

Described from eight specimens, one said to be a male, from the island of St. Vincent, West Indies. The male characters, however, have never been made known, and therefore the species must remain for the present unrecognized. It is possibly the same as one of the mainland forms; but as the species from Trinidad and British Guiana are different, this cannot be assumed. The specialized species of *Haemagogus* with simple claws in the female and short palpi in the male seem to be all of very restricted distribution. In the monograph we gave *splendens* a very extended distribution, Central America, Panama, Trinidad, St. Vincent and Brazil, which must now be canceled.

ILLUSTRATIONS OF CERTAIN MOSQUITOES

(*Diptera, Culicidæ*)

BY HARRISON G. DYAR

Culex (Choeroporpa) pasadaemon Dyar.

Culex (Choeroporpa) pasadaemon Dyar, Ins. Ins. Mens., ix, 100, 1921.

The male hypopygium, side piece, and basal organs are illustrated in Plate II, figure 1.

Culex (Choeroporpa) merodaemon Dyar.

Culex (Choeroporpa) merodaemon Dyar, Ins. Ins. Mens., ix, 100, 1921.

The basal parts of the hypopygium are illustrated in Plate II, figure 2.

Culex (Choeroporpa) dysmathes Dyar & Ludlow.

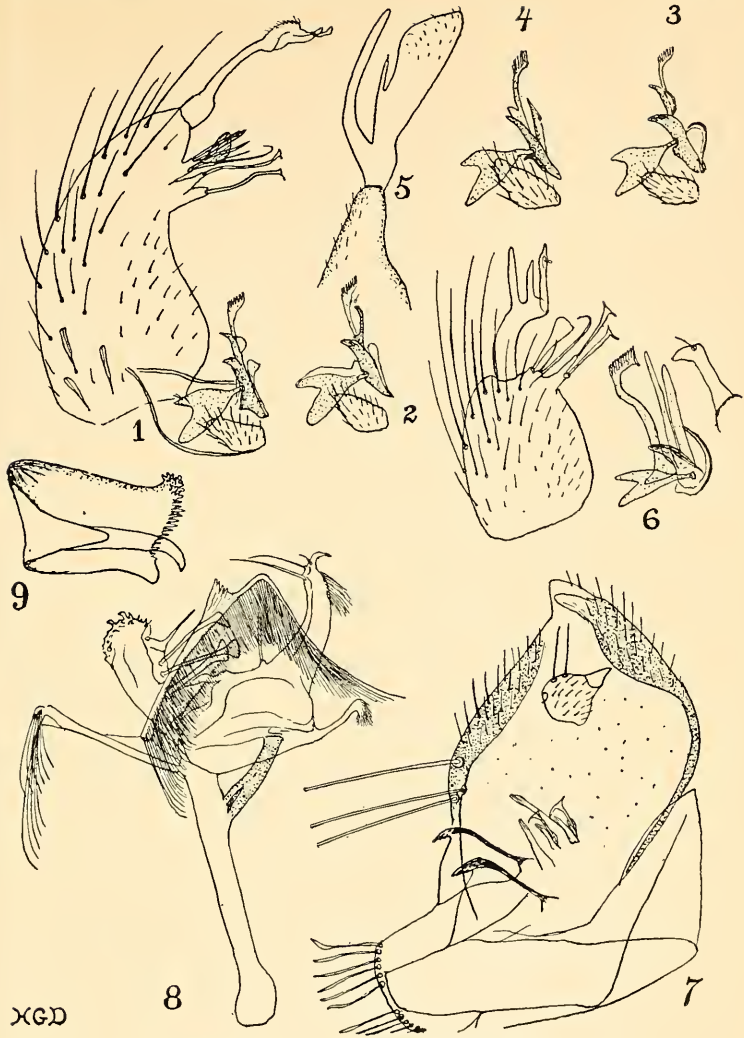
Culex (Choeroporpa) dysmathes Dyar & Ludlow, Ins. Ins. Mens., ix, 47, 1921.

The basal parts of the hypopygium are illustrated in Plate II, figure 3.

Culex (Choeroporpa) holoneus Dyar.

Culex (Choeroporpa) holoneus Dyar, Ins. Ins. Mens., ix, 35, 1921.

The basal parts of the hypopygium are illustrated in Plate II, figure 4.



HYPOPYGIUM OF MALE MOSQUITOES

Fig. 1. *Culex (Choeroporpa) pasadaemon* Dyar, side piece and basal parts.

