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EDITED BY

J. McDUNNOUGH,

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POPULAR AND PRACTICAL ENTOMOLOGY

THE LIFE HABITS OF *CEPHUS CINCTUS* NORT. IN MANITOBA.*

BY NORMAN CRIDDLE,

Treesbank, Man.

The problem of controlling the Western Wheat-stem Sawfly, *Cephus cinctus*, is still an acute one in the Prairie Provinces. The insect is now found over more than half the wheat-growing area of Manitoba; its range is very wide in Saskatchewan and it has been found to be present over quite an extensive territory in Alberta.

During the year 1922 the infestation was particularly severe, it being by no means uncommon to find fields of wheat with ninety per cent. of the stems attacked. Indeed, thousands of acres were similarly infested and countless millions of larvae remain in the stubble at the present time which will develop into adults next June, preparatory to attacking the new crop.

Much has already been written concerning this sawfly, but as further observations were made during 1922 in which additional information was obtained, it seems well to review the more important facts of the insect's life-history at this time.

The following summary shows the life cycle of the insect as it occurred in 1922:

Pupation began	May 20	completed May 28.
Adults appeared	June 9	abundant by the 12th
Mating began	June 10	general by June 12
Egg laying began	June 12	general by June 14.

In seeking a spot in which to place her eggs, the adult female sawfly runs actively up and down the stem with her head close to it as if making a careful examination for the right place; finding a likely one, she faces downward, and drawing her abdomen under her, thrusts her saw-like ovipositor into the stem in order to locate a hollow. Should this not be present, she tests other places until eventually, finding one that suits, she deposits an egg within the stem—a shiny, cylindrical white object, not very easily seen. In depositing eggs, a preference is shown for a situation around the topmost joint, but it frequently happens that there is no hollow at this point, in which case a lower position is selected. Thus there may be eggs in any portion of the stem. There appears to be an attempt of individual flies to place only one egg in a stem, but after searching among the neighboring herbage it is not an uncommon occurrence for the insect to return to the original plant and place another egg in it. The process of egg-laying only takes a few seconds, though the time occupied in seeking a suitable place may take several minutes. On one occasion an individual was seen to thrust her

*—Contribution from the Division of Field Crop and Garden Insects, Entomological Branch, Dept. of Agric., Ottawa.

NOTES AND DESCRIPTIONS OF SOME FOSSORIAL HYMENOPTERA

BY NATHAN BANKS,
Cambridge, Mass.

Below are a few descriptions and notes on Philanthidae and Scoliidae.

Philanthus consimilis n. n.

P. assimilis Bks., Can. Ent. 1919, 404 (not Bull. Amer. Mus. Nat. Hist. XXXII, 422, 1913.)

Cerceris salome n. sp.

♀. Black, marked with yellow; spot on base of mandibles, above base of mandibles, each side on face, above and below clypeal process, median carina, flagellum below, dot behind eyes, small spots on pronotum, postscutellum, two spots on first abdominal segment, broad band, emarginate in middle, on the second, narrow marginal bands on other segments above, broader on last, yellow. Legs yellow. tarsi darker, and femora black except hind femora at tips, hind tibiae with inner apical dark spot. Body rather evenly and coarsely punctate. Clypeal process about twice as broad as long, margin slightly concave; enclosure strongly longitudinally striate; stigma blackish; pygidium twice as long as broad, sides parallel. Length 13 mm. From Long Island, and Nyack, N. Y.; Wellesley, Mass. (Morse); and Jones' Creek, Lee Co., Va.

In my table (1912) it runs to 25, where it will not agree with either alternative; differing in the yellow marks, the band on second segment broader than others, the clypeal process concave in front, and the enclosure striate. It resembles *C. halone* in general, but the enclosure is different, and the clypeal process longer.

Cerceris sayi n. sp.

