

DESCRIPTION OF NINE NEW SPECIES OF CULEX, SEVEN FROM PANAMA AND TWO FROM VENEZUELA

(Diptera, Culicidae)

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No apologies are made for the length of the descriptions of the male terminalia given in this paper. The parts are so complicated, and in many good species are so nearly alike, that only by close attention to minute details of structure can specific differences be determined. Good figures assist in describing species, but because of the difficulties inherent in portraying a three-dimensional object in two dimensions, complete verbal descriptions are desirable, to indicate the orientation of the parts. In the following descriptions the fact that those parts which are apparently dorsal are morphologically ventral, and vice versa (owing to the torsion of the terminalia through 180° after emergence of the imago), has been indicated where necessary.

Some methods and apparatus which have been useful may be mentioned. Staining in acid fuchsin has assisted in determining the number and shape of the filaments of the lobe of the sidepiece. In every instance, the parts have been dissected, and in most cases mounted in a Cobb mount which permits both sides of an object to be viewed under one thickness of a coverglass. A good binocular microscope, with magnification up to 450 diameters, was used, fitted with eyepiece cap diaphragms and substage stop, to increase the stereoscopic effect of the binocular microscope. The advantages of these eyepiece caps and substage stop do not seem to be well known to entomologists, but they are of the greatest assistance in obtaining a stereoscopic image.

Undoubtedly a great deal of the difficulty encountered in attempting to identify the neotropical *Culex* is owing to the lack of adequate descriptions and large-scale figures of the terminalia. Edwards (1) predicted and the writer (2) proved that the number of good species had been exaggerated; it is hoped that future workers in this genus will not increase the

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muddle by giving us cursory, inadequate descriptions of supposedly new species, without figures, or with small-scale, indecipherable sketches of the terminalia. To remedy the existing situation, a thorough going revision of the entire genus as it occurs in the Americas is urgently required.

The writer has followed Edwards' (1) classification of the genus *Culex*, which differs somewhat from that of Dyar (3). The species placed by Dyar in sections *Choeroporpa*, *Helcoporpa*, *Dinoporpa*, *Melanoconion*, etc., have been regarded by Edwards as of one subgenus, *Melanoconion*. Under the classification used by Dyar, the nine species here described would fall into the following subgenera and sections: *vexillifer* n. sp. belongs to subgenus *Mochlostyrax*, section *Mochlostyrax*; *quadrifolius* n. sp., *flabellifer* n. sp., *limacifer*, n. sp., *elephas* n. sp., *paracrybda* n. sp., *lucifugus* n. sp., and *amitis* n. sp., all belong to section *Choeroporpa*; and *browni* n. sp. belongs to section *Anoedioporpa* of subgenus *Melanoconion*.

***Culex* (*Mochlostyrax*) *vexillifer*, new species**

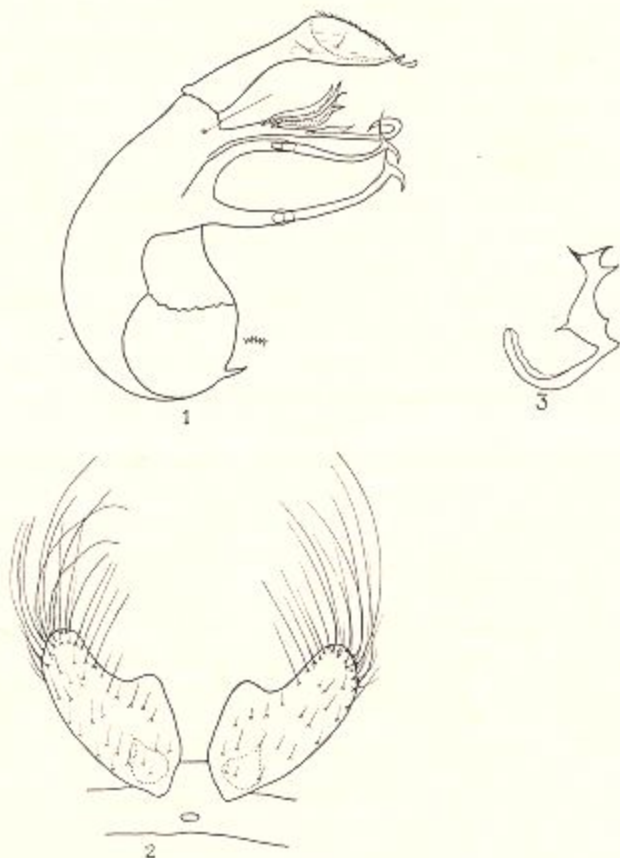
(Figs. 1-3)

Female: A small dark unmarked *Culex*, without abdominal markings.

