

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,

but without basal arm. Ninth tergites large at base, long, tapering and finger-shaped with a tuft of long hairs at the tip.

Type, male, No. 23938, U. S. Nat. Mus.; Atirro, Costa Rica, elevation 600 meters, October 24, 1920 (A. Alfaro).

The male type is much damaged and shows little that is characteristic in coloration; the structure of the hypopygium places it close to *tecmarsis* Dyar.

Culex (Choeroporpa) holoneus, new species.

Palpi, proboscis and legs black; mesonotum dark brown, the narrow curved scales slightly golden under the microscope; abdomen black, with narrow white basal segmental bands, widening on the sides; venter pale; the apices of the segments broadly dark. Wing scales rather broadly ovate on the forks of the second vein outwardly.

Hypopygium. Side piece swollen basally, the tip narrowed and conical, coarsely setose; an area of fine setæ on the inner aspect. Clasper attenuated centrally, the tip narrowly snout-shaped, excavate a little beneath, where there is a seta, and around which the median groove makes an arc; a short crest of pile on top; subterminal spine widened and appendiculate, unusually large. Outer division of the lobe of side piece with a slender inner arm, bearing a long hooked filament and a blade-like one; on the stem below the fork, a very large expanded leaf is inserted, the base and margins radially reinforced, the tip thin and indefinite; outer limb with a group of rather long appressed filaments; inner division of the lobe of side piece with the limbs divaricate and subequal, each bearing a long curved filament with expanded hooked tip; some minute pilosity in the angle between the two divisions of the lobe of side piece. Mesosome greatly reduced, apparently absent, in its place a pair of small pointed simple appendages, fimbriate on the inner side, the tip forming a retrose point. Tenth sternites comb-shaped, with about seven teeth, the basal shoulder produced into a thumb-like arm. Ninth tergites large, oblique, thick, conical, with fine setæ uniformly distributed, rather sparser at the tip.

Type, male, No. 23939, U. S. Nat. Mus.; Orotina, Costa Rica, elevation 300 meters, October 17, 1920 (A. Alfaro).

Aedes (*Culiselsa*¹) *perichares*, new species.

Female. Head with narrow curved white scales on the vertex, succeeded by flat white ones, which reach the eye-margin, flat black ones below; bristles long; a few erect forked black scales on the nape. Tori nude, clypeus nude, a patch of white scales on first joint of antenna. Mesonotum with dense dark brown narrow curved scales, white along the anterior margin, cut by two black impressed lines, continued laterally, and curved inward as in *Aedes aegypti*, except that the marking is diffuse and of a grayish silvery; white scales about antescutellar space and on scutellum. Abdomen black, with narrow lateral basal segmental white patches; venter with the segments white at base, black on the apical halves. Legs black, the femora narrowly whitish beneath at base; tarsi with narrow white rings at both ends of the joints, broader on the hind legs, the last hind tarsal all white. Wing-scales black, narrow and hair-like. Claws toothed.

Male hypopygium. Side pieces long and slender, conical, coarsely hairy, especially within; no apical lobe; basal lobe small, with many long setæ. Clasper with long blunt-ended spine. Claspette rather long, with a long seta just before its tip; filament slender and pointed, about as long as the stem. Tenth sternites long, slender, slightly hooked at tip. Aedoeagus conical, large. Ninth tergites undeveloped.

Described from nine males and five females, No. 23972, U. S. Nat. Mus.; Ciruelas, Costa Rica, elevation 800 meters, October 29, 1920, from larvæ in stone holes (A. Alfaro).

Nearest to *fluviatilis* Lutz, but the white tarsal rings on both ends of the joints.

¹To replace *Taeniorhynchus* as used by me, following the monograph, to avoid the confusion caused by the use of *Taeniorhynchus* in the sense of *Mansonia*, as employed by Theobald, Edwards and others.