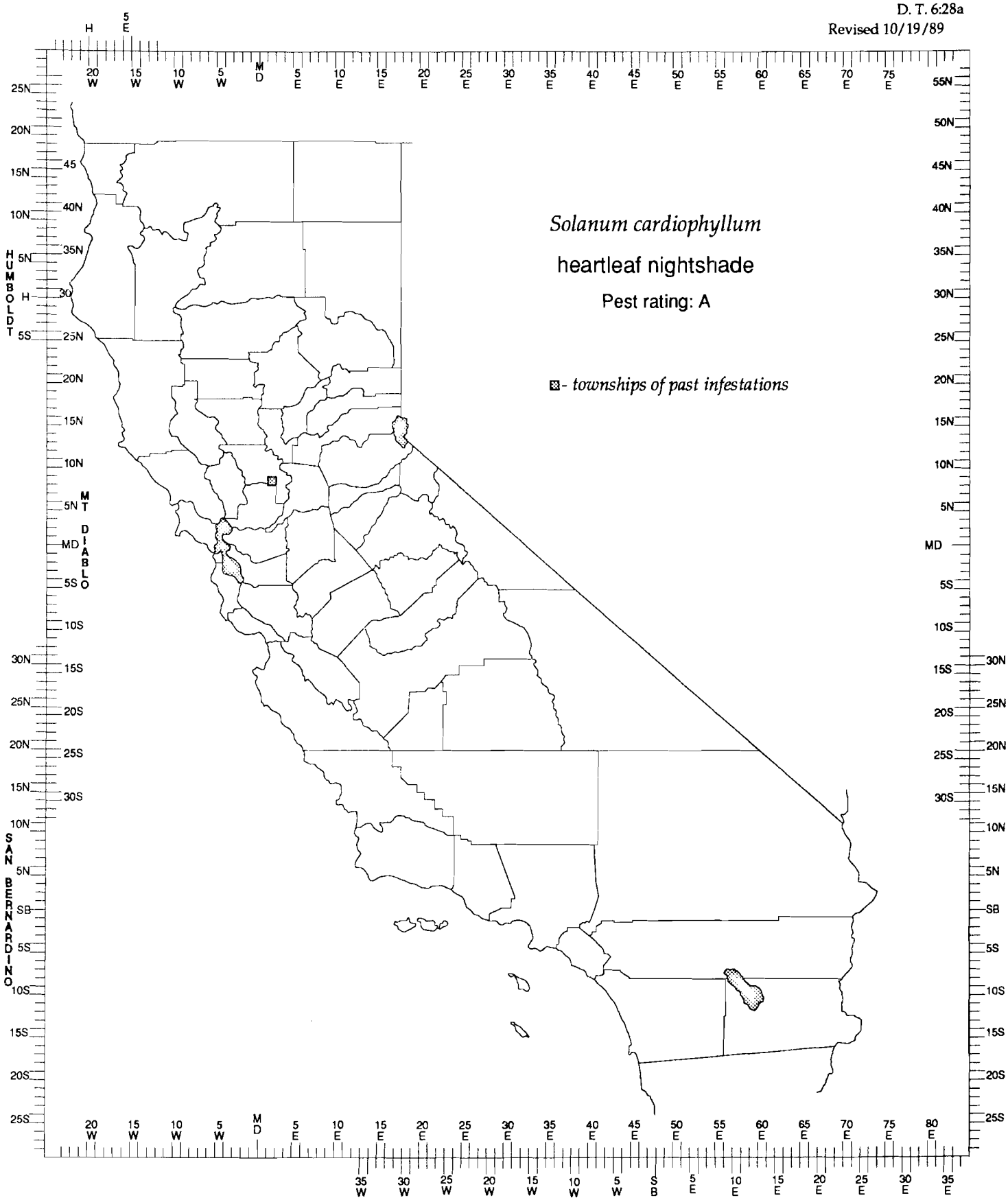

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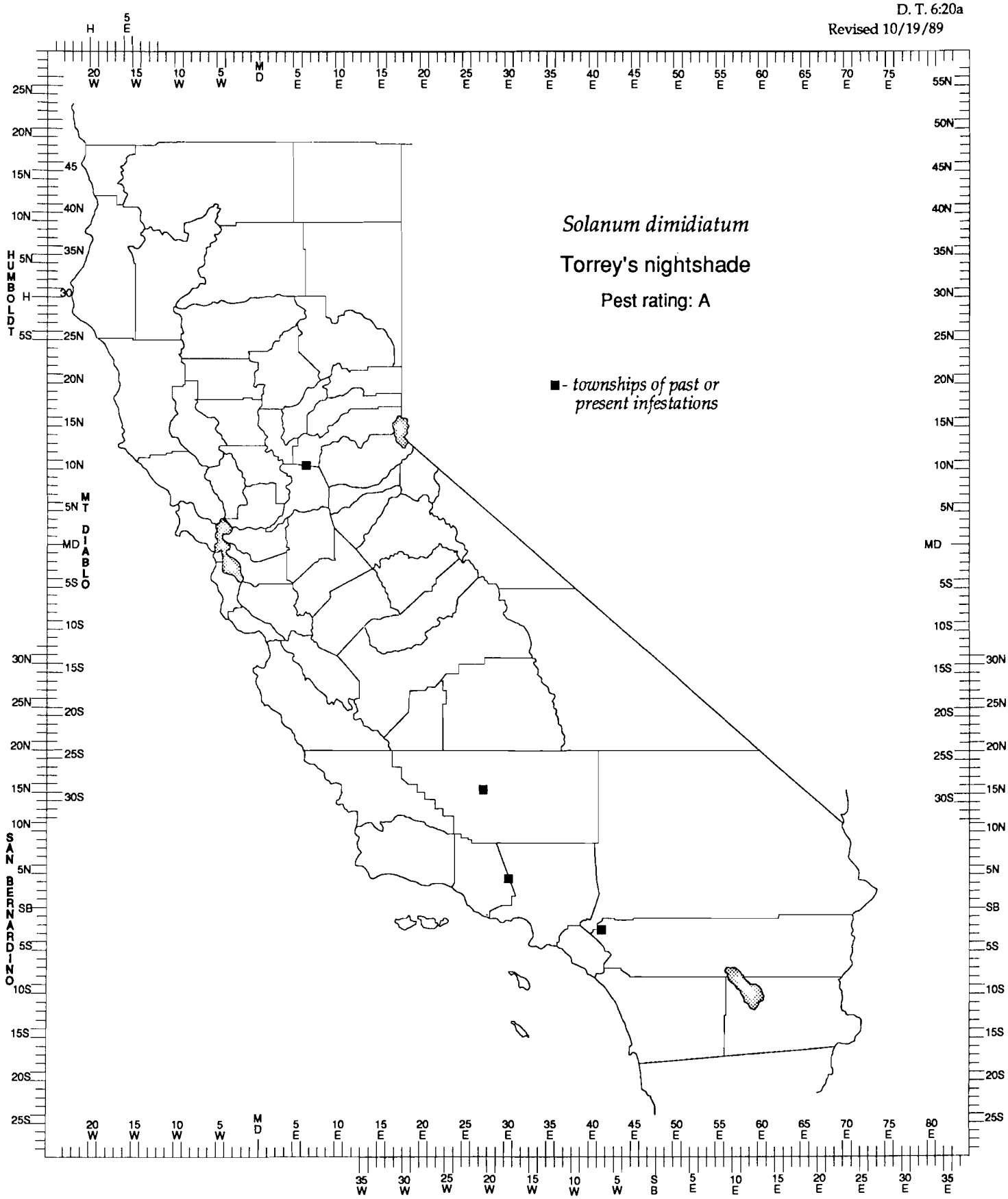

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DIVISION OF PLANT INDUSTRY - ANALYSIS & IDENTIFICATION/BOTANY

40

DETECTION MANUAL
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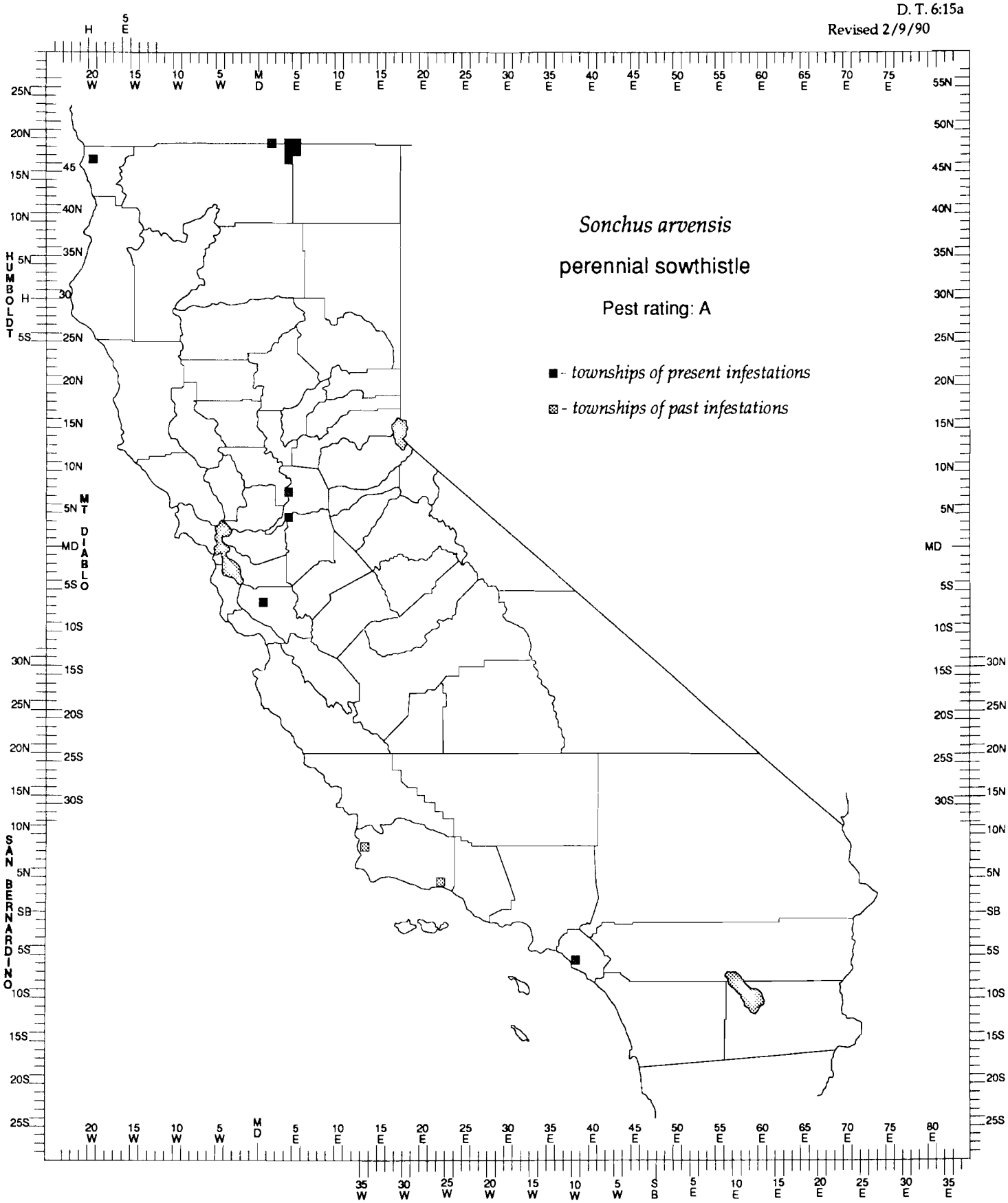
Revised 2/9/90



