California Department of Fish and Game
Job Final Report

Project Number: W-65-R-4 Project Title: Nongame Wildlife Investigations

Job Number: IV-11 Job Title: Forest Mammal Survey & Inventory

Period Covered: July 1, 1986 - June 30, 1987

Summary:

Red Tree Vole

Red tree vole (Arborimus longicaudus) habitat and micro-habitat use relative to availability was studied in young, mature, and old-growth Douglas-fir forests in northern California. Seventy-nine of 148 nest sites examined contained evidence of inhabitation by red tree voles. An analysis of macrohabitat selection between seral stages indicated that the abundance of red tree vole nests was greatest in old-growth forests. Also, 45 of the vole nests observed were located in two stands of Douglas-fir forest that were more mesic, due to their proximity with the Eel River, than the other seven stands examined in this study.

Red tree vole nests were characterized by accumulations of resin ducts and vole feces, and were composed primarily of small twigs. Nests were located most frequently on a branch directly adjacent to the trunk of the nest tree. Nests were not found in any tree species other than Douglas-fir. Chi-square goodness of fit tests indicated that red tree vole nest trees had a greater frequency of conks, dead tops, and fire and damage scars than expected. Discriminant function analysis indicated that, for all seral stages combined, red tree vole nest sites could be distinguished from available, but unused, trees by four variables: distance to the nearest red tree vole nest tree, bole height, tree height, and tree diameter. Discriminant analysis of eleven structural habitat variables measured in 0.04/ha, square plots indicated that red tree vole habitat could be distinguished from available habitat, in all seral stages combined, by four variables: altitude, average percent canopy cover, the number of snags, and the number of stumps. Analysis of variance indicated that red tree vole habitat was characterized by shorter snags, larger diameter logs, and larger diameter trees, particularly Douglas-firs and redwoods, than were observed in available but unused habitat. Also, red tree vole habitat was characterized by a smaller average percent cover of rock, a greater average percent cover of Berberis nervosa and of Galium muricatum, and a smaller average percent cover of herbaceous species, particularly deciduous herbaceous species, than occurred in available habitat. This suggested that the moist, cool conditions suitable for red tree vole existence in Northern California can be attributed to the dense, multilayered canopy of older, riparian Douglas-fir forests.

It was recommended that management of Douglas-fir forests in northern California for red tree voles on the macrohabitat level include maintenance of Douglas-fir forests in mesic locations and micro-climates. Such management

not only ensures that the moisture requirements of this species are met, but also provides suitable microhabitat for the existence of red tree voles in such forests.

Fisher

Recent observations, mainly from the 1970's and 1980's, were collected and combined with those of Schempf and White (1977), for a total of 499 sightings in California. Since this survey was conducted in essentially the same manner as the one completed during the last decade, comparison of recent data with historical data gives a good indication of trends.

Fishers are no longer distributed throughout their historical range, and are abundant now only in relatively restricted areas. Sighting reports show that the greatest fisher abundance occurs in the northwestern region of the state. However, their overall range in this area is actually shrinking. They are now absent from the Coast Range south of Trinity County, where they occurred earlier in this century. An additional area of relatively high abundance was identified in the north-central area of the state, south of Mount Shasta in southern Siskiyou and northern Shasta counties. Fishers had not been observed historically here, but this is a relatively small part of their overall range.

In the Sierra Nevada, the range of the fisher also is shrinking. In Tulare County, an area of high abundance earlier in this century, recent data indicates that fishers are declining. Also, this apparent decline has occurred in Tuolumne, Mariposa, Madera, and Fresno counties. Although historically observed on the western slope of the Sierra Nevada, particularly in the southern portion, fishers now appear to be restricted primarily to the eastern slope in both the northern and southern areas, where they continue to occur in sparse numbers.

In view of these trends, it is recommended that petitions be prepared to request formal listing of the fisher population in the Sierra Nevada as Endangered, and of the fisher population in northwestern California as Threatened.

Background:

The Department's list of mammalian species of special concern (Williams 1986) identifies 51 species or subspecies of mammals in California whose status is not well understood, are suffering from habitat loss, and potentially are threatened with extinction. This list is compiled by the Department for administrative purposes to identify potentially endangered species or subspecies in need of research and management attention and to provide a priority list for research. Species of Special Concern is not a classification under any California Administrative Code, and a species so listed is not afforded any additional protection under State law. Included in the list are nine species or subspecies that are closely associated with forest habitat types:

Townsend's Big Eared Bat	(Plecotus townsendii)
Oregon Snowshoe Hare	(Lepus americanus klamathensis)
Sierra Nevada Snowshoe Hare	(Lepus americanus tahoensis)
Point Arena Mountain Beaver	(Aplodontia rufa nigra)
Point Reyes Mountain Beaver	(Aplodontia rufa phaea)
White-eared Pocket Mouse	(Perognathus alticola alticola)
White-footed Vole	(Arborimus albipes)
Red Tree Vole	(Arborimus longicaudus)
Pacific Fisher	(Martes pennanti pacificus)

Red Tree Vole

The red tree vole was included in the listing, because it requires special consideration in the management of its habitat. These voles only live in coastal coniferous forests consisting of Douglas-fir (Pseudotsuga menziesii), grand fir, (Abies grandis), western hemlock (Tsuga heterophylla) and/or Sitka spruce (Picea sitchensis).

Coastal Douglas-fir forests are in great demand for their timber. Current projections are that all old-growth forests capable of sustaining a commercial harvest will be cut within 25 years in California and within 15 years in Oregon. This type of cutting could destroy that part of the forest habitat required by these voles.

Current research on old-growth forests in Washington, Oregon and northern California (Old-Growth Forest Wildlife Habitat Research and Development Program) is being conducted by the U.S. Forest Service's Pacific Northwest Forest and Range Experiment Station. It is hoped that research on the red tree vole can be integrated with other old-growth research programs.

Fisher

Historically, the fisher (Martes pennanti) was known to occur in the mountainous areas of California from Tulare County in the Sierra Nevada north to Shasta and Siskiyou counties, west to Del Norte and Humboldt counties, and then south in the Coast Range, possibly to Sonoma and Marin counties (Grinnell et al. 1937). Although the fisher is a large mustelid, little is known about its status, current distribution, and relative abundance. The most recent study of distribution and status of the fisher in California was completed by Schempf and White (1977) as an update of the work of Grinnell et al. (1937).

Early in this century the fisher was classified as a furbearer and regularly harvested in California, but in 1946 the season on its take was closed and trapping it is no longer permitted.

The fisher was included on the Department's list of Mammalian Species of Special Concern (Williams 1986) because its populations appeared to have declined in the Sierra Nevada. Also, there have been sizable reductions in the amount of the habitat type, primarily mature, mixed conifer forests, where they are normally found.

Objectives:

1. Determine the current distribution, abundance and habitat requirements of those mammal species of special concern in California possibly dependent on mature and old-growth conifer forests.

2. Determine the essential and limiting aspects of habitat quantity and quality on the maintenance of viable populations of these species of special concern.

3. Recommend management actions necessary to maintain affected populations or to increase them to ecologically sound levels.

Procedures:

Red Tree Vole

The Department contracted with the Pacific Southwest Forest and Range Experiment station to have Arlene Doyle of their staff and the Arcata Redwood Sciences Laboratory direct the study. Nina Meiselam, a Graduate Student at Humboldt State University, has performed the field work.

Nine stands of Douglas-fir forest, each a minimum of 20 ha in size, were studied. Red tree vole nests were located along a 1670 m transect, 100 m in width. Potential nests were verified by locating resin ducts, all that remain after the voles have fed on Douglas-fir needles, below or in the nests. Physical characteristics of each confirmed nest and nest tree were recorded.

