

SOME BEETLES OF THE FAMILIES CERAMBYCIDAE AND BUPRESTIDAE FROM MANNING PARK, BRITISH COLUMBIA

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INTRODUCTION—The following notes are the result of investigations conducted in Manning Park, B.C., during the summer of 1945, as part of a general biological survey covering the period from July 20 to August 16.

Manning Park, comprising 171,500 acres, lies across the divide of the coastal mountains where the humid western and the dry interior climatic regions overlap and merge into the alpine zones at the higher levels. It is therefore of considerable interest from a distributional and ecological point of view.

For the most part it is a mountainous and heavily forested region with western red cedar and western hemlock predominating in the western parts, and yellow pine in the eastern, while extensive tracts of the intermediate area are occupied by lodgepole pine on the drier slopes, and Englemann spruce in the moist valleys. At higher elevations alpine fir becomes more prevalent, with scattered stands of Lyall's larch and white-barked pine. Willows, poplars, alders and associated plants line the streamsides and swamp borders. Such conditions are very favourable to the development of wood-boring beetles.

The present annotated list is of necessity a provisional one, for not only were the early appearing species missed altogether, but the park area will require a more extended study in order to obtain an accurate conspectus of its Cerambycid and Buprestid fauna.

Four camps were established, each the centre of a distinct floral association.

(1) Forest Branch Cabin on the main road some 40 miles west of Princeton at an elevation of 4,000 feet and on the banks of the Similkameen River. Characteristic trees here are lodgepole pine and Englemann spruce.

(2) Allison Pass, about 6 miles west of the Forest Branch Cabin, on the divide between eastern and western flowing

streams, at an altitude of 5,000 feet. Characteristic trees are, in addition to those mentioned, western red cedar and hemlock, particularly in the western part of the district.

(3) Timberline Valley, an extensive tract of alpine meadow land at the foot of Mt. Three Brothers, at an altitude of 6,500 feet, about 15 miles north of Forest Branch Cabin. Prevailing trees here are alpine fir and Englemann spruce, together with scattered white-barked pine.

(4) Goodfellow Creek, seven miles east of Forest Branch Cabin, at an altitude of 3,500 feet. Yellow pine reached its western limit here, while lodgepole pine was dominant.

At all these points willows, alders and poplars were about equally distributed along the streams and wet places, though to a lesser extent and of different species in Timberline Valley.

SPECIES ACCOUNT. The sequence of species is based on C. W. Leng's 1920 "Catalogue of the Coleoptera of America, North of Mexico," and Supplements.

Abbreviations Forest Branch Cabin (F. B. C.), Allison Pass (A. P.), Timberline Valley (T. V.), Goodfellow Creek (G. C.). The North American distribution is briefly indicated: "B.C." includes Vancouver Island. "B.C. mainland" not, so far as known, recorded from Vancouver Island.

CERAMBYCIDAE

Tragosoma depsarium var. *harrisi* LeC.

Two specimens, F.B.C., Aug. 8 and 9.
Flying at dusk, one in pail of water.
B.C. to eastern N. America.

Spondylis upiformis Mann. One specimen. T. V., Aug. 6. In flight by day, near newly felled *Abies lasiocarpa*. B.C. mainland, Alaska to California, and east to Labrador and Lake Superior.