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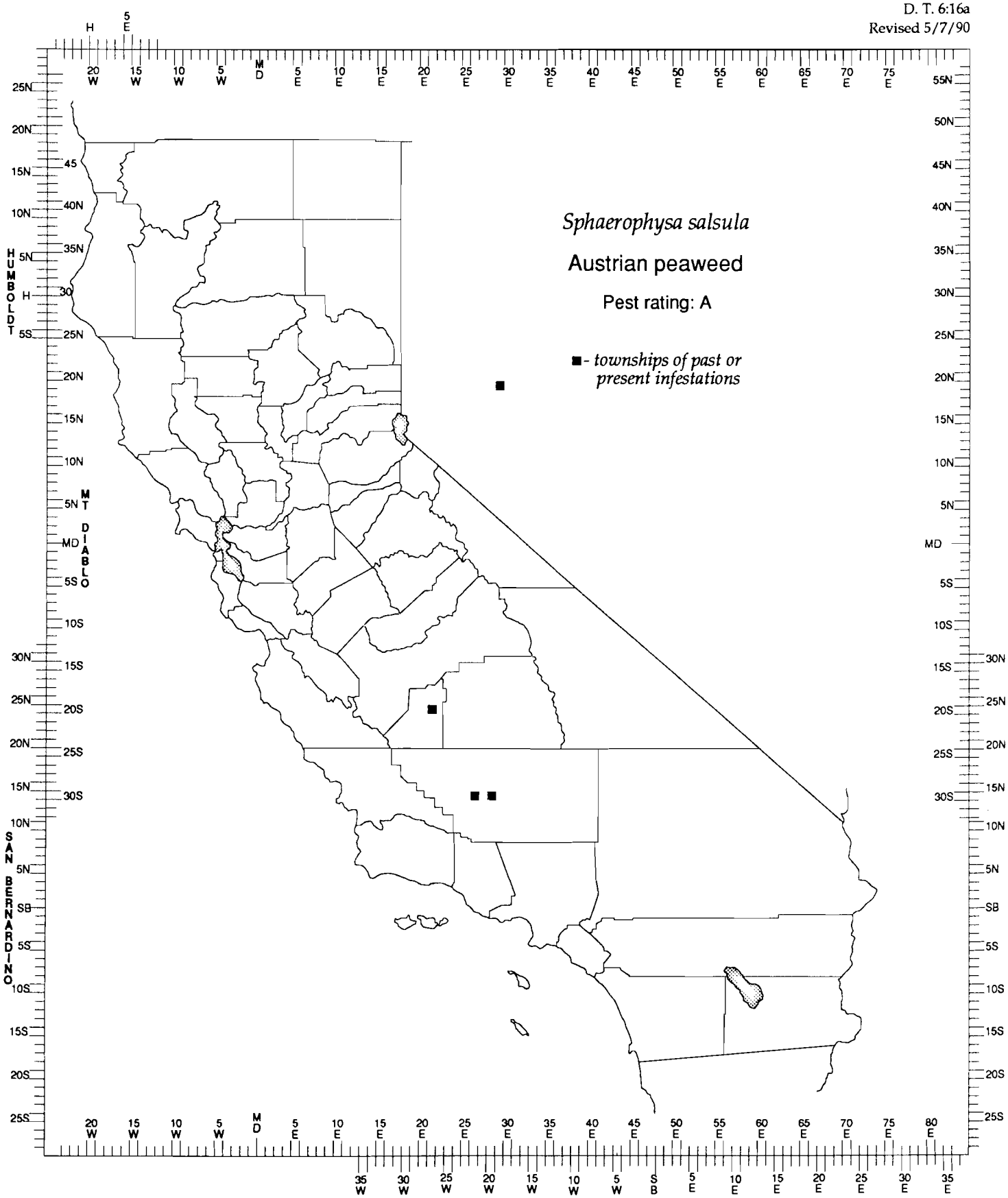
DIVISION OF PLANT INDUSTRY - ANALYSIS & IDENTIFICATION/BOTANY

DETECTION MANUAL
D. T. 6:16a
Revised 5/7/90



STATE OF CALIFORNIA • DEPARTMENT OF FOOD AND AGRICULTURE

DIVISION OF PLANT INDUSTRY - ANALYSIS & IDENTIFICATION/BOTANY

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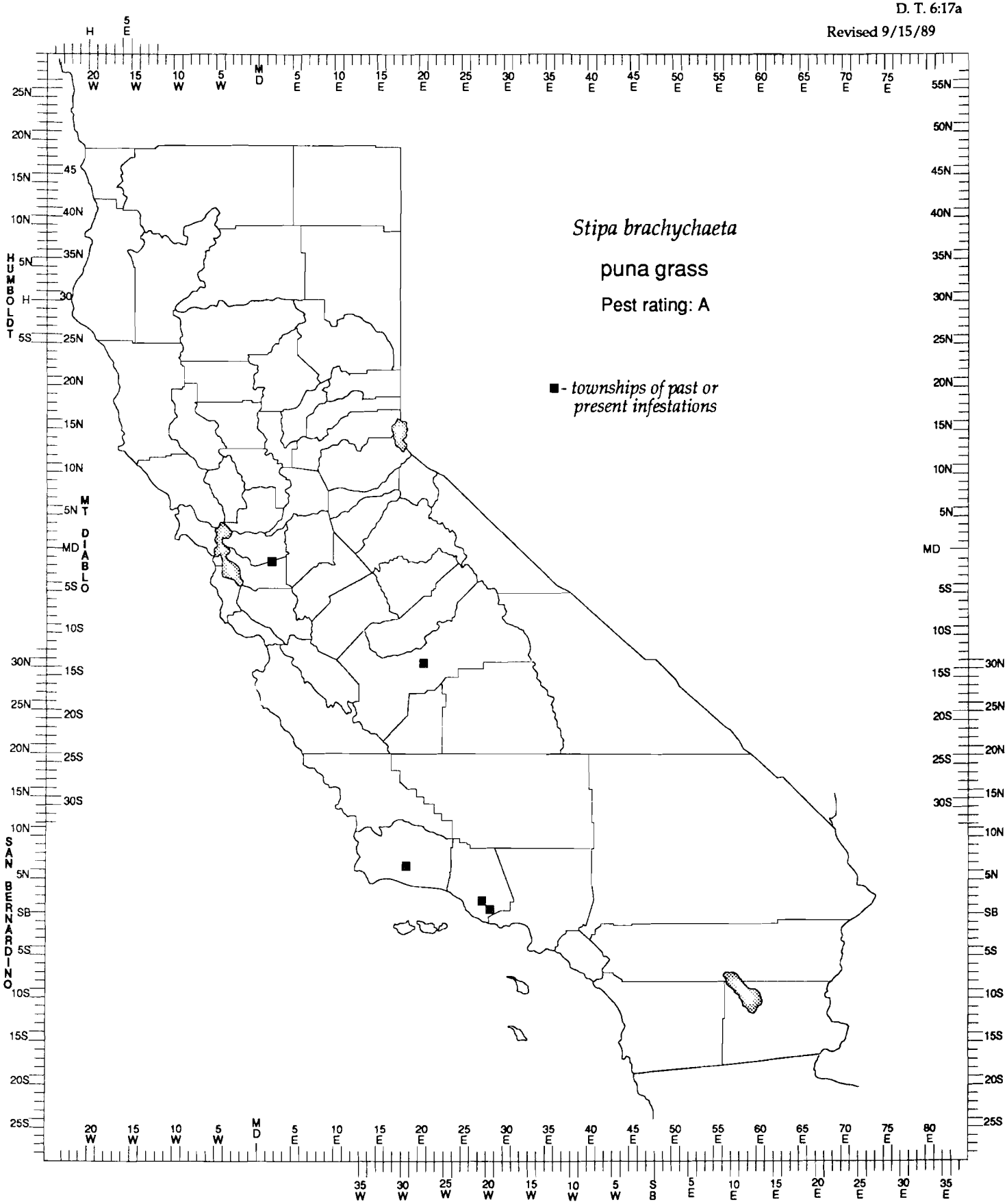
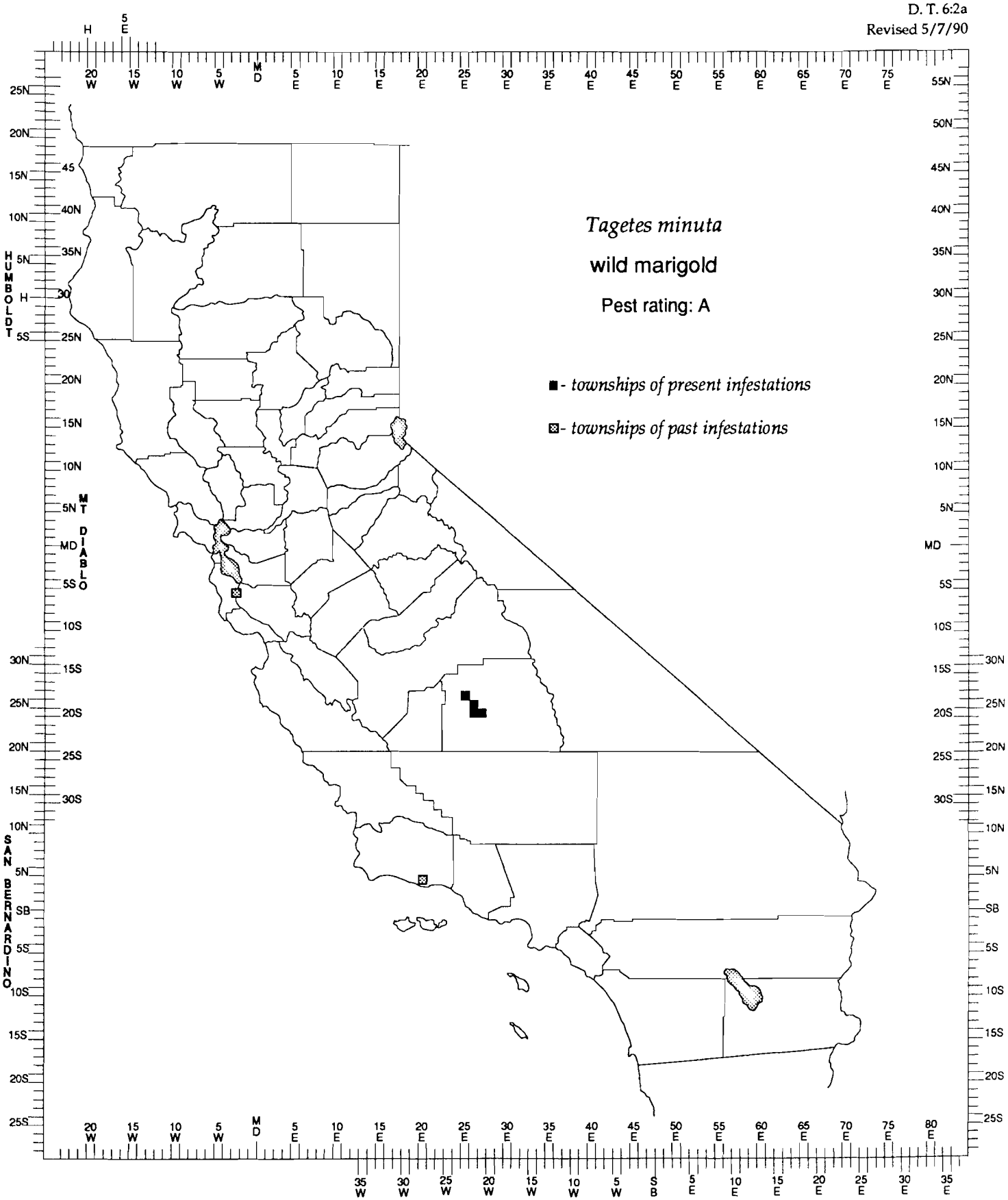
DETECTION MANUAL
D. T. 6:17a
Revised 9/15/89



