THE NORWEGIAN NORTH POLAR EXPEDITION WITH THE "MAUD"
1918–1925, SCIENTIFIC RESULTS, VOL. V, No. 5

DIPTERA FROM ARCTIC SIBERIA

BY

T. SOOT-RYEN
ZOOLOGICAL DEPARTMENT, TROMSØ MUSEUM

PRINTED AT THE EXPENSE OF
STATENS FORSKNINGSFOND AV 1919 AND
NORSK VAREKRIGSFORSIKRINGS FOND

PUBLISHED BY
GEOFYSISK INSTITUTT, BERGEN, IN CO-OPERATION
WITH OTHER INSTITUTIONS

BERGEN
A.S. JOHN GRIEGS BOKTRYKKERI
1928

DIPTERA FROM ARCTIC SIBERIA.

BY *T. SOOT-RYEN.*

The curator of the Entomological Department of the Zoological Museum of the University of Oslo, Mr. Natvig, kindly placed in my hands for determination a small collection of Diptera collected by Prof. Dr. H. U. Sverdrup on the "Maud"-Expedition. The material consists of two samples in alcohol, one collected at "Maudhavn"-Cape Chelyuskin (N. Lat. 77° 32'.6, E. Long. 105° 40') in July-August 1919, the other at the Firsøileø ("Four Pillar Island") of the Bear Island group (N. Lat. 70° 43'.2, E. Long. 165° 25') in June—July 1925. Besides the few species mentioned in this paper, the samples contained some specimens of Culicidae, and specimens and biological material of *Oedemagna tarandi* Lin., both of which will be worked out by Mr. Natvig.

The Diptera of the Arctic Siberian coasts are after the works of Frey, Lundstrøm and Becker[1]) on a rather comprehensive material, collected by various expeditions, well known. The "Maud" collection only contained the following species

Boletina Birulai, Lundstr.
Boletina sp.
Dolichoprymna longipennis, Holm.
Crypteriella Sverdrupi nov. gen. & sp.
Trichocera arctica, Lundst.
Helophilus borealis, Stæg.
Helina luteisquama, Zett.
Limnophora sp.
Anthomyid, undeterminable.

The Anthomyids are kindly determined by Mr. O. Ringdahl, Hälsingborg. For kind advice regarding the new species, that must be placed in a new genus, I am indebted to Mr. Ch. P. Alexander.

FAM. FUNGIVORIDAE.

Boletina Birulai Lundstrøm 1915.

1 ♂, 1 ♀ Maudhavn.
Distribution: Taimyr—New Siberian Islands.

---

[1]) Frey, R.: Diptera Brachycera aus den arktischen Küstengegenden Sibiriens. Mém. de L'Acad. des Sci. de Russie. VIII Ser. Vol. XXIX. No. 10. 1915.

Lundstrøm, Carl: Diptera Nematocera aus den arctischen Gegenden Sibiriens. Mém. de L'Acad. des Sci. de Russie. VIII Ser. Vol. XXIX. No. 8. 1915.

Becker, Th.: Ein Beitrag zur Kenntnis der Dipterenfauna Nordsibiriens. Mém. de L'Acad. des Sci. de Russie. VIII Ser. Vol. XVIII. No. 10. 1907.

Boletina sp.

1 ♀ Maudhavn, together with *B. Birulai.*

Larger than *B. Birulai* and more swollen. Length about 5 mm. Head, antennae, thorax, coxae and last tarsal segments dark. Femora, tibiae, and metatarsi lighter, darkened at apex. Abdomen brown, last — 7 — 8th — segments dark. Halteres light. All hairs rather short and light, only darker on the last abdominal segments. The antennae reach a little beyond the scutellum, 3 d. antennal segment shorter than in *Birulai.* Wings as long as abdomen, grayish with brown ribs. Sc. ending opposite r, Sc_2 on the middle of Sc. The base of fork M shorter than ta, Cu-fork somewhat anterior to the base of ta. An obsolete, below the base of fork M. Costa goes c. $^1/_5$ in the cell r_3. Tibiae ca. $1^1/_2$ times as long as metatarsi.

As I am not able to identify this specimen with any of the known arctic species, I have given the above characteristics. On account of the alcoholic preservation the colour markings are indistinct. I am inclined to think this is a new species, but more material, especially the male, is needed to allow a description.

FAM. CHIRONOMIDAE.

Dolichoprymna longipennis Holmgren 1883.

I ♂ Maudhavn.