Fig. 2. *Culex (Choeroporpa) merodaemon* Dyar, basal parts.

Fig. 3. *Culex (Choeroporpa) dysmathes* Dyar & Ludlow, basal parts.

Fig. 4. *Culex (Choeroporpa) holoneus* Dyar, basal parts.

Fig. 5. *Prosopolepis prolepidis* Dyar & Knab, clasper.

Fig. 6. *Culex (Helcoporpa) trifidus* Dyar, side piece, basal parts, and ninth tergite.

Fig. 7. *Sabethoides nitidus* Theobald, side piece and basal parts.

Fig. 8. *Sabethoides nitidus* Theobald, clasper.

Fig. 9. *Culex chidesteri* Dyar, mesosome.

Prosopolepis prolepidis Dyar & Knab.

Wyeomyia prolepidis Dyar & Knab, Ins. Ins. Mens., vii, 1, 1919.

Prosopolepis prolepidis Dyar, Ins. Ins. Mens., vii, 142, 1919.

Prosopolepis prolepidis Dyar & Ludlow, The Military Surgeon, xlviii, 677, 1921.

The figure of the clasper is repeated from the last reference cited above, Plate II, figure 5.

Culex (Helcoporpa) trifidus, new species.

The definition of the subgenus *Helcoporpa* may be enlarged to include the present form by reading "tip of clasper obliquely elliptically excavate, or branched."

Bronzy black, the abdomen with small basal segmental white spots.

Head with flat black scales on vertex, many forked brown ones behind, and a narrow border of white ones along the eye-margins. Mesonotum with fine hair-like dark brown scales. Abdomen bronzy black above, with small segmental white lateral spots; venter dark gray, the segments very narrowly white at their bases. Legs black, the femora white below nearly to the tips; coxæ green. Wing-scales black, narrow, those on the forks of the second vein narrowly ligulate. In the male, the palpi exceed the proboscis by about the length of the last joint, slender, pointed, the last two joints sparsely hairy.

Hypopygium. Side-piece short, subspherical and thick, the end of the abdomen enlarged thereby; lobe near the apex, the outer division shortly notched, with a spatulate leaf, a long hooked filament and a short one; inner division with two filaments with triangular pointed tips, one inserted more basally than the other. Clasper thick, divided into three erect parallel lobes, the center one shorter, the outer one bearing a short appendiculate spine subapically. Tenth sternites comb-shaped, the teeth at the tip divaricate, forming a hook. Mesosome with two long slender straight plates; basal hooks curved; parameres normal, the articulated plate (basal plates?) furcate. Ninth tergites elongated, foot-shaped, with a single seta (Plate II, figure 6, side piece and basal parts).

Types, two males, paratypes, four males and five females, No. 24158, U. S. Nat. Mus.; Escasú, Costa Rica, February 7, 1921, and Tiribí, Costa Rica, January 7, 1921 (A. Alfaro); also Rio Ciruelas, Costa Rica, April 10, 1921 (A. Alfaro).

Sabethoides nitidus Theobald.

Sabethes nitidus Theobald, Mon. Culic., ii, 347, 1901.

Sabethoides nitidus Howard, Dyar & Knab, Mosq. No. & Cent. Am. & W. I., iii, 37, 1915.

Sabethoides nitidus Bonne-Wepster & Bonne, Ins. Ins. Mens., ix, 2, 1921.

Male. Proboscis long, straight, slender, not swollen at the tip, white below for three-fourths its length. Palpi very short, exceeding the clypeus by about its own length. Antennæ as in the female. Femora more broadly white beneath than in the female on fore legs, the mid-femora white at base and with a bright white area beneath at tip occupying about one-fourth of the joint; first mid tarsal white below; second joint white all around, except for a narrow black dorsal line running two-thirds the length of the joint; third tarsal white at base, the upper side black at tip, the black area beginning as a dorsal line and widening to enclose the whole joint at tip.

Hypopygium. Side piece elliptical, flattened, concave, strongly chitinized on the edges; three setæ within; a rounded triangular plate toward the tip, bearing two setæ and a tooth (Pl. II, fig. 7). Clasper with slender column, triangularly widened and divided into five arms, the supporting limb chitinized; first arm small, slender, recurved, spinose; second stout, with pointed curved tip, three setæ and a short beard; third transverse, long, bar-like, angled outwardly like a bird's wing, bearing long fimbriate cilia throughout; fourth thick, capitate, rugose at tip, bearing inwardly three club-shaped filaments and a pointed one; fifth slender, rod-like, with two groups of long curved cilia at its apex (Pl. II, fig. 8). Tenth sternites with rod-like chitinized edge and dentate tip. Aedoeagus of two paired appendages, toothed at tip, the smaller pair with a plate behind each, giving rise to a triangular-tipped filament. Ninth tergites each with six stout setæ with expanded tips.

