

specimens was a typical *H. nigrirostris* cocoon containing an Hymenopterous cocoon of a kind indistinguishable from that of *Bathyplectes curculionis*, parasite of the Alfalfa Weevil introduced into Utah from Europe. Later this parasite was found in about 50 per cent. of the early cocoons of *H. nigrirosir*'s at Puyallup, Wash. In 1919 adults of this parasitic species were swept from clover at Forest Grove on two occasions. The parasite was also found to be present at Nehalem on the ocean front, where the weevil larvæ were not very easy to find. This parasite has been determined by Mr. A. B. Gahan⁴ of the U. S. National Museum as "*Bathyplectes exigua* Gravenhorst, a European species hitherto not recorded in the United States⁵ and apparently without host record in Europe." This parasite, like other members of this European genus, is especially adapted to prey upon the larvæ of Hypera, the young larvæ of which it searches out in their concealed locations in the axillary buds under the bracts on clover stems or under the flowering heads of clover. Thus we have a highly specialized parasite occurring even on the outskirts of the area infested by its host.

In addition this parasite of *H. nigrirostris* larvæ, a Pteromalid parasite attacking the pupæ within the lacy cocoons was found in fair numbers during the seasons of 1918 and 1919 at Puyallup, Wash., and Auburn, Wash. This parasite also shows a special adaptation for parasitism of Hypera, within the cocoons of which it occurs as naked larvæ or pupæ. However, it is not an active flier like *B. exigua*, and would probably spread more slowly than that species. It has not yet been found on the outskirts of the infested area. This parasite has been determined by Mr. A. B. Gahan as *Dibrachoides dynastes* Forster, a European parasite of the Alfalfa Weevil, *H. postica*, introduced into Utah but never recovered there so far as known to the author. This genus also, according to Mr. Gahan, was not represented in our fauna so far as known, previous to its discovery in Washington.

The occurrence in the Pacific Northwest of these parasites, apparently foreign to our fauna and not as yet found in the east, where *H. nigrirostris* has been known for many years and recently studied,⁶ suggests that the invasion of the Pacific Northwest may be from a source different from that of eastern America. It is unusual for highly specialized parasites of an introduced species to become common so soon after the appearance of the host in a new region. It has been shown that *H. nigrirostris* is spreading from the north to the south in the Pacific Northwest. This seems to indicate that the species is really circumpolar in its range, as Schwarz⁷ suggests, or that it has come from eastern Siberia by natural dissemination or accidental introduction. In the latter case the weevil was probably introduced by easy stages, such as would not eliminate the parasites, into the northern part of the Vancouverian faunal area of Van Dyke,⁸ which he considers includes even the lower levels of the Aleutian Islands and the southern margin of the Alaskan peninsula.

4. My thanks are due Mr. A. B. Gahan for determinations of parasites and kind permission to use extracts from his correspondence.

5. Mr. A. B. Gahan informs me that a specimen determined by him as *B. exigua* was recently reared from a larva of *Hypera punctata* at Mechanicsburg, Pa., by Mr. T. I. Guyton.

6. Herrick, Glenn W. and Detwiler, J. D. "Notes on some little-known pests of red clover," Jour. of Ec. Ent., Vol. 12, No. 2, 1919, p. 206.

7. Schwarz, E. A., Proc. Ent. Soc. Wash., Vol. 9, 1908, p. 114.

8. Van Dyke, Edwin C. Annals of the Ent. Soc. of America, Vol. 12, No. 1, 1919, p. 1.