- Asemum moestum* Hid. Four Specimens, F. B. C., July 26, A. P., July 27, T. V., Aug. 6. In flight and on newly felled *Pinus contorta* and *Abies lasiocarpa*. B.C. to eastern N. America.
- Tetropium velutinum* LeC. One, T. V., Aug. 6, on *Abies lasiocarpa*. B.C. south to California.
- Stenocorus inquisitor* L. One, A.P., July 27, on side of an old shack. B.C., N. America in general.
- Leptalia frankenhauseri* Mannh. One, F.B.C., July 22, on rose flower. West coast B.C., Alaska to California.
- Pachyta armata* LeC. Common, F.B.C., A.P., T.V., July 25 to August 13. On flowers of *Heracleum lanatum* and *Cicuta vagans*. A mountain species of the coastal range, B.C. to Washington.
- Pachyta lamed* Linn. Nine, A.P., T.V., July 22 to Aug. 5. Flying about newly cut *Abies lasiocarpa*. B.C., Alaska to California, east to the Atlantic.
- Evodinus vancouveri* Csy. Five, F.B.C., A.P., July 22-30. On flowers of *Heracleum lanatum* and *Cicuta vagans*. South-western B.C. This is the western representative of *E. monticola* which has a continent wide distribution.
- Leptacmaeops longicornis* (Kby.). Five, F.B.C., July 22 to 23. On rose flowers. Interior plateau region. B.C., south to Colorado.
- Acmaeops pratensis* (Laich). Abundant, F.B.C., A.P., July 25 to Aug. 13. On white flowers of the Compositae and Umbelliferae. B.C., North America in general, wherever coniferous forests occur.
- Acmaeops proteus* (Kby.) Nine, F.B.C., A.P., T.V., July 25 to Aug. 8. On newly felled *Abies lasiocarpa* and *Pinus contorta*, also on flowers of *Cicuta vagans*. Mainland of B.C., Alaska to California and in the north to Lake Superior. Five of these are black in colour.
- Gaurotes cressoni* Bland. Six, F.B.C., A.P., July 22 to 28. On rose flowers. One crawling over branch of newly cut *Pinus contorta*. Southern mainland interior of B.C. to California.
- Anoplodera sexmaculata* (L.) Common, F.B.C., A.P., July 23 to Aug. 12. On flowers. B.C., North America.
- Anoplodera instabilis* (Hald.) Four, F.B.C., A.P., July 24 to Aug. 12. Flowers of *Heracleum lanatum* and *Cicuta vagans*. B.C. mainland, east to Ontario.
- Anoplodera nigrella* (Say) One, G.C., Aug. 16. On driftwood, edge of stream. B.C. east to New York.
- Anoplodera laetifica* (LeC.) Two, A.P., July 28. Flowers of *Achillea millefolium*. B.C. to California.
- Anoplodera sanguinea* (LeC.) Common, A.P., F.B.C., G.C., July 24 to Aug. 12. Flowers, B.C. to California, east to Pennsylvania.
- Anoplodera canadensis* (Oliv.) One, G.C., Aug. 15. In flight. B.C., North America. This is the black phase.
- Anoplodera crassipes* (LeC.) Common, F.B.C., A.P., G.C., July 25 to Aug. 15. Flowers of *Cicuta vagans*. B.C. to California.
- Anoplodera tibialis* (LeC.) Three, F.B.C., A.P., July 26 to Aug. 12. Flowers of *Cicuta vagans* and *Heracleum lanatum*. B.C. east to Michigan.
- Anoplodera aspera* (LeC.) Common, F.B.C., A.P., July 23 to 28. Flowers of *Heracleum lanatum*. B.C. to New Mexico.
- Anoplodera chrysocoma* (Kby.) Very common, at all stations, July 25 to Aug. 12. Flowers of *Heracleum lanatum* and *Cicuta vagans*. B.C. to N. Mexico, east to Newfoundland. Most abundant of all the species.
- Grammoptera filicornis* Csy. Common, F.B.C., July 22 to 23. On rose flowers. B.C. to Mexico.
- Leptura oblitterata* Hald. Three, F.B.C., A.P., T.V., July 26 to Aug. 6. On flowers, *Heracleum lanatum* and in flight about newly cut *Abies lasiocarpa*. B.C. to California.
- Leptura propinqua* Bland. Common, F.B.C., A.P., G.C., July 24 to Aug. 12. Flowers of *Heracleum lanatum*, *Cicuta vagans* and *Spiraea lucida*. B.C. to California, in the mountains.

Gonocallus collaris (Kby.) One, F.B.C., July 25. In flight by day. B.C. east to Lake Superior.

Xylotrechus undulatus (Say) Seven, F.B.C., G.C., July 26 to 31. Running over newly felled *Pinus contorta*. B.C. mainland and north to eastern N. America.

