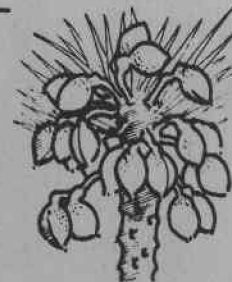


INSECT DISEASE REPORT



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POTENTIAL FOR THE PINE BUTTERFLY DEFOLIATION ON THE FLATHEAD INDIAN RESERVATION IN 1973

by

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The pine butterfly, *Neophasia menapia* Feld., has been at epidemic levels in the Bitterroot and Missoula valleys for the past 2 years (Ciesla et al. 1971) (Bousfield and Meyer 1972). Several reports of conspicuous pine butterfly flights on the Flathead Indian Reservation prompted an evaluation of the potential for pine butterfly defoliation in this area in 1973.

METHODS

The number of overwintering pine butterfly eggs found on the branch tips can be used to predict expected defoliation for the following summer. In late September, branch samples from ponderosa pine were collected by Bureau of Indian Affairs personnel from five areas where butterfly flights were noticed in August (Fig. 1). Samples consisted of six 5-inch branch tips, removed with a pole pruner, from mid-crown of 10 trees at each area. Branch tips were examined for pine butterfly eggs and both viable and nonviable eggs recorded. Viable eggs are distinguished from nonviable eggs by their green color and presence of yolk material, whereas nonviable eggs are grey and dry.

RESULTS AND DISCUSSION

The sample station in the Mud Lake area northeast of Ronan had the highest egg count, 10.67, of all areas sampled (Table 1). Two areas in the Jocko Valley (Evaro and Pistol Creek) had counts of 6.17 and 5.14 viable eggs per 5-inch branch tip respectively. The percent nonviability is about the same as was found in previous samples from the Bitterroot area. Based on these counts less than 10 percent of the trees will show noticable defoliation next year. The infestation should be evaluated next year to determine its trend.



Parasites and predators have been credited to reducing past infestations, although not until some permanent injury has occurred. No insecticide is presently registered for pine butterfly control.

TABLE 1.--Number of eggs per 5-inch branch sample

<u>Sample No.</u>	<u>Area</u>	<u>Total eggs</u>	<u>Viable eggs</u>	<u>Percent nonviable</u>
1	Evaro	8.60 \pm 1.40	6.17 \pm 1.17	28.86
2	Mud Lake (Southwest)	4.75 \pm 1.17	4.13 \pm 0.97	13.06
3	Mud Lake (South)	13.74 \pm 1.77	10.67 \pm 1.57	22.35
4	Pistol Creek	8.29 \pm 1.52	5.14 \pm 1.21	38.00
5	Selow	0.19 \pm 0.14	0.12 \pm 0.09	36.85

REFERENCES

Bousfield, W. E. and H. E. Meyer, 1972. Potential for defoliation of ponderosa pine stands by pine butterfly on the Bitterroot and Lolo NF's, Montana in 1972. USDA, Forest Service, Div. of S&PF. Report 72-9.

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APPRAISAL REPORT

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