

California Dept. of
Public Health
(Plague)

SUMMARY of PLAGUE FINDINGS, LASSEN VOLCANIC NATIONAL PARK,
1982

I. Serological tests for plague by passive hemagglutination test

Manzanita Lake

<u>Date</u>	<u>E. townsendii</u>	<u>T. douglasii</u>	<u>P. maniculatus</u>	<u>Results</u>
May 27	8	1	1	1 sero-posit 1:64 <u>E. townsendii</u>

Crags Campground

May 26	7		9	Negative
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II. Rodent carcasses submitted for plague test

<u>Date</u>	<u>Location</u>	<u>Species</u>	<u>Test Results</u>
July 15	Manzanita Lake	<u>S. lateralis</u> (2)	negative
Aug 16	Butte Lake	<u>S. lateralis</u>	negative
Aug 16	Butte Lake	<u>Eutamias sp.</u>	negative
Aug 20	Summit Lake	<u>Eutamias speciosus</u>	positive
Aug 20	Summit Lake	<u>S. lateralis</u>	negative
Aug 21	Manzanita Lake	<u>S. lateralis</u>	negative
Aug 21	Manzanita Lake	<u>Eutamias sp.</u>	positive

III. Pools of fleas tested for plague by bacterial isolation and culture

Manzanita Lake

<u>Date</u>	<u>HOSTS</u>					<u>Test Results</u>
	<u>E. townsendii</u>	<u>E. amoenus</u>	<u>E. speciosus</u>	<u>P. maniculatus</u>	<u>S. lateralis</u>	
May 27	7	4		1	18	Negati
Aug 27	7	9	1		16	Negati

Crags Campground

May 26				6	3	Negati
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Summit Lake

Aug 28		2	12		11	Negati
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Spermophilus lateralis - golden-mantled ground squirrel
Eutamias sp. = chipmunks, 3 species
Peromyscus maniculatus = deer mouse
Tamiasciurus douglasii = chickaree

PLAGUE CONTROL*, LASSEN NATIONAL PARK, SEPT., 1982

Summit Lake Campgrounds

Pre-treatment, August 28

<u>Species</u>	<u>No. Captured</u>	<u>No. With Fleas</u>	<u>% Infestation</u>	<u>No. Fleas</u>	<u>Flea Index</u>
Golden mantled ground squirrel	16	11	68	26	1.60
Chipmunk	20	14	70	29	1.40

Post-treatment, September 9

Golden mantled ground squirrel	20	4	20	4	0.2
Chipmunk	23	7	30	15	0.6

Manzanita Lake Campground

Pre-treatment, August 27

Golden mantled ground squirrel	20	16	80	65	3.25
Chipmunk	22	17	77	42	1.90

Post-treatment, September 30

Golden mantled ground squirrel	21	18	85	89	4.23
Chipmunk	10	4	40	8	0.80

*Control on Sept. 3-4, 1982 using 1% Ficam D dust by burrow dusting, and administered in bait/dust stations. Stations operated for 7 days.

PLAGUE AT LASSEN VOLCANIC NATIONAL PARK SINCE 1965

Note: A human case of bubonic plague occurred at Viola in 1965, a few miles west of the Manzanita Lake side of the Park.

1966 - Positive chipmunk, Summit Lake Campground	+
Positive fleas from above chipmunk, Summit Lake CG	+
Positive antibody titer to plague, one golden mantled ground squirrel, one chickaree, Manzanita Lake Campground	-
1967 - Positive antibody titers, two chipmunks, near Lost Creek Organizational Camp	1:32, 1:64
1975 - Three positive golden mantled ground squirrels and one flea pool from above, Craggs Campground	+
1977 - Positive antibody titer, one chipmunk, Butte Lake	1:32
Positive antibody titers, three chipmunks, Lost Creek Organizational Camp	1:16, 1:32, 1:256
Positive antibody titer, one chipmunk, Craggs Campground	1:128
Positive antibody titers, two chipmunks, Manzanita Lake Campground	1:128, 1:512
Positive antibody titer, one chipmunk, near Lost Creek Organizational Camp	1:512
Positive chipmunks, Manzanita Lake Campground	+
1978 - Positive chipmunk, Manzanita Lake Campground	+
Positive antibody titers, three chipmunks, one chickaree, Manzanita Lake Campground	1:16, 1:32, 1:64 1:512
Positive antibody titers, two chipmunks, Craggs Campground	1:32, 1:1024
1979 - Positive antibody titer, one chipmunk, Manzanita Lake Campground	1:128
1980 - Positive antibody titer, two chipmunks, Manzanita Lake Campground	1:16, 1:64
1981 - Positive golden mantled ground squirrel, Manzanita Lake Campground	+
Positive antibody titers, two chipmunks, Manzanita Lake Campground	1:512 (2)
1982 - Positive antibody titer, one chipmunk, Manzanita Lake Campground	1:64
Positive chipmunk, Manzanita Lake Campground	+
Positive chipmunk, Summit Lake Campground	+

+ = plague positive by bacterial isolation

1:00 = positive antibody titer to Yersinia pestis at dilution by hemagglutination test

flyer control 1982

~~78 sites~~
~~Total~~

C loop —	49	103
D loop —	54	
E loop —	47	
F loop —	31	79
G loop —	12	
hydroheater —	16	28
picnic area —	10	27
living quarters —	144	25
along road —	18	18
<u>total</u>		<u>248</u>