Monochamus maculosus latus Csy. Six, F.B.C., July 24 to 26. Flying about and at rest on newly cut *Pinus contorta*. B.C. to California.

Monochamus oregonensis LeC. Common, at all stations, July 25 to Aug. 5. At rest on newly felled *Pinus contorta* and *Abies lasiocarpa*. Observed ovipositing in an incision made in the bark by the jaws. B.C., Alaska to California.

There are two species of the genus *Leptacmaeops* at present undetermined; one specimen of each.

BUPRESTIDAE

Buprestis aurulenta L. One, F.B.C., July 24. Flying near *Pinus contorta*. B.C. to California.

Buprestis maculativentris var. *rusticorum* (Kby.) Two, A.P., G.C., July 28 to Aug. 15 in flight. B.C. to California. The western form of the species.

Buprestis confluenta Say. One, G.C., Aug. 15. Resting on old log by roadside, in vicinity of *Populus trichocarpa*. B.C. mainland, east to Ontario and southwards.

Buprestis fasciata Fab. One, A.P., July 28. In flight, B.C., across continent to the Atlantic.

Melanophila drummondii Kby. Common, F.B.C. T.V., July 26 to Aug. 6. On newly cut *Pinus contorta* and *Abies lasiocarpa*. B.C. to the Atlantic.

Anthaxia acneogaster Cast. Common, F.B.C., A.P., July 22 to Aug. 8. On flowers of *Rosa nutkana*, *Achillea millefolium*, *Heracleum lanatum* and *Cicuta vagans*. B.C., transcontinental.

Chrysobothris pseudotsugae Van D. Six, F.B.C., T.B., G.C., July 26 to Aug. 6. On newly cut *Pinus contorta* and *Abies lasiocarpa*. B.C. to California.

Chrysobothris trinervia Kby. One, F.B.C., July 26. On newly cut *Pinus contorta*. B.C. mainland and transcontinental.

Agilus politus Say. Two, F.B.C., Aug. 13. On *Salix sitchensis*. Widely distributed throughout North America, wherever willows occur.

DISCUSSION.

CERAMBYCIDAE

The Manning Park Cerambycid fauna, so far examined, appears to contain no especially marked divergence from that of the adjoining territory, but constitutes part of a general northwest by southeast strip of a humid coastal association which for convenience of expression is known as the Vancouver strip, extending from Alaska to California and roughly includes the Cascade and Coast mountain ranges. It is, however, of local interest, in that here are to be found an intermingling of the humid coastal species with those of the dry interior forms; but with the former by far predominating. From this point of view, the park area may eventually be found to have species of the dry belt forms, which here reach their western or near western limit of distribution.

In a consideration of the species recorded for the park it is well to include or to at least take account of a list of Cerambycidae collected by Mr. G. Stace Smith at Copper Mountain, which lies just outside the eastern boundary of the park. Of the 48 species so listed 23 were found in Manning Park during our short visit, while of the remainder, the majority will probably be found there in more extended seasonal collections.

Among the 33 species taken in the park, only three are not listed in the Copper Mountain group, but may eventually be found in that area also.

As far as the park collections are concerned, about 12 per cent of the species are characteristic of the dry belt, and apparently reach their western limit within the area. This group includes *Gaurotes cressoni*, *Leptacmaeops longicornis* and *Anoplodera instabilis*. Twenty-four per cent are typically humid coastal species and include *Leptalia frankenhausenii*, which

is also an endemic genus of the Vancouverian strip, *Leptura obliterata*. *Tetropium velutinum* and *Pachyta armata*. Fifty-three per cent or by far the larger proportion are of northern origin and of circum-polar or wide North American distribution. This percentage includes *Tragosoma harrisi*, *Pachyta lamed*, *Anoploclera canadensis* and *A. chrysocoma*, to mention only a few.

BUPRESTIDAE

This family has much the same relation to the adjoining territory as the Cerambycidae. The species have a wide continental range, with the exception of *Chrysobothris pseudotsugae* and *Buprestis aurulenta*, which are confined to the Pacific coast. *B. confluenta* appears to reach its western limit in the park area.

