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NEW SOUTH AMERICAN SPECIES OF DOLICHOPIDÆ

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In the present paper there are twenty species described as new, all but two of which are from the S. W. Williston collection now in The American Museum of Natural History, New York City. Two of these species were without locality label, but are no doubt from South America, probably taken in Brazil. The types are in The American Museum of Natural History.

Condylostylus denticulatus, new species

Length, 4 mm.

MALE.—Face wide, only a little narrowed below, bare, its suture near apical third, upper part shining green, lower portion blue, moderately white pollinose; front shining green with blue reflections and numerous long white hairs; palpi black with black bristly hairs and a few pale ones on the edge; proboscis dark yellowish-brown. Antennæ black, the joints of nearly equal length; longest bristle on second joint one and a half times as long as antenna; third joint somewhat triangular, as long as wide, arista dorsal, bare, about as long as width of head; beard white, long and abundant.

Thorax, scutellum, and abdomen shining green with blue reflections, incisures of abdomen very narrowly black, its bristles rather long and numerous; hypopygium rather small, black, its claspers yellow, about as long as hypopygium, with a cluster of long black hairs near the middle and short black appendages at tip, which have minute teeth or very short spines on inner edge.

All the coxæ and femora wholly black; fore coxæ with long white hair and black bristles at tip; femora with long white hair below; fore and middle tibiæ dark yellow, more brown at base; hind tibiæ dark yellowish-brown, with a row of eight or ten slender bristles on basal two-thirds of lower anterior surface, which are three times as long as diameter of tibia, and a row of about thirty hairs on lower posterior surface, which are twice as long as diameter of tibia and become a little shorter at tip; middle tibiæ with two long bristles on anterior surface and another at tip; fore tibiæ with four bristles on upper posterior surface, which increase a little in length; fore and middle tarsi dark yellow, almost brownish yellow, hind tarsi brown; fore basitarsi with long dense pile below; middle basitarsi with four pairs of little bristles below, which are about as long as diameter of joint; hind tarsi slender, not at all widened toward the tip; fore tarsi one and a half times as long as tibia; length of fore tibiæ as 65, middle 92, posterior as 133; joints of fore tarsi as 53-17-12-6-6; middle pair 70-27-14-10-6; of posterior pair as 59-26-19-9-5. Calypters, their cilia, and the halteres black.

Wings wholly grayish hyaline; costa with only short hair; cross-vein oblique; fork of fourth vein at an angle of about 60° with basal part of fourth, length from cross-vein to fork as 40, from fork to wing margin as 29, last section of fifth vein as 24 and cross-vein as 33.

FEMALE.—Face, thorax and scutellum almost wholly blue; front with rather short blackish hairs, longest bristle on second antennal joint about as long as antenna; fore tibiae with four bristles on posterior surface; middle tibiae with the same two long bristles on anterior surface as in male, also two smaller bristles nearer base on upper anterior surface, three below and two at tip; hind tibiae with five small bristles on anterior surface and a row of hairs on lower posterior edge, which are scarcely as long as diameter of tibia; color of legs, feet and venation of wings about as in the male.

TYPES.—Holotype, male, allotype, female, taken at Rio de Janeiro, Brazil, in August; S. W. Williston collection.

This is very much like *goetghebueri* Parent and *panamensis* Van Duzee. From the former it differs in having the hypopygial lamellæ straighter, with a cluster of long black hairs near the middle and slender black appendages at tip, which have minute teeth on inner edge. The lamellæ of Parent's species are very slender, elbowed, and have only a few very short hairs on the edges of apical half; in this the fore tarsi are only one and a half times as long as their tibiae, while in *goetghebueri* the fore tarsi are twice or three times as long as their tibiae. From *panamensis* it differs in having only four bristles on posterior surface of fore tibiae, not six as in that species, and the hypopygial lamellæ differ, as in *panamensis* there is a small, clavate, yellow appendage near tip of the lamellæ, and the first joint of all tarsi is much shorter in *denticulatus* than in *panamensis*.

Condylostylus brevipedis, new species

Length, 5 mm.

MALE.—Face wide above, narrow below, green, almost covered with white pollen; palpi black with white hairs and black bristles; front blue, shining, the blue extending on the sides of the face; antennæ black, longest bristle on second joint not as long as last two joints of antenna taken together, third joint about as long as wide; beard white, not long or very abundant.

Thorax and abdomen green, scutellum and first three abdominal segments mostly blue; first three abdominal segments with a few rather long white hairs on lower part of sides; hypopygium blackish, small, its claspers blackish, about as long as height of hypopygium, slightly enlarged at tip and fringed with rather long hairs on one side.

Coxæ black, anterior ones with a few very short white hairs and one or two black bristles; femora greenish black, with rather short, white hairs below; fore and hind tibiae yellow, extreme tips of posterior tibiae a little brown; fore tibiae with one rather long, slender bristle near middle of lower posterior surface; hind tibiae with a small

bristle on anterior surface at basal fourth; fore tarsi (Fig. 17) with first joint yellow with a long bristle at apical fourth and a shorter one at middle, hairs on lower surface nearly twice as long as diameter of joint; hind tarsi wholly black, thick with long hair, third joint short, not at all enlarged, narrower than second; hind tibiae about one and one-third times as long as first three joints of hind tarsi; middle tarsi missing in the type; length of fore tibiae as 90, hind ones as 166; joints of fore tarsi as 90-24-20-15-8. First three joints of hind tarsi as 75-35-8 (Fig. 18). Calypters and their cilia black; halteres pale yellow.

Wings grayish with the usual brown cross-bands united back as far as the third vein; brown on costa beginning considerably beyond tip of first vein and reaching tip of fork of fourth vein; first cross-band rather narrow, scarcely reaching hind margin of wing; fork of fourth vein at an angle of about 70° with basal part of fourth vein, both sections of fork straight, fourth vein from cross-vein to fork as 53, from fork to wing margin 21, last section of fifth vein as 17, of the cross-vein 41.

TYPE.—Male, taken at Rio de Janeiro, Brazil, in August; S. W. Williston collection.

This belongs in the group which includes *uniseta* Becker, but seems to be distinguished by the long second joint of hind tarsi together with the short third joint, which is not at all enlarged but cylindrical and scarcely one-fourth as long as second.

Condylostylus crassitarsis, new species

Length, 5 mm.

MALE.—Face rather wide, covered with white pollen when viewed from above; face and front green; palpi black with black bristles and pale hairs; proboscis yellow; antennae black, longest bristles on second joint about as long as antenna, third joint small, rounded, arista dorsal, about as long as height of eye; beard white, short and scanty.

Thorax and abdomen shining green, scutellum and first three abdominal segments with blue reflections, last four abdominal segments with bronze reflections, base of segments black; venter with a few short, white hairs; hypopygium small, reddish brown, its claspers short, straight, tapering.

Coxae and femora black; extreme tips of coxae and of fore and middle femora, fore trochanters, all tibiae and fore basitarsi yellow, middle and hind basitarsi yellowish brown; fore and middle tarsi from tip of first joint and whole of hind tarsi blackish; fore coxae with moderately long but not abundant white hair, and two long black bristles near tip; fore tibiae with three slender bristles on lower posterior surface, which are of nearly equal length, the longest about as long as second joint of fore tarsi; middle tibiae with three small bristles on upper anterior and three small ones on upper posterior surface of basal half, besides those at tip; hind tibiae with three small bristles on basal half of anterior surface; fore tarsi with two bristles on apical half of lower surface of first joint, the one nearest middle as 8, the one near tip as 12, hair on lower surface of all joints rather long; first two joints of middle tarsi without special hair or bristles; hind tarsi (Fig. 16) stout, first joint with six inconspicuous little bristles among the long hair on lower surface, third joint slightly widened, fourth and fifth more conspicuously widened, the last nearly round; length of fore tibiae

as 98, bristles on posterior surface as 22 to 27; joints of fore tarsi as 94-31-21-15-8; first two joints of middle pair as 125-28; joints of posterior pair as 85-33-16-11-7, width of fourth joint as 8, of fifth 7. Calypters brown with black cilia; knobs of halteres pale yellow.