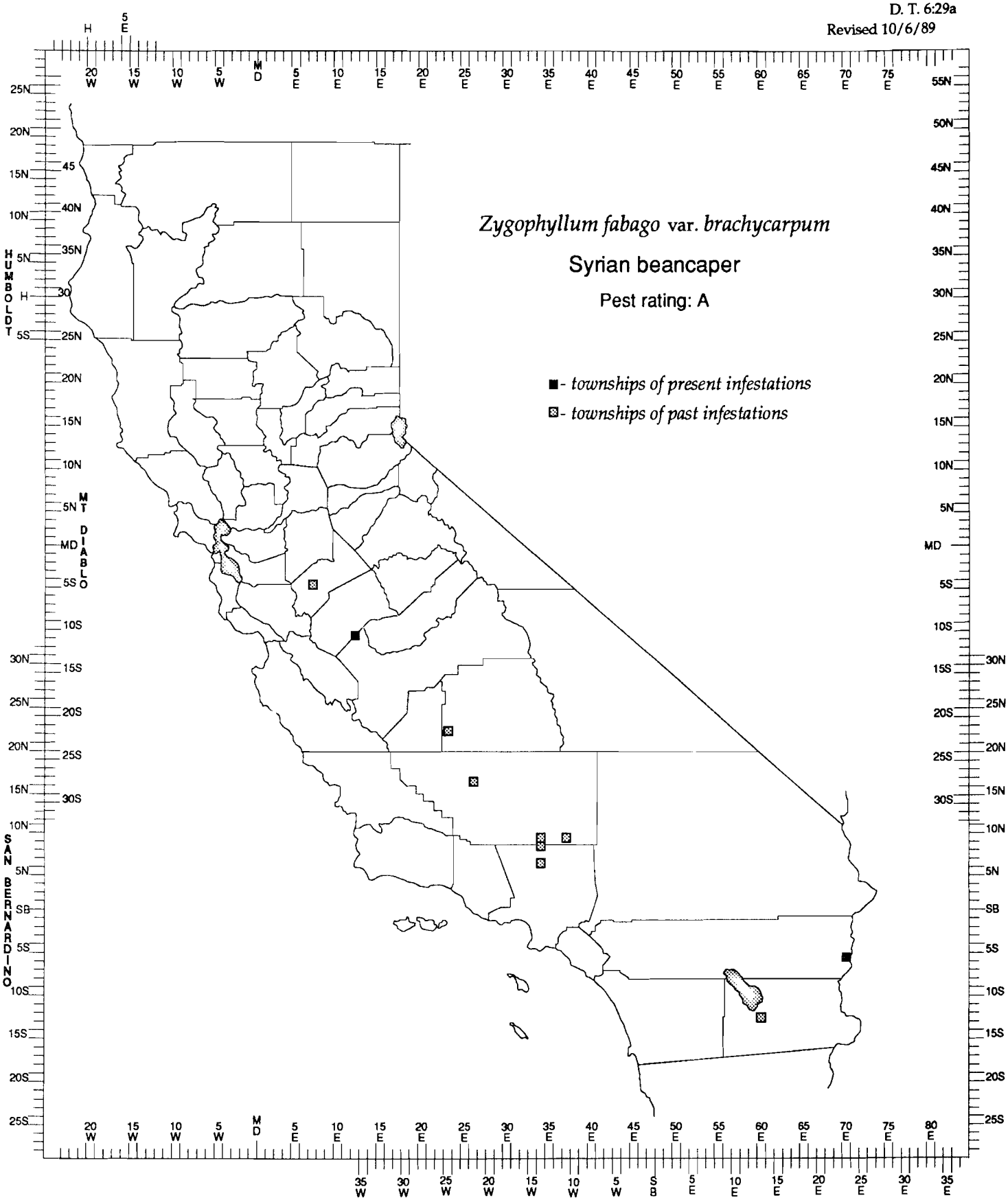
DETECTION MANUAL
D. T. 6:2a
Revised 5/7/90



STATE OF CALIFORNIA • DEPARTMENT OF FOOD AND AGRICULTURE

DIVISION OF PLANT INDUSTRY - ANALYSIS & IDENTIFICATION/BOTANY

DETECTION MANUAL
D. T. 6:29a
Revised 10/6/89



NEW COUNTY RECORDS AND SIGNIFICANT FINDS

FERTILE CAPEWEED, *Arctotheca calendula*,-(A)- Several new locations of this weed were found in the first quarter of 1990 north of San Francisco (for a map of capeweed locations, see page 7). The following report by Botanist Doug Barbe outlines the new county record for this weed pest:

> On March 30, 1990, an infestation of fertile capeweed, *Arctotheca calendula*, was found in Marin County. This is a significant new occurrence of fertile capeweed in the state.
>
> The only other known location is two miles west of Ferndale in Humboldt County.
>
> The capeweed was detected by Greg Archbald, Director of Volunteer Development for the Golden Gate National Park Association at Fort Mason, San Francisco (in the Golden Gate National Recreation Area at the west end of Tennessee Valley Road near Mill Valley). A second location, with four plants, was reported by Mr. Archbald on April 9 in Gerbode Valley, 1.8 air miles southeast of the Tennessee Valley site.
>
> Although the plants were flowering, none had yet produced mature achenes. All plants were removed by hand, bagged, and destroyed.
>
> Also found growing in association with the fertile capeweed at this site was subterranean clover, *Trifolium subterraneum*. The seed of this forage crop has been imported for many years from Australia where capeweed is a widespread weed pest. Mature achenes of capeweed have been detected in past lots of Australian subterranean clover seed and it is likely this was the source of the infestation in Marin County.

The following report by Doug Barbe outlines the second find of capeweed in another location in Marin County:

> On May 12, fertile capeweed was found in Marin County on the Pierce Point trail in the Point Reyes National Seashore.
>
> Capeweed has been found previously in the Golden Gate National Recreation Area near Mill Valley, Marin County, and near Ferndale in Humboldt County.
>
> The capeweed was detected by Doreen Smith and Bob Allen of the Marin Chapter of the California Native Plant Society, and reported by Greg Archbald of the Golden Gate National Park Association at Fort Mason, San Francisco.
>
> The plant was in an early flowering stage and had not yet produced mature achenes. According to Bill Shook, Resource Management Specialist at the national seashore, the discovery location has not been grazed since the late 1970's. The trail was rebuilt about two years ago and the ground where the plant was found was hard packed and showed no signs of recent disturbance.

HYDRILLA, *Hydrilla verticillata*,-(A)- The following report by Doug Barbe recounts the recollection of this serious weed pest at a previous known location:

> On February 12, 1990, there was a re-occurrence of hydrilla in Sutter County. Previous occurrence at this site was in the spring of 1985. This re-occurrence was detected by Sutter County Agricultural Biologist Stan Anderson who brought a specimen to the Botany Lab for confirmation (see the included map for the location of this occurrence). It has not been mapped previously because of missing township and range data.
>
> On May 30, 1990 hydrilla was found in a pet store aquarium in Irvine, Orange County. Orange County Agricultural Inspector J. Gibbs is credited with the find.
>
> For current hydrilla distribution in California, see map on page 27.
>
> Apparently hydrilla is still finding its way into California through the aquarium industry. County inspectors and biologists should be cognizant of this while conducting their surveys.

Entomology Highlights

SCIENTIFIC NAME CHANGES

Dr. Douglas J. Williams is one of the World's foremost authorities on scale insects and is affiliated with the C·A·B International Institute of Entomology in Great Britain. He has recently published a three-part series of books entitled *The Scale Insects of the Tropical South Pacific Region*. Classifying and identifying insects of the South Pacific has led him to believe that certain changes should be made in some of the existing scientific names. Some of the proposed changes are as follows:

Original Name	New Name	Common Name
Protopulvinaria mangiferae (Green),	*Milviscutulus mangiferae* (Green)	mango shield scale
Asterolecanium (bamboo feeders only)	*Bambusaspis* spp.	bamboo pit scale

This last change (*Asterolecanium*) includes numerous species, but the following list indicates those species which have been encountered in California in the past:

Original Name	New Name	Common Name
Asterolecanium bambusae (Boisduval)	*Bambusaspis bambusae* (Bois.)	bamboo pit scale
Asterolecanim pseudomiliaris (Green)	*Bambusaspis pseudomiliaris* (Green)	a bamboo pit scale
Asterolecanium robusta (Green)	*Bambusaspis robusta* (Green)	robust bamboo pit scale

Recent systematic research into the original type specimens of several common species described in Europe and Africa during the early 1800's has resulted in the discoveries of synonymies and the subsequent necessity for the change in the scientific names of two commonly encountered California mealybugs.