Vegetation analysis were performed on 400 m^2 plots around nest trees and in randomly chosen plots in portions of the stand not used by tree voles. The analysis involved determining stand structure and species composition and density.

Fisher

Data on fishers was gathered by requesting sighting reports from appropriate state and federal governmental agencies and from licensed fur trappers that reported capturing and releasing individuals. A supply of "Furbearer Observation" report forms (Appendix A) was sent to federal agencies that regularly have personnel in the field. Some agencies keep detailed sighting records and provided numerous locations for this survey. Federal agencies queried include the U.S. Forest Service, National Park Service, and the U.S. Bureau of Land Management. Report forms also were sent to state agencies with field personnel, including the Department of Parks and Recreation and each region of the Department of Fish and Game.

Letters of inquiry with a map of the appropriate county were sent to all licensed fur trappers that reported capturing and releasing fishers during the last few years. Participants marked and returned the map indicating locations and dates of fishers that they had trapped and released or otherwise observed. "Furbearer Observation" report forms were included so they could report any future or additional sightings. A letter of inquiry and a supply of forms was also sent to the California Trappers Association, asking that they distribute them at one of their meetings.

Fisher occurrence reports were collected, entered into a database file, and tabulated and reported by county (Appendix B). This file also included all sightings collected and reported by Schempf and White (1977). Individual sightings were grouped by date, mapped, and compared with the sighting map developed by Grinnell et al. (1937, Fig. 75) using 1919 to 1924 trapping reports (Figure 1). Numbers of occurrence reports from Grinnell et al. (1937), from Schempf and White (1977), and from this survey also were tabulated by date and county (Table 1). Then, current sightings were compared with historical sightings to determine if any changes in distribution and abundance of fishers may have occurred during this century.

Findings:

Red Tree Vole

Attached is the final report cited below:

> Meiselman, N. 1987. Red Tree Vole Habitat and Microhabitat Utilization in Douglas-fir Forests of Northern California. Unpubl. report. Calif. Dept. of Fish and Game, Wildlife Mgmt. Div. Sacramento, CA. 64 pp. + appends.

Fisher

Distribution - Almost all of the 499 fisher observations collected from various sources were made within the range of the fisher as described by Grinnell et al. (1937). Recent sightings (1970s and 1980s) are not evenly distributed and are, in fact, scarce or spotty in some areas and highly concentrated in others. There appears to have been a substantial reduction of the overall fisher distribution in California since early in this century (Figure 1).

Recent fisher sightings are most heavily clustered in the northwestern and north-central mountain areas, with a smaller cluster in the southernmost section of the Sierra Nevada in Tulare County. In the Sierra Nevada recent sightings are scarce to absent on the western slope and are relatively sparse on the eastern slope. However, they are conspicuously absent in the northern Coast Range south of Trinity County. The scarcity of recent records in these areas can be visually compared with clusters of recent sightings in other areas of the state, as well as with historical sightings (Figure 1).

Abundance - This survey was conducted in a manner similar to the one conducted by Schempf and White (1977), allowing their sightings to be combined in the database with the more recent ones for a total of 499 observations. Although these two surveys were not conducted the same way as that of Grinnell et al. (1937), numbers of occurrences per county can be compared (Table 1) and some inferences can be drawn about probable population trends. The sightings in Grinnell's Fig. 75 represent a five year (1919-1924) period of reported furbearer trappers results, so they are rather limited, obtained from relatively few observers over a rather short time period. The sighting reports obtained during this survey and by Schempf and White (1977), in contrast, were provided by several governmental agencies and their field personnel, as well as by licensed trappers. Schempf and White also included the sightings provided by Yocum and McCollum (1973).

Table 1. County distribution of fisher occurrence records in California. Those from Grinnell et al. (1937, Fig. 75) are 1919-1924 trapping reports. Additional early records and those prior to 1970 are from Schempf & White (1977), and records from the 1970s and 1980s are mainly from this study.

Number of Records by Date

County	1919 to 1924	before 1940	1940s thru 1960s	1970s and 1980s	County	1919 to 1924	before 1940	1940s thru 1960s	1970s and 1980s
Alameda					Orange				
Alpine			4	2	Placer	1		1	1
Amador	1		1		Plumas			3	3
Butte			1		Riverside				
Calaveras	2				Sacramento				
Colusa					San Benito				
Contra Costa					San Bernardino				
Del Norte		1		13	San Diego				
El Dorado	1		1	1	San Francisco				
Fresno	3	3	12	4	San Joaquin				
Glenn	2	2			San Luis Obispo				
Humboldt	5		7	29	San Mateo				
Imperial					Santa Barbara				
Inyo			1		Santa Clara				
Kern			1		Santa Cruz				
Kings					Shasta	3		6	38
Lake	3		3		Sierra	2			2
Lassen			2	4	Siskiyou	7		10	35
Los Angeles					Solano				
Madera	7			1	Sonoma				
Marin					Stanislaus				
Mariposa	1	6	5	1	Sutter				
Mendocino	4	1			Tehama	1			
Merced					Trinity	22		34	72
Modoc					Tulare	3	7	50	25
Mono				3	Tuolumne	6	4	4	3
Monterey					Ventura				
Napa					Yolo				
Nevada					Yuba				

The sightings were divided by date in order to observe any changes over time, and compared with those shown in Grinnell's Fig. 75. Sighting reports were obtained from 26 counties: a total of 74 from 1919-1924, 24 from before 1940, 146 from the 1940s through the 1960s, and 237 from the 1970s and the 1980s. Sightings with unknown dates were not included in Table 1 or Figure 1, but are included in Appendix B.

Since the observations were obtained in a similar manner, when comparing numbers of sightings in each County by date (Table 1), the magnitudes of increases or decreases between recent and historical data sets probably are reflective of trends in relative population abundance. This applies

especially to the 1940s through 1960s data set when compared to that of the 1970s and 1980s, and less so when comparing either of these to the earlier data sets. An increase between any two time periods probably reflects a true increase in relative abundance, or at least indicates that the population remained stable, due to the shorter time period affecting the most recent data set. A decrease could be reflecting an actual decrease in abundance, since a greater number of observers in the recent time period conceivably could overcome the effect of the shorter length of time.

Counties showing an increase in, or a stability of relative abundance of fishers include Del Norte, Humboldt, Shasta, Siskiyou, and Trinity in the northwestern region of the State. A decrease in the relative abundance of fishers has occurred in Lake and Mendocino counties in the northern Coast Range and Fresno, Madera, Mariposa, and Tulare counties on the west slope of the Sierra Nevadas.

Analysis:

Red Tree Vole

The basic objectives of determining the statewide distribution and abundance of this species were not met. In order to know where to look for red tree voles to determine distribution and abundance, it was necessary to more closely define the habitat used by this species of arborial rodent. This study did identify red tree vole habitat and it provided information on the relative abundance of voles in various habitat types.

It is apparent from this study that red tree voles are most likely to occupy older Douglas-fir forests in mesic locations. Such forests are likely to be in high demand for their timber and timber harvesting presents a continued threat to maintaining red tree vole populations at ecologically sound population densities throughout their historical range.

The next step to determine the red tree vole's current status is to sample suitable habitat for the presence of the voles. This could prove to be time consuming and could be incomplete because of the lack of and adequate habitat mapping or otherwise accounting of older stands of Douglas-fir and Grand Fir habitats. However, it should be done to document not only the current abundance of the species but to determine the degree of fragmentation in the distribution caused by already fragmented habitat. Such a search would be hampered by ongoing habitat alteration.

Fisher

Formulating conclusions and determining trends is difficult with a survey of this sort. Information received in trapping and sightings reports can not be considered a random sample providing uniform coverage of the State and this type of data set is not statistically quantifiable. There tends to be a low response to voluntary surveys when participants are asked to search old records or memories. If one agency, or a portion thereof, does not or cannot provide information, compared with another that sends in hundreds of sightings, false or misleading trends could appear in the data set. The number of observers in a particular area could cause a cluster of sighting reports, which could appear as an overly important location when mapped.