Male: Palpi exceeding the proboscis by almost the length of the last two segments. Male terminalia: Clasper short, stout, widened at base, strongly constricted beyond middle, expanded into a foot-shaped "head" at tip. Outer surface of head with an oval depression, the internal border of which is finely wrinkled, with small triangular lamellae; a small seta from a tubercle near external border, and another smaller seta on outer side. A minute upturned terminal horn, with subterminal flattened appendicle. Sidepiece well rounded outwardly, clothed with a few sparse spines and a few long striate scales. Outer division of lobe of sidepiece a very slender column, bearing on a slender continuing arm a long hook-tipped flattened rod, and a short lanceolate filament. Inserted proximal to these are five closely appressed, curved leaves, their bases slender, the blades widened, the longest with pointed tip, the others with truncate tips. Inner division of the lobe of the sidepiece divided, with two widely furcate arms, the outer slightly longer than the inner; each with a long slender rod, with capitate upturned tip, doubly hooked, the internal hook much produced into a long slender filament. Tenth sternite slender, straight, with comb-shaped tip, with about 12 fine teeth. Tenth tergite membranous, inconspicuous. Inner paired plate of mesosome with long stem, and three radiating points at tip, the apical short, pointed, the lateral thicker, with somewhat rounded point, the ventral (apparent dorsal) point long, sharp, directed upward and ventrally. A stout conical ventral point about one-third distance up from base. Basal hooks long, curved, widened, with hooked tips. Lobes of ninth tergite very large, flattened, the tip roundedly produced, with many long curved hairs from apex; a small

bare angle from posterior border. Base slightly produced, with short setae. Tergite with a broad ventral plate with an oval lacuna, as in *Culex pilosus* and several other species of *Culex*, in all of which it appears to be the opening of a tubular duct, whose function is unknown, and which has not been noted in any descriptions known to the writer.

The species is close to *alogistus* Dyar, but differs in the shape of the lobes of the ninth tergite and in the mesosomal plate.



Culex vexillifer, n. sp.

Fig. 1, Sidepiece. 2, Lobes of ninth tergite. 3, Inner plate of mesosome.

Types: 1 female, 2 males, the male terminalia in balsam mounts. The material has been deposited in the U. S. National Museum, together with balsam mounts of the larval skins. Type locality, Barro Colorado Island, Gatun Lake, Panama Canal Zone, January 15, 1935.

Larva: A typical *Mochlostyrax*, but unique among the known larvae of this subgenus in having the scales on the eighth abdominal segment

in a patch of about 50, instead of a single row. Head broad, antennae long, with tuft at outer three-fourths. Anterior frontal hairs small multiple (10-haired) tufts. Outer mid-frontal hair (just posterior to antenna) a long six-haired tuft. Middle mid-frontal hair single, long. Inner mid-frontal hair double, long, inserted posterior to and in line with middle mid-frontal hair. Inner and outer occipital hairs minute 3-haired tufts. Anal siphon short, curved dorsally, with 8 pairs of long ventral tufts, and two pairs of long 2-haired lateral tufts. Pecten 10 long fringed spines, becoming longer outwardly. Scales of eighth abdominal segment in a triangular patch of about 50-60, smaller at base of patch, longer at apex, each scale with slender body, the tip broadly expanded and fringed.

The larvae were taken from the water held between the buttressed roots of a tree overhanging a stream on Barro Colorado Island, being pointed out to me by Dr. Frank M. Chapman. This is an unusual breeding-place for this subgenus, all the other known larvae being addicted to ground-pools. The species is named *vexillifer*, from vexillus, a banner or standard, in reference to the conspicuous long pennon-like projection from the tips of the rods of the inner division of the sidepiece.

Culex (*Melanoconion*) *quadrifoliatus*, new species

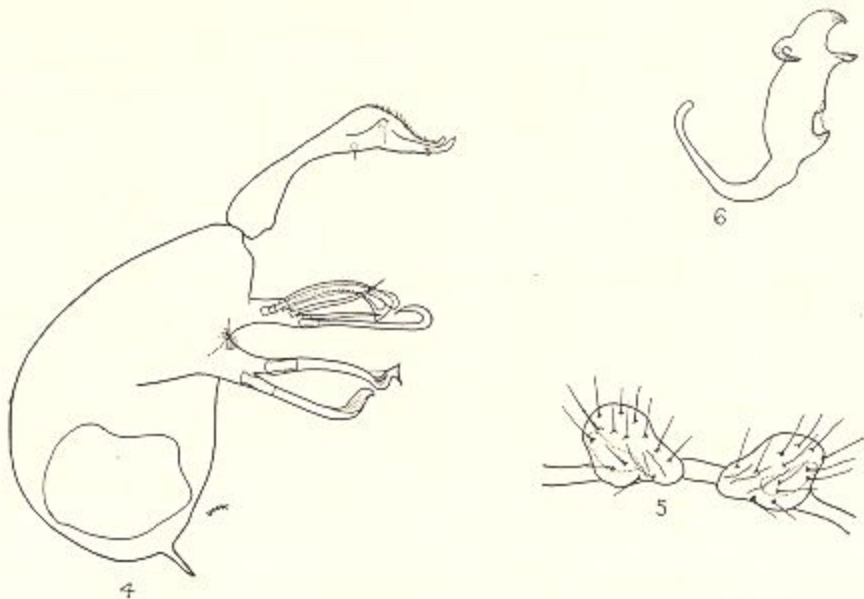
(Figs. 4-6)

Female: Unknown.