This specimen is at first sight of quite another habitus than the figure of Lundstrøm. The abdominal segments are not expanded as in the drawing mentioned. Thus the wings seem longer, reaching to the hind margin of 5th segment, and the large hypopygium very long, as long as the two preceding segments together. The only differing character is indeed the longer 7th segment of the club-shaped antennae. It is 3 times as long as broad.

Distribution: Nowaya Zemlja, Taimyr—New Siberian Islands.

FAM. LIMNOBIIDAE.

Crypteriella nov. gen.

Anterior tibia without spurs, middle tibia with well developed spurs, and hind tibia with small black, blunted, rudimentary spurs. Antennae with 12 segments, scapus with elongated innermost segment and nearly quadratic second segment, slightly broadening towards the apex. Flagellum with 10 segments, the first segment composed of more — 3 or 4 — fused segments, elongated, gradually tapering towards the apex. The other flagellar segments thin and 3—4 times as long as broad, the 6th is nearly 2 times as long as the following one, surely composed of 2 segments.

Wings not haired, only microscopically pubescent, venation very like that of *Cladura* O.-S. R_s rather long, not strongly curved as in *Crypteria* Bergr., but nearly linear. An_2 shorter than in *Crypteria*, reaching the posterior wing margin opposite the base of the radial sector.

Type of genus *C. Sverdrupi* nov. sp.

This genus is very closely related to the genera *Crypteria* Bergr., *Pterochionea* Alex., and *Cladura* O.-S., but differs in some respects from all. All this genera bear in the venation of the wings a close resemblance to some subgenera of *Limnophila,* as e. g. *Dactylolabis* O.-S. The genus *Neolimnophila* Alex., described as a subgenus

of *Limnophila,* must according to Alexander be included in the above mentioned *Cladura*-group. On the other hand the immature stages of *Cladura* bear a resemblance to the immature stages of *Dicranoptycha* O.-S. *(Limnobiini).* These facts therefore concerning the genera, more or less closely resembling *Cladura* and for the majority placed in the *Eriopterini,* in many respects point out a relation with the *Limnophilini* and perhaps also with the *Limnobiini.* Pierre[1]) has proposed a new tribe *Cryptini,* including *Crypteria* and *Adelphomyia* Bergr., intermediate between *Eriopterini* and *Limnophilini.* The last genus, *Adelphomyia,* belongs, however, to the *Pedicini,* as showed by Alexander[2]) in his studies of the immature stages. Alexander[3]) in 1922 proposed a new subtribe of *Eriopterini,* the *Chionearia* or better *Cladurariа,* including the genera *Cladura, Chionea,* and probably *Crypteria* and *Pterochionea.* In the same group also the genera *Neolimnophila, Neocladura* Alex., and *Crypteriella* must be placed. Whether this group shall be considered as a subtribe of *Eriopterini* or of *Limnophilini,* or as an intermediate tribe between both, further investigations must settle. I fully agree with Alexander in the supposition that the genera in this group are not so nearly related as we assume.

The group *Cladurariа* may be diagnosticated and the included genera separated in the following way:

Cladurariа Alexander 1922.

First tibia as a rule without spurs; wings not haired on the disk, first medial vein branched, or wings rudimentary, microscopic. Antennae with less than 16 segments. If the first tibia is spurred, always the basal flagellar segments fused to a large segment.

Key of genera.

1.	Wings rudimentary, smaller than the halteres	*Gen. Chionea* Dalm.
	Wings normally developed	2.
2.	Second anal vein short, not reaching to the base of the sector. Second segment of scape not broader than the first. Tibiae without spurs	*Gen. Pterochionea* Alex.
	Second anal vein longer, reaching to the base of the sector	3.
3.	Second anal vein very long, reaching to the middle of the posterior margin of the wing. Second segment of scape enlarged, globular. Radial sector curved	*Gen. Crypteria* Bergr.
	Second anal vein shorter, second segment of scape not globular, r present	4.
4.	All tibiae without spurs	5.
	At least the middle tibiae with distinct spurs	6.

[1]) Pierre, C.: Diptères: Tipulidæ. Faune de France. Paris 1924.

[2]) Alexander, Ch. P.: The Crane-Flies of New York. Part II. Cornell Univ. Memoir 38. 1920.

[3]) Alexander, Ch. P.: The Biology of the North American Crane-Flies VI. Pomona College Journ. of Ent. and Zool. Vol. XIV. No. 1. 1922.