Wings grayish, basal half of second vein yellowish; the usual brown cross-bands united back to third vein, also united along fourth vein; the brown on the costa begins half-way from tip of first vein to the cross-vein and extends to tip of fork of fourth vein; there is an oval hyaline spot in first band between third and fourth veins, which nearly forms a break in the cross-band, also a small elongated triangle near costa with its base just back of tip of second vein and extending half-way to tip of third vein; hairs on the costa strong, a little curved, not erect, but the costa might almost be said to be ciliated; fork of fourth vein forming an angle of about 60° with basal part of fourth vein, its upper bend rounded; fourth vein from cross-vein to fork as 58, from fork to wing margin 25, cross-vein 36, the last section of fifth vein as 18.

TYPE.—Male, taken at Rio de Janeiro, Brazil, in July; S. W. Williston collection.

This is very much like *uniseta* Becker, but the bristles on posterior surface of fore tibiæ are longer and much more slender, first joint of fore tarsi with two large bristles and the joints of the tarsi of somewhat different proportional length.

Another male from Corumba, southern Brazil, is probably this species, but is too much broken to be sure. One of the fore basitarsi of the type has no bristle below, but it may have been broken off.

***Condylostylus bisinuatus*, new species**

Length, about 6 mm.

MALE.—Face wide above, narrow below, suture near the middle, green, opaque with white pollen on lower two-thirds, rounded below; front shining green with blue reflections; proboscis yellow; palpi black with long white hair and one black bristle; antennæ black, bristles on second joint about as long as antenna, third joint rounded, scarcely as long as wide; arista dorsal, nearly bare, about as long as the thorax; beard white, moderately abundant but not very long.

Thorax and abdomen green with blue reflections, last three abdominal segments dark purple; second segment broadly dull black in the middle, this black extending narrowly forward in the middle to base of segment; third and fourth segments dull black on basal half, scutellum with two pairs of equally large bristles; bristles of abdomen rather short, its hair black, on lower part of the sides there are quite numerous, but short, white hairs. Hypopygium (Fig. 2) and its appendages black, lamellæ with a few short hairs.

Coxæ and femora black, white pruinose; fore coxæ with moderately long white hair and one black bristle near the middle; fore and middle femora with moderately long white hair below, the middle pair very slightly narrowed or indistinctly notched before the middle, the white hair at this point short; hind femora with a few long white hairs below; narrow tips of fore and middle femora and all tibiæ yellow; middle and hind tibiæ slightly brown at base and tip; middle tibiæ with five hairs above near base, which are twice as long as diameter of tibia, and three slender

bristles below, on second fourth, which are three times as long as diameter of tibia; hind tibiæ without bristles; fore tarsi (Fig. 1) yellow, last joint black, first joint one-fourth longer than tibia, last four joints taken together three-fifths as long as first, first joint bent a little upward then downward towards tip; it has seven long slender bristles on one side and shorter stiff hairs on apical two-thirds of other side, the basal third with long fine hairs on the same side, fifth joint flattened and widened, oval (middle and hind tarsi missing in type); joints of fore tarsi as 100-26-16-8-11; fore tibiæ as 74, middle tibiæ as 156 and hind 205. Calypters and their cilia brown; halteres yellow.

Wings grayish with two dark brown cross-bands, united along the costa to third vein and narrowly along fourth vein, the first band is rather wide and reaches hind margin of wing at tip of fifth vein; on the costa the brown begins at tip of first vein and reaches tip of third vein, filling half of the cell back and beyond the fork of fourth vein, leaving the tip of the wing narrowly gray, the hyaline space between the cross-bands rather narrow; front of wing from base to tip of first vein and back to third vein pale brownish; fourth vein from cross-vein to fork as 74, from fork to wing margin 20, fork of fourth vein extending backward more than half-way to cross-vein, then sharply curved forward, running straight to wing margin; cross-vein as 40, last section of fifth vein as 20, and bent quite sharply toward hind margin of wing.

TYPE.—Male, taken at Chapada, Brazil.

In Abbe O. Parent's key to the North and South American species of this genus (Annales de le Société Scientifique de Bruxelles, (B) XLIX, part 1, p. 84, January 31, 1929) this would run to couplet 8 in group V, species *bifimbriatus* Aldrich. In that species the first joint of fore tarsi is straight and without very long bristles and the third joint longer than the second, while in *bisinuatus* the first joint of fore tarsi is bisinuate and with several bristles as long as second tarsal joint which is much longer than third.

***Condylostylus latimanus*, new species**

Length, 4.5 mm.

MALE.—Face quite narrow below, suture at its middle, lower part green, part above the suture and the front violet, viewed from above the face is nearly opaque with white pollen; palpi black; proboscis dark yellow; antennæ black, its joints of about equal size, bristles on second joint as long as two last joints taken together, third joint somewhat, but very obtusely, pointed at tip, arista inserted above the tip, but distinctly dorsal, nearly bare, not as long as width of head; beard whitish, rather short and scanty.

Thorax and abdomen green with blue reflections, scutellum violet with two pairs of large bristles; dorsum of thorax shining, pleura white pruinose; bristles of thorax and abdomen short; incisures of abdomen a little yellowish, last two abdominal segments purple; hypopygium (Fig. 3) black, its outer lamellæ yellow, long, ribbon-like, fringed with long delicate hairs on lower edge and short and more scattering ones on upper edge.

