

THE SWARMING OF *CULEX QUINQUEFASCIATUS* SAY

(*Diptera, Culicidæ*)

By HARRISON G. DYAR

In the monograph (Howard, Dyar & Knab, Mosq. No. & Cent. Am. & W. I., iii, 355, 1915) we quote Schwarz and Goeldi on the swarming of this species, but neither author says anything about the attraction of the males to the human person. In my experience it is pronounced, as much so as with *Aedes aegypti* or *Aedes varipalpus*. At Kerrville, Texas, the hotel had a double porch well shaded with lattice and vines. In the daytime, on the upper porch, males of *Aedes aegypti* swarmed about one who sat there for some time, and in the evening, on the lower porch, the same phenomenon was observed, only the species concerned was *Culex quinquefasciatus*. It was long after sunset, quite dark in fact, a small electric light was burning at the entrance to the porch. Sitting in a chair a little distance back from the light, after some time the male *Culex* began to gather, and continued swarming about head and shoulders in the dusk as long as one wished to stay.

RING-LEGGED *CULEX* IN TEXAS

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The following species of the ring-legged or *tarsalis* group of *Culex* occur in Texas.

Culex (*Culex*) *tarsalis* Coquillett.

Culex tarsalis Coquillett, Can. Ent., xxviii, 43, 1896.

Culex willistoni Giles, Handb. Gn. or Mosq., 281, 1900.

Culex affinis Adams (not Stephens), Kans. Univ. Bull., ii, 25, 1903.

Culex kelloggii Theobald, Can. Ent., xxxv, 211, 1903.

Culex peus Speiser, Insektenbörse, xxi, 148, 1904.

Undoubted specimens of this species are before me, proboscis, legs and mesonotum fully ornamented, Camp Travis, Texas, March 26, 1918 (D. L. Van Dine).

Culex (Culex) thriambus, new species.

Female. Proboscis black above, broadly whitish in the middle below, the white rarely nearly or wholly encircling the organ in a narrow ring. Mesonotum with brown scales. Abdomen with basal segmental white bands, widening on the sides; venter pale, with diffused black patches toward the posterior borders of the segments. Legs with the femora white below, femora and tibiæ lined with white on the inner side only, black without; tarsi narrowly and often indistinctly ringed with white at both ends of the joints. Wing-scales dark, narrow and hair-like.

Male. The proboscis has a complete white ring; otherwise the coloration is as in the female. Hypopygium. Side piece curved, conical at tip; subapical lobe with three rods, a leaf and a stout seta. Clasper smooth, wide at base, the spine appendiculate and shortly subapical. Tenth sternites with strongly spinose tip and curved basal arm, the latter enlarged at end. Mesosome with the inner process membranous and denticulate, central area with four teeth, outer process thumb-shaped. Ninth tergites undeveloped.

Larva. Head-hairs multiple; antennæ with the basal part with long spines, the notch at the outer third; lateral comb of the eighth segment of numerous scales in a patch; air-tube long and slender, slightly tapering on the outer half, about six times as long as wide; pecten of about 12 teeth on the basal third of the tube; hairs single, a long single one beyond the pecten and a short double subapical one are preserved, besides two single ones, one out of line just beyond the long hair mentioned, and another much more out of line beyond the middle of the tube. Possibly there should be four hairs in the posterior row instead of two as here described. These hairs are easily broken, the remaining insertions difficult to find. Anal segment broadly ringed by the plate.

Larvæ in a small dirty pool beside the river.

Types, one male and two females, No. 23926, U. S. Nat. Mus.; Kerrville, Texas, August 20, 1920 (H. G. Dyar).

Allied to *stigmatosoma* Dyar (= *eumimetes* D. & K.).

Culex (Culex) coronator Dyar & Knab.

Culex coronator Dyar & Knab, Journ. N. Y. Ent. Soc., xiv, 215, 1906.

Culex (Culex) usquatus Dyar, Ins. Ins. Mens., vi, 122, 1918.

Normal adults emerged from larvæ in a street excavation filled with rain-water, San Benito, Texas, August 21, 1920 (H. G. Dyar). The larvæ were lost in transit and did not come under minute observation.

The male hypopygium agrees with the normal *coronator* form, not as in the *usquatus* form, which has the setæ at the tip of the side-piece forming a distinct tuft.

THREE NEW MOSQUITOES FROM COSTA RICA

(*Diptera, Culicidæ*)

BY HARRISON G. DYAR

Culex (Choeroporpa) alfaroi, new species.

Occiput with flat black and white scales, which change in color with the incidence of the light; abdomen black above; legs black; wing scales black, those on the forks of the second vein outwardly narrowly ovate; mesonotum dark brown, the narrow curved scales inclining to golden.

Hypopygium. The shape of side piece and clasper cannot be made out in the mount. Outer division of lobe of side-piece narrowly columnar, widened and rather strongly furcate, the inner limb with a long hooked filament and a shorter similar filament with separate insertions; close to the outer limb, a large insertion bearing a rather large leaf, not quite as long as the setæ; on the limb beyond, a group of about four filaments closely placed. Inner division of the lobe of side piece with two long hooked filaments, close together and parallel, one inserted half way up on the side of the other. Mesosomal plate trifid, the upper horn short and pointed, the lower longer and notched; third point subapical, close to the others, long and sharp. Basal hooks broad, curved. Tenth sternites slender with comb-shaped tip, the base expanded, with a shoulder,