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LXXVI.—*Note on some British Culicidæ.*

By CHAS. O. WATERHOUSE, F.E.S.

HAVING had occasion to collect and make observations on the larvæ of Culicidæ, I was fortunate enough to rear from a larva found in the New Forest a species which appears to be new and of which I subjoin a description kindly drawn up for me by Mr. F. V. Theobald. I also reared the male of *Culex diversus*, Theobald, which was not previously known. My attention was first directed to the larva of *C. Waterhousei* by the length of time it remained under water without coming to the surface for air. This larva, which was of a very pale green, almost always rested in deep water on its back or in an oblique position. The longest time I ever actually watched it was half an hour; but on one occasion I was working close by the aquarium for two hours, and looked at it at frequent intervals. Having carefully noted its position, I feel certain that it never moved during the whole of that time. This is in great contrast with the larva of *C. cantans*, which rarely remains down in the water for more than half a minute.

The following are Mr. Theobald's descriptions:—

Culex Waterhousei, sp. n.

Thorax black, clothed with pale golden to creamy scales. Abdomen deep brown, with pale basal bands. Palpi of male brown, with yellowish mottling in places, two basal white bands to the two apical segments, and two yellow bands towards the base. Legs deep brown, femora and tibiæ mottled with yellow; metatarsi and first two tarsals of fore and mid legs with narrow basal white bands; in the hind legs the white bands are broad. Apical segment of male elaspers with spines; median processes broadly expanded apically. Fore and mid unguis unequal, hind unguis equal, all uniserrated.

♂. Head deep brown, clothed with rather large, creamy, curved scales, long, narrow, ochreous, upright, forked scales in front, with rather broader and shorter ones behind, and flat, creamy, lateral scales. Palpi with the two apical segments nearly the same length, deep brown, with an irregular, white, scaled basal area to each, and with blackish hair-tufts; the long antepenultimate segments with two broad, creamy, scaled bands, the two apical segments with black hair-tufts and also black hairs on the apex of the antepenultimate. Antennæ with very deep brown plume-hairs. Proboscis deep brown, unbanded.

Thorax black, with rather large, curved, pale golden scales,

somewhat paler over the roots of the wings; scutellum testaceous, deep brown along the border of the mid-lobe, and with a deep brown patch on each side between the mid- and side-lobes, clothed with rather large, narrow, curved scales of similar hue to those of the mesothorax; posterior border-bristles dense, pale golden; pleurae deep brown, with pale creamy flat scales; metanotum brown. Abdomen blackish, with basal creamy bands and pale brown to dull golden hairs; basal segment with many pale scales.

Legs with the femora and tibiae mottled brown and yellow, the fore and mid metatarsi with narrow basal white bands, also the first two tarsals; in the hind legs the bands are broader and are present on all the segments; fore and mid unguis large, unequal, both uniserrated, the hind equal and uniserrated.

Wings with rather broad lateral vein-scales, especially on the branches of the second long vein; many scales on the first long vein somewhat *Teniorhynchus*-like. First submarginal cell considerably longer and narrower than the second posterior cell, their bases nearly level; stem of the first submarginal cell nearly as long as the cell; stem of the second posterior longer than the cell; mid cross-vein longer than either the supernumerary or posterior cross-veins, the latter about its own length distant from the mid cross-vein.

Male genitalia with claspers long and broad, spiny towards the apex, the apical segment short and thick; one side of the apex of the basal lobes armed with short hook-like spines; a large pineapple-shaped densely tuberculate process from the base of each side; the two median processes long, composed of two segments, the apical one broadly knife-shaped and curved on its inner edge.

Length 5.5 mm.

Habitat. New Forest, Brockenhurst (*C. O. Waterhouse*).

Observations. Described from a single male easily told from all other dark-banded-legged European species by the very marked male genitalia. The male genitalia of the type are preserved in balsam. The squamose characters of the wing exclude it from *Culex*; but until female material is examined I prefer to leave it provisionally in that heterogeneous genus.

Culex diversus, Theobald.

Mon. Culicid. p. 73 (1901) (♀ only described).

♂. Palpi deep violet-black, with traces of yellow scales at the base of the two apical segments and on the antepenultimate segment, the penultimate and apex of the antepenultimate

with dense dusky hair-tufts, the apical one with scanty hairs, the two apical segments and apex of the antepenultimate slightly swollen, the last two of nearly equal length, apical segment blunt; the hair-tuft on apex of antepenultimate segment very dense. Proboscis deep brown, with dull yellow scales at the base. Antennæ deep brown, with deep brown plume-hairs.

Thorax as in the female. Abdomen blackish, with basal pale bands, moderately hairy, hairs pale. Genitalia densely hairy, hairs golden; apical joint of claspers curved, with the terminal segment long and bent at the tip, a few short spines below its junction with the larger part of the clasper, basal lobe densely hairy in places, especially on the inner side; between the basal lobes a long dense mass of golden hairs, two long curved processes with short spines on their inner lower edge, and a curious group of flattened curved spines forming a prominent object between them and the basal lobes.

Legs deep blackish brown, except the femora, which are pale beneath. Fore and mid unguis unequal, the larger biserrated, the smaller uniserrated; hind unguis large, simple, uniserrated.

Wings with the first submarginal cell longer and narrower than the second posterior cell, its base nearer the apex of the wing, its stem a little longer than the cell; stem of the second posterior cell also longer than the cell; posterior cross-vein about its own length distant from the mid cross-vein.

Length 5.5 to 6 mm.

Habitat. New Forest, Brockenhurst.

Observations. Bred by Mr. Waterhouse. The male genitalia are very marked.

MISCELLANEOUS.

On the Affinities of Herpetomonas subulata*, and the Phylogeny of the Trypanosomes. By LOUIS LÉGER.

THE structure of *Herpetomonas subulata* points to its extremely close affinity with certain species of *Crithidia* previously described by me. To *Crithidia minuta* of *Tabanus tergstinus*, Egg., especially, the resemblance of the young gregarine and monad forms is such that it is impossible to distinguish these two Flagellata in these stages.

* [This parasite is described by M. Léger in the number of the Comptes Rend. Hebd. des Séances de la Soc. de Biologie (Dec. 30, 1904, pp. 613-615) from which the present extract is taken. He states (*loc. cit.* p. 613) that he met with it in the alimentary canal of *Tabanus glaucopus*, Mg. (a species of horse-fly which occurs in Great Britain), in the south of France. According to M. Léger it is not common, and he found it only four times in sixty specimens of *Tabanus* and *Hæmatopota* collected in autumn upon cattle and horses.—TRANSL.]