

241

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DIPTERA COLLECTED BY THE LATE ALLAN CRAWFORD ON WRANGEL ISLAND.*

BY C. H. CURRAN AND C. P. ALEXANDER,

Among the effects of the late Allan Crawford, found when the relief ship reached the island in 1924, were some insects contained in alcohol. The Dipterous insects have been forwarded for determination and there are representatives of five species. Of these only six specimens are sufficiently well preserved to permit of determination, the remainder being so fragmentary as to permit of only a guess as to the genus to which they belong. Dr. C. P. Alexander has been kind enough to report upon the Tipulidae. In addition to the specimens examined by him there are fragments of a small species probably belonging to the Limmophilinae. The specimens determined will be mounted in the usual manner after be-

*—Contribution from the Division of Systematic Entomology, Entomological Branch, Dept. of Agric., Ottawa.

ing hardened in xylol, thus making them more available.

Collections of Arctic Diptera are of unusual interest as many of the species are holarctic and it is in far northern America that palaeartic species are most frequently found. The collection contains representatives of three families of Diptera.

MUSCIDAE (ANTHOMYIDAE auct)

Hylemyia sp.

Two females in poor condition appear to belong to this genus. They are however more robust than usual and rather suggest *Hydrophoria* but the squamae are of approximately the same length. The antennae are missing, there are four posterior dorso-centrals and the wings are conspicuously tinged with yellow, while the thorax and abdomen are unusually free of pollen although this may be due to their immersion in alcohol.

HELOMYZIDAE

Oecothoa Halliday

Three species belonging to this genus occur in the Arctic region of America and are separable as follows:

- 1. Small crossvein with conspicuous dark brown clouding; posterior forceps of ♂ rounded apically; scutellum blackish on basal half or more except laterally *fidelis* n. sp.
Small crossvein at most inconspicuously clouded; if the posterior forceps are rounded apically the scutellum is only a little darkened basally, mostly yellow 2.
- 2. Large species; posterior forceps of ♂ broad, transverse apically; scutellum blackish on disc *aristalis* Malloch.
Smaller, under 4.5 mm., posterior forceps rounded apically; scutellum usually almost all yellow *fenestralis* Fallen.

***Oecothoa fidelis* Curran, n. sp.**

Very similar to *fenestralis* but the anterior crossvein is clouded with brown, the small frontal hairs are longer and much coarser, the scutellum is strongly bicolorous, the fused posterior forceps longer. Length 3.5 to 5 mm.

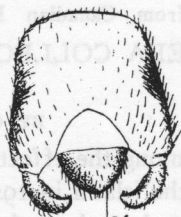


Fig. A.

Oecothoa fidelis n. sp. Fig. A. Ventral view of ♂ genitalia; p.f. posterior forceps.

Male. Head reddish, whitish or grayish pollinose, the occiput with three short vertical projections forwards, blackish in ground color; front with a broad brownish stripe on each side of the ocelli which curves inwards to fuse or almost join more than half way from the ocelli to the antennae, leaving a broad pale area surrounding the brown ocellar triangle. Palpi reddish yellow. Antennae reddish, the third segment mostly brown; arista brown, pubescent.

Thorax black in ground color, the humeri, posterior calli largely and the

scutellum on its broad border, yellowish; thorax thick grey or yellowish grey pollinose, the mesonotum with three very broad, irregular darker vittae giving a somewhat mottled appearance. Four dorso-centrals, one presutural, one humeral, two notopleural, one supra-alar, two post-callar and one sternopleural; scutellum with two pairs of strong marginals and numerous short discal hairs.

Legs dark reddish, the femora brownish except the base and broad apex. Middle femora anteriorly with a row of fairly strong bristles for more than half their length, but broadly separated from the apex, near the upper edge and with a row of slightly weaker bristles on the apical half in the middle, the lower row complete and strong, the postero-ventral bristles forming a complete more or less double row.

Wings yellowish tinged, especially towards the base; anterior crossvein with conspicuous brown cloud. Squamae and halteres yellow, the former with white fringe.

Abdomen blackish, densely brownish grey pollinose, the genitalia reddish, from ventral view appearing as in fig. A.

Female. The color is the same but the bristles on the middle femora are weaker.

Holotype—♂, *Allotype*—♀, and a paratype of each sex; No. 2341 in the Canadian National Collection.

TIPULIDAE

The collection of Tipulidae consists of a single vial containing three imperfect specimens, one of which is headless and cannot be determined. From its general habitus this latter specimen may pertain to either of the genera *Tipula* or *Prionocera*. The remaining specimens represent the two sexes of an undescribed species of the genus *Tipula* that is characterized herewith.

The writer has recently summarized our knowledge of the crane-flies of the Arctic Region (Report of the Scientific Results of the Norwegian Expedition to Novaya Zemlya, 1921. No. 5. The Crane-flies, pp. 9—15; 1922). To the bibliography of Arctic crane-flies given at that time, the following additional reference and emendations should be given:

Alexander, Charles P.

1923. Diptera of the Pribilof Islands, Alaska. (Tipulidae and Rhyphidae). North American Fauna, 46: 159-169, pls. 10-11.

1924. Report of the Second Norwegian Arctic Expedition in the "Fram," 1898-1902. Norsk Entomol. Tidsskr., 1: 296-297.

Lundstrom, C.