Male: A small brown unmarked *Culex*, the palpi exceeding the proboscis by nearly the length of the last two segments. Male terminalia: Clasper moderate, thickened at base, slightly curved, strongly constricted beyond middle, the apex expanded, with grooved snout-shaped tip, outwardly dentate, the crest pilose. Terminal horn small, upturned, appendicle large, sub-terminal, grooved. Eye-seta below crest, set very close under the overhang; a smaller seta below and proximal to it. Sidepiece rounded outwardly, sparsely clothed with few short setae and striate scales. Outer division of lobe of sidepiece a short thick column, with the following appendages: from an offset on the outer side of the middle of the column is a stout filament; from the tip of the column three curved spatulate filaments with rounded tips; beyond these a long lanceolate filament. On a slender continuing arm is a long hook-tipped rod, and a smaller lanceolate filament. Inner division of lobe of sidepiece a short column, with a patch of fine pilosity at base, between it and outer division. Outer arm short, with long curved rod with capitate tip. Inner arm absent, the rod sessile, nearly as long as the outer rod, the tip widened, flattened, upcurved, with recurved tip.

Tenth sternite short, curved, with about 9 long blunt teeth. Lateral plates triangular, large. Tenth tergite membranous, inconspicuous. Inner paired plate of mesosome with short thick stem, upper arm short, curved and pointed, lateral arm flattened, tip truncate, ventral arm a

long semicircular horn, on same level with lateral arm. Lobe of ninth tergite small, ovoid, oblique, the base produced, the whole covered with short setae.



Culex quadrifolius, n. sp.

FIG. 4, Sidepiece. 5, Lobes of ninth tergite. 6, Inner plate of mesosome.

Type: One male, the terminalia in a balsam mount. Type locality, Mojingo Swamp, lower Chagres River (Atlantic Side), Panama Canal Zone, December 6, 1933. The material has been deposited in the U. S. National Museum.

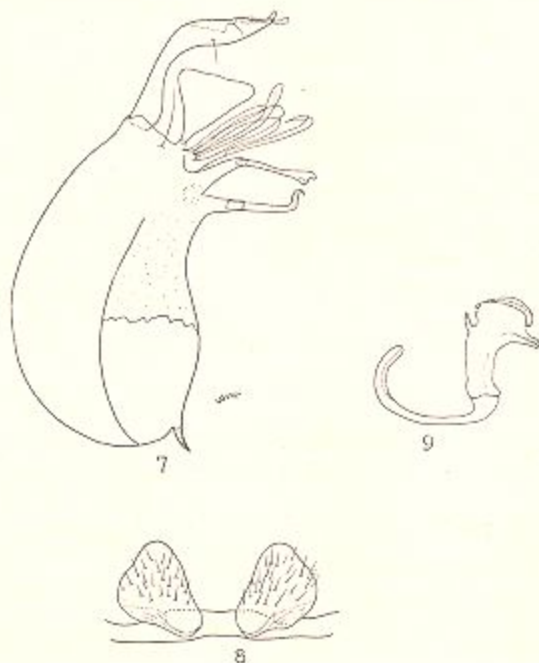
***Culex (Melanoconion) flabellifer*, new species**

(Figs. 7-9)

Female: Unknown.

Male: A small brown unmarked *Culex*, the palpi exceeding the proboscis by nearly the length of the last two segments. *Male terminalia*: Clasper very long and slender, curved, constricted beyond middle, the tip dorsoventrally compressed, scarcely expanded, grooved, with scant pilosity outwardly; a short upturned terminal horn and a broad subterminal appendice. A triangular projection on dorsal (apparent ventral) aspect, with eye-seta beneath, a shorter seta within proximally. Sidepiece rounded, somewhat conical towards tip, the outer and inner divisions of the lobe crowded towards tip. Outer aspect rounded, clothed with sparse setae. Outer division of lobe of sidepiece very short, nearly sessile, set obliquely very close to tip of sidepiece; a short continuing arm bears a long hook-tipped rod and a lanceolate filament three-quarters as long. From a slight eminence

adjacent is a series of setae, the most proximal long, narrowly lanceolate; the next two longer, equal, spatulate, with truncate tips; the next still longer, spatulate, with rounded tip. Between the outer division and the insertion of the clasper, arising from a slight eminence, is a very large triangular fan-like leaf (whence the name, from *flabellus*, a fan), not striate, the free border somewhat crenate. A strong seta opposite the leaf, on ventral side of sidepiece. Inner division of lobe of sidepiece short, the arms furcate, unequal, the inner half the length of the outer; the outer arm with a slender curved rod with hooked capitate tip; the



Culex flabellifer, n. sp.

FIG. 7, Sidepiece. 8, Lobes of ninth tergite. 9, Inner plate of mesosome.

inner arm with a shorter, nearly straight rod, the tip upturned, flattened, with recurved point. A patch of fine pilosity at base of inner division. Tenth sternite moderate, curved, with comb-shaped tip bearing about 10 curved teeth. Tenth tergite long, narrow, somewhat chitinized. Inner paired plate of mesosome with short thick stem; upper arm with curved free border, somewhat hooded, with a few serrations ventrally; lateral arm a stout point; ventral arm a stout curved horn. Lobe of ninth tergite somewhat conical, set obliquely on tergite, the apex produced, bare, the body with many short setae from small tubercles.