However, since fishers generally are considered to be rare or uncommon, it is more likely that a sighting is considered important enough to be recorded by an observer.

Fisher populations appear to be stable or increasing in the northwestern and north-central mountainous regions of the state (Figure 1). Large clusters of sightings occur in central Trinity County and in northeastern Humbolt County, with smaller adjacent clusters in southern Del Norte and western Siskiyou counties. The additional large cluster in the north-central region, south of Mount Shasta in southern Siskiyou and northwestern Shasta counties, is in an area that lacks historical sightings.

Although these clusters of recent sightings likely indicate that populations are increasing in these areas, as reported by Schempf and White (1977) and Yocum and McCollum (1973), they also could be the result of a few observers with good records providing information for this survey. U.S. Forest Service sighting records from timber survey crews in the national forests of Trinity and Humboldt counties provided multiple reports in that area. The cluster in the area south of Mount Shasta resulted from the detailed records kept by one individual. Also, it should be noted that these two areas make up only a very small portion of the overall range of the fisher in California as described by Grinnell et al. (1937), and may, in fact, be an indication of fishers becoming scarcer throughout their range so that they are more frequently observed in the few remaining areas of suitable habitat.

The reduction of overall range and concentration of the majority of the fisher population into three relatively small areas leaves them more vulnerable to extinction than if they were more widely dispersed. Clumping of the majority of individuals makes the population more susceptible to natural disasters, such as fires, and to infectious diseases, and could result in a depletion of primary food organisms. In contrast, if populations are too fragmented, it may be difficult for individuals to find mates during the appropriate season, and the loss of all individuals from an area, due to stochastic events, could leave an area of suitable habitat without fishers and so isolated that it could not be re-inhabited by other fishers at some later time.

In the northern Coast Range from Mendocino County south, there were no current sightings of fishers collected in this survey. According to Grinnell et al. (1937), fishers had already disappeared from the coastal area in Sonoma and Marin counties, where they had reportedly occurred historically. Schempf and White (1977) included a few sightings in Lake County made near the middle of this century. However, since that time, there have been no reported observations of fishers south of Trinity County. It appears that they should be considered extirpated from this area, most likely caused by alteration and fragmentation of suitable habitat due to timber harvesting. This has resulted in the continuation of a substantial reduction of the historic range of the fisher in the northern Coast Range.

In the northern Sierra Nevada, fishers continue to occur in sparse numbers. However, unlike historical sightings, recent observations are essentially limited to the eastern slope, indicating a rather disturbing decline on the western slope (Figure 1). Again, this is probably due to the continued harvesting of mature timber stands on the west slope and the resulting alteration and fragmentation of the preferred habitat of the fisher, mature mixed conifer forest.

Current sightings in the southern Sierra Nevada shows an even more drastic decline in the west slope fisher population, particularly in Tuolumne, Mariposa, Madera, and Fresno counties, where almost all of the present observations have been made on the eastern slope, in contrast with almost all of the historical sightings being on the western slope. The primary cause appears to be the same, alteration and fragmentation of mature mixed conifer forest due to timber harvest. Historically these counties were considered to be important areas for fishers.

The final and most disturbing population decline appears to have occurred in Tulare County, where a large cluster had appeared in the historical data sets. Less than half as many observations were reported during this survey as were reported in the middle of the century, although the sources of sightings, U.S. Forest Service and National Park Service records, were the same. This can be conceptually compared with a doubling of reported sightings in Trinity County over the same time period (Table 1, Figure 1).

The tentative results of this survey indicate that fishers seem to be doing well in only two relatively restricted areas of the state, specifically in the northwestern and north-central mountainous regions, but appear to be declining in all other areas. Fishers appear to have been extirpated from the northern Coast Range south of Trinity County, and possibly from the western slope of the central and northern Sierra Nevadas. Although these results cannot be considered completely conclusive, since the data is not quantitative, the trend indicated by this data is alarming. It would be prudent to conduct a rigorous census to accurately define the current range of fishers in California.

Since this survey has identified major declines in fisher populations throughout the state, it appears that immediate formal listing as Threatened or Endangered is warranted. The voluntary response to this survey can be considered good, and since it is closely comparable to the one that was conducted by Schempf and White (1977) during the last decade, the population declines identified should be taken seriously. Large areas of the fishers' former range are no longer suitable due to alteration and fragmentation of their preferred mature forest habitat. These trends will continue as additional mature forest is harvested. It is urgent that protection measures be defined and implemented.

Since the Sierra Nevada fisher population has exhibited drastic and continuous decline since earlier in this century, it should be listed as Endangered. The fisher population in northwestern California appears to be stable where it still occurs, but a substantial reduction of range has occurred since earlier in this century. Since this population has become more fragile and conceivably could become seriously endangered as habitat alteration continues, the northwestern population should be listed as Threatened.

Recommendations:

1. A formal listing petition should be prepared and submitted to the Fish and Game Commission to list the Sierra Nevada fisher population as Endangered, and the northwestern California fisher population as Threatened.

2. Observation reports should continue to be collected from agency field personnel and licensed fur trappers, and compiled in an effort to monitor future population trends of fishers in California.

3. Rigorously survey the currently identified range of fishers to identify suitable and occupied habitat. Devise and implement management procedures on these lands to maintain and enhance fisher populations.

4. Survey currently known suitable habitat for the presence of red tree voles.

5. Consider red tree vole habitat suitability in the land management planning process and provide for the species' habitat requirements in any local program to alter suitable habitat.

Literature Cited:

Grinnell, J., J. Dixon, and J. M. Linsdale. 1937. Fur-bearing mammals of California. 2 vol., University of California Press, Berkeley, 777 pp.

Schempf, P. F. and M. White. 1977. Status of six furbearer populations in the mountains of northern California. U.S. Dept. of Agriculture, Forest Service, California Region, December 1977, 51 pp.

Williams, D. F. 1986. Mammalian species of special concern in California. California Dept. Fish and Game, Wildl. Manag. Div. Admin. Rep. 86-1, Sacramento, 112 pp.

Yocum, C. F. and M. T. McCollum. 1973. Status of the fisher in northern California, Oregon and Washington. Calif. Fish and Game 59(4):305-309.