A recent paper by Yair Ben-Dov and Jennifer Cox [Entomologist's Monthly Magazine 126: 79-83 (1990)] indicates a need to change the scientific name of lilybulb mealybug. Previously called *Chorizococcus lounsbury* (Brain) 1912, this name has been found synonymous with *Vryburgia amaryllidis* (Bouché) 1837.

A common California species of mealybug, the cactus mealybug, formerly called *Spilococcus cactearum* (McKenzie) 1960, was changed in 1987 to *Spilococcus leucopogi* (Brittin) 1938 and will be changed yet again due to synonymy to *Spilococcus mamillariae* (Bouché) 1844.

COMMON NAME CHANGES

The following are several common name changes for species encountered by CDFA and county personnel which have been accepted by the ESA Common Names Committee:

Common Name	Scientific Name
ponderosa pine tip moth	*Rhyacionia zozana* (Kearfott)
striped pine scale	*Toumeyella pini* (King)

COMMON NAME CHANGES (continued)

Common Name	Scientific Name
Willamette spider mite	*Eotetranychus willamettei* (McGregor)
American palm cixiid	*Myndus crudus* Van Duzee
brown speckled leafhopper	*Paraphlepsius irroratus* (Say)
European elm bark beetle	*Scolytus multistriatus* (Marsham)
western blacklegged tick	*Ixodes pacificus* Cooley & Kohls
western conifer-seed bug	*Leptoglossus occidentalis* Heidemann
western pine tip moth	*Rhyacionia bushnelli* (Busck)

SIGNIFICANT FINDS

MEDITERRANEAN FRUIT FLY, *Ceratitis capitata*,-(A)- Thirty-seven Medflies have been collected in the first quarter of 1990. Aerial treatment and sterile release techniques are still being applied for control. There have been no Medflies found since May 1, 1990. The charts that follow list the 1990 Medfly collections on pages 49-50 and the known hosts of Medfly on pages 51-57.

MEXICAN FRUIT FLY, *Anastrepha ludens*, -(A)- Eight non-sterile Mexican fruitflies have been collected in San Diego County in 1990. An aerial eradication program began on May 18 and an 81-square mile Mexican fruitfly quarantine surrounding this infestation has been implemented. Eradication entails three aerial malathion bait applications on a 14-day cycle followed by release of sterile Mexican fruitflies through the F_3 generation in the 16-square miles surrounding these finds.

Two Mexican fruitflies have also been found in the Compton area of Los Angeles County. This site is within the Mediterranean fruit fly quarantine boundary but outside the Mexican fruitflies aerial malathion bait application block. An 81-square mile Mexican fruitflies quarantine surrounding this infestation has been implemented. Eradication action started on May 15. There will be three aerial malathion bait applications on a 14-day cycle followed by release of sterile Mexican fruitflies through the F_3 generation in the 9-square miles surrounding these finds. The chart on page 50 lists the data for each Mexican fruitfly find in 1990:

Mediterranean Fruit Fly, *Ceratitis capitata*, -(A)- 1990 Collections

County	City	Date	#M/F	Trap/Stage	Host	Collectors
Los Angeles	Sun Valley	1/2/90	0/1	McPhail	lemon	Quinones
Los Angeles	Glendale	1/3/90	1/0	Jackson	orange	Washington
Los Angeles	Whittier	1/6/90	1/0	Steiner	orange	McFall
Los Angeles	Whittier	1/8/90	0/1	Steiner	orange	Payne
Orange	Garden Grove	1/10/90	0/1	McPhail	orange	Ramos
Los Angeles	East Los Angeles	1/10/90	0/1	McPhail	lemon	Torres
Los Angeles	West Covina	1/10/90	1/0	Steiner	orange	Waters
Los Angeles	Glendale	1/16/90	1/0	Jackson	orange	Washington
Los Angeles	Pico Rivera	1/17/90	0/1	Steiner	orange	Baranov
Los Angeles	Glendale	1/18/90	larva	3rd instar	kumquat	Ruiz/Ogoke
Los Angeles	South Gate	1/24/90	0/1	McPhail	lemon	Epps
Los Angeles	Whittier	1/24/90	0/1	Steiner	Lemon	Borondy
Los Angeles	Glendale	1/26/90	larva	3rd instar	calamondin	Ruiz/Ruiz
Los Angeles	Pomona	1/26/90	1/1	McPhail	orange	Rodriquez
Los Angeles	Bassett	2/13/90	1/0	Steiner	loquat	Tejeda
Los Angeles	Diamond Bar	3/20/90	0/1	McPhail	loquat	Rodriquez
Riverside	Woodcrest	3/21/90	0/1	McPhail	orange	Hornig
Los Angeles	Rowland Hgts.	4/3/90	0/1	McPhail	loquat	Rodriquez
San Bernardino	Upland	4/3/90	0/1	McPhail	lemon	Sarmiento
San Bernardino	San Bernardino	4/4/90	0/1	McPhail	orange	Witt
Los Angeles	Los Angeles	4/5/90	0/1	McPhail	loquat	Mizubayashi
Los Angeles	Glendora	4/11/90	1/0	McPhail	loquat	Garcia
Los Angeles	Walnut	4/11/90	0/1	McPhail	lemon	Rodriquez
Riverside	Woodcrest	4/12/90	0/1	McPhail	orange	Hornig
San Bernardino	San Bernardino	4/16/90	0/1	McPhail	loquat	Witt
Los Angeles	San Dimas	4/16/90	0/1	McPhail	orange	Garcia
Los Angeles	Glendora	4/16/90	0/1	McPhail	loquat	Garcia
Los Angeles	Azusa	4/17/90	1/0	Steiner	grapefruit	Slemaker
San Bernardino	Alta Loma	4/18/90	0/1	McPhail	grapefruit	Sarmiento

Mediterranean Fruit Fly, *Ceratitis capitata*, -(A)- 1990 Collections (continued)

County	City	Date	#M/F	Trap/Stage	Host	Collectors
Los Angeles	Pomona	4/18/90	0/1	McPhail	loquat	Rodriquez
Los Angeles	Cerritos	4/19/90	0/1	McPhail	fig	Barnes
Los Angeles	Artesia	4/23/90	0/1	McPhail	loquat	Garcia
San Bernardino	San Bernardino	4/25/90	0/1	McPhail	orange	Witt
Los Angeles	Valinda	4/25/90	0/1	Steiner	fig	Baranov
Los Angeles	Downey	4/28/90	0/1	McPhail	lemon	Epps
Los Angeles	Artesia	5/1/90	0/1	McPhail	loquat	Salazar

Mexican Fruit Fly, *Anastrepha ludens*, -(A)- 1990 Collections

County	City	Date	#M/F	Trap/Stage	Host	Collectors
Los Angeles	East Los Angeles	1/12/90	0/1	McPhail	orange	Chow
Los Angeles	East Los Angeles	3/23/90	1/0	McPhail	orange	Weatherby
San Diego	El Cajon	4/25/90	1/0	McPhail	orange	Murray
Los Angeles	Compton	5/3/90	1/0	McPhail	orange	Gonzalez
San Diego	San Diego	5/4/90	0/1	McPhail	sapote	Brandon
San Diego	El Cajon	5/5/90	0/2	McPhail	orange	Legard
Los Angeles	Compton	5/8/90	1/0	McPhail	loquat	Dominquez

Medfly Host List for Field Use

compiled from various sources by G. D. Barbe, Senior Plant Taxonomist,
Analysis & Identification/Botany Laboratory, Division of Plant Industry, California Department of Food & Agriculture

Calif.	Botanical name	Botanical family	Common name	Importance	Comments/ Other Common Names
✔	*Actinidia chinensis*	Actinidiaceae	kiwi	🍎🍎	
✔	*Annona cherimola*	Annonaceae	cherimoya	🍎🍎	only when ripe
	Annona glabra	Annonaceae	pond apple	🍎🍎	
	Annona muricata	Annonaceae	soursop	🍎🍎	ripe to overripe
	Annona reticulata	Annonaceae	custard apple	🍎	papaya (Spanish)
	Annona squamosa	Annonaceae	sugar apple	🍎🍎	
	Arenga pinnata	Palmae	sugar palm	🍎🍎	
✔	*Argania spinosa*	Sapotaceae	argan tree	🍎🍎	
	Artocarpus altilis	Moraceae	breadfruit	🍎	
	Artocarpus heterophyllus	Moraceae	jackfruit	🍎	
	Averrhoa carambola	Oxalidaceae	star fruit	🍎🍎	carambola
	Blighia sapida	Sapindaceae	akee	🍎🍎🍎	
	Calophyllum inophyllum	Guttiferae	ball kamani	🍎🍎🍎	
✔	*Capsicum annuum*	Solanaceae	cultivated pepper	🍎🍎	sweet bell, chilies; pimiento
	Capsicum frutescens	Solanaceae	tobasco pepper	🍎🍎	
✔	*Carica papaya*	Caricaceae	papaya	🍎🍎	
	Carica quercifolia	Caricaceae	dwarf papaya	🍎🍎	
✔	*Carissa grandiflora*	Apocynaceae	Natal plum	🍎🍎	
✔	*Casimiroa edulis*	Sapotaceae	white sapote	🍎🍎🍎	sapote blanco
	Chrysophyllum cainito	Sapotaceae	star apple	🍎🍎🍎	
	Chrysophyllum oliviforme	Sapotaceae	star apple	🍎🍎🍎	
✔	X *Citrofortunella mitis*	Rutaceae	calamondin	🍎🍎🍎	also orangequat
✔	*Citrus aurantiifolia*	Rutaceae	sour lime	🍎	includes 'Bearss' lime; lima
✔	*Citrus aurantium*	Rutaceae	sour orange	🍎🍎🍎	naranja agria
✔	*Citrus limon*	Rutaceae	lemon	🍎🍎🍎	except 'Eureka', 'Lisbon', unless injured; limón
✔	*Citrus* X *limonia*	Rutaceae	Rangpur lime	🍎🍎🍎	
✔	*Citrus maxima*	Rutaceae	pumelo, shaddock	🍎🍎🍎	
✔	*Citrus medica*	Rutaceae	citron	🍎🍎	cidro citron
✔	*Citrus* X *nobilis*	Rutaceae	king mandarin	🍎🍎🍎	also tangor, temple orange
✔	*Citrus* X *paradisi*	Rutaceae	grapefruit	🍎🍎🍎	toronja; pomelo
✔	*Citrus reticulata*	Rutaceae	mandarin, tangerine	🍎🍎🍎	satsuma; mandarina
✔	*Citrus sinensis*	Rutaceae	sweet orange	🍎🍎🍎	'Valencia', navel, etc.; naranja dulce
✔	*Coffea canephora*	Rubiaceae	common coffee	🍎🍎🍎	= *C. arabica*; primary host
✔	*Coffea liberica*	Rubiaceae	Liberian coffee	🍎🍎🍎	
✔	*Crataegus* spp	Rosaceae	hawthorn	🍎🍎	