Type: A single male, the terminalia in a balsam mount. Deposited in the U. S. National Museum. Type locality, Santa Rosa, Colon Province, R. de Panama; a small native

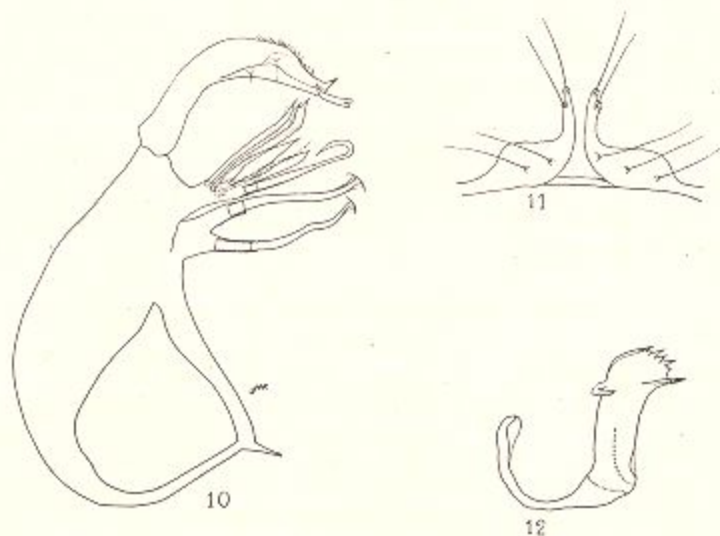
village on the right bank of the Chagres River, a few miles below Madden Dam. The unique specimen taken by sweeping, June, 1932.

Culex (Melanoconion) limacifer, new species

(Figs. 10-12)

Female: Unknown.

Male terminalia: Clasper short, thick, scarcely constricted before the long, snout-shaped "head," which is minutely pilose outwardly. Terminal horn large, upturned; a very long, flattened, cleft, terminal



Culex limacifer, n. sp.

FIG. 10, Sidepiece. 11, Lobes of ninth tergite. 12, Inner plate of mesosome.

appendicle. A groove from the terminal horn to the overhang above the short eye-seta; a second seta present proximal to this. Outer division of the lobe of the sidepiece thick, with a long inner continuing arm bearing a long hook-tipped rod and a smaller lanceolate filament. The base of the inner arm bears a stout curved flattened filament, its tip extending nearly to the ends of the outer group of filaments. The outer aspect of the column bears a very slender seta, inserted evenly with the stout curved filament. The outer group of 4 (or 5?) flattened, closely appressed, bent filaments is sessile on the column, basal to the stout flattened filament. A long strong seta arises on the outer aspect of the column, at its base. Inner division of lobe of sidepiece furcate, the outer arm more than twice the length of the inner. Each arm bears a long, slender, capitate rod, that of the inner arm being upcurved, with widened and flattened tip. Below the inner division, outwardly, is a patch of short setae from tubercles. Tenth sternite straight, the tip curved, comb-shaped, with 8 or 9 teeth. The inner paired plate of

the mesosome with uniform stem, with flattened erect arm, rather coarsely dentate towards the dorsal tip; lateral arm sharp, flattened, long; a short sharp curved horn arises from the stem at the same level as the flattened lateral arm. Basal hooks long, widened centrally, with hooked tips. Lobes of the ninth tergite unique, their form best understood by reference to the figure. On the greatly elongated projecting inner tips are two long setae, one inserted just below the tip, the other slightly proximal to it, on the outer aspect. Three or four (the number varies) long, laterally directed setae on the body of the lobe. The species is named from a fanciful resemblance of the lobes of the ninth tergite to a pair of garden slugs (*Limax*), with their antennae erect.

Type: A single male, the terminalia in a balsam mount. Bred from a pupa found in a stream at Chase, Costa Rica, just across the Panama boundary, in Bocas del Toro Province, February, 1928.

Paratype: The terminalia from a male bred from a pupa brought to the Ancon Sanitary Office, February, 1934, locality of capture unknown, but probably in the environs of Panama City, R. de Panama.

***Culex (Isostomyia) browni*, new species**

(Figs. 13-15)