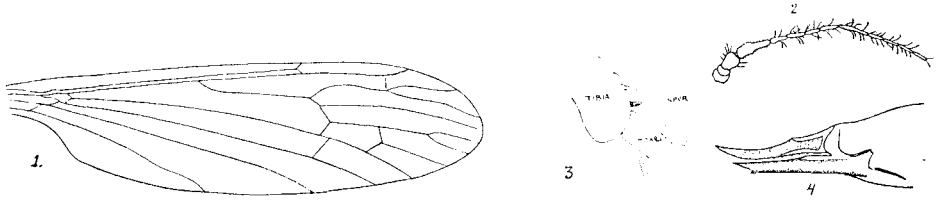
5. Sc long ending opposite the base of R_2, petiole of cell M_1 short, not much longer than m..... *Gen. Cladura* O.-S.
   Sc short, ending about opposite midlength of R_{2+3}, petiole of cell M_1 long, about twice the length of m. *Gen. Neocladura* Alex.

6. All tibiae with spurs. 10 free flagellar segments. R_{2+3} longer than R_2 alone..... *Gen. Neolimnophila* Alex.
   Anterior tibiae without spurs, middle tibiae with distinct and posterior with rudimentary spurs. Antennae with 9 free flagellar segments. R_{2+3} as long as R_2 alone *Gen. Crypteriella* nov.

Crypteriella Sverdrupi nov. sp.

(Fig. 1—4).

♀. Colour — the specimen in alcohol — brown; mesothorax darker, grayish with 3 brown stripes, the middle one divided by a fine narrow gray line; scutellum and pleurae also somewhat dark. Abdomen lighter brown. Legs brown with darkened tarsi. The hind coxa and trochanter especially light. Antennae brownish with darker flagellum.



Crypteriella Sverdrupi nov. sp. ♀.

Fig. 1. Wing (× 7). — Fig. 2. Antenna (× 28). — Fig. 3. Posterior rudimentary tibial spur (× 75). Fig. 4. Ovipositor lateral (× 28).

Wings long and rather narrow, hyaline without spots, the disk microscopically pubescent, the ribs with small dark hairs. R_s rather long, nearly straight. Fork R_2—R_3 only a little longer than the stem R_{2+3}, with diverging branches. An indistinct radial cross-vein at the base of the fork R_2—R_3, surrounded by an indistinct opaque stigma. Sc_1 and Sc_2 ending a little anterior to the first fork of R_s. Fork M_1—M_2 as long as the stem M_{1+2}. Posterior cross-vein situated near the base of the discal cell. An_1 reaching the posterior wing margin opposite the base of the discal cell, An_2 opposite the base of R_s. Halteres light with quite white knob. Length 9.5 mm.; length of wing 9 mm.

The basal part of the terebra somewhat darker than the light brown cerci and styli, and about as long as the cerci. Cerci slender, somewhat bent upwards at the apex, at base an impressed lighter part. (Fig. 4). Styli a little shorter than the cerci.

Type one female. Firsøileø.

FAM. RHYPHIDAE.

Trichocera arctica Lundstrøm 1915.

2 ♂ Maudhavn.

The prepared dorso-ventrally flattened hypopygium agrees well with the drawing of Lundstrøm. There are however two other characters that are different from his

description, viz.: the place of the M—Cu cross-vein and the form of the antennal segments. The M—Cu cross-vein is situated a little posterior to the base of M, but not so much as in *lutea* Becher, and in one specimen the 3d and 4th segments on the right antenna were partly coalesced, but on the left normal. Both characters more resembling *lutea* than *arctica*.

Widely distributed in arctic Asia from Taimyr to the New Siberian Islands.

FAM. SYRPHIDAE.

Helophilus borealis Stæger 1845.

1 ♀ Firsøileø.

Agrees well with description of American specimens, but the scutellum with both yellow and black hairs on the disk.

Distribution: Nearctic from Greenland to Alaska, in Siberia westwards to the Bear Island group.

FAM. ANTHOMYIDAE.

Helina lutelsquama Zetterstedt 1845.

1 ♂, 1 ♀ Firsøileø.

This species is hitherto only found in Northern Norway and Sweden, and is the first representative of the genus found in arctic Siberia.

Limnophora sp.

1 ♀ Maudhavn.

According to Ringdahl this specimen much resembles *rostrata* Ringd., but is altogether a different species.

Besides these 3 specimens of Anthomyids there was also one specimen from Maudhavn which had been squeezed and made undeterminable.