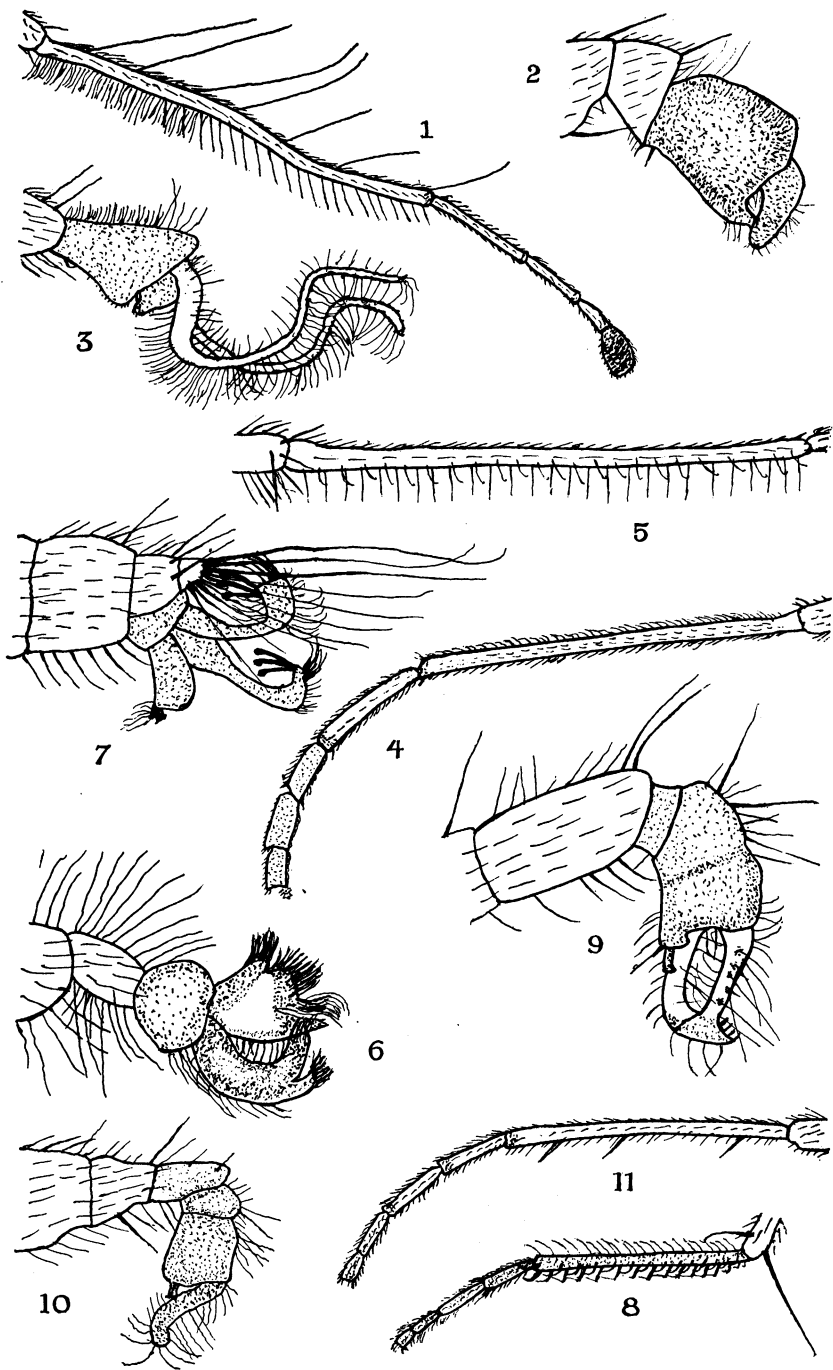
Fore coxæ brownish yellow with white hair and two black bristles near tip; middle and hind coxæ and trochanters black; all femora and tibiæ yellow; apical third of hind femora blackish; sides of middle femora at tip and most of basal half of hind tibiæ brown; all femora with white hair below, which is not as long as width of femora; fore tibiæ wholly without bristles, their hair short; middle tibiæ with very small bristles at tip, also one long slender bristle below, which is one and one-fifth times as long as second joint of middle tarsi; hind tibiæ without bristles, but with a row of longer hairs on lower posterior surface, which are not quite as long as diameter of tibia; fore and middle tarsi blackish brown, but more or less yellowish at base; hind tarsi wholly black, the apical joints very slightly widened; fore tarsi (Fig. 4) gradually a little widened to tip of fourth joint, fifth slightly less widened than fourth; middle basitarsi (Fig. 5) with a row of about 27 delicate, straight, erect hairs on anterior surface, also a row of little, stiff hairs with their tips bent on lower anterior surface; length of fore tibiæ as 82, middle 96, and hind as 163; joints of fore tarsi as 92-26-14-11-8; middle pair as 123-30-20-11-8; hind pair as 85-31-19-12-9. Calypters and their cilia brown; halteres yellow with a brown spot on the knob.

Wings grayish with the usual two brown cross-bands united along the costa to third vein, which is considerably bent back at tip; the brown on the costa begins a little before the tip of first vein and extends almost to tip of third vein, filling two-thirds of the cell back of the fork of fourth vein; first cross-band rather narrow, extending nearly equally each side of cross-vein, scarcely reaching tip of fifth vein; fork of fourth vein reaching back one-third the way to the cross-vein; upper bend abruptly rounded, then running straight to wing margin a little before apex of wing; fourth vein from cross-vein to fork 60, from fork to wing margin as 21; last section of fifth vein as 20, cross-vein 40.

TYPE.—Male, taken in July, at Rio de Janeiro, Brazil; S. W. Williston collection.

This would run in Abbe O. Parent's table of species to *viridicoxa* Aldrich, in couplet 22, group I, but couplet 19 would have to be changed to read "all coxæ black, green or brownish"; it differs from *viridicoxa* in having the fore coxæ rather dark yellowish-brown, and the middle tibiæ with a long, erect bristle or spur below (as in *calcaratus* Loew) and in having the hypopygial lamellæ filiform; it differs from *completus*

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| Fig. 1. | <i>Condyllostylus bisinuatus</i> , new species. | Fore tarsus of male. |
| " 2. | " " " | Hypopygium of male. |
| " 3. | " <i>latimanus</i> , new species | Hypopygium of male. |
| " 4. | " " " | Fore tarsus of male. |
| " 5. | " " " | Mid tarsus of male. |
| " 6. | " <i>difusus</i> Wiedemann. | Hypopygium of male. |
| " 7. | " <i>ornaticauda</i> , new species. | Hypopygium of male. |
| " 8. | " " " | Mid tarsus of male. |
| " 9. | " <i>setitarsis</i> , new species. | Hypopygium of male. |
| " 10. | " <i>tenuitarsis</i> , new species. | Hypopygium of male. |
| " 11. | " <i>trimaculatus</i> , new species. | Fore tarsus of male. |



Becker, to which it is also closely related, in having the long spur on lower side of middle tibiæ at tip and one rather long slender bristle below; Becker's species has three very short bristles on middle tibiæ and no spur at tip below.

***Condylostylus diffusus* Wiedemann**

Length, 5 mm.

MALE.—Face shining green, rather wide, without pollen, suture below the middle, lower part about as long as wide, rounded below. Front mostly blue, shining; palpi and proboscis black, former with black bristly hairs; antennæ black, longest bristle on second joint nearly twice as long as antenna, third joint somewhat triangular, about as long as wide; arista dorsal, not as long as width of head; beard whitish, abundant, but not very long.

Thorax and abdomen shining green with bronze reflections; scutellum with two pairs of large bristles; both dorsum and venter of abdomen with rather long, black hair; hypopygium (Fig. 6) black, its outer lamellæ yellow, broadly black on upper and apical margins, each lamella with two clusters of very black, bristle-like hairs and one cluster of pale hairs; they are cleft rather deeply near inner edge.

All coxæ and femora wholly black; fore tibiæ and tarsi yellow; middle and hind tibiæ and tarsi brown; fore coxæ with abundant and rather long white hair; all femora with abundant, long, white hair below; fore tibiæ with a row of five slender bristles on posterior surface, these of increasing length, the last twice as long as the first; middle tibiæ with two rather long, slender bristles and one small one on upper posterior surface and one long, slender one near base, also two at tip: hind tibiæ with several short, slender bristles on upper anterior surface; fore tarsi nearly twice as long as their tibia, first joint of fore tarsi with very dense, short, whitish pile below; middle tarsi with quite long, silvery-white hairs on upper surface of last two joints which are longer than diameter of joint, the first joint with a few minute spines below; hind tarsi plain, with rather long hair; joints of fore tarsi as 93–26–20–12–6; middle pair as 112–27–20–12–6; of posterior pair as 85–28–21–11–7; Fore tibiæ as 80, middle ones 112, length of hind ones as 143; all pulvilli rather small, white. Calypters, their cilia and the halteres black.