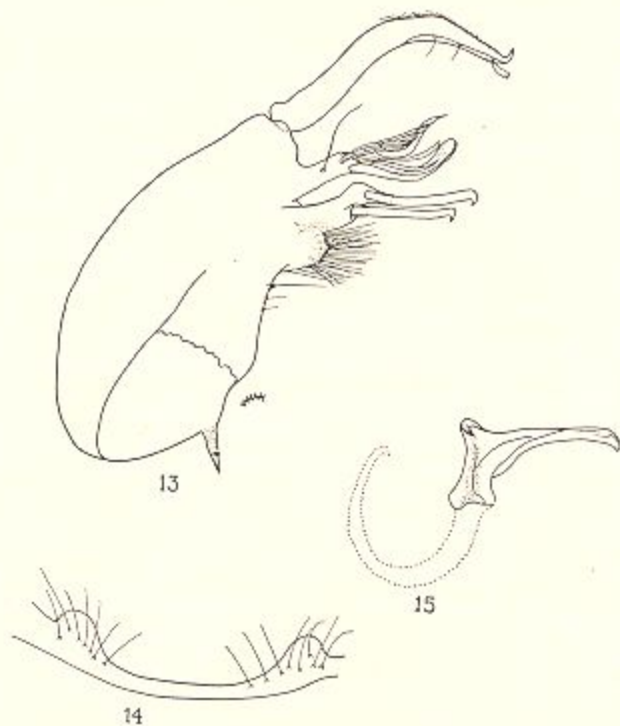
Male: A small brown *Culex*, with short palpi.

Male terminalia: Clasper slender, nearly uniform in thickness from side view, strongly curved inward beyond middle, somewhat flattened dorsoventrally; outer margin clothed with fine appressed setae beyond middle, followed to tip by many closely set triangular lamellae. Terminal horn short, upcurved; a short subterminal appendicle, somewhat widened at apex. Two rather widely separated subequal fine setae arise on the inner surface of the clasper, not far from the tip.

Sidepiece long, oval, conical towards tip, the basal opening very long and narrow; outer aspect clothed with sparse fine setae. Outer division of lobe of sidepiece with a thick dorsoventrally flattened stem, arising very close to the insertion of the clasper, and bearing the following appendages: inserted midway of the stem, on the outer aspect, a long fine seta, with curved tip; proximal to tip of stem, and on the inner aspect, two long fine filaments; a third similar filament is inserted slightly distal to these. At the tip is a long curved grooved filament, flattened and rounded at tip. Inserted at about the same level are two flattened curved filaments, about half the length of the grooved filament. At the tip on the inner aspect is a number of appressed flattened pointed filaments, and outwardly a long sickle-shaped filament from a stout base.

Inner division of lobe of sidepiece a stout column, the inner arm shorter than the outer. Outer arm elbowed ventrally, swollen; the filament deeply inserted in the angle of the elbow, long, strong, straight, with hooked tip. Inner arm slender, straight, with a similar filament, not quite so long. Proximal to the inner division is a large rounded boss, densely clothed with long strong setae from prominent tubercles;

several similar setae at base of inner division and of the rounded boss. Inner plate of mesosome T-shaped, with very short straight stem; dorsal (apparent ventral) arm very long, flattened, downcurved and rounded at tip; ventral arm a short thick curved horn. Tenth sternites with slender stem, tip comb-shaped, with about seven straight teeth. Lobes of ninth tergite widely separated, the tergite between them very narrow; lobes small, somewhat hemispherical, with a few fine setae at base only.



Culex browni, n. sp.

FIG. 13, Sidepiece. 14, Lobes of ninth tergite. 15, Inner plate of mesosome.

Type: One male, the terminalia in a balsam mount. The material has been deposited in the U. S. National Museum.

The unique specimen was taken by sweeping with a net near the "Army boundary ditch" near Gatun, Canal Zone, November 29, 1933, by Mr. C. G. Brown, Gatun District Sanitary Inspector, to whom, for his assistance on many occasions, and because of his intelligent interest, I take pleasure in dedicating this species.

The species is an *Isostomyia* (*Anoedioporpa*), falling with *corriganii* and *conservator* on the short male palpi, and on the

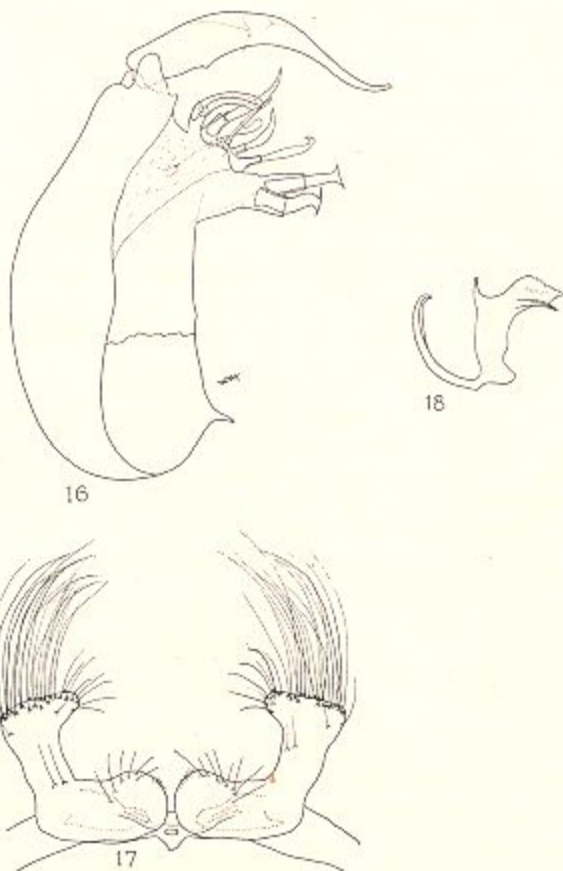
shape of the mesosomal plate and the lobes of the ninth tergites, but distinct in the possession of the large hairy boss at the base of the inner division of the lobe of sidepiece, and the different armature of the outer lobe.