✔= Likely to be found in California. 🍎🍎🍎 = Primary host 🍎🍎 = Occasional host 🍎 = Rarely infested

Calif.	Botanical name	Botanical family	Common name	Importance	Comments/ Other Common Names
✔	*Cucurbita* spp.	Cucurbitaceae	squash, pumpkin	🍎	calabaza
✔	*Cydonia oblonga*	Rosaceae	quince	🍎🍎🍎	membrillo
✔	*Cyphomandra betacea*	Solanaceae	tree tomato	🍎🍎	tamarilla
✔	*Diospyros kaki*	Ebenaceae	oriental persimmon	🍎🍎🍎	persimonio japones
✔	*Diospyros lotus*	Ebonaceae	date plum	🍎	
✔	*Diospyros virginiana*	Ebonaceae	American persimmon	🍎🍎	soft ripe
✔	*Dovyalis caffra*	Flacourtiaceae	kei apple	🍎🍎🍎	
	Dovyalis hebecarpa	Flacourtiaceae	Ceylon gooseberry	🍎🍎	
✔	*Eriobotrya japonica*	Rosaceae	loquat	🍎🍎🍎	nispero
	Eugenia brasiliensis	Myrtaceae	Brazilian plum	🍎	
	Eugenia dombeyi	Myrtaceae	Spanish cherry	🍎🍎🍎	
✔	*Eugenia uniflora*	Myrtaceae	Surinam cherry	🍎🍎🍎	also Barbados cherry
	Euphorbia longana	Euphorbiaceae	longan	🍎🍎	
✔	*Feijoa sellowiana*	Myrtaceae	pineapple guava	🍎🍎🍎	including guavasteen; guayaba de pina
✔	*Ficus carica*	Moraceae	fig	🍎🍎	higo
✔	*Fortunella japonica*	Rutaceae	kumquat	🍎🍎🍎	
✔	*Fragaria* X *ananassa*	Rosaceae	strawberry	🍎	fresa
	Garcinia mangostana	Guttiferae	mangosteen	🍎🍎	
	Geoffroea decorticans	Leguminosae	chanar	🍎🍎	
✔	*Gossypium* spp.	Malvaceae	cotton	🍎🍎	if bruised; algodón
✔	*Juglans* spp.	Juglandaceae	walnut	🍎🍎🍎	with husk; nuez
✔	*Litchi chinensis*	Sapindaceae	litchi, lychee	🍎	
✔	*Lycopersicon esculentum*	Solanaceae	tomato	🍎🍎	tomate
✔	*Malpighia glabra*	Malpighiaceae	Barbados cherry	🍎🍎	
	Malpighia punicifolia	Malpighiaceae	Barbados cherry	🍎🍎	
✔	*Malus pumila*	Rosaceae	common apple	🍎🍎🍎	primary host; manzana
✔	*Malus sylvestris*	Rosaceae	crab apple	🍎🍎🍎	primary host
	Mammea americana	Guttiferae	mammee apple	🍎	
✔	*Mangifera indica*	Anacardiaceae	mango	🍎🍎🍎	
	Manilkara zapota	Sapotaceae	sapodilla	🍎🍎	
✔	*Mespilus germanica*	Rosaceae	medlar	🍎🍎	
	Mimusops elengi	Sapotaceae	West Indian medlar	🍎🍎🍎	
✔	*Murraya paniculata*	Rutaceae	orange jessamine	🍎🍎🍎	
✔	*Musa* X *paradisiaca*	Musaceae	banana, plantain	🍎	banana, plátano

✔= Likely to be found in California. 🍎🍎🍎 = Primary host 🍎🍎 = Occasional host 🍎 = Rarely infested

Calif.	Botanical name	Botanical family	Common name	Importance	Comments/ Other Common Names

	Ochrosia elliptica	Apocynaceae	Bourbon orange	🍎🍎	
✔	*Olea europea*	Oleaceae	olive	🍎	oliva
✔	*Opuntia* spp.	Cactaceae	opuntia cactus	🍎🍎	e.g., prickly pear, beavertail, etc.; tunas
✔	*Passiflora* spp	Passifloraceae	passionfruit	🍎	passionflower
✔	*Persea americana*	Lauraceae	avocado	🍎🍎	some varieties are preferred hosts; aguacates
✔	*Phoenix dactylifera*	Palmae	date palm	🍎	dátiles
✔	*Physalis peruviana*	Solanaceae	ground cherry, poha	🍎	
	Pouteria campechiana	Sapotaceae	canistel	🍎🍎	
	Prunus americana	Rosaceae	American plum	🍎🍎🍎	ciruela pasa
✔	*Prunus armeniaca*	Rosaceae	apricot	🍎🍎🍎	chavacán, albaricoque
✔	*Prunus avium*	Rosaceae	sweet cherry	🍎🍎	cereza dulce
✔	*Prunus cerasus*	Rosaceae	sour cherry	🍎🍎	cereza agria
✔	*Prunus domestica*	Rosaceae	plum, prune	🍎🍎🍎	French and Italian prunes; ciruela
✔	*Prunus dulcis*	Rosaceae	almond	🍎🍎	with husk; almendra
✔	*Prunus persica*	Rosaceae	peach, nectarine	🍎🍎🍎	primary hosts; durazno, melocotón, nectarina
✔	*Psidium cattleianum*	Myrtaceae	strawberry guava	🍎🍎🍎	includes yellow strawberry guava; guava fresa
✔	*Psidium guajava*	Myrtaceae	guava	🍎🍎🍎	including lemon guava; guayaba
✔	*Punica granatum*	Punicaceae	pomegranate	🍎	granada
✔	*Pyrus communis*	Rosaceae	pear	🍎🍎🍎	pera
	Pyrus X *lecontei*	Rosaceae	pear	🍎🍎🍎	'Kieffer', 'LeConte' pears
✔	*Rubus* spp.	Rosaceae	blackberries	🍎	boysenberry, youngberry, etc.; zarzamora
✔	*Sechium edule*	Cucurbitaceae	chayote	🍎	
✔	*Solanum melongena*	Solanaceae	eggplant	🍎	berenjena
✔	*Solanum nigrum*	Solanaceae	black nightshade	🍎🍎	
✔	*Solanum pseudocapsicum*	Solanaceae	Jerusalem cherry	🍎🍎🍎	
	Spondias mombin	Anacardiaceae	mombin	🍎	also hog plum, Spanish plum
	Spondias purpurea	Anacardiaceae	jocote	🍎	
✔	*Syzygium jambos*	Myrtaceae	rose apple	🍎🍎🍎	manzana rosa
	Syzygium malaccense	Myrtaceae	mountain apple	🍎🍎🍎	also Malay apple
	Terminalia catappa	Combretaceae	tropical almond	🍎🍎🍎	
	Terminalia chebula	Combretaceae	black myrobalan	🍎🍎🍎	(not *Prunus cerasifera*)
✔	*Thevetia peruviana*	Apocynaceae	yellow oleander	🍎🍎	
✔	*Vicia faba*	Leguminosae	broad bean	🍎	habas
✔	*Vitis labrusca*	Vitaceae	fox grape	🍎	slipskin, concord-type
✔	*Vitis vinifera*	Vitaceae	wine & table grape	🍎🍎	uva

✔= Likely to be found in California. 🍎🍎🍎 = Primary host 🍎🍎 = Occasional host 🍎 = Rarely infested

Calif.	Common name	Botanical name	Botanical family	Importance	Comments/ Other Common Names
	akee	Blighia sapida	Sapindaceae	●●●	
✔	almond	*Prunus dulcis*	Rosaceae	●●	with husk; almendra
✔	apple, common	*Malus pumila*	Rosaceae	●●●	primary host; manzana
✔	apple, crab	*Malus sylvestris*	Rosaceae	●●●	primary host
✔	apricot	*Prunus armeniaca*	Rosaceae	●●●	chavacán, albaricoque
✔	argan tree	*Argania spinosa*	Sapotaceae	●●	
✔	avocado	*Persea americana*	Lauraceae	●●	some varieties are preferred hosts; aguacates
	ball kamani	*Calophyllum inophyllum*	Guttuferae	●●●	
✔	banana, plantain	*Musa* X *paradisiaca*	Musaceae	●	banana, plátano
✔	Barbados cherry	*Malpighia glabra*	Malpighiaceae	●●	
	Barbados cherry	*Malpighia punicifolia*	Malpighiaceae	●●	
✔	bean, broad	*Vicia faba*	Leguminosae	●●	habas
	black myrobalan	*Terminalia chebula*	Combretaceae	●●●	(not *Prunus cerasifera*)
✔	black nightshade	*Solanum nigrum*	Solanaceae	●●	
✔	blackberries	*Rubus* spp.	Rosaceae	●	boysenberry, youngberry, etc.; zarzamora
	Bourbon orange	*Ochrosia elliptica*	Apocynaceae	●●	
	Brazilian plum	*Eugenia brasiliensis*	Myrtaceae	●	
	breadfruit	*Artocarpus altilis*	Moraceae	●	
✔	cactus, opuntia	*Opuntia* spp.	Cactaceae	●●	e.g., prickly pear, beavertail; tunas
✔	calamondin	X *Citrofortunella mitis*	Rutaceae	●●●	also orangequat
	canistel	*Pouteria campechiana*	Sapotaceae	●●	
	Ceylon gooseberry	*Dovyalis hebecarpa*	Flacourtiaceae	●●	
	chanar	*Geoffroea decorticans*	Leguminosae	●●	
✔	chayote	*Sechium edule*	Cucurbitaceae	●	
✔	cherimoya	*Annona cherimola*	Annonaceae	●●	only when ripe
✔	cherry, sour	*Prunus cerasus*	Rosaceae	●●	
✔	cherry, sweet	*Prunus avium*	Rosaceae	●●	cerezas
✔	citron	*Citrus medica*	Rutaceae	●●	cidro citron
✔	coffee, common	*Coffea canephora*	Rubiaceae	●●●	= *C. arabica*; primary host
	coffee, Liberian	*Coffea liberica*	Rubiaceae	●●●	
✔	cotton	*Gossypium* spp.	Malvaceae	●●	if bruised; algodón
	custard apple	*Annona reticulata*	Annonaceae	●	papaya (Spanish)
✔	date palm	*Phoenix dactylifera*	Palmae	●	dátiles
✔	date plum	*Diospyros lotus*	Ebonaceae	●	
✔	eggplant	*Solanum melongena*	Solanaceae	●	berenjena

✔= Likely to be found in California. ●●● = Primary host ●● = Occasional host ● = Rarely infested

