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NOTES ON EUROPEAN MOSQUITOES

(Diptera, Culicidæ)

By HARRISON G. DYAR

The mosquito-fauna of continental Europe has not been carefully worked over by modern methods, and many surprises no doubt await us. Ficalbi's work in Italy is remarkably good for its time, but his studies of the male genitalia were not detailed enough.

The following species is closely related to *Aëdes pullatus* Coquillett of the Northern Rocky Mountains to Alaska, and I had no suspicion before that there was a representative in Europe.

Aëdes metalepticus, new species.

Head and mesonotum with sparse dull golden yellow scales with an olivaceous tint, indistinctly defining two narrow bare dorsal lines. Abdomen black, with rather narrow uniform basal segmental white bands. Legs black, the femora pale beneath; knee-spots white. Wing-scales dark.

Genitalia: Clasp with long terminal spine; side-pieces about four times as long as wide, the tip rounded; apical lobe long, slender, equalling the tip of side-piece, with coarse normal hairs on one side; basal lobe represented by a long, very strong spine and apart from that, two rather short curved spines; not contiguous, but arising from a common chitinized base. Stem of harpago long, angled, the basal portion hirsute; filament angled, and rather broadly widening beyond the angulation. Unci large, with recurved point at tip. Basal appendages with five rather slender spines.

In *pullatus* the two spines of basal lobe are approximate and longer, and the basal appendages are more strongly setose. The two species are very close, however.

Types, 1 male and 12 females, No. 22714, U. S. Nat. Mus.; Alps, Province Sondrio, Italy, as follows: M. Merigio, 1800 m., July 17, 1900; Scais, 1500 m., July 19, 1901; Venina, 1600 m., August 8, 1903; Chiareggio, 1700 m., August 9, 1903; Campo Moro, 2000 m., August, 1903 (M. Bezzi). Also Cusiano, August, 1908 (M. Bezzi), the specimens in poor condition and not positively determined. Five paratypes returned to Prof. Dr. M. Bezzi.

Doctor Bezzi kindly calls my attention to *Aëdes jugorum* Vill. (Bull. Soc. Ent. France, 1919, 59, 1919), as possibly identical with this species. Villeneuve's description of the coloration of the mesonotum is not unlike the present form; but he passes over the genitalia with a brief description evidently made with a hand-lens. It is therefore impossible to say whether *metalepticus* is the same as *jugorum* or not. In these insects, the male organs are so characteristic and important for determination that it is surprising to find an eminent author like Doctor Villeneuve disparage them, as he does in the article referred to. "Ce sont des organes trop frêles pour être employés dans une diagnose." Needless to say, our disagreement is profound.

It occurred to me as possible that this might be the same as *Aëdes alpinus* Linn., described from Lapland. Linnaeus might easily have included a composite of several species with black tarsi of the *nemorosus* group, so that the name would have to be restricted. In that case *alpinus* would have to be applied to the commonest of the *Aëdes* with black tarsi that frequent the mountains of Lapland, whichever that may be found to be. Linnaeus' description, however, is unusually full. His account (Flora Lapponica, 364, 1737) has been kindly put into English for me by Mr. August Busck, and reads as follows. The account in the second edition of the Flora Lapponica is in Latin, and is simply a translation of the Swedish of the first edition: "*Culex alpinus.* Quite like the foregoing [*Culex vulgaris*, a

Simulium], but considerably larger, as large as a grain of wheat; the body is nearly grayish black, with six or eight bands, rising from the under side toward the back. The wings are whitish, with gray veins, shining, and towards the light with a tint of red. Middle of the body (thorax) hairy, especially on the under side; the femora and tibiæ with white rings.

"This mosquito has chosen as its principal place of abode the valleys and clefts in the mountains; but it is not unknown in the forests of Lapland, nor in the upper part of Sweden. Everywhere it appears in less numbers and does not attack in such dense armies of warriors as the foregoing species [*Simulium* sp.], but is individually far more valiant. It does not seek out a pore in the skin, but at once, even before it has gotten firmly settled on the skin, it wounds and stings as if with a needle, preferring the face, and it cannot easily be scared away."

Linnaeus's statement that the thorax is hairy, especially below, strongly indicates that *alpinus* is an earlier name for *nigripes* Zett. *Aëdes nigripes* Zett. (Ins. Lapp., 807, 1838) is the predominant arctic species in Scandinavia. It is represented in Greenland by the closely allied *innuitus* D. & K. (Ins. Ins. Mens., v, 166, 1917), and on the arctic shore of the Candian Northwest Territory by *nearcticus* Dyar (Rept. Can. Arctic Exp., iii, Part C, 32, 1919), all of these forms with the same long thoracic vestiture, but differing in details of the male genitalia.

Henriksen & Lundbeck in their "Groenlands Landarthropoder," give a comprehensive bibliography of *Culex nigripes* Zett., treating it as an arctic species from Lapland, Spitzbergen, Greenland, Boothia-Felix, Grinnell Land, etc. The American forms should undoubtedly be separated as indicated above. The synonymy may stand as follows:

AEDES ALPINUS Linn.

Culex pipiens Linnaeus (in part not Linn.), Syst. Nat., ed. x, 602, 1758.

Culex alpinus Linnaeus, Flora Lapp., 2d ed., 381, 1792.

Culex nigripes Zetterstedt, Ins. Lapp., 807, 1838.

Aëdes alpinus Dyar & Knab, Proc. Ent. Soc. Wash., xi, 32, 1909.
Aëdes alpinus Howard, Dyar & Knab, Mosq. No. & Cent. Am. & W. I., iii, 368, 1915.
Culex nigripes Henriksen & Lundbeck (in part not Zetterstdet), Meddelelser om Groenland, xxii, 595, 1917.

THE SPECIES OF CHOEROPORPA, A SUBGENUS OF CULEX

(Diptera, Culicidæ)

By HARRISON G. DYAR

Mrs. J. Bonne-Wepster left with me her more difficult slides of *Choeroporpa,* which I have gone over with the following result:

The group seems to be well represented in Surinam, much more abundantly than in Panama, according to the collections which we have received from there. It extends also throughout the Tropics and into the warmer temperate regions both in North and South America.

Culex (Choeroporpa) taeniopus Dyar & Knab.

Culex taeniopus Dyar & Knab, Journ. N. Y. Ent. Soc., xv, 100, 1907.
Culex taeniopus Howard, Dyar & Knab, Mosq. N. & Cent. Am. & W. I., iii, 248, 1915.
Culex taeniopus Dyar, Ins. Ins. Mens., vi, 111, 1918.

This species proves to be widely spread. Described from Nicaragua, found in Panama, and Mrs. Bonne-Wepster has bred it in Surinam and secured a male, showing the species to belong to *Choeroporpa.* Full description of the structures will appear elsewhere.

Culex (Choeroporpa) anips Dyar.

Culex anips Dyar, Ins. Ins. Mens., iv, 48, 1916.
Culex (Melanoconion) anips Dyar & Knab, Ins. Ins. Mens., v, 180, 1917.
Culex (Choeroporpa) anips Dyar, Ins. Ins. Mens., vi, 104, 1918.

The clasp-filament is thickly snout-shaped, with a crest of rather long hairs on top; the tip curves up in a sharp point, the