Besides the localities given in the monograph, the following may be cited: Dona Maria, Chiapas, Mexico (D. L. Crawford); Guatemala (R. Morales); Matapalo, Costa Rica, January 16, 1921 (A. Alfaro); Higuito, San Mateo, Costa Rica (Pablo Schild); David, Panama, August 10, 1920 (J. Zetek); Rupununi, British Guiana (K. S. Wise).

The fortunate discovery of this long-sought male is due to the indefatigability of Dr. Anastasio Alfaro of the Costa Rican National Museum at San José. Dr. Alfaro met with the species in some numbers, biting by day, and by sweeping in the vicinity, secured the male. Twenty-two specimens were thus taken at Matapalo, and accompanying them were only four other mosquitoes, respectively, *Culex declarator* D. & K. ♀, *Aedes taeniorhynchus* Wied. ♀, *Aedes cuneatus* D. & K. ♀, too much rubbed to be sure, and *Anopheles punctimacula* D. & K. ♂.

In the monograph we suggested that this mosquito was probably predacious in the larval state, on account of its rarity, and only single specimens being caught; but if so, the *Sabethoides nitidus* must have consumed all of their prey in this case, for they were in some numbers and no other Sabethid was flying. The four mosquitoes caught with them are all marsh-pool or ground-pool breeders, and could not have formed the prey of a Sabethid larva. It occurs to us to make the suggestion that this species is predacious on larvæ occurring in cocoon husks, cacao shells and bamboo joints, such as *Haemagogus*, etc. The specimens taken by Mr. Schild were accompanied by *Haemagogus iridicolor* Dyar, and in Dr. Alfaro's case the suggestion made above may explain the absence of accompanying adults.

Culex (Culex) chidesteri, new species.

Described from two males. Proboscis with a pale whitish band beyond the middle; palpi exceeding the proboscis by more than one length of the last joint, black, the last two joints hairy, a faint pale band on the long joint. Vestiture black, as far as can be seen, both specimens being denuded; in one the tarsi are entirely black, in the other, very faint indica-

tions of narrow pale rings at the joints. The wing scales are rather broadly ligulate, especially on the forks of the second vein.

Hypopygium. Side piece with a subapical lobe, bearing three rods, of which the middle one is stouter, a leaf and a seta. Mesosome thick, cylindrical, the end truncate, slightly excavate, with a row of numerous small even teeth; the upper angle is rounded and covered with short papillose teeth, the lower angle rounded and short; a stout tooth arising from the base of the mesosome in the middle, and exceeding it. Tenth sternites tufted with even spines, with a stout curved basal arm.

The species falls in the table (Ins. Ins. Mens., vi, 94, 1918) with *stenolepis*, from which it differs in the shape and spinulation of the mesosome (Pl. II, fig. 9). In *stenolepis*, also, the tarsal joints are broadly ringed with white.

Types, two males, No. 24716, U. S. Nat. Mus.; Colon, Panama, June 24, 1921, taken on the hospital screens between 7 and 8 a. m. (W. S. Chidester, communicated by J. Zetek).

Uranotaenia orthodoxa, new species.

Head purplish black, with a round silvery blue spot at the vertex; clypeus and tori ochraceous. Prothoracic lobes with bluish silvery scales; mesonotum pale brown, with small black hairs and longer bristles, leaving two narrow bare lines, and a broader space on each side posteriorly; an oblique line of silvery blue scales from the root of the wing forward to the middle of mesonotum. Abdomen black above, dull yellowish below. Legs black scaled, with bluish and bronzy reflections, the femora pale beneath. Wing scales black, a line of bluish silvery ones on the base of the fifth vein.

Type, female, No. 24706, U. S. Nat. Mus.; Tiribí, Costa Rica, May 29, 1921 (A. Alfaro); paratype, female, San José, Costa Rica, May 15, 1920 (A. Alfaro).

Nearest to *U. pallidoventer* Theobald, but the head entirely dark blue behind, without the border of metallic scales.

Single examples occurred in two rearings, all the other specimens being *Culex coronator* in both cases.