Calif.	Common name	Botanical name	Botanical family	Importance	Comments/ Other Common Names
✔	fig	*Ficus carica*	Moraceae	●●	higo
✔	grape, fox	*Vitis labrusca*	Vitaceae	●	slipskin, concord-type
✔	grape; wine or table	*Vitis vinifera*	Vitaceae	●●	uva
✔	grapefruit	*Citrus X paradisi*	Rutaceae	●●●	toronja, pomelo
✔	ground cherry, poha	*Physalis peruviana*	Solanaceae	●	
✔	guava	*Psidium guajava*	Myrtaceae	●●●	including lemon guava; guayaba
✔	hawthorn	*Crataegus* spp.	Rosaceae	●●	
	jackfruit	*Artocarpus heterophyllus*	Moraceae	●	
✔	Jerusalem cherry	*Solanum pseudocapsicum*	Solanaceae	●●●	
	jocote	*Spondias purpurea*	Anacardiaceae	●	
✔	kei apple	*Dovyalis caffra*	Flacourtiaceae	●●●	
✔	king mandarin	*Citrus X nobilis*	Rutaceae	●●●	also tangor, temple orange
✔	kiwi	*Actinidia chinensis*	Actinidiaceae	●●	
✔	kumquat	*Fortunella japonica*	Rutaceae	●●●	
✔	lemon	*Citrus limon*	Rutaceae	●●●	except 'Eureka', 'Lisbon', unless injured; limón
✔	lime, Rangpur	*Citrus X limonia*	Rutaceae	●●●	
✔	lime, sour	*Citrus aurantiifolia*	Rutaceae	●	includes 'Bearss' lime; lima
✔	litchi, lychee	*Litchi chinensis*	Sapindaceae	●	
	longan	*Euphorbia longana*	Euphorbiaceae	●●	
✔	loquat	*Eriobotrya japonica*	Rosaceae	●●●	nispero
	mammee apple	*Mammea americana*	Guttiferae	●	
✔	mandarin, tangerine	*Citrus reticulata*	Rutaceae	●●●	satsuma; mandarina
✔	mango	*Mangifera indica*	Anacardiaceae	●●●	
	mangosteen	*Garcinia mangostana*	Guttiferae	●●	
✔	medlar	*Mespilus germanica*	Rosaceae	●●	
	mombin	*Spondias mombin*	Anacardiaceae	●	also hog plum, Spanish plum
	mountain apple	*Syzygium malaccense*	Myrtaceae	●●	also Malay apple
✔	Natal plum	*Carissa grandiflora*	Apocynaceae	●●	
✔	nectarine	*Prunus persica*	Rosaceae	●●●	nectarina
✔	olive	*Olea europea*	Oleaceae	●	
✔	orange jessamine	*Murraya paniculata*	Rutaceae	●●●	
✔	orange, sour	*Citrus aurantium*	Rutaceae	●●●	naranja agria
✔	orange, sweet	*Citrus sinensis*	Rutaceae	●●●	'Valencia', navel, etc.; naranja dulce

✔= Likely to be found in California. ●●● = Primary host ●● = Occasional host ● = Rarely infested

Calif.	Common name	Botanical name	Botanical family	Importance	Comments/ Other Common Names
✔	papaya	*Carica papaya*	Caricaceae	●●	
	papaya, dwarf	*Carica quercifolia*	Caricaceae	●●	
✔	passionfruit	*Passiflora* spp.	Passifloraceae	●	passionflower
✔	peach	*Prunus persica*	Rosaceae	●●●	primary host; durazno, melocotón
✔	pear	*Pyrus communis*	Rosaceae	●●●	pera
	pear	*Pyrus* X *lecontei*	Rosaceae	●●●	'Kieffer', 'LeConte' pears
✔	pepper, cultivated	*Capsicum annuum*	Solanaceae	●●	sweet bell, chilies; pimiento
	pepper, tobasco	*Capsicum frutescens*	Solanaceae	●●	
✔	persimmon, American	*Diospyros virginiana*	Ebonaceae	●●	soft ripe
✔	persimmon, oriental	*Diospyros kaki*	Ebenaceae	●●●	persimonio japones
✔	pineapple guava	*Feijoa sellowiana*	Myrtaceae	●●●	including guavasteen; guayaba de pina
	plum, American	*Prunus americana*	Rosaceae	●●●	ciruela
✔	plum, Japanese	*Prunus salicina*	Rosaceae	●●●	ciruela japonesa
✔	plum, prune	*Prunus domestica*	Rosaceae	●●●	French and Italian prunes; ciruela pasa
✔	pomegranate	*Punica granatum*	Punicaceae	●	granada
	pond apple	*Annona glabra*	Annonaceae	●●	
✔	pumelo, shaddock	*Citrus maxima*	Rutaceae	●●●	
✔	quince	*Cydonia oblonga*	Rosaceae	●●●	membrillo
✔	rose apple	*Syzygium jambos*	Myrtaceae	●●●	manzana rosa
	sapodilla	*Manilkara zapota*	Sapotaceae	●●	
✔	sapote, white	*Casimiroa edulis*	Sapotaceae	●●●	sapote blanco
	soursop	*Annona muricata*	Annonaceae	●●	ripe to overripe
	Spanish cherry	*Eugenia dombeyi*	Myrtaceae	●●●	
✔	squash, pumpkin	*Cucurbita* spp.	Cucurbitaceae	●	
	star apple	*Chrysophyllum cainito*	Sapotaceae	●●●	
	star apple	*Chrysophyllum oliviforme*	Sapotaceae	●●●	
	star fruit	*Averrhoa carambola*	Oxalidaceae	●●	carambola
✔	strawberry	*Fragaria* X *ananassa*	Rosaceae	●	fresa
✔	strawberry guava	*Psidium cattleianum*	Myrtaceae	●●●	includes yellow strawberry guava; guava fres
	sugar apple	*Annona squamosa*	Annonaceae	●●	
	sugar palm	*Arenga pinnata*	Palmae	●●	
✔	Surinam cherry	*Eugenia uniflora*	Myrtaceae	●●●	*also* Barbados cherry
✔	tangelo	*Citrus* X *tangelo*	Rutaceae	●●●	
✔	tomato	*Lycopersicon esculentum*	Solanaceae	●●	tomate
✔	tree tomato	*Cyphomandra betacea*	Solanaceae	●●	tamarilla
	tropical almond	*Terminalia catappa*	Combretaceae	●●●	

✔= Likely to be found in California. ●●● = Primary host ●● = Occasional host ● = Rarely infested

Calif.	Common name	Botanical name	Botanical family	Importance	Comments/ Other Common Names
✔	walnut	*Juglans* spp.	Juglandaceae	●●●	with husk; nuez
	West Indian medlar	*Mimusops elengi*	Sapotaceae	●●●	
✔	yellow oleander	*Thevetia peruviana*	Apocynaceae	●●	

✔= Likely to be found in California. ●●● = Primary host ●● = Occasional host ● = Rarely infested

VARROA MITES, *Varroa jacobsoni*,-(A)- A number of these mites have been found in California the first quarter of 1990, and infested apiaries have been given eradicative treatments. This does not include hives entering the state under quarantine. The following chart indicates data involving each find:

County	City	Date	Collector
San Bernrdino	San Bernardino	12/28/89	Hunter
Placer	Weimar	1/3/90	Henderson
San Bernardino	Redlands	1/12/90	Smith
Riverside	Moreno Valley	1/10/90	Vizthum
San Bernardino	Mentone	1/23/90	Schatz
Madera	Madera	3/2/90	Mayeda
Kern	Unknown location	3/22/90	Holland
Santa Barbara	Unknown location	3/30/90	Tingos/Taylor
Riverside	Riverside	4/9/90	Vizthum
Riverside	Riverside	4/9/90	Vizthum
Ventura	Camarillo/Somis	4/12/90	McClure
Ventura	Santa Paula	7/?/90	McClure
Sacramento	Orangevale	4/25/90	Raschke
Yolo	Unknown location	5/7/90	Delbondio
Ventura	Santa Paula	5/1/90	McClure
San Bernardino	Upland	5/3/90	Smith
Riverside	Riverside	5/7/90	Vizthum
Sacramento	Folsom	5/8/90	Raschke
Sacramento	Folsom	5/8/90	Raschke
Sacramento	Folsom	5/8/90	Raschke
Sacramento	Folsom	5/8/90	Raschke
Ventura	Santa Paula	5/7/90	McClure
Ventura	Oxnard	5/7/90	McClure
Riverside	Riverside	5/8/90	Vizthum
Riverside	Riverside	5/10/90	Vizthum
Riverside	Riverside	5/14/90	Vizthum
Riverside	Riverside	5/14/90	Vizthum
Ventura	Camarillo	5/17/90	McClure
Ventura	Camarillo	5/17/90	McClure
Ventura	Oxnard	5/17/90	McClure
Ventura	Camarillo	5/17/90	McClure
Ventura	Unknown location	5/17/90	McClure
Ventura	Unknown location	5/17/90	McClure
Calaveras	Acampo	5/30/90	Kerstan
Calaveras	Acampo	5/30/90	Kerstan
Calaveras	Acampo	5/30/90	Kerstan
Calaveras	Acampo	5/30/90	Kerstan
Calaveras	Railroad Flat	5/31/90	Kerstan/Norfolk

NEW COUNTY RECORDS

RUSSIAN WHEAT APHID, *Diuraphis noxia*,-(Q)- Russian wheat aphid has been found for the first time in four California counties (see the distribution map on pg. 60). The following report covers the finds for 1990:

> On January 4, 1990, Russian wheat aphid was found in Monterey County by University of California Extension Professor Dr. Charlie Summers and Farm Advisor Bill Chaney.
>
> First time findings of Russian wheat aphid occurred in Sutter, Santa Cruz, Kings, and Colusa Counties. Russian wheat aphid was collected in Sutter County on March 14, 1990, by Jack Williams and Dave Wilson and also on March 23, 1990 by S.V. Protine. Bill Chaney found Russian wheat aphid in a water pan trap located in a pepperfield in Santa Cruz County on March 20, 1990. Russian wheat aphid was found on barley in Kings County on April 2, 1990, by Sean Hardy and Dennis Brat. On April 6, 1990, Steven Scardaci of the University of California Cooperative Extension found Russian wheat aphid in Colusa County.

TORPEDO BUG, *Siphanta acuta*,-(B)- Jim Xerogeanes of Humbolt County has collected the first specimen of this flatid planthopper in Northern California. Jim spotted the torpedo bug at an outside house light while vacationing in Millbrae, San Mateo County. He collected the specimen on March 18, 1989, unsure of its identity. After seeing the article and picture of the torpedo bug in the June-August issue of CPPDR [8(34):58], Jim realized what the specimen was and submitted it to the Sacramento lab on January 25, 1990, for verification.

