of the ground. An examination of weather data recorded at Embarras Airport revealed that the total precipitation (38.1 in.) from May, 1959, to April, 1961, was 6.7 in. above the average (31.4 in.) for comparable periods since 1945. In the period from May, 1957, to April, 1959, the total precipitation was 24.4 in., 7.0 in. below average.

It is surprising that a variation in precipitation of this magnitude could alter water levels sufficiently to cause large scale mortality. However, a closer examination of the topography and soil conditions of the region indicate that this is probable. This is a region of sand flats that are divided by low sand ridges which comprise remnants of old lake shores. Drainage is characteristically poor. Profiles along the Athabaska and other rivers show that the sand is at least 20 ft. deep in many places and horizons of tar sand, which vary in thickness and depth below the surface, are common. These tar sands are known to cover large areas and are the probable cause of the perched water tables. This whole region has a history of frequent forest fires. During years of average precipitation the pine is able to establish itself after a fire on sites where the water level is close to the surface. Such stands are susceptible to damage by any marked fluctuation in the water table. Apparently the level reached by the water table in 1960-61 was several inches above levels of the previous 15-year period in this region.—J. E. Nighswander.

BRITISH COLUMBIA

A New Record of Cordyceps militaris (Fr.) Link. in B.C.—Populations of the green-striped forest looper, *Melanolophia imitata* Wlk., reached heavy infestation proportions on the west coast of Vancouver Island in 1960. The insect overwinters as a pupa in the duff layer of the forest floor. Fall pupal surveys indicated that defoliation could be heavy in 1961 if pupal survival was high. A study area on Millar Channel, in L 493, about 16 miles north of Tofino, was visited in early May, 1961, to collect pupae for adult emergence records and to determine overwintering pupal mortality. Pupae in this area averaged two per square foot in October, 1960. While searching for pupae, small orange coloured stalks were observed protruding about 5/8 inches through the duff. Without exception, they all originated from *Melanolophia* pupae. Specimens were subsequently identified as *Cordyceps militaris* (Fr.) Link., an ascomycete, by Dr. W. G. Ziller of the Victoria Laboratory. In the field, the stipe did not exceed two inches in length and was a creamy white colour. The ascocarp was similarly coloured but had a light orange appearance because of the spore structures.

This is the first record of this pathogen in Western Canada although it is commonly found in association with insect pupae. It is widely distributed in North America, South America, Europe, and Asia.

The *Cordyceps* were first found on May 6. They were easily located and occurred throughout the study area. At the end of May the fruiting bodies could be found only in very shaded holes or pockets in the duff.

The control exerted on the *Melanolophia* population by the pathogen is largely unknown. Sampling was not intensive enough to determine the degree of infection. It is also not known how long the fruiting bodies are present, or if they all appear at the same time. The collapse of the infestation in 1961 has made it impossible to conduct more intensive studies as planned to determine the association between *Cordyceps* and *Melanolophia*.—D. G. Collis and N. E. Alexander.

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ROGER DUHAMEL, F.R.S.C., Queen's Printer and Controller of Stationery, Ottawa, 1962