Wings grayish with the usual two brown cross-bands connected along the costa as far back as third vein, the brown of the bands darker in front of third vein, beginning on the costa before the tip of first vein and reaching tip of third vein; fork of fourth vein at nearly a right angle at base, but bending backward above, the upper bend broadly rounded; fourth vein from cross-vein to the fork as 51, from fork to wing-margin 27, last section of fifth vein as 27, cross-vein 50.

Redescribed from one male, taken in July, at Rio de Janeiro, Brazil; S. W. Williston collection.

***Condylostylus distinctus*, new species**

Length, 5 mm.

MALE.—This form is very nearly like *diffusus* Wiedemann, but has no white hair on the last two joints of middle tarsi. It has all parts of nearly the same color as in that species except that the hypopygial lamellæ are darker, but they have the same

groups of black hair as in *diffusus*. The bristles on the tibiæ and the white hair on the lower surface of the femora are the same and the legs have the same white pulvilli; the form of fore tarsi and short pile on lower surface of the basitarsi are the same; the measurements of the sections of the wing-veins are almost like those of *diffusus*; the wings differ in having the basal part of the fork of fourth vein straight and the brown on the costa beginning at or a little beyond the tip of first vein; the proportional length of the joints of the tarsi and tibiæ differ considerably. In *distinctus* the fore tarsi are one and three-fourths times as long as the tibiæ and the first joint is a little shorter than the remaining four taken together; in *diffusus* the fore tarsi are almost twice as long as tibia and first tarsal joint nearly one and a half times as long as the remaining four; the hind tarsi are a very little shorter than the tibia in this and a little longer than tibia in *diffusus*.

Length of fore tibiæ as 90, middle ones as 127, hind as 175; joints of fore tarsi as 76-32-24-15-8; middle pair as 107-32-22-10-6; width of last joint of middle tarsi as 5; joints of posterior tarsi as 97-31-22-11-8. Calypters, their cilia and the halteres black.

Types.—Holotype, male, and three male paratypes, all taken in July, at Rio de Janeiro, Brazil; S. W. Williston collection.

This would seem to be the same as *diffusus* Wiedemann, but it has no white hair on the last two joints of the middle tarsi of any of the four type specimens; this white hair is very conspicuous in *diffusus*. The form of the hypopygial lamellæ seems somewhat different but they are not spread out enough for me to be sure. Both these forms are very much like *furcillatus* Parent, described from specimens taken in Costa Rica, but that species differs in having only one bristle on posterior surface of fore tibiæ, and the hypopygial lamellæ are cleft almost to the petiole, forming two nearly equal parts, the outer part would be nearly round if it were not cleft, and it has no clusters of black hair, which are so conspicuous in this species.

Condylostylus ornaticauda, new species

Length, 4 to 4.5 mm.

MALE.—Face with numerous hairs, which are mostly black, but mixed with shorter, delicate white ones, face and front green or blue, shining; palpi black with white hair and black bristles; proboscis yellow; antennæ black, longest bristle on second joint on lower surface and one and two-thirds as long as antenna, third joint rounded at tip, scarcely as long as wide; arista dorsal, bare, scarcely as long as width of head; beard abundant, rather short, brownish gray.

Thorax and abdomen green with bronze reflections, usually the scutellum and three basal segments of abdomen blue; incisures of abdomen broadly black; scutellum with two pairs of bristles; bristles of thorax and abdomen moderately long, tip of abdomen with very long bristles. Hypopygium and its appendages black (Fig. 7), claspers long with three finger-like appendages at tip, which is enlarged and bears many long hairs.

Coxæ black, fore coxæ with abundant white hair and two black bristles; femora green with long white hair below; tips of fore and middle femora, all tibiæ and fore basitarsi yellow, remainder of fore and whole of middle and hind tarsi black; fore tibiæ with a row of longer hairs on lower anterior edge and three bristles on upper posterior surface; middle tibiæ with three rather long bristles below, one at basal sixth, one at basal third and one near middle; one above at basal third, one curved one near tip on upper anterior edge and an erect spur below near tip, which is two-thirds as long as first tarsal joint; hind tibiæ without bristles; fore tarsi with last joint very slightly widened; middle tarsi (Fig. 8) with a row of little bristles below, which are bent at right angles near the middle, a row of stiff, curved hairs on lower posterior surface and a row of hairs on anterior surface, all these fully as long as diameter of joint; hind tarsi stout with last two joints rounded and nearly as wide as long; length of fore tibiæ as 70; of middle ones 100, joints of fore tarsi as 50-13-12-6-6, middle ones as 54-16-13-6-5; of posterior pair as 50-16-13-7-7, width of apical joints as 6. Calypters brown with black cilia; halteres yellow.

Wings grayish; third vein bent back a little at tip; fork of fourth vein at right angles to fourth, but rounded almost from base to tip, from cross-vein to fork as 38, from fork to wing margin as 26; last section of fifth vein as 22, cross-vein as 33, oblique.

FEMALE.—All femora and tibiæ wholly yellow; all hairs on the face white; bristles on second antennal joint not longer than the antennæ; middle tibiæ without a spur below; hind tibiæ with several bristles; all tarsi plain; otherwise as in the male.

TYPES.—Eleven males and twenty-nine females. The holotype, male, allotype, female, and thirty-seven paratypes were taken at Rio de Janeiro, Brazil, in May, July, and August; one male paratype was taken in April, at Piedra, Brazil.

This species belongs to the *caudatus* group of species; the male differs most strikingly from all others of the group in having the tips of the three-fingered hypopygial appendages much enlarged and bearing long black hairs on the side, and the face has the hairs mostly black and stiff.

***Condylostylus setitarsis*, new species**

Length, 5 to 6 mm.

MALE.—Face green or blue, narrowed below, nearly opaque with white pollen when viewed from above; front shining green or blue; palpi black, with long black bristles and a few pale hairs; proboscis yellow, more brownish at base; antennæ black, longest bristle on second joint twice as long as the antenna third joint small, about as long as wide; arista dorsal, nearly bare, about as long as width of head; beard not very long but quite abundant, white.

Thorax and abdomen green; scutellum and first three abdominal segments mostly or wholly blue, former with two pairs of large bristles, base of abdominal segments broadly black; venter yellowish brown with short white hair; hypopygium (Fig. 9) black, its lamellæ (Fig. 19) of moderate length, pale yellow, with black bristly hairs at tip, which are of moderate length, they also have some delicate, moderately long hairs on the sides.

Coxæ and femora black, fore coxæ with white hair and two black bristles; all femora with white hair below, which is longer than the width of femora; fore trochanters, narrow tips of fore and middle femora and all tibiæ yellow, hind tibiæ quite broadly brown at base and tip; fore tibiæ with a row of seven moderately long bristles on posterior surface, without bristles above; middle tibiæ with a row of seventeen bristles on anterior surface, one bristle on anterior surface near base, several at tip and three on basal fourth of posterior side; hind tarsi without bristles, but with a row of stiff hairs; fore and middle tarsi black from tip of first joint, the former with abundant but not very long hair, first joint also with dense, short, pale pile below, fifth joint a very slightly widened; middle basitarsi with three rows of cilia or bristles (Fig. 13), upper surface with a row of eight bristles, which are twice as long as diameter of joint, anterior surface with a row of about forty-five slender, erect hairs, which are nearly twice as long as diameter of joint and have their tips abruptly enlarged with minute spines on apical edge of the enlarged tips, the lower anterior edge with a row of about thirty-eight slender bristles which are fully three times as long as the diameter of the joint and are not erect, second joint with ten erect hairs with enlarged tips on anterior side and a row of about eight little bristles on lower anterior surface, fifth joint a little widened, not quite as wide as long; hind tarsi wholly black with long, dense hair, the last three joints widened and flattened; length of fore tibiæ as 94, of middle 125, posterior as 185; joints of fore tarsi as 90-26-18-11-7; middle as 141-25-20-8-7, posterior as 90-30-14-11-9, width of third joint as 10. Calypters brown with black cilia; halteres pale yellow.