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Date: 2 Oct 87

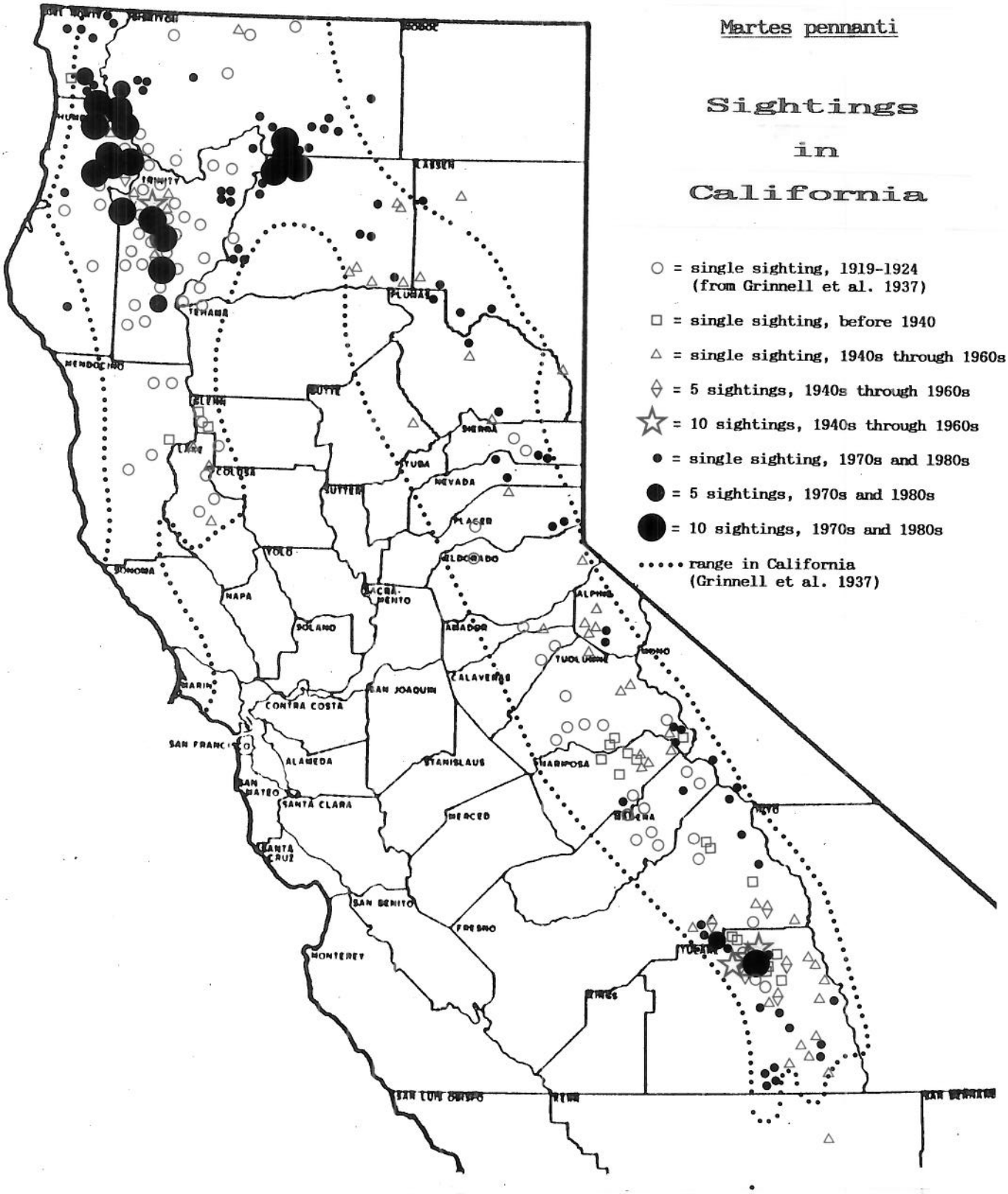

Figure 1. Fisher (Martes pennanti) sightings in California; comparison of distribution in the early 1900s (after Grinnell et al. 1937, Fig. 75), middle of the century (sightings collected by Schempf and White 1977), and current distribution from additional observations collected during this study (1970s and 1980s).

Appendix A.

FURBEARER OBSERVATION

SPECIES OBSERVED: _____

DATE: _____ TIME OF DAY: _____

PLACE SEEN:

County: _____

Distance and Direction to Nearest Town: _____

_____

Township and Range (if known): _____

------fold----------

Additional Information (habitat type, elevation, etc.): _____

_____

_____

DETAILS: (Include animal's identifying factors and activities.)

_____

_____

_____

OBSERVER Name: _____

Address: _____

_____

Phone: (_____) _____

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from: _____

_____

_____

place stamp here

TO:

California Department of Fish and Game
Wildlife Management Division
Nongame Bird and Mammal Section
1416 Ninth Street
Sacramento, CA 95814

FISHER SIGHTINGS IN CALIFORNIA
Nongame Bird and Mammal Section

LOCATION	TOWNSHIP	RANGE	SECTION	DATE Yr-Mo-Day
** County: ALPINE				
1 mi W LAKE ALPINE	7N	18E	8	61
1 mi W LAKE ALPINE	7N	18E	8	67
1 mi W LAKE ALPINE	7N	18E	8	69
10mi SW MARKLEEVILLE	9N	19E	30	690724
3.5 mi E LAKE ALPINE	7N	18E	SW12	730815
12mi SW MARKLEEVILLE	9N	18E	26	79
14 mi W MARKLEEVILLE	10N	18E	30	UNK
9 mi NNW LAKE ALPINE	9N	18E	30	UNK
** County: AMADOR				
9miESE COOKS STATION	7N	15E	1	65
** County: BUTTE				
0.5 mi W BRUSH CREEK	21N	6E	7	69
** County: DEL NORTE				
12 mi NE KLAMATH	14N	2E		29
2 mi WSW GASQUET	17N	1E	25	720222
4 mi E GASQUET	17N	2E	25	720222
11 mi ENE REQUA	14N	3E	29	7210
5 mi E KLAMATH GLENN	14N	2E	13	730111
12mi E KLAMATH GLENN	13N	4E	18	7406
14mi E KLAMATH GLENN	13N	4E	22	740627
7 mi SSE HORSE FLAT	16N	4E	1	7602
11.5 mi E REQUA	14N	3E	33	760204
11.5 mi E REQUA	14N	3E	NW33	760204
6 mi ENE JOHNSONS	12N	4E	31	770413
5 mi N HORSE FLAT	18N	3E	12	780102
4 mi NNE HORSE FLAT	18N	4E	16	780609
12 mi E KLAMATH	13N	3E	11	860819
** County: EL DORADO				
4 mi S MEYERS	11N	18E	17	6703
1.5 mi S TAHOMA	14N	17E	SE17	84SUMM
** County: FRESNO				
13mi NNW CEDAR GROVE	11S	30E	29	1206
7mi NNE DINKEY CREEK	8S	26E	34	131112
7mi NNE DINKEY CREEK	8S	26E	34	1312
3 mi NNW CEDAR GROVE	13S	30E	2	420512
1 mi N CEDAR GROVE	13S	30E	12	420520
2 mi NW WILSONIA	13S	27E	36	420718
5 mi ENE CEDAR GROVE	13S	31E	2,11	49
13 mi E CEDAR GROVE	13S	33E	19,20	49

FISHER SIGHTINGS IN CALIFORNIA
Nongame Bird and Mammal Section

LOCATION	TOWNSHIP	RANGE	SECTION	DATE Yr-Mo-Day
2 mi NW HUME	13S	28E	16	490321
7 mi NNW CEDAR GROVE	12S	30E	15	490825
4 mi SW HUME	13S	28E	31	500330
4 mi NW HUME	13S	28E	7,8,17	50s
3 mi W HUME	13S	28E	20	50s
1 mi NW CEDAR GROVE	13S	30E	11,14	640926
10mi NE DINKEY CREEK	9S	27E	14	7408
4 mi SW HUME	13S	27E	31	760825
12miENE MONO HOT SPR	7S	29E	4	78
4 mi SW HUME	13S	27E	19	830526
3 mi NE CEDAR GROVE	13S	31E	4	<53
6 mi NE DUNLAP	13S	27E	9	UNK
8.5 mi NW HUME	13S	27E	7,8	UNK
2.5 mi W HUME	13S	28E	20	UNK
2.5 mi WSW HUME	13S	28E	28	UNK
4 mi NW HUME	13S	28E	5	UNK
4 mi SW HUME	13S	28E	31	UNK
** County: GLENN				
10miNW ALDER SPRINGS	22N	9W	28	36
7miWNW ALDER SPRINGS	21N	9W	15	36
** County: HUMBOLDT				
6 mi SW WEITCHPEC	9N	5E	22	62-66
3 mi SW WILLOW CREEK	6N	4E	12	6404
6 mi W ORLEANS	11N	5E	31	64WINT
5.5mi E WILLOW CREEK	7N	6E	32	6509
4mi ENE WILLOW CREEK	7N	5E	SENE36	6510
3 mi NE WILLOW CREEK	7N	5E	24	66SUMM
WILLOW CREEK	7N	5E	33	69
4.5 mi SW SALYER	6N	5E	31	701001
2 mi NNE KNEELAND	5N	2E	28,29	701115
5 mi NE WILLOW CREEK	7N	5E	13	70FALL
8 mi W ORLEANS	11N	4E	34	70SPRG
5 mi N WEITCHPEC	10N	4E	14	7204
8.5 mi ESE JOHNSONS	11N	4E	15	7204
2 mi SE WEITCHPEC	9N	4E	14	7207
4.5 mi NNW HOOPA	8N	4E	SE2	7207
5 mi N WEITCHPEC	10N	4E	14	730111
10 mi ESE JOHNSONS	11N	4E	23	730111
6 mi NE WEITCHPEC	10N	5E	17	730220
6.5 mi WNW ORLEANS	11N	5E	19	730220
9 mi NE HOOPA	9N	6E	30	730515
9 mi SE WEITCHPEC	9N	6E	NESW30	730515
6 mi N WILLOW CREEK	7N	5E	SWSW4	7307