Egg masses and nymphs of this planthopper are frequently encountered on leaves of cut floral plants and nursery stock from Hawaii. Since 1983, specimens have been collected from several counties of Southern California including San Diego, Los Angeles, and Orange County. Jim's finding confirms that it also occurs in Northern California.

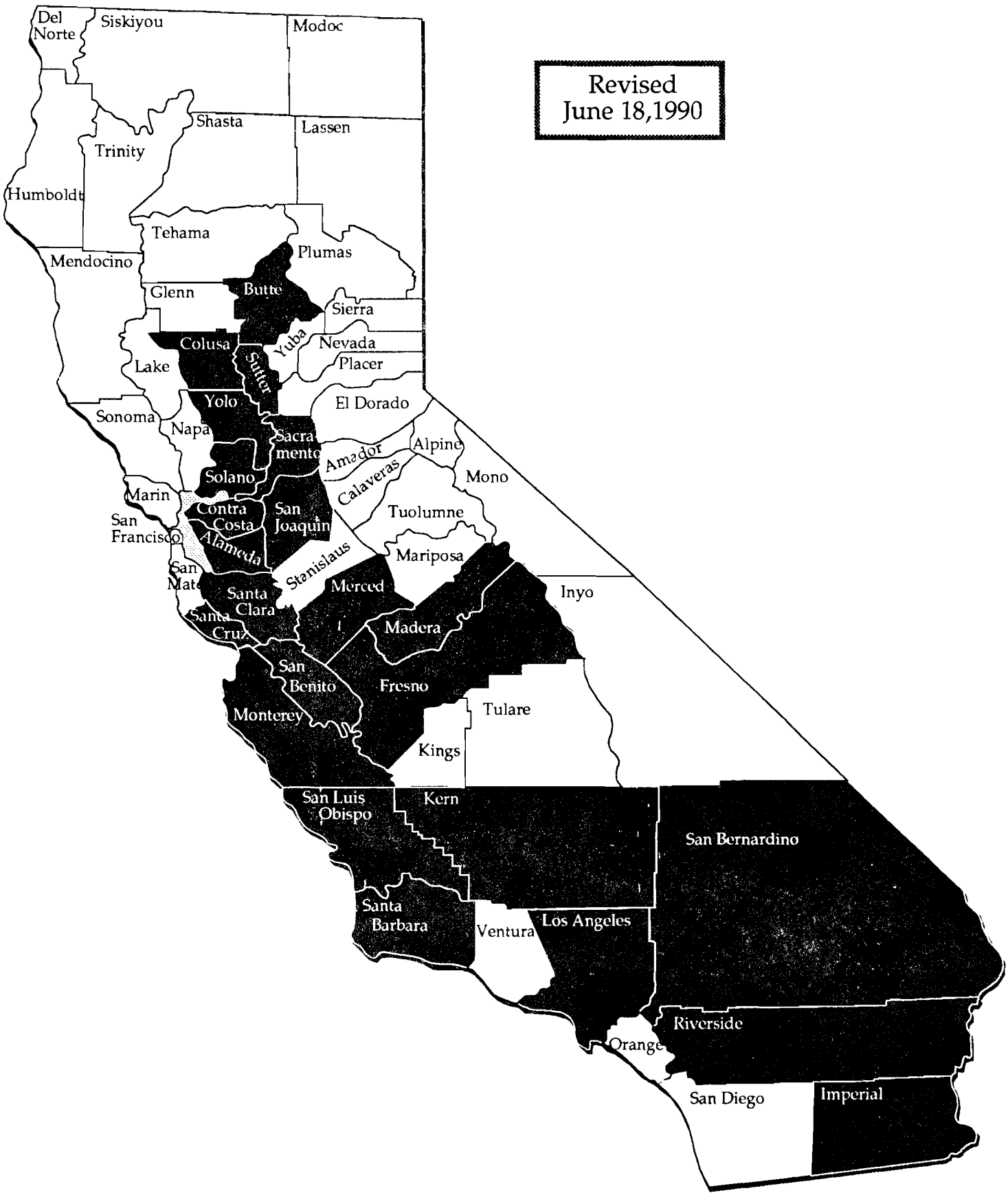
ASH WHITEFLY, *Siphoninus phillyreae*,-(C)- Ash whitefly has been found in two new counties in the first quarter of 1990. On March 13, 1990, this exotic pest was found in Imperial County by Seitz and Mecate. It appeared again on April 18, 1990 on the leaves of a phillyrea plant at the University of California, Davis Arboretum located in Yolo County. Kathleen Casanave is credited with the find in Davis.

Ash whitefly is now found in 19 counties (see distribution map on pg. 61) .

EUGENIA PSYLLID, *Trioza eugeniae*,-(Q)- Eugenia psyllid has been found in two new counties. On May 1, 1990, Pam Bone found this pit-making psyllid on eugenia in Sacramento. She reported that the plant had pitted leaves, distorted new growth, and discolored tissues. It was also found May 24, 1990, on eugenia in Solano County by Jeff Erwin.

Eugenia psyllid is native to Australia. It was first detected in North America on May 4, 1988, in Los Angeles County. For more information, see CPPDR 7(1-4):12-13.

California Distribution of Russian Wheat Aphid



General Distribution of Ash Whitefly in California

Revised
July 17, 1990

NEW COUNTY RECORDS (continued)

KUWANA OAK SCALE, *Kuwania quercus*,-(C)- This rare and unusual scale was found for the first time in Solano County on April 20, 1990. The find was made by Ted Swiecki, a Pest Control Advisor.

This infestation is a few miles south of known infestations along Highway 128 in Yolo and Napa Counties. An earlier account of this scale insect in CPPDR 5(3-4):228 listed Solano County as being infested; however, this is an error and should have read as Yolo County. The insect is now known to occur in Napa, Yolo, Solano, and San Joaquin Counties.

Ted Swieki's comments indicate that the species may also occur in Roseville, Placer County, and at Glen Ellen, Sonoma County. In each case, Ted says the insects are found on single trees with badly sloughing bark. Other trees in the area are not particularly infested. Whether the scale is causing the bark to peel or whether the scale does better on trees with sloughing caused by other agents is not known.

BAILEYANA PSYLLID, *Acizzia acaciae baileyanae*,-(C)- This recently introduced psyllid has now been found in Santa Cruz County. The collection was made at Watsonville on April 18 by Marilyn Perry.

In preparing this data for inclusion in the CPPDR, it was discovered that a number of new county records for this insect were overlooked in past issues. The psyllid now occurs in eight counties including: Alameda, Orange, Santa Barbara, San Luis Obispo, San Diego, Sacramento, Santa Cruz and Solano. The following chart indicates the collection data for the new records that were overlooked:

County:	Locality:	Date:	Collectors:
San Luis Obispo	Morro Bay	12/18/87	S. Jordan
San Diego	San Diego	2/18/88	Rhys/Kellum
Sacramento	Sacramento	2/25/88	Jenson/Engstrom

For more information on this psyllid, see CPPDR 6(1): 6, 1987.

Pest Exclusion

Airport Blitz—The big news in pest exclusion is now the famous airport blitz at the Los Angeles International Airport held during a one week period in May. The 100 percent inspection of baggage from targeted flights from designated areas went a long way toward indicating just how much fruit, animal products, and other agricultural material was actually moving in passenger luggage. The blitz was carried out by a task force from five branches of CDFA and three Southern California counties. Of the five CDFA divisions, 15 employees were from Analysis and Identification, seven were from Control and Eradication, six were from Pest Exclusion, three were from Animal Health/Division of Animal Industry, and two were from Pest Detection/Emergency Projects. Participants from Los Angeles County include: Peggy Byerly, John Cervantes, Dan Papilli, John Wegener, and Mary Ann Yale. Other participants include Tony Do and Theresa Knitter from Orange County and Bruce Bowers from San Diego County.

The following account, condensed from Exclusion reports, indicates the findings and explains the reasons for the blitz.

Several recommendations were made at the Pest Pathways Meeting held November 22, 1989, to determine how Mediterranean fruit fly (Medfly) and other serious agricultural pests are being repeatedly introduced into California. One of the recommendations was to carry out a 100 percent inspection of air travelers' baggage from origins that are considered high risk for Medfly.

As a consequence, a cooperative Federal/State/County passenger baggage inspection blitz was conducted during May 14-20, 1990, at the Los Angeles International Airport (LAX). Flights arriving from all countries in Central and South America, as well as most flights from Mexico, were the primary targets of the blitz since these origins are considered high plant pest risks. In addition, several of the precleared flights from Hawaii were given a 100 percent inspection as a quality control check of the preclearance inspection. Lastly, as time and resources permitted, flights originating from nontargeted, yet potentially high risk areas, such as the Philippines, were also given a complete inspection.

Methodology

In order to carry out the blitz, 53 State and County employees assisted 28 USDA inspection personnel and one dog team. The work hours were from 8:00 a.m. to 4:00 p.m. for the day shift. The swing shift began at 4 p.m. and worked until the final targeted flights were cleared (approximately 2:30 a.m.).

The inspections conducted during the blitz included flights in the Tom Bradley International Terminal (TBIT) and targeted international flights in both Terminal 2 and Terminal 5 of LAX. TBIT handles the vast majority of foreign flight arrivals while targeted flights at Terminal 5 were primarily from Mexico. The USDA dog teams and additional Pest Exclusion staff carried out the inspection of the Hawaiian flights in their terminal of arrival. Only TBIT and Terminal 2 have X-ray machine inspection capabilities.

The blitz inspection process was substantially the same as the normal USDA inspection process with one important difference; all of the baggage of both flight crews and passengers from targeted flights was completely inspected. Under normal circumstances, the USDA does not perform a 100 percent inspection; rather, it uses a profile system to identify high pest risk flights and passengers. The USDA passenger profiling system is made up of three major components: visual cues; passenger interviews; and contraband availability from the passenger's origin. Regardless of the passenger's origin, some form of inspection is conducted for each traveler. Each passenger must complete a Customs Declaration before entering the inspection area. (In the case of a husband/wife or family traveling together, one declaration can be completed to cover all individuals involved.) Once the travelers have gathered their baggage, they proceed to the primary screening area where their declaration is reviewed by PPQ personnel. At this point, the agricultural official determines (using the above stated methods) if the individual is a high suspect for contraband. If the decision is to conduct a further inspection, the individual is either directed to the X-ray scanner or to an H-counter for physical baggage inspection. If at any time there is an indication that a passenger may be carrying a prohibited commodity, the individual is given an opportunity to amend his or her Customs Declaration before further inspection is begun. Upon further inspection, if any commodities are found and appear to have been concealed, the passenger may be assessed a civil penalty ranging from $10 to $50. A good deal of discretion is given to the inspectors in deciding the degree of inspection which should be afforded each individual and whether a penalty is warranted.

