

Other parasites were bred in small numbers only. *Amblyteles* sp. hatched from about 1 per cent of the pupæ. Of other hymenopterous species single specimens only have been reared.



Fig. 11.—*Bercecyntus bakeri* How. var. *euzoa*. 20 times natural size. (Original.)

Tachinidæ. Although larvæ of these parasitic flies were found from time to time during the season while cutworms were being dissected, they were bred on one occasion only. On July 6 two *Phorichaeta sequax*¹ were obtained from a specimen taken at Lethbridge.

DISEASES.

Two diseases caused a high mortality among larvæ. One of these, seen only at Welling, attacks immature and mature larvæ, turning them to an opaque pink colour, which is most noticeable ventrally. Many dead larvæ were found on the surface of the ground on May 12, especially under the shelter of dry cow droppings. Dull pink, sluggish, specimens were numerous. Some of these diseased specimens were killed, fixed, and sent to Dr. Glaser at Boston. He replied that they had every appearance of suffering from an intestinal bacterial disease, though it was impossible to diagnose with certainty without living material.

We dissected specimens after death and found that all of the vital organs were normal. At this time, however, the musculature had a bleached pinkish-white appearance, while from the fat body a semi-white fluid escaped in large quantities.

Diseased specimens were taken to Lethbridge in order that the disease might be transmitted, if possible, to the healthy specimens of that locality. Such attempts were never successful, whatever the method adopted. The diseased larvæ regurgitated a quantity of greyish white fluid when irritated. This was smeared on grass and fed to other larvæ, but in no case was any effect produced, for they matured, pupated, and moths emerged.

A cage of 100 larvæ collected at Welling suffered seriously from this disease, although only specimens which were apparently healthy were put into it. One moth and one *Ichneumon* only hatched from this cage, while many typically diseased larvæ were seen on the surface of the ground.

A second disease was prevalent at Lethbridge. This attacked mature specimens only, often after they had made their cells. The diseased larvæ became inflated, turned brown, and when dissected were found to have their body contents decomposed and liquifying.

¹Determined by Prof. J. M. Aldrich.