FISHER SIGHTINGS IN CALIFORNIA
Nongame Bird and Mammal Section

LOCATION	TOWNSHIP	RANGE	SECTION	DATE Yr-Mo-Day
0.5 mi N MIRANDA	2S	2E	34	730710
4 mi N WILLOW CREEK	7N	5E	16	730715
3 mi S ORLEANS	10N	6E	18	730927
10.5 mi ESE JOHNSONS	11N	4E	24	740304
7 mi NW ORLEANS	11N	5E	18	75
4 mi W SOMES BAR	11N	5E	NW1	75
5 mi W SOMES BAR	11N	5E	SENE2	75
6 mi WNW ORLEANS	11N	5E	30	750422
4.5 mi NNE WEITCHPEC	10N	4E	SWSE24	751008
10.5 mi ESE JOHNSONS	11N	4E	24	751104
5 mi NE WEITCHPEC	10N	5E	NWSE19	770205
4 mi S ORLEANS	10N	6E	SENW20	770413
6.5 mi WNW ORLEANS	11N	5E	19	770617
4 mi ESE ORLEANS	10N	6E	SWNE11	770623
4 mi NW ORLEANS	11N	5E	11	771012
4 mi W SOMES BAR	11N	5E	NENE1	771026
3 mi SE ORLEANS	10N	6E	NW9	780111
7mi ENE WILLOW CREEK	7N	6E	SENE21	7803
7mi ENE WILLOW CREEK	7N	6E	NWNW21	7803
7mi ENE WILLOW CREEK	7N	6E	SESW21	7808
11 mi NE HOOPA	8N	6E	SWSW3	780815
5 mi N ORLEANS	11N	6E	NWSE5	780816
8.5 mi E JOHNSONS	11N	4E	15	780829
8mi ENE WILLOW CREEK	7N	6E	SWNE22	782505
3 mi NNE ORLEANS	11N	6E	SESW17	790207
3 mi NNE ORLEANS	11N	6E	SWSE17	790511
4 mi N ORLEANS	11N	5E	18	790514
8.5 mi E JOHNSONS	11N	4E	15	791010
3 mi WSW ORLEANS	10N	5E	NENW3	791021
9 mi ESE JOHNSONS	11N	4E	22	791210
4 mi NE WILLOW CREEK	7N	5E	NE14	791211
10 mi ESE JOHNSONS	11N	4E	23	800102
6 mi NE WEITCHPEC	10N	5E	NW27	800402
3 mi N WILLOW CREEK	7N	5E	SESW16	800414
4.5miNE WILLOW CREEK	7N	5E	NWSE24	800924
3 mi N WILLOW CREEK	7N	5E	NENW16	801209
11 mi S HOOPA	6N	4E	NESW24	81
6.5 mi E HOOPA	8N	6E	SESE30	810131
7 mi SE WILLOW CREEK	5N	4E	NESW2	811003
9mi SSE WILLOW CREEK	5N	5E	NWNW12	811003
4 mi SW WILLOW CREEK	6N	5E	NE18	81SUMM
3 mi SE WILLOW CREEK	6N	5E	SESE10	820415
3 mi WSW ORLEANS	10N	5E	NWSW3	830106
11 mi S WILLOW CREEK	5N	5E	SW28	8302
6 mi E WEITCHPEC	9N	5E	NW11	830217

FISHER SIGHTINGS IN CALIFORNIA
Nongame Bird and Mammal Section

LOCATION	TOWNSHIP	RANGE	SECTION	DATE Yr-Mo-Day
2 mi NE WEITCHPEC	10N	5E	NENE31	830226
6 mi E WILLOW CREEK	6N	6E	SENW4	830626
6.5 mi ESE HOOPA	7N	5E	1	8309
5.5 mi E JOHNSONS	11N	4E	7	831117
6mi NNE WILLOW CREEK	7N	5E	NWNE3	840308
7 mi SE ORLEANS	10N	5E	NENE25	840321
10 mi S WILLOW CREEK	5N	5E	SENE20	8404
4mi SSE WILLOW CREEK	6N	5E	NWSE21	8407
5 mi ESE HOOPA	8N	5E	NESW35	840808
5 mi ESE HOOPA	8N	5E	NESE35	840809
5 mi N WILLOW CREEK	7N	5E	SESE10	850711
10 mi S WILLOW CREEK	5N	5E	SWNW20	850724
3 mi NW WILLOW CREEK	7N	5E	SENW19	850813
7mi SSE WILLOW CREEK	5N	5E	NENW3	860412
7 mi E HOOPA	8N	6E	30	8606
6 mi ESE HOOPA	8N	5E	NENW36	8606
14 mi E MAPLE CREEK	4N	5E	NESW3	8606
4.5mi S WILLOW CREEK	6N	5E	NWNE27	860630
4 mi SE HOOPA	8N	5E	SW34	860920
6 mi WNW ORLEANS	11N	5E	30	UNK
6 mi S ORLEANS	10N	5E	NW36	UNK
3 mi SW ORLEANS	10N	5E	NWNW11	UNK
1.5 mi SW ORLEANS	10N	5E	SWSE1	UNK
** County: INYO				
11.5 mi W BARTLETT	16S	34E	36	66
** County: KERN				
2 mi E BODFISH	27S	33E	17	55
** County: LAKE				
32 mi N UPPER LAKE	19N	10W	11	500722
15miNNW BARTLETT SPR	18N	8W	27	<52
5 mi W BARTLETT SPRS	15N	8W	6	<52
** County: LASSEN				
15 mi S ADIN	36N	9E	4	63
12 mi SW LODGEPOLE	31N	6E	28,33	680704
8 mi SE PITTVILLE	36N	6E	23	71SUMM
4.5 mi W NORVELL	30N	8E	9	76
2 mi NE WESTWOOD	29N	9E	33	800620
7 mi SW SUSANVILLE	28N	11E	NWNE2	860913
** County: MADERA				
22 mi NE BASS LAKE	4S	25E	31	720719

