

NOTES ON A VARIETY OF THE WESTERN TENT CATERPILLAR, *MALACOSOMA PLUVIALE* (DYAR)¹

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The typical form of the western tent caterpillar, *Malacosoma pluviale* (Dyar), is distributed across southern British Columbia from Vancouver Island to the Alberta boundary; the northern extremity of its range in the province is not yet definitely known, but it does not appear to be very far north of Kamloops.

A variety of the western tent caterpillar occurs over a large part of central and northern British Columbia, its range according to present knowledge being widely separated from that of the southern form (see map, Fig. 1). In 1947, the Forest Insect Survey at Vernon first received cocoons of this variety from Aleza Lake; since then material has been collected at many localities from the vicinity of Quesnel northward to Fort Nelson and from a point 50 miles east of Prince George westward to Fort Fraser.

The Adult

The adult, according to Dr. E. Munroe of the Systematics Unit, Division of Entomology, Ottawa, cannot certainly be separated from typical *M. pluviale*, although the majority of specimens differ in coloration.

The Egg Mass

Eggs have been examined in only two localities. The masses were in the form of a band encircling the twig in contrast to those of *M. pluviale* in southern British Columbia, which usually do not form a complete band. Although found only within two feet of the ground, the egg masses were on small twigs and not on main branches.

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Hosts and Habitat

The western tent caterpillar in the southern interior of British Columbia prefers trees and shrubs of the family Rosaceae; chokecherry, *Prunus virginiana*, saskatoon, *Amelanchier* spp., and wild rose, *Rosa* spp. are favoured hosts, and in the South Okanagan and East Kootenay districts, light infestations have been observed on antelope bush, *Purshia tridentata*. Willows, *Salix* spp., and mountain alder, *Alnus tenuifolia*, are often defoliated. The northern variety, however, as shown by the records of the Forest Insect Survey and numerous field observations, is not so general a feeder. The only hosts on which it has been known to develop infestations are dwarf birch, *Betula glandulosa* and one or two species of willows that grow in association with that shrub. This preference has resulted in a restricted habitat, that of muskegs, grassy swamps, and rarely, stream and lake margins. The muskeg type of habitat is found in many localities along the Hart Highway north of Prince George, and a number of minor infestations were observed there in the years 1950 to 1955. One of the most remarkable features of the insect is its abundance in these swamps where frequently the food plants are surrounded by water during the feeding period, and its absence from the intervening upland forest where most of the hosts acceptable to the southern form grow in profusion.

The Larva

The basic colour pattern of the larva is similar to that of the typical form but black predominates and may, in some individuals, almost entirely replace the orange markings. A small proportion of most populations, however, may bear a conspicuous orange pattern resembling that of