1918. Diptera-Nematocera aus den Arctischen Gegenden Sibiriens. Resultats Scientifiques de l'Expedition polaire Russe en 1900-1903, sous la Direction du Baron E. Toll. Section E: Zoologie, vol. 2, Livr. 8: 1-33, pls. 1-2.

Riedel, M. P.

1919. Resultats scientifiques de l'Expedition des freres Kuznecov a l'Ourel Arctique en 1909, sous la direction de H. Backland. Nematocera Polyneura. Mem. Acad. Sci. Russ., (8) 28: 1-10, figs.

Tipula crawfordi Alexander, n. sp.

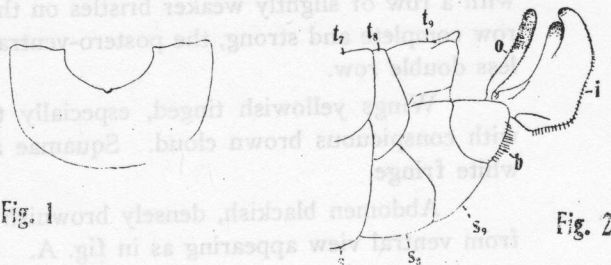
Belongs to the *cineracea* group; wings whitish subhyaline, with a pale brown pattern; male hypopygium with the outer dististyle cylindrical.

Male.—Length about 10 mm. *Female.*—Length about 15 mm.; wing about 13.5 mm.

Coloration described from alcoholic specimens.

Head and thorax blackish, in dry specimens presumably with a grey pruinosity. Abdomen obscure reddish, with a narrow dark line on either side and a paler, more diffuse dorso-median vitta, more evident in the female; caudal margins of the tergites narrowly ringed with darker; in the male, abdominal segments beyond the fifth passing into brownish black.

Frontal prolongation of the head relatively stout, the nasus entirely lacking, as in the group. Antennae with the scapal segments black, the first segment relatively short and stout; flagellum broken.



Tipula crawfordi n. sp. Fig. 1—Ninth tergite, dorsal aspect; Fig. 2—Male hypopygium, lateral aspect; *b*—basistyle; *i*—inner dististyle; *o*—outer dististyle; *s*—sternites 7-9; *t*—tergites 7-9.

Thorax with the dorso-pleural membrane pale. Legs with the coxae and trochanters black, probably pruinose in dry specimens; all of the legs are broken and detached, those presumably pertaining to this species being relatively stout, the femora and tibiae reddish fulvous, the femora broadly, the tibiae more narrowly, tipped with brownish black; tarsi gradually passing into black. Wings detached, but almost certainly pertaining to this species: Whitish subhyaline with a sparse, pale brown pattern, arranged as follows.—A cloud near mid-length of vein Cu_1 , occupying cells M and Cu ; a cloud in the outer end of cell M , crossing $m-cu$ into cell M_1 ; stigma infuscated; clouds at origin of R_s and on the anterior cord, the latter confluent with the stigmal area; wing-apex weakly but extensively infuscated; veins dark brown. Venation: Distal section of vein R_2 pale but entire; cell 1st M_2 relatively small, pentagonal; cell M_1 longer than its petiole; vein 2nd A straight.

Apex of the abdomen strongly upturned. Male hypopygium of relatively simple structure. Ninth tergite (Fig. 1) only moderately chitinized, not blackened; caudal margin with a broad and relatively shallow U-shaped notch, the base of the emargination with a second microscopic notch; lateral angles of the tergite broadly truncated, the mesal-apical angle of each a little produced. Basistyle (Fig. 2, *b*) complete, more reddish in color than the sternite, appearing roughly triangular in outline with the apex evenly rounded. Outer dististyle (*o*) cylindrical, the distal half blackened, the surface of the style with microscopic pale setae. Inner dististyle (*i*) a broad, pale yellow, very compressed blade, the caudal margin with a fringe of delicate setae; apex of the style split into two appressed lobes that are blackened, their tips obtusely rounded. Ninth sternite ($9s$) with a median notch, the base filled with membrane. Eighth sternite ($8s$) unarmed. Ovipositor with the tergal valves long and slender, the margins smooth. The sternal valves are a little shorter but much deeper, compressed, the tips subobtusely.

Holotype, ♂, Wrangel Island, Siberia (Latitude about 75.1° N.). Collected by Allan Crawford; No. 2342 in the Canadian National Collection.

Allotype, ♀, same data.

The crane-fly is named in honor of the collector, Mr. Allan Crawford, who perished from starvation on Wrangel Island, due to the inability of relief ships to reach him.

Tipula crawfordi belongs to a small group of Arctic *Tipula* that I have called the *cineracea* group, distinguished by the simple male hypopygium and the complete lack of a nasus. The two fully-winged species that agree closest with the present form are *T. cineracea* Coquillett of Alaska (Proc. Washington Acad. Sci., 2: 404; 1900) and *T. katmaiensis* Alexander, of Katmai, Alaska (Ohio Journ. Sci., 20: 202—203; 1920). If the detached wing in the vial actually belongs to the present species, as seems to be the case without any question, the fly is readily told by the pictured wings.* The two subapterous species of the same group, *T. whitneyi* Alexander of the Pribilof Islands, Alaska (North American Fauna, 46: 161-163; 1923) and *T. gynaptera* Alexander from Plover Bay, Siberia (Journ. N.Y. Ent. Soc., 26: 72-73; 1918) are very distinct.