Wings grayish with the usual brown cross-bands connected along the costa to a point a little back of third vein and narrowly along fourth vein, leaving a whitish, hyaline spot between third and fourth veins, the brown begins on the costa beyond the tip of first vein and extends nearly to tip of fork of fourth vein; the first cross-band covers the cross-vein and extends narrowly to tip of fifth vein, the second band extends a little back of fourth vein; fork of fourth vein bent backward at about a 55 degree angle with basal part of fourth vein, upper bend of fork rounded; third vein only a little bent back at tip, fourth vein from cross-vein to fork as 63, from fork to wing margin 27; last section of fifth vein straight and its length as 22, cross-vein as 44.

Types.—Two males, taken at Rio de Janeiro, Brazil, the holotype in August, the paratype in July; S. W. Williston collection.

This is the third species, so far as I know, in which the first segment of the middle tarsi bears a row of cilia with their tips enlarged and bearing minute hairs or blunt spines on apical margin. *C. ornatipes* Van Duzee was taken by Mr. Edwards in northeastern Argentina; it has long hairs on the hypopygial lamellæ, which reach nearly to the middle of the fourth ventral segment. The other two species have short or only moderately long hairs on the lamellæ; *terciliatus* Parent does not have the row of long slender bristles on lower anterior edge of middle basitarsi which are so conspicuous in this species, it also has distinct cilia above, not little bristles as in this species.

Condylostylus tenuitarsis, new species

Length, 5 mm.

MALE.—Face and front shining green, the face narrow below, with considerable white pollen, suture near the middle; palpi black with pale hair and black bristles; proboscis dark yellow; antennæ black, longest bristle on second joint as long as the antenna, third joint rounded, scarcely as long as wide, arista dorsal with short pubescence, slender, about as long as width of head; beard short, white.

Thorax green, posterior part of dorsum and the scutellum blue, the latter with two pairs of nearly equally large bristles; abdomen green, first two segments with blue reflections, the following segments broadly black at base, third, fourth and fifth segments with coppery reflections; bristles of abdomen rather short; hair on venter moderately long, whitish; hypopygium (Fig. 10) black with basal part more purple, its outer claspers black, slightly enlarged at tip when viewed from behind.

Coxæ and femora black; fore coxæ with moderately long, white hair and one long black bristle; all femora with moderately long white hair below; tips of fore coxæ, fore trochanters, narrow tips of fore and middle femora, all tibiæ and fore and middle basitarsi yellow; narrow tips of hind tibiæ and whole of hind tarsi brown; fore tibiæ with five slender bristles on posterior surface, these are twice as long as diameter of tibia, they have no bristles on upper surface; middle tibiæ with a row of twenty bristles on anterior surface, which are not very stout but twice as long as diameter of tibia, also a row of six on posterior surface, extending from near the base to a little beyond the middle, these are shorter and more slender than those on anterior side; posterior tibiæ without bristles; fore basitarsi with five minute bristles below; middle basitarsi with a row of ten little spines on upper surface and a row of slightly fusiform hairs on lower anterior surface, which are recumbent and not as long as the hairs on upper surface; third and fourth joints of hind tarsi fully as wide as the preceding joint, fifth joint a little narrower; length of fore tibiæ as 92, middle 126, hind pair as 171; joints of fore tarsi as 96-26-21-13-7; middle pair 134-22-20-11-6; posterior pair as 83-30-17-12-9. Calypters and halteres brown, cilia of former black.

Wings grayish with the usual two cross-bands united along the costa as far back as third vein, the brown on costal margin beginning considerably beyond tip of first vein and reaching the tip of the fork of fourth vein; fork of fourth vein making an angle of about 60° with basal part of fourth vein; fourth vein from cross-vein to fork as 60, from fork to wing margin 27, cross-vein as 36, last section of fifth vein 21.

Types.—Holotype, male, and one male paratype, taken in April, at Piedro, Brazil; S. W. Williston collection.

This is a slender species with short, slender bristles on posterior surface of both fore and middle tibiæ, middle tibiæ with a row of twenty bristles on anterior surface; fore and middle basitarsi with a row of little spines and middle basitarsi also with an inconspicuous row of fusiform hairs.

This form would run to *uniseriatus* Becker, but the row of cilia on the middle basitarsus consists of twelve bristles on lower anterior surface, which are much longer than diameter of basitarsus in *uniseriatus*, while in *tenuitarsis* the ciliation on the upper surface of middle basitarsi is composed of eight to ten minute spines which are shorter than diameter of joint, and with a row of slightly fusiform hairs on lower anterior surface.

Condylostylus trimaculatus, new species

Length, about 5 mm.

MALE.—Face rather narrow below, its suture a little above the middle, seen from above it is opaque with white pollen, face and front blue-green, vertex not deeply excavated; palpi black with white hairs and black bristles; proboscis dark yellow; antennæ black, one long bristle on second joint one and a half times as long as antenna, third joint somewhat triangular, but rounded at tip, arista dorsal, about as long as width of head; the beard consists of only a few short white hairs.

Thorax and abdomen green, posterior part of thorax, scutellum and abdomen with blue reflections, the latter with narrow yellowish incisures; scutellum with two pairs of nearly equally long bristles, anterior margin of thorax white pollinose, pleura silvery-white pollinose; bristles of thorax and abdomen rather short. Hypopygium reddish brown, its lamellæ black, somewhat triangular, three times as long as wide at base.

Coxæ and femora dark reddish-brown; anterior surface of fore coxæ with white hairs, inner edge black-haired, tip with several black bristles; femora with a few rather short white hairs below; fore and middle tibiæ yellow, hind tibiæ light brownish-yellow, with a row of stiff black hairs on lower posterior surface; upper surface of middle tibiæ with a pair of bristles near base, one bristle near apical third and two or three at tip, below with one bristle near the middle, all these bristles of about equal length and nearly twice as long as diameter of tibia; fore tibiæ without bristles; fore and middle tarsi brownish, first joint more yellowish, hind tarsi dark brown, first joint with many little spines below (last four joints broken off in type); fore tarsi (Fig. 11) with three equally long bristles on lower posterior surface, these are as long as last tarsal joint; otherwise the fore and middle tarsi are plain; length of fore tibiæ as 75, middle 115, and hind pair as 140; joints of fore tarsi as 67-15-16-12-7; middle pair 84-14-13-7-6; first joint of hind tarsi as 37. Calypters brown with black cilia; halteres wholly yellow.

Wings grayish with three brown clouds (Fig. 12), one at tip of second vein, one covering fork of fourth vein and extending to tip of third vein, the other on the cross-vein; fourth vein from cross-vein to fork as 46, from fork to wing margin 22, last section of fifth vein 18, and the cross-vein as 41.

TYPE.—Male taken in August, at Rio de Janeiro, Brazil; S. W. Williston collection.

It is possible that specimens of this form may be found with the brown spots on the wing united into the usual two cross-bands, connected along the costa. *C. trimaculatus* seems to come nearest to *uniseta* Becker, in that there is only one large bristle on first joint of fore tarsi, although there may be one or two small ones nearer the base.

Condylostylus rubrocauda, new species

Length, 12 mm.