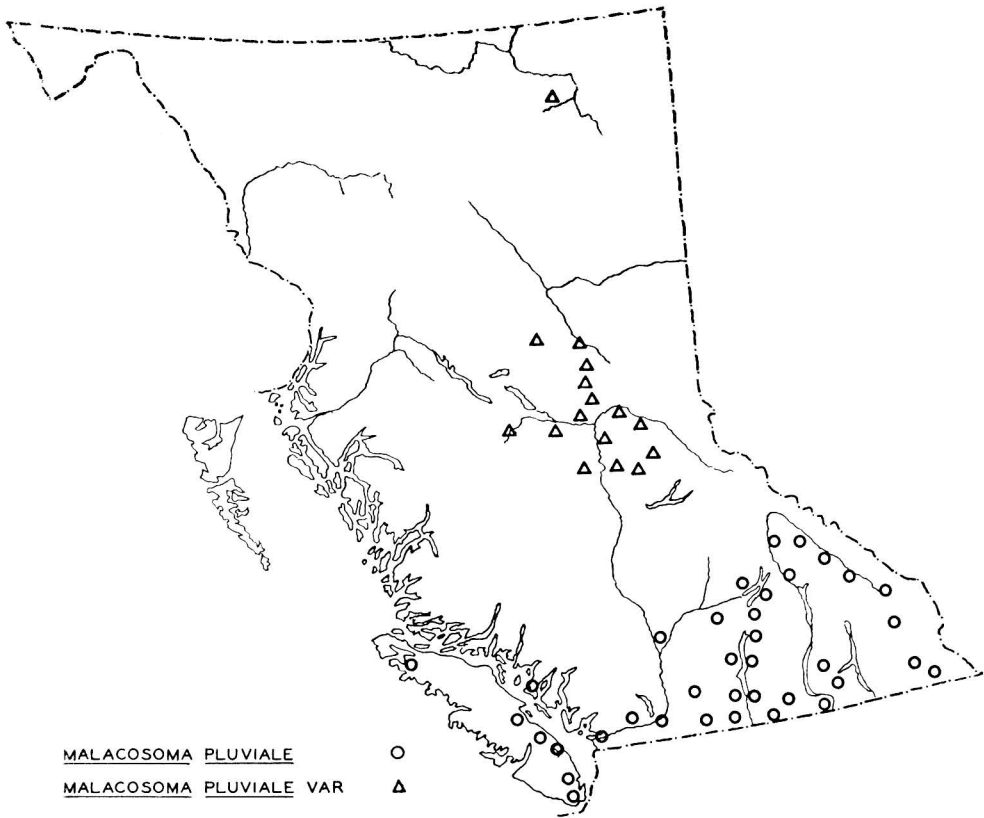


Fig. 1.—Distribution of collections and field observations of the western tent caterpillar, *Malacosoma pluviale* (Dyar), and a variety, in British Columbia.

larvae from the southern Interior. The habits are orthodox; each colony remains near the tent until growth is almost completed or the food sup-

ply exhausted. When this occurs, the larvae may migrate from a swamp and denude deciduous growth along the fringe of the surrounding forest.

TABLE I.—Results of Dissection of 118 Cocoons of a Variety of *Malacosoma pluviale* Dyar, Hixon, B.C., July 8, 1950.

No. of pupae per cocoon	No. of cocoons	Total No. of pupae	No. of dead pupae		Number of pupae surviving
			caused by parasitism*	caused by other factors	
1	83	83	57	—	26
2	23	46	35	1	10
3	6	18	14	—	4
4	3	12	10	—	2
5	2	10	9	—	1
6	1	6	4	1	1
Total	118	175	129	2	44
			131		

*Mortality from parasitism in all instances was caused by dipterous parasites.

Larval development is similar to that of the forest tent caterpillar, *Malacosoma disstria* Hbn., and the earliest recorded cocooning date for both species in the Quesnel district is June 9.

The Cocoon

When cocoons of this variety were first collected at Aleza Lake in 1947, it was found that frequently two or more larvae had spun up together, uniting their efforts to form a single

cocoon. The pupae were in a single envelope with no silk separating them. In 1950, a high population overflowed from a bog near Hixon and spun up in the surrounding forest, thus affording an opportunity to gather additional information on the frequency of multiple cocoons. The tops of five lodgepole pine saplings were clipped off and the masses of cocoons on the branches and leaders were dissected and the number of pupae in each recorded (Table 1).

OCCURRENCE OF *LEPTOCONOPS KERTESZI* KIEFFER (DIPTERA: CERATOPONGONIDAE) IN BRITISH COLUMBIA¹

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At about noon on June 22, 1955, on a hot, dry, grassy slope along the Dog Creek — Gang Ranch cutoff in the southern Cariboo country, a horde of minute flies appeared, biting fiercely in the hair and ears of a party of entomologists. The attack was similar to that of no-see-ums (*Culicoides* spp.), but the latter usually bite at dusk and under conditions of shade and high humidity.

Specimens collected were identified by the writer as of *Leptoconops kerteszi* Kieffer. This species has an unusual distribution. The type locality is Cairo, Egypt, and specimens are recorded from elsewhere in Egypt and Tunisia, as well as from Cape Province in South Africa. On this continent they have been captured in Utah and California. Carter (1921), in his revision of the genus, stated that the Utah specimens had spherical spermathecae in contrast to the obovate form in the type, and tentatively named the variety *americanus* to accommodate them. However, the British

Columbia specimens have distinctly obovate spermathecae.

This occurrence constitutes the first biting record for the species in Canada, although Mr. J. A. Downes, Entomology Division, Ottawa, stated (in litt.) that adults of *Leptoconops* sp. have been captured in southern Manitoba and Saskatchewan, and at Churchill, Man. In view of this wide distribution, the lack of earlier biting records is remarkable. It is possible that attacks by *Leptoconops* spp. have been attributed to *Culicoides* spp.

Carter set the range limits of the genus as between Lats. 35°S. and 40°N., with records all the way from North Africa to Siam and Queensland in the Old World, and in the United States, Cuba, and Brazil in the New. Since then there have been two records from France (Roman, 1937; Huttel and Huttel, 1952), one from the far eastern U.S.S.R. (Gutsevitch, 1947), and one from Washington State (Bacon, 1955). These, together with the new Canadian records, show the genus to have a cosmopolitan rather than a holotropical distribution.

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References

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