Mr. Stace Smith lists 22 species from Copper Mountain, as compared with nine Copper Mountain species will eventually

from Manning Park; probably all of the be found to occur in the park area.

SUMMARY.

Thirty-three species of Cerambycidae and nine species of Buprestidae were taken in the area during the period of July 21 to August 16, 1945.

From a distributional view point the Cerambycidae constitute about 30 per cent west coast or Vancouverian strip. The remaining 70 per cent are composed, for the most part, of holarctic elements of wide distribution and of comparatively recent specific origin. One genus, *Neoclytus*, is of neotropical origin. Three species are "dry belt" forms not, so far as known, recorded west of the park boundaries. Two species remain to be identified.

Only four species of Cerambycidae and one of Buprestidae listed here have not yet been recorded for Vancouver Island.

LITERATURE CITED

- Smith, Stace G. 1929, 1930. "Coleoptera" Museum and Art Notes (Vancouver, B.C.) 1929. 4 (2):73-74; 1930, 5 (1):24-25.
- Lindley, E. G. 1939. The Origin and Distribution of the Cerambycidae of North America, with special reference to the fauna of the Pacific slope. Proc. Sixth. Pac. Sci. Congress 1939.4:269-282.

THE HIBERNATION OF *NYMPHALIS CALIFORNICA* (Bdv.), THE CALIFORNIA TORTOISESHELL BUTTERFLY; A QUERY.—In the summer of 1945 (as noted by Hardy, Ent. Soc. B.C. Proc. 43:36) enormous numbers of this butterfly occurred throughout southern British Columbia. They do not breed on Vancouver Island but arrive here late in the summer and remain for the winter. On May 11th, 1946, while engaged in experimental spraying at Brentwood on the Saanich peninsula, I observed thousands of these butterflies passing overhead in a north-easterly direction. They travelled in small parties of ten or a dozen, always in the direction of the southern mainland. This return migration had been continuing for at least a week or ten days previous to my observing it and was so noticeable that it was the subject of correspondence in the local press. The point that occurs to me is that it is unusual for an insect to breed in one part of the province and hibernate in another. It would be interesting to know whether the habit of hibernating in the more salubrious climate of southern Vancouver Island rather than in the region where it breeds is the usual custom of this species or whether it occurs only in years of excessive abundance. In this connection the observations of entomologists on the mainland would help to clear up the point. Have hibernating specimens of this species been found on the mainland in the regions where *Ceanothus*, the food plant, occurs? —W. Downes, 2056 Granite Street, Victoria, B.C.

SPRING FLIGHT OF *NYMPHALIS CALIFORNICA* NEAR NELSON, B.C. (Lepidoptera: Nymphalidae).—While driving near Coffee Creek on the road between Nelson and Kaslo, B.C., April 14, 1947, I came upon a swarm of tortoiseshell butterflies. There were tens of thousands of them along the road and they seemed to be moving southward though I could not be sure of this. Every few yards there were groups of approximately 100 settled, and the air was full of them. They did not extend south beyond Queens Bay, though a few were noted across the lake, between Gray Creek and Creston. I am indebted to Dr. T. N. Freeman of Ottawa for identifying one of the butterflies as *N. CALIFORNICA* (Bdv.).—H. J. Coles, Golden, B.C.

ELM GALL APHID EATEN BY EVENING GROS-BEAK (Aphididae: Eriosomatidae).—For about a week each year flocks of noisy evening Grosbeaks (*Hesperiphona vespertina*) invade the American elm trees lining some of Vernon's streets. This season (1947) they were busy by May 15, and the sidewalks were soon littered with bits of leaves. Examination showed that the birds were picking only the rolled leaf-galls filled with maturing *Eriosoma americana* (Riley), which they soon stripped out. The coxcomb galls of *E. crataegi* (Oest.), equally common on the trees, were not attacked in any of the cases observed. I am indebted to E. P. Venables for identification of the aphids.—Hugh B. Beech, Vernon, B.C.