FISHER SIGHTINGS IN CALIFORNIA
Nongame Bird and Mammal Section

LOCATION	TOWNSHIP	RANGE	SECTION	DATE Yr-Mo-Day
** County: MARIPOSA				
4 mi ESE EL PORTAL	3S	20E	24	151217
7 mi NW EL PORTAL	2S	19E	23	16
FORT MUNROE	?	?	?	160222
FORT MUNROE	?	?	?	170203
3mi SW YOSEMITE VILL	2S	21E		190127
3mi SW YOSEMITE VILL	2S	21E		200214
6miSSW YOSEMITE VILL	3S	21E	24	430623
7mi SW YOSEMITE VILL	3S	21E	22	440102
5 mi S YOSEMITE VILL	3S	22E	18	540702
12miENE YOSEMITE VIL	2S	24E	5	630831
0.25 mi N FISH CAMP	5S	21E	25	7106
3 mi SE WAWONA	5S	22E	7	UNK
4 mi ENE EL PORTAL	3S	20E	12	UNK
2.5 mi NE EL PORTAL	3S	20E	3	UNK
** County: MENDOCINO				
6 mi ENE HEARST	19N	11W	8	26
19.5 mi ESE TATU	20N	10W	4	UNK
** County: MONO				
8mi SE MAMMOTH LAKES	4S	28E	34	70s
9mi SE MAMMOTH LAKES	5S	28E	8	70s
3.5miWNW MAMMOTH LKS	3S	27E	30	70s
** County: NEVADA				
6mi WNW SODA SPRINGS	17N	13E	11	7308
8mi ENE GRANITEVILLE	18N	12E	2	860601
** County: PLACER				
2.5 mi SSW TROY	16N	13E	2	6901
3 mi WSW HOMEWOOD	14N	16E	9	720901
** County: PLUMAS				
11 mi N CHILCOOT	24N	16E	11	43
1 mi SW TAYLORSVILLE	26N	10E	34	46
6 mi SW CLIO	21N	12E	8	620804
9 mi NNE CHESTER	30N	7E	SW21	740822
1.5 mi N BLAIRSTON	22N	12E	3	830605
3.5 mi E GREENVILLE	26N	10E	5	840620
** County: SHASTA				
9.5 mi ESE VIOLA	30N	4E	11	4410
0.25miE MANZANITA LK	31N	4E	18	5112

FISHER SIGHTINGS IN CALIFORNIA
Nongame Bird and Mammal Section

LOCATION	TOWNSHIP	RANGE	SECTION	DATE Yr-Mo-Day
0.25miE MANZANITA LK	31N	4E	18	511210
4.5 mi NNE DRAKESBAD	30N	6E	8	520824
7 mi NE HAT CREEK	34N	5E	2	68
5 mi E HAT CREEK	35N	5W	28	68
15.5 mi ESE VIOLA	31N	5E	36	700819
2 mi NE LAKEHEAD	35N	4E	5	70WINT
PITVILLE	37N	5E		72
6 mi S BURNEY	34N	3E	20	731127
6 mi SSE BURNEY	34N	3E	15	731227
FRENCH GULCH	33N	7W		731228
1 mi NW LAMOINE	36N	5W	SESE16	761219
4.5 mi W WHISKEYTOWN	32N	7W	SWNE5	791021
2 mi SW WHISKEYTOWN	32N	7W	11	791021
3 mi NW CASTELLA	38N	4W	7	81-86
2.5 mi NW CASTELLA	38N	4W	8	81-86
0.5 mi NW CASTELLA	38N	4W	16	81-86
0.5 mi SE CASTELLA	38N	4W	22	81-86
3 mi E CASTELLA	38N	3W	18	81-86
3 mi NW CASTELLA	38N	4W	SWNW7	83-84
3 mi WNW CASTELLA	38N	4W	NENE18	83-84
3 mi WNW CASTELLA	38N	4W	NWNW18	83-84
3.5 mi WNW CASTELLA	38N	5W	NWSW13	83-84
4.5 mi WNW CASTELLA	38N	5W	SWNE14	83-84
4.5 mi W CASTELLA	38N	5W	NWNE23	83-84
4.5 mi WNW CASTELLA	38N	5W	SESE14	83-84
3.5 mi WNW CASTELLA	38N	5W	NWSE13	83-84
3 mi WNW CASTELLA	38N	4W	SENW18	83-84
3 mi WNW CASTELLA	38N	4W	SWNE18	83-84
3 mi WNW CASTELLA	38N	4W	SWNE18	83-84
3 mi WNW CASTELLA	38N	4W	SWNE18	83-84
3 mi NW CASTELLA	38N	4W	SESE7	83-84
2.5 mi NW CASTELLA	38N	4W	NWSW8	83-84
3 mi NW CASTELLA	38N	4W	NWSE7	83-84
4 mi NW CASTELLA	38N	4W	SWSW6	83-84
3 mi SW CASTELLA	38N	4W	SWNE32	83-84
3 mi SW CASTELLA	38N	4W	SESE32	83-84
3 mi SW CASTELLA	38N	4W	SESE32	83-84
2.5 mi SSW CASTELLA	38N	4W	SENW33	83-84
2.5 mi SSW CASTELLA	38N	4W	SWNE33	83-84
2.5 mi SSW CASTELLA	38N	4W	NENW33	83-84
5 mi NE LAMOINE	36N	4W	4	8307
0.5 mi NW CASTELLA	38N	4W	16	8403
** County: SIERRA				
8 mi SSW SIERRAVILLE	19N	14E	28	7201

FISHER SIGHTINGS IN CALIFORNIA
Nongame Bird and Mammal Section

LOCATION	TOWNSHIP	RANGE	SECTION	DATE Yr-Mo-Day
8 mi SSW SIERRAVILLE	19N	14E	28	78WINT
** County: SISKIYOU				
5 mi WSW HORNBROOK	47N	7W	27,34	40s
4 mi W CECILVILLE	38N	12W	22	670328
6 mi SSW SAWYERS BAR	39N	12W	23	670610
3 mi WSW CECILVILLE	38N	12W	26	670627
6 mi SSE CECILVILLE	37N	11W	15	680407
2 mi SW SNOWDEN	40N	10W	9	680418
6 mi SE SAWYERS BAR	39N	11W	26	680428
2 mi NE SAWYERS BAR	40N	11W	22	690403
1 mi NE SAWYERS BAR	40N	11W	21	690600
1 mi SE SAWYERS BAR	40N	11W	33	690920
2 mi W CURTIS	39N	1E	25	7207
5 mi NNE SOMES BAR	12N	7E	7	72WINT
1mi SW COTTAGE GROVE	14N	6E	20	730410
10 mi SW CALLAHAN	39N	10W	24	730410
5 mi E COTTAGE GROVE	14N	7E	17	730411
5 mi E COTTAGE GROVE	14N	7E	17	730412
5 mi E COTTAGE GROVE	14N	7E	17	730421
4 mi N SOMES BAR	12N	6E	11,14	730515
5miSE FKS OF SALMON	9N	8E	5	730817
8miABOVE SAWYERS BAR	40N	11W		7403
4mi WSW MUGGINSVILLE	43N	11W	26	7406
1miE FORKS OF SALMON	10N	8E	18,19	741113
7 mi WNW SOMES BAR	12N	5E	NESW22	770411
15 mi NE MCCLOUD	41N	1W	NWNW4	780406
5 mi NW DUNSMUIR	39N	4W	8	7901
3 mi SSW MT SHASTA	40N	4W	32	7902
3 mi SSW MT SHASTA	40N	4W	32	8002
11 mi NE MCCLOUD	41N	1W	30	8007
7 mi NNW BARTLE	41N	1E	33	8007
13 mi NNE HAMBONE	42N	3E	3	800815
9 mi NNE MCCLOUD	41N	2W	20	801007
5 mi NW DUNSMUIR	39N	4W	8	81
5 mi NW DUNSMUIR	39N	4W	8	81
2 mi NW MCCLOUD	40N	3W	35	81-86
1 mi N MCCLOUD	40N	3W	36	81-86
3 mi SSW MT SHASTA	40N	4W	32	81-86
5.5 mi SW MT SHASTA	40N	5W	35	81-86
5 mi SW MT SHASTA	39N	4W	8	81-86
4 mi S WEED	41N	5W	25	81-86
7 mi SW EDGEWOOD	41N	6W	16	81-86
11.5 mi SW MT SHASTA	39N	6W	23	8110
7miSSE COTTAGE GROVE	13N	6E	22	81SUMM

