

N 18 - 2 flowers

HAY FEVER POLLEN SURVEY OF LASSEN VOLCANIC NATIONAL PARK

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This survey consists of field studies of potential plant sources of air-borne pollens within and near Lassen Volcanic National Park, supplemented by daily tests of air-borne pollens taken at Park Headquarters, Manzanita Lake, during the months of July, August and September.

Field Study: August 20, 21, 1947

The wind-pollinated trees, weeds and grasses were examined at Manzanita Lake, along Lassen Peak Highway through the park and on to the towns of Mineral and Red Bluff, also from Manzanita Lake along the highway to Redding. The dominant vegetation of the park consists of conifer trees. Of the numerous species present none produce active allergenic pollen, except incense cedar, and there are too few of these trees to do any harm. A few specimens of willow and cottonwood can be found at Manzanita Lake and perhaps at other points in the park. These shed pollen at a time when there are few if any visitors. Bluegrass, timothy, redtop and other cultivated grasses are plentiful just outside the south edge of the park where a limited amount of grazing and farming are carried on, but there is very little acreage devoted to grasses within the park. No ragweeds, except a trace of cocklebur, were found, nor any English plantain or sagebrush. *with no ragweed at all in the park*

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Daily air sampling was carried out at Park Headquarters from July 1 until September 30. The sampling apparatus was placed on top of the small seismograph building. Slide exposures were made by Park Naturalist E. J. Schultz under the general supervision of Superintendent Daniel J. Tobin. Examination and counting of test slides were done by O. C. Durham at Abbott Laboratories. Detailed statistics

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and a summary are included as part of this report.

Comments

The tests were not started soon enough to include all of the grass season, but judging from data obtained in other western parks of similar altitude it is quite likely that July was the month of heaviest grass pollination in Lassen. If so the total count for the season is only about as much as is frequently encountered in one day in agricultural areas. Only traces of weed pollen of any sort were found. In fact, the weed pollen total was the lowest of any part so far studied, except Crater Lake. (Rainier average only slightly higher, with two of three stations much lower). It is hardly likely that subsequent tests in the park will in any way mar the excellent record obtained so far, because there are no important sources of air-borne pollen close enough to the park to contribute any appreciable amount of active pollen.

Report of Pollens and Fungi Found on Atmospheric Slides

Per cubic yard

PLACE Lassen Volcanic National Park MONTH July, August, September YEAR 1947

	J U L Y						A U G U S T					S E P T E M B E R							
	Pine	Wood Rush	Grass	Chenopod	Composite	Miscellaneous	Pine	Grass	Plantain	Composite	Regweed	Pine	Grass	Sagebrush	Composite	Regweed			
1	35						2					1			2				
2	32						3					1							
3	24						5					2							
4	14	1				2						4							
5	37											1							
6	35		2	2			8					1							
7	34						3					3							
8	21					2	4					2							
9	18						1					1							
10	17						1					2							
11	5						2					1							
12	6						1					1		2					
13	11						2	2				2		4		2			
14	13		2				1					1		4					
15	13																		
16	15						2					1		2					
17	23						2												
18	9																		
19	17						1		2	2	1	4		2					
20	17						4												
21	12						1												
22	2						1					2	2	4	2				
23	2																		
24	2						1												
25	17																		
26	8						1												
27	1					2	1												
28	2						2												
29	6						1												
30	2						2												
31	1																		

SUMMARY OF AIR-BORNE POLLEN FOUND IN LASSEN VOLCANIC NATIONAL PARK

July 1 - September 30, 1947

	<u>Maximum</u>	<u>Total</u>
Ragweed	2	3
Grass	2	8
Chenopod	2	2
Composite	2	6
Plantain	2	2
Sagebrush	4	18
Miscellaneous	2	6