MALE.—Face wide above, a little narrowed below, green, blue in the middle, lower part opaque with grayish-white pollen, bulging, suture near the middle; front blue, violet in the middle, shining; palpi black with white hair and long black bristles; proboscis yellow; antennæ (Fig. 14) black, third joint brown, rounded, second joint with short bristles; arista wholly bare, as long as width of head, appearing white against a dark background; beard white, short.

Dorsum of thorax shining green, with bronze reflections; acrostical bristles large; scutellum with two pairs of equally large bristles; abdomen green, base of first four segments yellow, it has short black hair, except a few very short white ones on the sides; venter yellow with a few short black hairs; hypopygium dark reddish, outer lamellæ blackish, elongate triangular, with long hairs on one edge and at tip.

Fore coxæ wholly yellow, nearly bare in front, except three large, black bristles; middle and hind coxæ reddish with a large black bristle; middle ones a little blackened on outer surface; femora and tibiæ yellow, tips of hind femora narrowly black above; hind tibiæ quite broadly brown at tip; fore tibiæ without bristles; middle tibiæ with two, one near the base and one near middle; hind tibiæ with one large bristle near base; femora with only short hair, except a few longer pale ones on lower surface of fore pair; fore tarsi plain, slender, yellow with tips of joints blackened; if my measurements are correct (the articulations are not easily distinguished) their joints are as 160-13-8-10-9; their tibiæ as 132. Calypters and halteres yellow, the former with white cilia.

Wings (Fig. 15) grayish with the usual cross-bands united back to third vein, the whole front of wing is more or less brown from costa to third vein; first cross-band a little interrupted between third and fourth veins, but reaching hind margin of wing at tip of fifth vein, the second band covering the whole of the fork of fourth vein.

TYPE.—Male, taken in April, at Piedra, Brazil; S. W. Williston collection.

This is one of the species that makes the dividing of the genus *Psilopus* unsatisfactory; it has four large bristles on the scutellum and long acrostical bristles as in the genus *Condylostylus*, but the calypters bear white cilia as in *Sciapus*; the arista is also almost as near subapical as dorsal, which might be thought by some to allow putting it in the genus *Chrysosoma*. *C. rubrocauda* would run to *brevis* Becker in Abbe O. Parent's table of species, couplet 3, group I; it differs from that species in having the hypopygial lamellæ elongate triangular, whereas in *brevis* the lamellæ are oval.

***Diaphorus (Lyronseurus) willistoni*, new species**

Length, 3.5 mm.

MALE.—Face and front green, of nearly equal width, their sides nearly parallel, but the front very slightly wider, face covered with pollen, which extends on to the sides of the front, this pollen is white when viewed from in front, more yellowish brown when seen from above; palpi yellow, black at base and covered with white pollen; antennæ black, third joint somewhat reniform, wider than long, but rounded on outer end, arista apical, pubescent; lower orbital cilia and the rather abundant beard white.

Thorax and abdomen bright green; prothorax with several small, white bristles above fore coxæ; fore part of dorsum of thorax with yellowish pollen; pleura white pollinose; abdomen with blackish incisures and black hair, a few short, whitish hairs on the sides; bristles at tip short; hypopygium small, blackish, with small, somewhat triangular, yellowish-brown lamellæ, fringed with white hair.

All coxæ black with yellow tips; anterior surface of fore coxæ with white pollen and a few small white hairs, one small black bristle at base and a row of five longer

ones at tip; all femora green with rather wide yellow tips; trochanters and tibiæ yellow, extreme tips of hind tibiæ brown; all tarsi yellow at base, fore and middle ones blackish from tip of first joint, hind pair black almost to the base; all femora with a row of short pale hairs below; fore tibiæ with one bristle above near base, below with distinct, rather long and somewhat erect, black hairs on their whole length, these hairs extend along the first three joints of their tarsi, but are scarcely as long as diameter of joints; middle tibiæ with one large bristle near basal fourth of anterior surface, this bristle is as long as second joint of fore tarsi; there are also a pair of smaller bristles above near middle; middle tarsi plain; hind tibiæ with two pairs of bristles above, one near base and the other near middle, they also have rows of rather long, stiff hairs on both anterior and posterior surfaces and extending their whole length, these are not as long as diameter of tibia; hind basitarsi with a long erect bristle near base, below, which is fully as long as second joint of fore tarsi and very slightly curved, they also have a row of small bristle-like hairs, the four last joints have dense hair and the row of little bristles on the side; joints of fore tarsi as 39-14-14-8-8; middle pair as 50-20-13-7-5; of posterior pair as 35-22-14-7-7. Calypters, their cilia and the halteres yellow.

Wings (Fig. 20) grayish, veins brown; costa only a little thicker beyond tip of first vein; a brown cloud fills in the tip of the wing, from costa to third vein and from before tip of second vein to tip of third; venation about as in *simplex*, Loew, but last section of fourth vein only a little bent.

TYPES.—Two males: holotype without a locality label; paratype taken at Rio Nor.

This species belongs to the *simplex* group (*Lyroneurus*) which has the venation very much alike and is the fourth species having a brown cloud at tip of wing. Two of the species have the sides of second and third abdominal segments yellow, *apicalis* Becker and *maculatus* Parent; *apicalis* has a blackish ring before the tip of hind femora, while *maculatus* has no such ring. *Adustus* Wiedemann has the costa very much enlarged beyond tip of first vein and the fourth vein more bent than in this form, the wing also has a brown streak before fourth vein, which is not found in this species.

Dr. Becker made *chabybæus* Roder a synonym of *adustus* Wiedemann, but Abbe O. Parent redescribed *chabybæus* from the type in 1929. It does not have the distinct cloud at tip of wing as in the other four species, but has the space in front of third vein uniformly tinged with brown, and lacks the erect bristle at base of hind basitarsi.