FISHER SIGHTINGS IN CALIFORNIA
Nongame Bird and Mammal Section

LOCATION	TOWNSHIP	RANGE	SECTION	DATE Yr-Mo-Day
3 mi SSW MT SHASTA	40N	4W	32	82
3 mi N SOMES BAR	12N	6E	23	830915
5.5 mi W SOMES BAR	12N	5E	SESE35	831009
10.5 mi WSW CALLAHAN	39N	10W	23	UNK
13miWSW MUGGINSVILLE	43N	12W	24	UNK
4 mi W MUGGINSVILLE	43N	10W	17	UNK
** County: TRINITY				
7 mi NW FOREST GLEN	1N	7E	29	411118
2 mi SW BIG BAR	33N	12W	7	670516
3 mi S BIG BAR	33N	12W	20	671005
3.5 mi ENE BIG BAR	34N	12W	26	671007
2 mi ENE BIG BAR	34N	12W	34	671008
3.5miS JUNCTION CITY	33N	11W	25	671020
4 mi SW HYAMPOM	2N	7E	8	67FALL
2 mi E DEL LOMA	5N	8E	29	680117
2.5 mi SW DENNY	6N	7E	5	680210
6 mi SW DENNY	6N	6E	23	680216
1.5 mi SW DENNY	6N	7E	5	680226
4 mi SW DENNY	6N	6E	13	680313
2 mi WNW HAYFORK	31N	12W	3	680323
2.5 mi NW HAYFORK	32N	12W	34	680418
4 mi NNE DEL LOMA	5N	8E	8	680419
5 mi SW DENNY	6N	6E	24	680426
9 mi N JUNCTION CITY	35N	10W	30	680512
DENNY	7N	7E	33	680813
3.5 mi WSW HELENA	34N	12W	35	680907
2 mi NE BURNT RANCH	5N	6E	1	680909
3 mi SW DENNY	6N	7E	7	681105
2 mi N JUNCTION CITY	34N	11W	36	681205
6 mi S BURNT RANCH	4N	6E	15	68FALL
6 mi S BURNT RANCH	4N	6E	15	69
3.5 mi NW HAYFORK	32N	12W	33	69
3.5 mi SSE HYAMPOM	2N	7E	7	69
1 mi E BIG BAR	33N	12W	4	690210
5 mi NW CARRVILLE	38N	8W	33	690218
2 mi ESE HELENA	34N	11W	34	690310
2 mi NNE BIG BAR	34N	12W	28	690322
2.5miSSE BURNT RANCH	5N	6E	25	690504
3 mi N DEL LOMA	5N	7E	12	690521
3.5 mi SW HELENA	33N	11W	7	690811
5 mi SW BURNT RANCH	4N	6E	15	69FALL
8 mi E HYAMPOM	3N	8E	29	70
2 mi N DEL LOMA	5N	7E	13	700114
4.5mi SE BURNT RANCH	4N	7E	6	700310

FISHER SIGHTINGS IN CALIFORNIA
Nongame Bird and Mammal Section

LOCATION	TOWNSHIP	RANGE	SECTION	DATE Yr-Mo-Day
2 mi SW BIG BAR	33N	12W	7	700325
2 mi N DEL LOMA	5N	7E	13	700401
4.5 mi WSW DEL LOMA	4N	7E	5	700402
2 mi NE BURNT RANCH	5N	6E	1	700403
6mi SW JUNCTION CITY	32N	11W	4	7008
2 mi SW BIG BAR	33N	12W	7	701104
4 mi N HELENA	34N	11W	4	70FALL
5 mi SE BIG BAR	33N	12W	34	70SUMM
DENNY	7N	7E	33	710223
2 mi SW BIG BAR	33N	12W	7	710302
5 mi SW BIG BAR	4N	8E	30	710518
6 mi SW HAYFORK	2N	8E	33	7110
4 mi E SALYER	6N	6E	21	720214
4 mi S BURNT RANCH	4N	6E	2	720224
2 mi S JUNCTION CITY	33N	10W	19	720402
3.5 mi ENE SALYER	6N	6E	8	7205
4.5 mi ENE SALYER	6N	6E	NW9	7205
4 mi SW BIG BAR	33N	12W	22	720623
7 mi N BURNT RANCH	6N	6E	23	720810
4 mi N BURNT RANCH	6N	6E	27	721001
5 mi SSW BIG BAR	4N	8E	32	721024
4 mi SE BIG BAR	33N	12W	14	730328
5.5 mi E SALYER	6N	6E	22	730510
3.5 mi NE DEL LOMA	5N	8E	8	730511
5 mi E SALYER	6N	6E	21	731106
3 mi S BIG BAR	33N	12W	SW19	731108
5 mi SW DENNY	6N	6E	14	731115
4 mi W BIG BAR	4N	8E	7	740208
3 mi SE SALYER	6N	6E	SE30	751119
2 mi E SALYER	6N	6E	SESE19	760501
7 mi NE HYAMPOM	4N	7E		77-78
5 mi S BURNT RANCH	4N	6E	NWSW10	771110
2 mi NE DEL LOMA	5N	7E	NE23	780520
4.5 mi E SALYER	6N	6E	SWSW15	800307
4 mi E SALYER	6N	6E	SESE21	800902
2 mi NE DEL LOMA	5N	8E	17	81SUMM
4 mi WSW DENNY	6N	6E	NW2	820804
3 mi SE HAYFORK	31N	12W	28,29	820917
12 mi SW HAYFORK	29N	12W	NW8	821109
4miSW COVINGTON MILL	35N	8W	29	83-84
5miSW COVINGTON MILL	35N	9W	23	83-84
3.5miSW COVINGTON ML	35N	8W	19	83-84
2miSE COVINGTON MILL	35N	8W	20	83-84
6 mi NW HAYFORK	3N	8E	SE33	8307
3.5 mi NE HAYFORK	32N	11W	NE20	830831

FISHER SIGHTINGS IN CALIFORNIA
Nongame Bird and Mammal Section

LOCATION	TOWNSHIP	RANGE	SECTION	DATE Yr-Mo-Day
3 mi S JUNCTION CITY	33N	11W	25	84
8 mi NE HAYFORK	32N	11W	SW3	840327
4 mi NW BURNT RANCH	5N	6E	NWNW5	840731
3 mi NW BURNT RANCH	5N	6E	NENW4	840731
7 mi NE HAYFORK	32N	12W	25	841001
9 mi NW HAYFORK	3N	7E	24	841017
4 mi W HELENA	34N	12W		85
13 mi SW HAYFORK	1S	8E	9	850226
13 mi W HAYFORK	2N	7E	17,18	850312
6 mi W HAYFORK	2N	8E	NW17	850411
8 mi N HAYFORK	33N	12W	36	850416
7 mi NE HAYFORK	32N	11W	SE5	850516
7 mi NE HAYFORK	32N	11W	SE5	850516
18 mi SW HAYFORK	2S	8E	5	850516
6 mi NE HAYFORK	32N	11W	NW8	850516
7 mi NE HAYFORK	32N	11W	9	850526
8 mi NE HAYFORK	32N	11W	4	850603
5 mi NE HAYFORK	32N	11W	17	850619
10 mi SW HAYFORK	30N	12W	NENW33	850720
10 mi SE HAYFORK	30N	11W	31	851004
2.5 mi E HAYFORK	31N	11W	8	860728
9 mi NW HAYFORK	3N	7E	SE25	860827
4 mi WNW BURNT RANCH	5N	6E	SWSW7	8611
8 mi N HAYFORK	33N	11W	31	861113
1 mi N WEAVERVILLE	33N	10W	1	UNK
5 mi NNW WEAVERVILLE	34N	10W	14	UNK
4 mi NW WEAVERVILLE	34N	10W	27	UNK
4 mi SW HAYFORK	31N	12W	28	UNK
** County: TULARE				
8 mi SE WILSONIA	14S	29E	32	20
MINERAL KING	17S	31E	15	20
7 mi SE WILSONIA	14S	29E	29	201105
4.5miWNW SILVER CITY	16S	30E	33	350111
4 mi NE GIANT FOREST	15S	30E	29	350414
6 mi N MINERAL KING	16S	31E	15	350519
6 mi S GIANT FOREST	17S	29E	1	371212
21 mi E JOHNSONDALE	23S	35E	2	40
1 mi W GIANT FOREST	16S	29E	1	400623
5 mi SE GIANT FOREST	16S	30E	23	4011
6 mi S MINERAL KING	18S	31E	7	410112
GIANT FOREST	16S	29E	1	410623
GIANT FOREST	16S	30E	6	410805
3 mi W GIANT FOREST	16S	29E	3,10	420521
3 mi W GIANT FOREST	16S	29E	3,10	421024