***Culex (Melanoconion) elephas*, new species**

(Figs. 16-18)

Female: Unknown.

Male: A small dark brown unmarked *Culex*. The palpi are rather shorter than is usual, exceeding the proboscis by only half the length of the last segment.



Culex elephas, n. sp.

FIG. 16, Sidepiece. 17, Lobes of ninth tergite. 18, Inner plate of mesosome.

Male terminalia: These bear a striking resemblance to those of *Culex egcymon* Dyar, a very common species in the Canal Zone, each part having distinct homologies with the corresponding part in *egcymon*

but so different in details that confusion between the two species is impossible. The very long, tapering, curved clasper bears a ludicrous resemblance to the proboscis of an elephant; hence the descriptive name.

Clasper very long, about two-thirds the length of the sidepiece; distally greatly produced, narrowing to a fine upturned tip, without pilosity, terminal horn, or appendicle; much expanded basally, with an angular projection on outer aspect, slightly before middle; a long, distally directed seta on outer margin, a shorter mesially directed seta within and beneath the angular projection; base widened dorso-ventrally, provided on each side with a socket articulating with processes from the apex of the sidepiece.

Sidepiece rounded outwardly, with a few striate scales on base outwardly; tip with a long process on each side, articulating with the clasper. Inwardly with a narrow triangular pilose area, slightly produced at base of outer division of lobe of sidepiece.

Outer division of lobe of sidepiece a low cone; on the inner (mesial) side, remote from the other filaments, is a short projection bearing three short thick curved filaments, all about equal in length. Outwardly (laterally) in order distally is a long slender filament, recurved at tip like a crozier, inserted on a slight eminence somewhat proximal to middle of lobe; adjacent to the three curved filaments is a long stout slightly sinuate lanceolate filament, broadly and deeply inserted; next is a long slender filament extending nearly to the tip of the stout lanceolate filament; beyond this are two stout filaments, the inner flattened, curved, lanceolate, slightly twisted; the outer filament longer, with stout hooked tip.

Inner division of lobe of sidepiece infuscated, very close to outer division; thick, flattened and widened basally, with a slight hump at base next to the three short curved filaments of outer division, and a thickened curved ridge outwardly. Outer arm infuscated, short, thick, straight, deeply inserted, the apex expanded, with one long and one short laterally projecting tip. Inner arm infuscated, shorter than outer arm, somewhat angled near middle, apex expanded, with one long and one short laterally projecting tip.

Tenth sternite with short stem, angled near base, the tip curved, with about 25 very fine, closely set curved teeth, those nearest stem coarser, straighter. Lateral plates of 10th sternites small, curved, triangular, attached to the ventral (apparent dorsal) side of 9th tergite and to the basal plate. Tenth tergite long, wide, slightly chitinized. Inner plate of mesosome in side view with stem flattened laterally, wide, uniform; three arms at tip, the middle arm furcate, with a shelf-like projection, the upper crest coarsely dentate; lateral arm long, flattened, squarely truncate at tip; ventral (apparent dorsal) arm a long, sharp, laterally-directed point. Basal hooks long, slender, recurved.

Ninth tergite with very large lobes, somewhat L-shaped, nearly approximate, the base of the L broadened, bulbous at tip, with a few spirally arranged setae before bare apex; upright shaft of L very short, with two setae within angle; tip expanded, with bulbous projection mesially, clothed with radiating setae; apex clothed with very many long, mesially directed setae, their tips curved. The strip of tergite

between the enlarged lobes narrow, with a triangular dorsal (apparent ventral) projection with central round lacuna, apparently the opening of a duct.

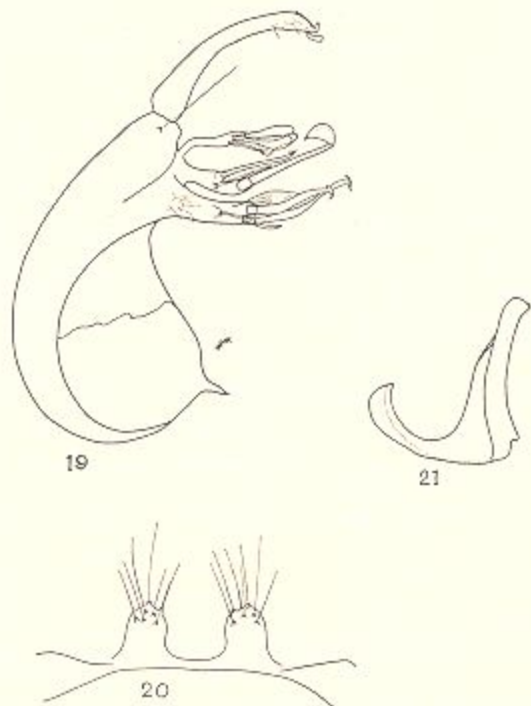
Type: A single male, the terminalia in a balsam mount. The material has been deposited in the U. S. National Museum. Type locality, Juan Diaz neighborhood, east of Panama City, R. de Panama, the male obtained by sweeping, January 28, 1936.