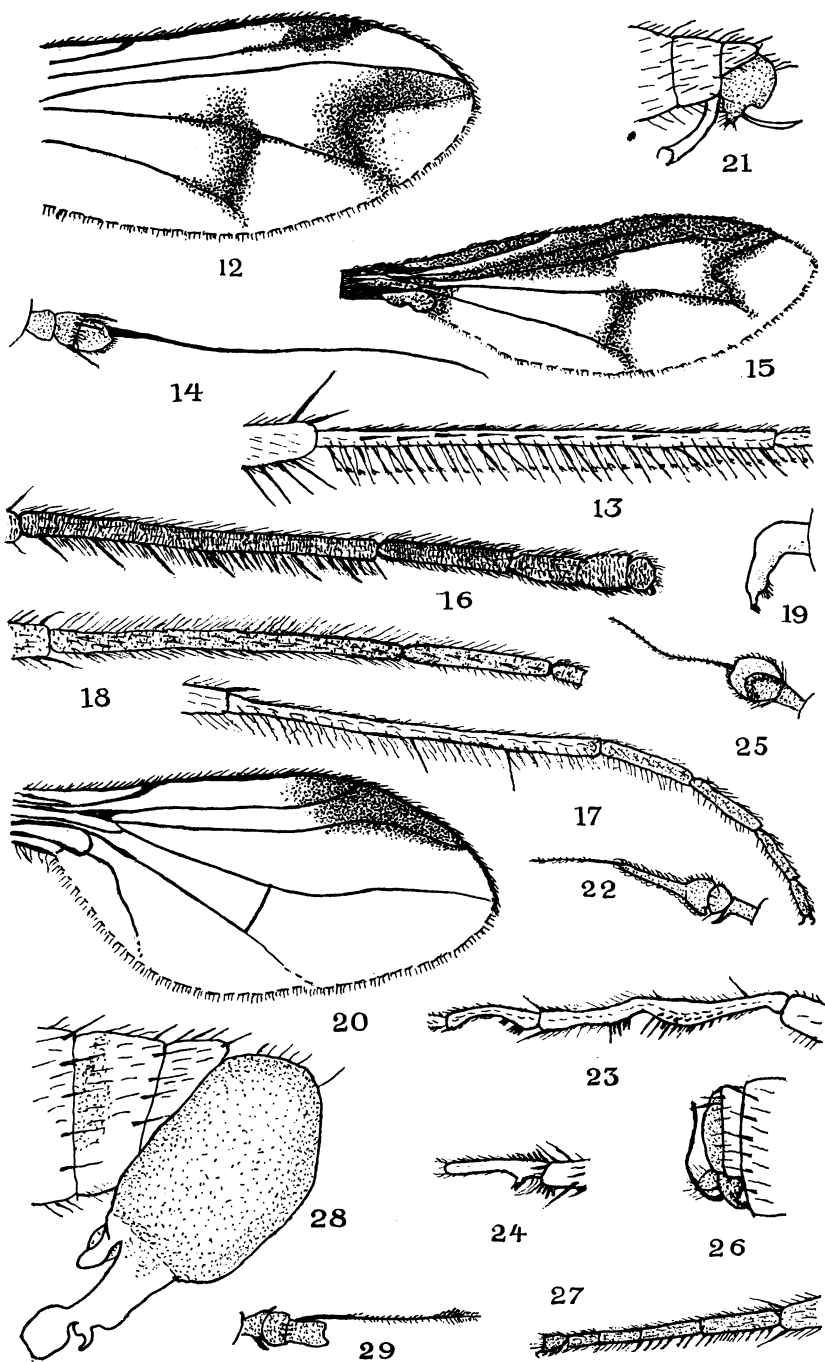
CHRYBOTUS Meigen

Of the five species of *Chrysotus* described here one belongs to the group separated by Dr. Becker under the generic name *Achradocera*, while the other four species would all fall in the first four couplets of the key to the South American species of *Chrysotus* (part 5, of the 'Diptera

of Patagonia,' published by the British Museum, March 22, 1930, page 27) which I have revised to receive them. There are no species omitted in this key as it is now.

- 1.—All femora and hind tibiæ yellow on basal half, black on most of apical half; all tarsi black from tip of first joint. *pictipes* Becker.
 *All femora yellow, posterior pair may be black on apical part. 2.
 All femora black or metallic on basal third or more, or one pair almost wholly black. 9.
- 2.—Inner hypopygial appendages long, ribbon-like, pale yellow, and circularly emarginate at tip. *caudatus*, new species.
 Hypopygial appendages short as usual. 3.
- 3.—Antennæ with at least the first joint yellow. 4.
 Antennæ wholly black. 6.
- 4.—Face very narrow, green; hypopygium with the central organ long and flattened. *caudatus*, new species.
 Eyes contiguous on the face; central hypopygial organ short, sometimes invisible. 5.
- 5.—First antennal joint yellow, second and third black, sometimes the hind femora a little brown above at tip. *picticornis* Loew.
 First, second, and narrow base of third joint yellow, third joint mostly black; hind femora blackened above at tip. *longiventris*, new species.
- 6.—Eyes contiguous, almost obliterating the face; femora conspicuously black at tip. 7.
 Face narrow below, eyes not quite touching; all femora wholly yellow. 8.
- 7.—First joint of hind tarsi nearly twice as long as second; hind tibiæ and tarsi with numerous, long, bristly hairs above; hind tibiæ one and a half times as long as tarsi. *setosus*, new species.

- Fig. 12. *Condylostylus trimaculatus*, new species. Wing of male.
 " 13. " *setitarsis*, new species. Mid basitarsus of male.
 " 14. " *rubrocauda*, new species. Antenna of male.
 " 15. " " " " Wing of male. . .
 " 16. " *crassitarsis*, new species. Hind tarsus of male.
 " 17. " *brevipedis*, new species. Fore tarsus of male.
 " 18. " " " " First three joints of hind tarsus.
 " 19. " *setitarsis*, new species. Hypopygial lamellæ of male, from above.
 " 20. *Diaphorus willistoni*, new species. Wing of male.
 " 21. *Chrysotus caudatus*, new species. Hypopygium of male.
 " 22. " *tumidus*, new species. Antennæ of male.
 " 23. " " " " Fore tibiæ and basitarsus of male.
 " 24. " " " " Fore basitarsus of male, from above.
 " 25. *Syntormon rotundicornis*, new species. Antenna of male.
 " 26. " " " " Hypopygium of male.
 " 27. " " " " Hind tarsus of male.
 " 28. *Neurigona grossicauda*, new species. Hypopygium of male.
 " 29. *Paraclius plumicornis*, new species. Antenna of male.



- First joint of fore tarsi slightly shorter than second; hind tibiæ and tarsi with the bristly hairs on upper surface less dense and shorter; posterior tibiæ one and two-thirds times as long as tarsi *parvipalpus*, new species.
- 8.—Hypopygial appendages small, wholly yellow; abdomen with two rather strong hairs at tip; all pulvilli rather large; all coxæ yellow; palpi dark (West Indies; Bolivia) *paradoxus* Aldrich.
Hypopygial appendages black; no special hairs at tip of abdomen; pulvilli small; middle and hind coxæ black; palpi yellow (Peru).
flavipalpis Van Duzee.
- 9.—Palpi unusually large 10.
Palpi normal in size, or nearly so 11.
- 10.—Palpi yellowish-white (mother-of-pearl color), leaf-like, twice as long as wide; antennæ yellow; thorax golden green, thickly covered with brown pollen (Peru) *imitator* Becker.
Palpi yellow with silvery-white tip, three times as long as wide; antennæ blackish brown, first segment yellow; thorax shining blue-green, without pollen (Argentina) *palparis* Becker.
- 11.—Antennæ yellow, second and third segments black above; tip of arista with a small lamella; halteres and palpi yellow; face white, eyes not touching (Peru) *laminatus* Becker.
Antennæ wholly black 12.
- 12.—Legs wholly black; cilia of calypters black 13.
Legs not wholly black 16.
- 13.—Halteres, calypters, their cilia, and face black; wings brownish black, especially in front; length, 3.5 mm. (Colombia) *exceptus* Becker.
Halteres and calypters yellow; wings grayish or pale brownish 14.
- 14.—Hind femora and tibiæ much thickened in middle, and together with their basitarsi clothed with rather long hair; face and upper side of palpi white (Peru) *tumidipes* Becker.
Hind femora and tibiæ not much thickened, not so hairy; palpi black 15.
- 15.—Front dull brown; face gray; third antennal segment rather large; hind tibiæ on whole length of anterior surface with long, delicate cilia; length, 1.6 mm. (Peru) *viridis* Becker.
Front metallic black, shining; face dull black; third antennal segment rather small; hind tibiæ without cilia; length, 1.8 mm. (Ecuador).
unicolor Becker.
- 16.—Third antennal segment large at base, with a very long point and rather short apical arista; figure 22. (Becker's genus *Achradocera*) 20.
Antennæ formed as usual, sometimes moderately elongate 17.
- 17.—Middle or hind tibiæ modified; all coxæ and femora black 18.
All tibiæ plain 19.
- 18.—Eyes touching, facial triangles above and below white; hind tibiæ narrowed before tip, of normal size and with a large, curved spur (Bolivia).
subapicalis Becker; cf. also *calcaratus* Van Duzee.
Eyes contiguous, leaving only a small blackish-gray facial triangle above and below; hind tibiæ with a large lobe at tip (Ecuador) . . . *laciniatus* Becker.