During the blitz, three methods of inspection were employed for passengers arriving on targeted flights; X-ray scanning devices for exposing baggage contents, physical inspection by agricultural personnel and canine profiling. In the first instance, all baggage in the traveler's possession was placed on a conveyor belt which transported the baggage through the scanning device. A trained USDA employee monitored a video screen which showed images of the baggage contents. If the outline image of plant or animal material was detected, the item was removed from the conveyor belt and referred to another inspector for further handling. Parcels which proved negative for prohibited material were allowed to proceed through the agricultural inspection area without further inspection.

The second method of inspection was far more labor intensive as it involved opening of all baggage carried by the traveler and physically examining the contents for prohibited items. When material was discovered, the items were removed at that point.

The third method of inspection involved the use of dogs trained to identify baggage containing plant and animal material by the scent of the material. A trained dog and handler worked in the area surrounding the baggage carousel where individuals were retrieving their luggage. The dog sniffed the traveler's possessions, and if it detected the scent of plant or animal matter, it reacted in a manner that alerted the handler to the presence of the material. At that point the package was opened and if the material was prohibited, it was confiscated. In any of the three foregoing methods where obvious smuggling attempts were made, a civil violation was assessed ranging from $10 to $50 per incident.

Blitz Results

The degree of inspection given each traveler was contingent only on personnel availability and inspection space. Many flights arriving from high pest risk origins were so crowded that the time spent per passenger was a major concern in getting the arriving traveler cleared in a timely manner. A more thorough inspection would likely show increased interception results.

In total, there were 490 flights arriving at LAX during the week of the blitz. State, County, and Federal inspectors seized 1,692 separate lots (5,787 pounds) of prohibited plant and animal materials from 301 of the 490 flights. It should be noted that not all rejected commodities originated in the same country as the flight origin. Many travelers began their journey at points far removed from the airport where the flight originated (i.e., a traveler from whom mangoes were intercepted on a Mexican flight may have departed from home in Guatemala). Following is a further breakdown of the resulting data:

1. Targeted countries: From Argentina, Brazil, Chile, Costa Rica, Ecuador, El Salvador, Guatemala, and Mexico, 153 flights were completely inspected. These inspections involved 16,997 passengers resulting in 677 interceptions of prohibited fruits and vegetables and 140 animal products (2,828 pounds). All three methods (X-ray, physical inspections and dog teams) were utilized for these targeted flights.

2. Nontargeted Countries: From the remaining 337 nontargeted flights, 690 separate lots of prohibited fruits and vegetables and 185 animal products (2,969 pounds) were intercepted from passengers coming from Australia, Japan, the Philippines, Iran, Korea, Malaysia, Taiwan, Thailand, etc. Most of the nontargeted flights were inspected with the traditional USDA profiling method. However, certain flights from high pest risk origins (i.e. the Philippines) were also given a 100 percent inspection.

3. Hawaiian Flights: Seven flights that were precleared by the USDA in Hawaii were inspected utilizing dog team inspections for the 1,738 passengers and complete inspections for the 83 flight crew members. Cargo from these flights was not blitzed since it already received 100 percent inspection by the USDA in Hawaii.

Seven fruit interceptions were made from five of these flights including one apple from a United Airlines crew member's bag. Fruit trays of safeguarded U.S. mainland fruit are placed on some United Airline flights—generally for first class passengers.

4. Plant Pest Interceptions: A total of 164 separate pests were intercepted; 72 were of economic significance, 23 were undetermined (damaged or to be forwarded for further identification) and 69 were of no economic importance.

a) Fruit Fly Larvae: In total, there were 56 separate live fruit fly larval interceptions. Of this number, 49 were confirmed to be *Anastrepha* sp. and two were *Dacus* sp., with the remaining five confirmed to be Tephritid fruit

flies of major importance, but not yet identified to genus.

b) Other Pests: The 16 other pests of economic importance intercepted during the blitz were:

1. *Aulacaspis tubercularia* (2)
2. *Pseudaonidia trilobitiformis*-Trilobed scale
3. Aphididae (2)
4. Pseudococcidae (3)
5. Psyllidae
6. Gracillariidae
7. Geometridae
8. *Stenoma catenifer* (2)-Avocado seed weevil
9. *Sternochetus mangiferae*-Mango seed weevil
10. *Oryza* sp. -Red Rice
11. *Heracleum mantegazzianum*

5. Violations: The total number of violations for the week of the blitz was 367 (277 for plant products and 90 for animal products). The fines levied for these violations ranged from $10 to $50, totaling $11,330 ($8,730 plants, $2,600 animals) for the week. Of the 367 total violations issued, 232 (193 plants, 39 animals) were issued to passengers arriving on targeted flights.

6. Commodities: The major fruit fly host commodities confiscated and destroyed included mangoes, avocados, mangosteens, tejocotes, guavas, mombins, citrus, mameys, sapotes, and stone fruits.

Summary

The blitz was a joint federal-state-county effort with full partnership between the USDA and CDFA for planning, organization and execution. The results validate the current expenditure of resources by the USDA for inspection of passenger baggage at foreign arrival airport terminals. However, the results also demonstrate that the pathway is not adequately closed; that there is considerable smuggling, and that more resources need to be expended to close this important pathway and build a stronger deterrent to the illegal activity which is now common.

SIGNIFICANT FINDS IN OTHER STATES

MEDITERRANEAN FRUIT FLY, *Ceratitis capitata*,-(A)- Medfly has again occurred in Florida. The following is an account of several finds that have been made there over the last several months.

On April 16, 1990, a single young male Medfly was found in Miami Springs, Dade County. The Medfly was detected in a Jackson trap that had been placed in a guava tree and was located approximately two blocks north of the Miami International Airport.

On April 21, 1990, a single unmated female Medfly was found in Miami Springs, Dade County. The Medfly was detected in a Jackson trap that had been placed in a calamondin tree. The location is approximately two miles northwest of where a single male Medfly was detected on April 16 .

On April 22, a single male Medfly was found in Miami Springs near the original find. Also, a single male Medfly was found in a Jackson trap in Hialeah one mile northeast of the original find. Both flies were caught in traps placed in sour orange trees.

On April 23, a single male Medfly was found in a Jackson trap in a loquat tree in Miami Springs. This detection was approximately one mile west of the initial detection.

On April 24, a single unmated female Medfly was trapped in Port Everglades, Broward County. Trapping has been increased to protocol levels.

Between April 21 and 25, two unmated female and six male Medflies were trapped in Miami Springs, Dade County. This triggered a quarantine and an aerial bait spray treatment was applied on April 26.

On May 21, a live male Medfly was captured in the city of Hialeah. It was captured just outside of the aerial treatment zone but in the quarantined area.

On May 11, a male Medfly was trapped within the aerial treatment block in the Miami Springs area.

Between May 11-17, six additional adult male Medflies were found within the original infested area.

AFRICANIZED HONEY BEE, *Apis mellifera scutellata*,-(A)- On February 6, 1990, a colony of Africanized honey bee (AHB) was discovered by workers unloading a ship at Port Everglades. The bees had hitchhiked aboard the coastal freighter Waterstoker from Guatemala. The colony of about 40,000 bees was destroyed at the Port by Plant Protection and Quarantine Officers. Florida officials will place a dozen additional bait hives near the Port in the next few weeks to attract any that may not have been killed.

SIGNIFICANT FINDS IN OTHER COUNTRIES

AFRICANIZED HONEY BEE, *Apis mellifera scutellata*,-(A)- Africanized honey bee was found in Mexico. A swarm was captured near the town of Valle Hermoso, Tamaulipas, which is located about 40 kms (25 miles) south of the Texas Border. The sample has been sent to the ARS laboratory in Beltsville, Maryland for further testing.

Border Stations

Twelve Border Station personnel helped with the airport blitz at the Los Angeles International Airport during May (see story on page 58). The Border Station personnel involved were: Rene Barnett, Dick Brown, Robert Derichsweiler, Jack Doyle, Diane Duffin, Mike Griffin, Teri Hutchinson, Beverly Litchfield, Sonia Munoz, Bob Rodriguez, Rose Mary Walker, and William Walker.

One of the patterns that emerged from the blitz was the popularity of mangoes, a very good host for many of the fruit fly species. Although mangoes are commonly seized at the border stations, a large number of mangoes were intercepted in baggage during the blitz at Los Angeles International Airport this May.

Recently, a large shipment of 125, 40-pound boxes (banana cartons) of illegal Florida mangoes was intercepted at the Meyers Station by Gary Speck. The boxes were on a bobtail truck that bypassed the station on a residential street. The truck was stopped by a CHP and was escorted back to the station where the mangoes were off-loaded and the driver was cited.

A second truck was also stopped by the CHP. The driver was directed to return to the station, but never arrived. There is some evidence that this smuggling operation has been going on for several months. CDFA is investigating the situation.

Other pests are also found in border stations besides fruit flies and ants:

Live burrowing nematode adults, *Radopholus similis*, were found in Florida houseplants enroute to San Francisco, California. Al Guthrie intercepted these houseplants at the Blythe border station.

Also at the Blythe border station, other houseplants enroute from Florida to four California counties were intercepted. Fidel Martinez found cyst nematode larvae, *Heterodera* sp., on some houseplants bound for San Dimas. The larvae of dagger nematode, *Xiphinema* sp., were found by Bill Hinsley on houseplants bound for San Bernardino.

Houseplants infested with root-knot nematode larvae, *Meloidogyne* sp., bound for Los Angeles, San Bernardino, and Marysville, were intercepted by Dariel Perez, Bill Hinsley, and Diana Holm. These findings occurred in March.

Root-knot nematode larvae were found by Mike Garrison at the Dorris border station in Idaho houseplants on a U-Haul bound for Santa Monica.

Weeds were found in several border stations:

At the Truckee border station, musk thistle was intercepted in February by Dave Sage on alfalfa hay from Nevada bound for Oakdale.

At the Tulelake border station, two weeds were found by Kevin Wood during March. Onopordum thistle, enroute from Oregon to San Francisco, was found in weed debris. Spotted knapweed, enroute from Oregon to Corning, was found in flowers.

At the Hornbrook station, diffuse knapweed was found by Al Rojas on Washington baled hay that was bound for Susanville and then again at the Needles border station by John Breznay on a picnic table from New York on its way to Oceanside. Both of these findings took place in March.

At the Dorris border station, diffuse knapweed was found by Wayne Leslie on a Montana garden tiller on its way to Lodi and then again by Brian Shurtleff on a forklift from Washington on its way to Snelling. These findings occurred in March. Also at the Dorris border station, musk thistle was intercepted by Donna Garrison in April. Musk thistle was found in grass hay from Oregon that was bound for Montague.