

of midges, and discontinuance of the practice would allow reinfestation from adjacent waters. Light traps would be of value only to resorts and private residences.

A number of chemicals were tried, usually at the rate of one pound per 50 square yards of surface area, and then checked under field conditions. Some were applied on the surface to kill ascending pupae, and others, by tube sprayers, to the bottom to contact larvae. Midge larvae, in the experimental section of Lake Ewauna, were counted before and

after application. A sub-surface apparatus was devised for preliminary chemical control.

Calcium arsenate, basic copper sulfate, Bordeaux, pyrethrum, and Paris-green all gave a fair degree of control ranging from 50 per cent to 98 per cent in different areas. Crushed salt, sown by hand gave a 100 per cent kill in the area examined. Phenothiazine and miscible oil destroyed great numbers of ascending pupae. Some of the chemicals approached laboratory expectations, particularly phenothiazine and crushed salt but at present no recommendations can be made.

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THE BLACK WITCH MOTH *EREBUS ODORA* (L.) IN BRITISH COLUMBIA

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Introduction. The capture of two specimens of this phalaenid moth in Victoria last season has led to inquiries regarding its occurrence in British Columbia. Authentic records have proved to be so few it is thought desirable to bring them together in this paper as a basis for future reference and investigation. Allusions to mysterious and elusive gigantic moths have been made from time to time; some of them may refer to the species in question, but lacking confirmation we suspect the *Polyphemus* or *Cecropia*

moths, of the same size and well-known residents of British Columbia.

Description. The Black Witch, *Erebus odora*, was described by Linnaeus in 1758 as *Bombyx odora*, *Erebus* being assigned in 1810 by Latrelle. It early attracted the attention of naturalists, yet is sufficiently distinctive to have only one synonym, *agarista* Cramer, 1887. It is a large moth with wings extending over 6 inches and broad in proportion. The forewings suggest the clean-cut lines of a hawk; the nervures and membranes

are unusually tough, and capable of much hard service. The thorax is broad and very rigid. In fact this moth has an exceptional physique, suited to long journeys.

Distribution. The Black Witch is native to the West Indies, Central and South America, where it is common. In North America it ranges in the east through the Atlantic States from Florida to Canada and in the west from Mexico through California to British Columbia, becoming scarcer and later in the season the farther north it occurs.

The species had not been known to breed north of Mexico, until Dr. John A. Comstock published a beautifully illustrated description of larvae and pupae found in southern California. It is probable that our migrants come from there, or from adjacent Mexico. The food plants are cited as belonging to the *Leguminosae* specifically *Cassia fistula*, *Pithecolobium* sp., *Saman* sp., *Gymnocladus dioica*, and in California, *Acacia decurrens*.

Habits. The little evidence obtainable suggests that the Black Witch is more of a chance wanderer than possessed of any definite migratory instinct. As is already intimated it is a powerful flier, and no doubt of a restless disposition. Its occurrence in British Columbia is due to an exceptional combination of favourable conditions; in 40 years there are only six authentic records. All of these are from points in southern British Columbia, with a majority from Vancouver Island. These captures appear to have been in towns or cities but this may be due either to attraction to lights, or the fact that they would not be as readily observed in country districts. The two taken last year in Victoria were at rest in dark buildings and only moved when

disturbed, indicating they are normally night or dusk fliers. Their wings are much frayed at the edges, and the thorax of each is denuded, but the wing pattern is still distinct.

List of known specimens of *Erebus odora* taken in British Columbia:

The Provincial Museum, Victoria, B.C.

1. Female, Victoria, V. I., August 6, 1908. E. M. Anderson.
2. Female, Oak Bay, V. I., August 25, 1915. E. M. Anderson.
3. Male, Victoria, V. I., August 12, 1941. Dr. L. J. Thompson.
4. Male, Caddboro Bay, V. I., August 28, 1941. Allan Upward.

The University of British Columbia, Department of Zoology

5. Male, St. Leon Hot Springs, Kootenay Lake, B.C., August, 1905.
6. Female, "Unlabelled, possibly caught by F. K. Auden".

Canadian Records. A search through the literature has brought to light a number of Canadian records outside of British Columbia, over the same 40 year period. These may be summarized as follows: 26 specimens are known to have been recorded, their distribution by Provinces, east to west, being—[Newfoundland, 1]; New Brunswick, 2; Quebec, 4; Ontario, 3; Manitoba, 4; Saskatchewan, 2; Alberta, 3; and British Columbia, 8.

The sexes were about equally common. One specimen was captured in July, 11 in August, and 2 in September. Some examples were taken by "sugaring", others at lights, and the rest in dark buildings by day.

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NOTES ON SOME WOOD-BORING BEETLES OF SAANICH, VANCOUVER ISLAND, B. C. (Coleoptera, Cerambycidae & Buprestidae)

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Introduction. The incentive for this study was the discovery of a new road allowance through a tract of forest and bush land. The resultant tangle of stumps, logs and slash afforded an ideal attraction for Cerambycids and Buprestids intent on mating and ovipositing.

The area involved is about 3½ miles north of Victoria, B.C., at the edge of the southern slope of Mount Douglas, where it merges into low-lying flats and hollows. The trend of the road is east and west; it is about a quarter of a mile in length, a convenient size for detailed examination. On the east the road has its beginning at the base of a rocky slope supporting an extensive stand of Garry oak, *Quercus Garryana*. Continuing in a westerly direction the road passes through a shallow valley, crosses a low ridge, and descends again to damp bush and meadow land.

The central ridge supports a heavy stand of first and second growth Douglas fir, *Pseudotsuga taxifolia*, and grand fir, *Abies grandis*, with underbrush of ocean spray, *Spiraea discolor*, in the few open spaces. On the lower ground, alder, *Alnus rubra*, black poplar, *Populus trichocarpa* and aspen, *Populus tremuloides* are the dominant trees, with a luxuriant growth of moisture-loving shrubs of willows, *Salix* spp., crab-apple, *Pyrus*

diversifolia, black hawthorn, *Crataegus brevispina*, dogwood, *Cornus pubescens*, cascara, *Rhamnus purshiana* and others.

It was hoped that with such a variety of newly-cut wood exposed at the right season, a large number of species of Cerambycidae and Buprestidae would be found. Accordingly the place was visited as often as possible during the season from March to September, 1934. Notes and collections were made at each visit.

Annotated List of Species. The following list includes all the species of wood-boring beetles collected or observed in this study, together with brief notes on their numbers, habits and dates of collection. Species occurring in numbers exceeding 50 individuals are marked "abundant", those between 25 and 50 are designated as "common" while those between 8 and 25 are noted as "several." When fewer than 8 were collected the exact number is given. All records are confined to the area outlined unless otherwise stated. The specimens mentioned in the list are in the Provincial Museum at Victoria, B.C. The arrangement followed is according to Leng's Catalogue (1920) but with the nomenclature revised in certain cases to agree with more recent taxonomic studies.