***Culex (Melanoconion) paracrybda*, new species**

(Figs. 19-21)

Female: Unknown.

Male: A small brown unmarked *Culex*, with unbanded legs. Palpi exceeding the length of the proboscis by slightly less than the length



Culex paracrybda, n. sp.

FIG. 19, Sidepiece. 20, Lobes of ninth tergite. 21, Inner plate of mesosome.

of the last two segments. The male terminalia show affinities to those of *Culex taenioptus* Dyar, many homologies being evident, but the details differ so greatly that confusion between the two is impossible. As form *crybda* Dyar (which Edwards elevates to specific status) is without the white tarsal banding, the present species has been named *paracrybda* to denote the close relationship.

Male terminalia: Clasper moderate, thick, widened at base, scarcely constricted before tip, which is scarcely widened, flattened dorso-ventrally, the outer surface minutely pilose outwardly, with large eye-seta and smaller seta proximally. Tip with upturned terminal horn and large triangular subterminal appendicle. Sidepiece rounded outwardly, with sparse long setae. Internally a narrow membranous area separates the apical lobe from the rest of the sidepiece. Outer division of lobe of sidepiece arcuate, composed of two arms, one inner, slender, curved, outer thick, upcurved, the whole inserted nearly at a right angle to the inner face of the sidepiece. The long slender curved column has migrated from its usual position, apically on the outer division, to a point at the base. This slender column bears in order from the base a slender lanceolate filament, two appressed striate leaves, somewhat widened centrally, with rounded tips, and terminally, a larger striate leaf with thin stem and widely expanded blade. The outer thick upcurved arm of the outer division has a long slender seta from a tubercle at its base, at the junction with the sidepiece. Beyond this, about midway of the column, on the outer aspect, is a long lanceolate filament from a prominent insertion. Just beyond this, on the inner aspect, is a slender filament, flattened and slightly curved towards tip. From the upturned produced apex is a long strong hook-tipped rod. Inner division of lobe of sidepiece projecting dorsally (apparently ventrally), undivided, a stout column from a triangular base, very close to the outer division; at the base outwardly are four or five fine setae; outwardly at the middle of the column is a stout short filament; at the apex are two distorted sinuate rods with capitate tips, the inner slightly shorter than the outer; arising apparently from the middle of the outer rod is a triangular membrane, with long point directed towards the base of the lobe. Tenth sternite straight, slender, with very narrow tip, with about five or six closely set long straight teeth. Lateral plate large, triangular, dome-like. Tenth tergite broad, membranous, with a few prominent setae at tip. Inner paired plate of mesosome a simple flattened rod, without terminal horns, the tip rounded, very slightly beaked; the dorsal (apparent ventral) margin of the shaft thickened and chitinized, with a slight basal point; the ventral margin somewhat widened, membranous. Basal hooks rather short, curved, the inner margin chitinized, the tip hooked. Lobes of the ninth tergite approximate, small, erect, ovoid, with about seven long setae at tip only.

Type: A single male, the terminalia in a balsam mount. The material has been deposited in the U. S. National Museum. Type locality, Juan Diaz neighborhood, east of Panama City, R. de Panama, the male obtained by sweeping, January 28, 1936.

***Culex (Melanoconion) lucifugus*, new species**

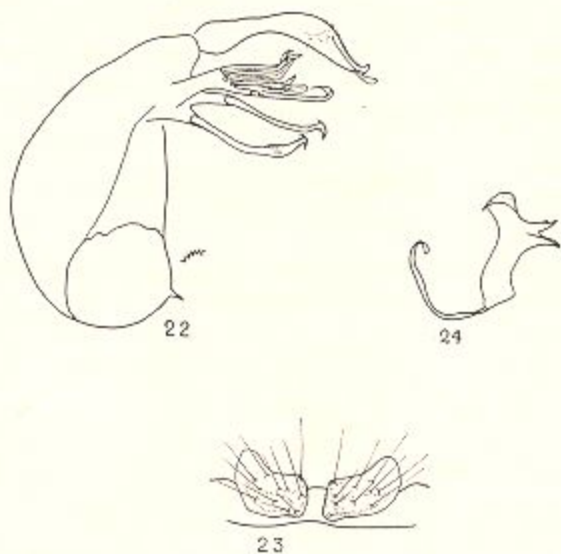
(Figs. 22-24)

Female: Unknown.

Male: A small brown unmarked *Culex*, the palpi exceeding the proboscis by almost the length of the last two segments.

Male terminalia: Clasper long, enlarged at base, constricted before middle, the "head" expanded, very long, being half the length of the clasper; tip snout-shaped, grooved, outwardly with small lamellae distally and with fine pilosity proximally; upturned terminal horn and a large subterminal flattened appendicle at tip. Eye-seta well up under overhang, very long and fine; a smaller seta below and proximal, outwardly.

Sidepiece rounded outwardly, conical towards tip, clothed with sparse setae.



Culex lucifugus, n. sp.