FISHER SIGHTINGS IN CALIFORNIA
Nongame Bird and Mammal Section

LOCATION	TOWNSHIP	RANGE	SECTION	DATE Yr-Mo-Day
2 mi SW WILSONIA	14S	28E	7	430226
GIANT FOREST	16S	30E	6	450416
3 mi E GIANT FOREST	16S	30E	3	450928
2 mi SW GIANT FOREST	16S	29E	10	46
3 mi SW GIANT FOREST	16S	29E	10	46
4 mi NE GIANT FOREST	15S	30E	21	48
3 mi NE GIANT FOREST	15S	30E	29	480319
1 mi S GIANT FOREST	16S	30E	7	480402
1 mi N GIANT FOREST	15S	30E	31	481216
3 mi NE GIANT FOREST	15S	30E	21	481222
13mi NE MINERAL KING	15S	33E	32	49
3 mi NE GIANT FOREST	15S	30E	21	49-50W
GIANT FOREST	16S	30E	6	4911
3 mi NE GIANT FOREST	15S	30E	21	491119
6 mi SE WILSONIA	14S	29E	19	5011
18miESE MINERAL KING	18S	34E	10	50s
6 mi E JOHNSONDALE	22S	33E		54
5.5 mi E CAMP NELSON	20S	34E	16,17	57
4 mi SE WILSONIA	14S	28E	12,13	590128
2 mi NW GIANT FOREST	15S	29E	34,36	590612
3 mi W GIANT FOREST	16S	29E	2,3	590717
2 mi NW GIANT FOREST	15S	29E	34,36	590829
4 mi NE GIANT FOREST	15S	30E	21	590921
1 mi NE GIANT FOREST	15S	30E	31	600321
4 mi NE GIANT FOREST	15S	30E	21	600505
6 mi NE THREE RIVERS	15S	29E	3	601106
JOHNSONDALE	22S	32E		61
1 mi NW GIANT FOREST	15S	29E	36	610427
1 mi N GIANT FOREST	15S	30E	31	611127
9 mi ESE CAMP NELSON	21S	33E	6,7	620620
5mi ENE THREE RIVERS	16S	29E	33,34	630422
4mi NNW GIANT FOREST	15S	29E	23	631108
6.5miNNW GIANT FORST	15S	30E	3,4	640123
6mi ENE GIANT FOREST	15S	30E	25	650614
18 mi NE SILVER CITY	15S	33E	16	650920
1 mi E GIANT FOREST	16S	30E	6	661104
10 mi E GIANT FOREST	16S	31E	2,3	670310
8 mi SW MINERAL KING	18S	29E	14	670322
6 mi SE THREE RIVERS	18S	29E		671219
9 mi SE THREE RIVERS	18S	29E	24	680131
6 mi NE THREE RIVERS	16S	29E	34	680202
5 mi S SILVER CITY	18S	31E	6	680328
COMMISSARY CURVE	?	?	?	690327
1 mi W GIANT FOREST	16S	29E	1	700111
24miESE MINERAL KING	18S	35E		72

FISHER SIGHTINGS IN CALIFORNIA
Nongame Bird and Mammal Section

LOCATION	TOWNSHIP	RANGE	SECTION	DATE Yr-Mo-Day
5 mi ENE CAMP NELSON	20S	32E	SWSW21	721014
GIANT FOREST	16S	30E	6	731224
COMMISSARY CURVE	?	?	?	750404
6 mi NNW GIANT GROVE	15S	29E	10	760601
7 mi NNE MILO	18S	29E	36	780427
5 mi WNW JOHNSONDALE	22S	31E	27	780620
2 mi NW GIANT FOREST	15S	29E	34	780903
5 mi NE BADGER	15S	28E	4	7810
2 mi NW GIANT FOREST	15S	29E	35	790519
2 mi NW GIANT FOREST	15S	29E	34	800629
1mi W CALIF HOT SPRS	23S	30E	36	80s
2 mi SE WILSONIA	14S	28E	7	830223
10 mi N CAMP NELSON	19S	31E		8303
5 mi NE GIANT FOREST	15S	30E		830720
NEAR SEQUOIA NATL P	?	?	?	8401
1 mi SW WILSONIA	14S	28E	8	840128
12 mi NE JOHNSONDALE	21S	33E	24	841030
7mi E CALIF HOT SPRS	23S	32E	32	860515
5mi NNE CAL HOT SPRS	23S	31E	9	860615
3 mi NE BADGER	14S	28E	NES31	8608
2 mi SW WILSONIA	14S	28E	7	8610
10mi ENE JOHNSONDALE	22S	33E	24	8610
1 mi SE WILSONIA	14S	28E	SW7	870222
7.5miSSW MINERAL KNG	18S	31E	20	UNK
8 mi SW MINERAL KING	18S	30E	24	UNK
MINERAL KING	17S	31E	15	UNK
6 mi SW MINERAL KING	18S	31E	7	UNK
7 mi SE MINERAL KING	18S	31E	18	UNK
6 mi NE GIANT FOREST	15S	30E	23	UNK
4 mi NE GIANT FOREST	15S	30E	27	UNK
9 mi SSW SILVER CITY	18S	30E	22	UNK
8mi ESE GIANT FOREST	16S	31E	17	UNK
5 mi SW SILVER CITY	17S	30E	27	UNK
4mi NNW GIANT FOREST	15S	29E	14	UNK
4 mi NNE SILVER CITY	16S	31E	29	UNK
4 mi SE GIANT FOREST	16S	30E	27	UNK
1 mi W GIANT FOREST	16S	29E	1	UNK
** County: TUOLUMNE				
9mi SE TUOLUMNE MDWS	2S	25E	17,18	150718
5 mi W WHITE WOLF	1S	20E		160120
4 mi SW ASPEN VALLEY	2S	20E	7	161205
HOG RANCH RANGER STN	?	?	?	2001
12 mi ESE PINECREST	3N	20E	9	61
1 mi N TUOLUMNE MDWS	1S	24E	5	61SUMM

FISHER SIGHTINGS IN CALIFORNIA
Nongame Bird and Mammal Section

LOCATION	TOWNSHIP	RANGE	SECTION	DATE Yr-Mo-Day
6 mi WNW DARDANELLE	6N	18E	13,24	63
13 mi ESE PINECREST	3N	20E	3	65
5miENE TUOLUMNE MDWS	1S	25E	6	720713
3mi SE TUOLUMNE MDWS	1S	24E	SWSW22	740326
5 mi E TUOLUMNE MDWS	1S	25E	6	740626
5 mi NE MATHER	1N	20E		UNK
4 mi SW ASPEN VALLEY	2S	20E	7	UNK
5mi SSW ASPEN VALLEY	2S	20E	18	UNK