♀. Black, marked with pale yellow as follows: Base of mandibles, double spot on the clypeal process, long spot each side on face, spot behind eyes, two on pronotum, the postscutellum, two large spots on propodeum, two large spots on the first abdominal segment, and subequal broad bands on each of the following segments, broadly emarginate in front; venter black, unmarked; legs reddish to yellow in part; antennae reddish on basal part; wings rather smoky, darker towards the costal tip, stigma reddish; moderately coarsely and densely punctate, clothed with white hair, that on head, pronotum, propodeum and basal abdominal segment very long; tawny hair on each side of the pygidial area, and a tuft each side at tip. Clypeal process large, suberect, one and a half times as broad as long, hardly narrowed at tip, deeply, angularly emarginate in front. Enclosure evenly, rather coarsely, and almost longitudinally striate. Basal abdominal segment much broader than long; pygidial area two and one half times as long as broad, sides nearly parallel, and fully as broad at base as elsewhere, finely punctate. Length 14 mm.

♂. More slender; marked as in female but face mostly yellow and spots on the propodeum smaller; clypeus truncate below, surface nearly flat; hair-combs about twice their length apart; enclosure striate on sides, smooth in middle, pygidial area broader near tip than at base, coarsely punctate; femora of front and mid pairs with black spot, hind femora largely black at tip, and also apical half of the hind tibia black. From Steele, N. Dakota, July 13 (Stevens).

Cerceris stevensi n. sp.

In general similar to *C. sayi* in marks, hair, punctuation, etc., having in addition a white spot above the base of mandibles, one on pleura below tegula, a broad band on the scutellum, spots on the propodeum very large, and the abdominal bands rather broader at lateral ends. The clypeal process is proportionally broader, but of the same general shape; the pygidial area is much broader at base than elsewhere. Length 16 mm. From Steele, N. Dakota., July 13 (Stevens).

Trielis alcione Bks.

A pair from Sheldon, N. Dakota, Aug. 10, (Stevens).

The male agrees with the type of *T. alcione*; the female, hitherto unknown, is black, marked with red and yellow; the vertex, base of mandibles, and basal joint of antennae are rufous; two spots on pronotum, three on the scutellum, line on postscutellum, large median spot on the propodeum as well as lateral marks, and four pairs of spots on the abdomen, all slenderly connected; venter wholly black; legs largely rufous; hair on venter white, that on dorsum largely tawny, hair on head and thorax mostly white. Length 22 mm.

My table of the females (Bull. Mus. Comp. Zool. LXI, 112) may be changed as follows to include *alcione*.

3. A median yellow spot on propodeum; transverse frontal suture straight; the anterior ocellus not twice its diameter from the suture; spots of abdomen connected4
- No median spot on propodeum; transverse frontal suture sinuate; anterior ocellus fully twice its diameter from the suture; spots of abdomen separated5
4. Thorax and abdomen largely black; venter unspotted *alcione*
Thorax and abdomen largely rufous; venter with a pair of spots on third segment *regina*
5. Insect mostly rufous; fore wings with a dark streak near the tip; hair on abdomen above and below golden *xantiana*
Insect largely black, the streak of fore wing reaching nearer to base; hair on dorsum of abdomen much darker than that below *octomaculata*
(*lupina*).

NEW APPOINTMENTS TO THE ENTOMOLOGICAL BRANCH

Mr. E. R. Buckell was appointed Assistant Entomologist on November 27th, 1922. He is attached to the Division of Field Crop and Garden Insects. Mr. Buckell received his B. A. from Cambridge (Eng.) in 1911. Subsequent to the war he was engaged by the British Columbia Department of Agriculture on insects affecting the range.

Mr. C. R. Twinn was appointed Junior Entomologist on September 14th, and is attached to the Division of Field Crop and Garden Insects. Mr. Twinn received his B. S. A. from O. A. C. in 1922, and was engaged in a temporary capacity on the European Corn Borer work at Port Stanley during the past summer.