FIG. 22, Sidepiece. 23, Lobes of ninth tergite. 24, Inner plate of mesosome.

Outer division of the lobe of the sidepiece a slender column, directed ventrally (apparently dorsally), with a slender continuing arm bearing a long, flattened, angled rod with hooked tip, and a smaller broad twisted lanceolate filament. Proximal to these is a long, broad, ovate, leaflike filament, and adjacent to it is a long lanceolate filament with bent tip. Proximal to this is a series of four flattened, widened, closely appressed filaments. A long strong seta is on the base of the outer division, outwardly.

Inner division of the lobe of the sidepiece set obliquely, the arms widely furcate, the inner much shorter than the outer; both arms bearing long rods, the upper directed ventrally (apparently dorsally), straight at base, characteristically curved towards tip, with flattened hooked tip. Lower rod straight nearly to tip, then abruptly bent upwards, widened, striate, with terminal hook.

Tenth sternite with straight shaft and curved comb-shaped tip, with about nine curved teeth. Tenth tergite long, narrow, triangular, inconspicuous.

Inner paired plate of mesosome with base slender, erect; part beyond dorsally directed at angle of 45° , widened; three arms at tip, upper arm widened, semicylindrically curved laterally, coarsely serrate on free margin; lateral arm long, flattened, truncate; ventral arm inserted on same level, a long laterally curving sharp horn.

Lobe of ninth tergite somewhat resembling that of *Culex limacifer* n. sp. (q. v.); oblong, the inner edge produced to form an erect point clothed with short caudally directed setae; the body of the lobe with laterally directed setae.

Type: A single male, the terminalia in a balsam mount. The material deposited in the U. S. National Museum.

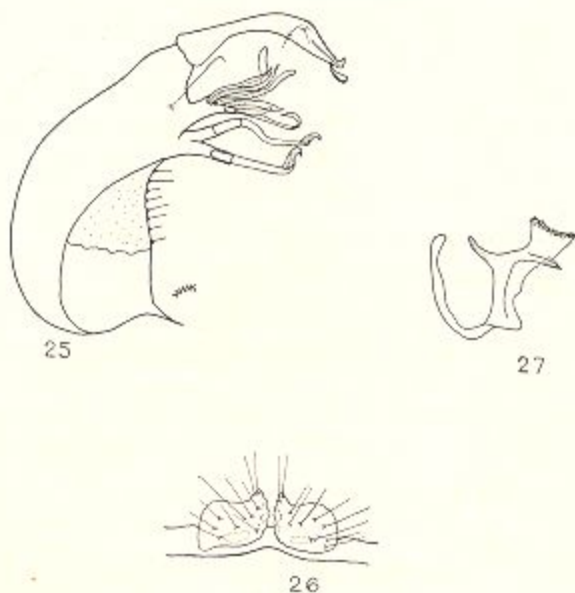
Type locality: Quiriquire, Venezuela (near Maturin, north-eastern Venezuela), June 14, 1935.

***Culex amitis*, new species**

(Figs. 25-27)

Female: Unknown.

Male: A small dark brown *Culex*, the palpi exceeding the proboscis by almost the length of the last two segments.



Culex amitis, n. sp.

FIG. 25, Sidepiece. 26, Lobes of ninth tergite. 27, Inner plate of mesosome.

Male terminalia: Clasper with stem enlarged basally, constricted before middle, the "head" very long, ending in a grooved snout-shaped tip, clothed outwardly with minute lamellae. Terminal horn large, upturned; subterminal appendicle long, slender, grooved. An eye-seta

well up under overhang, a smaller seta below and proximal, outwardly. Sidepiece rounded outwardly, clothed with sparse curved setae; somewhat conical towards tip.

Outer division of lobe of sidepiece a rather short, slender column, widening outwardly, with inner continuing arm bearing the usual long flattened hook-tipped rod and a smaller lanceolate filament, nearly equally inserted; on an offset near the base of the continuing arm are a broad striate leaf, and a broad flattened round-tipped filament. Proximal to these is a series of three filaments, the most proximal closely appressed, the distal longer, spatulate. A long strong seta with curved tip is on base of outer division, on outer aspect.

Tenth sternite short, straight, with curved comb-shaped tip, with about 10 teeth. Tenth tergite long, triangular, somewhat chitinized.

Inner paired plate of mesosome with curved stem, with three arms at tip; upper arm widened and curved, directed laterally, the free edge finely serrate; two lateral arms before tip, one short, pointed, with minute tooth before tip; the other much longer, flattened, directed dorso-laterally. Basal hooks long, slender, curved, hooked at tips.

Lobe of ninth tergite oblong, the ventral (apparent dorsal) free margin laterally produced and somewhat curved, the inner basal angle produced; body clothed with long setae from tubercles.

Type: Two males, the terminalia in balsam mounts. Deposited in the U. S. National Museum.

Type locality: Quiriquire, Venezuela (near Maturin, north-eastern Venezuela), June 14, 1935, the material obtained by sweeping.

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3. Dyar, H. G. 1928. The Mosquitoes of the Americas. Carnegie Institution of Washington.