Eyes separated, face gray; hind tibiæ narrowed at tip for a short distance this narrow part preceded by a short, blunt, bristly projection (Peru).

soleatus Becker.

- 19.—Eyes separated, face gray; palpi grayish yellow; all tibiæ yellow (north Argentina).....*metatarsatus* Becker.

Eyes contiguous, face above and below blackish, usually almost obliterated by the eyes; palpi black; hind tibiæ and tarsi wholly black or brown (North America, reported by Becker from Ecuador).....*obliquus* Loew.

- 20.—Front femora fully half, hind femora wholly black; apical part of front femora, whole of middle femora, all tibiæ and tarsi, except last segment, yellow; hypopygium with leaf-like, outstanding, dark lamellæ (Paraguay; Colombia; Trinidad).....*femoralis* Becker.

Front femora yellow with a black line above or on upper part of one side; middle femora wholly yellow or a little blackened at base; hind femora wholly black or green.....21.

All femora black on at least basal third (middle tibiæ modified in all three species).....26.

- 21.—Hind femora of middle tibiæ modified.....22.

Legs normal, except that sometimes last three segments of hind tarsi are a little modified.....23.

- 22.—Face opaque, brownish yellow; middle tibiæ swollen below; middle basitarsi bent, concave below (Virgin Islands).....*excavatus* Van Duzee.

Face green with gray pollen, ground color not concealed; hind femora arched above with a concave emargination below (western North America).

arcuatus Van Duzee.

- 23.—Face and front opaque, with brownish-yellow pollen.....25.

Face and front green, with thin white pollen.....24.

- 24.—Third segment of hind tarsi distinctly concave below, fourth slightly so, fifth very slightly widened (southern Chile).....*chilensis* Van Duzee.

Hind tarsi normal, all segments cylindrical (North America).....*barbatus* Loew.

- 25.—Hind tibiæ and tarsi blackish-brown; hypopygium without distinctly visible appendages; front femora with a narrow line of black on upper edge; hind basitarsi somewhat longer than second segment (north Chile).

angustifacies Becker.

Hind tibiæ yellow with extreme tip brown, tarsi dark brown; hypopygium with distinct, rounded, blackish lamellæ; front femora rather broadly black on upper edge of anterior surface; first segment of hind tarsi nearly twice as long as second (central Chile).....*edwardsi* Van Duzee.

- 26.—Front and face dull brown; cilia of calypters black; hind femora considerably thickened at base (Costa Rica).....*meridionalis* Becker.

Face green, with slight pollen, ground color not concealed; cilia of calypters yellow, black in *tuberculatus*; hind femora very much thickened at base and with a cluster of long stout bristles on anterior surface.....27.

- 27.—Face green, with thin white pollen; hypopygial lamellæ yellowish; front femora with basal two-thirds, middle with basal half and whole of hind femora green or black; tibiæ yellow, broad base and narrow tip of hind pair blackish, front tibiæ with apical half more or less infuscated (Virgin Islands).

contractus Van Duzee.

Face green; hypopygial lamellæ blackish; front femora black with yellow tips; front tibiæ pale yellow with a distinct black ring at middle and a black tip; middle femora with nearly basal half, hind pair wholly black; hind tibiæ yellow with basal third blackish, their tips narrowly deep black (Peru).....*shannoni* Van Duzee.

Face green with thin white pollen; femora green or black, fore pair with apical fourth, middle with apical third yellow, hind pair wholly black; all tibiæ wholly yellow (Bolivia).....*tuberculatus*, new species.

***Chrysotus caudatus*, new species**

Length, 1.7 mm.

MALE.—Thorax and abdomen shining green with bronze reflections; bristles of thorax black; abdomen depressed, hairs and bristles on first abdominal segment wholly yellow, on the other segments mostly yellow, but with black hair mixed among them; hypopygium (Fig. 21) black, small, but conspicuous, with small, black outer appendages and a pair of long, thin, ribbon-like, pale yellow inner appendages, which are circularly emarginate at tip, with one long hair; penis long and thin.

Fore coxæ and fore and middle femora and tibiæ yellow; middle and hind coxæ black on basal half or more; hairs and bristles of all coxæ yellow or whitish; hind coxæ with two bristles; fore femora with long pale hairs below, which are shorter than width of femora, middle femora with shorter pale hairs below; fore tibiæ with one small bristle near base and with rather long hair, the ventral hair somewhat erect; middle tibiæ with two bristles on upper surface, near first and second thirds; fore tarsi yellow, infuscated at tip, just equal to their tibiæ in length; joints of fore tarsi as 15-6-5-3-5.

Wings nearly hyaline, veins brownish yellow, sections of costa as 35-54-20-11; second and third veins and last section of fourth vein straight; fourth parallel with third and ending in apex of wing; both sections of fifth vein as 31, cross-vein as 8; anal angle of wing prominent, the wing being of somewhat equal width.

Another male taken at the same place appears to be the same species, except that the long inner appendages are concealed; it has the thorax, abdomen, penis and fore tarsi the same. This paratype has the face very narrow, the eyes almost touching in the middle, face green with a little gray pollen; palpi yellow; front green; first antennal joint yellow, others missing; posterior femora and tibiæ wholly yellow; middle and hind tarsi yellow, a little darkened at tip; all tarsi plain; hind tarsi a little shorter than their tibia, their joints as 21-9-6-5-5.

Types.—Holotype, male, and one male paratype, taken at Piedra, Blaena, Bolivia.

The holotype is chosen because it shows the inner appendages of the hypopygium, although it is in poor condition, having lost its head and both posterior legs and the middle tarsi. Have described it because of its remarkable hypopygial appendages.

***Chrysotus setosus*, new species**

Length, 2 mm.

MALE.—Eyes contiguous, obliterating the face; palpi moderately large, yellow; front blue-green, quite shining; antennæ wholly black, third joint very small,

somewhat triangular with the three sides nearly equal; arista apical, its pubescence long; lower orbital cilia white; occiput green, shining.

Dorsum of thorax and abdomen shining green, abdomen with black hair, some of the hairs have a yellowish reflection; pleura black, white pollinose; hypopygium small, brown, mostly concealed.

Fore coxæ largely blackish, but apical half and much of anterior surface more or less yellowish, anterior surface with a few yellowish hairs and black bristles at tip; middle and hind coxæ black with yellow tips, middle ones with a dense brush of hair at tip; femora, tibiæ, and tarsi yellow, tips of tarsi blackish; apical half of hind femora black and with a row of four large bristles on lower anterior surface; middle tibiæ with two bristles on basal half of upper anterior surface, the one nearest the base longer than first joint of hind tarsi; fore femora with a row of about twelve bristles on lower posterior surface, extending their whole length and becoming hair-like at base; fore tibiæ with a row of bristly hairs on whole lower anterior surface, which are as long as width of tibia and extend the whole length of the basitarsi; hind tibiæ with very numerous bristles on upper, anterior surface, these are as long as diameter of the rather thick tibia, the bristles extending the whole length of the tarsi but becoming shorter toward the tip; lower surface of tarsi with long, delicate, very dense hair, delicate hairs extending on the tibiæ, but rather scattering even at tip and becoming short and placed far apart before reaching the apical third, there being only about twelve on whole of apical third; fore and middle tarsi with dense hair; fore tibiæ and tarsi of equal length; hind tibiæ about one and two-thirds times as long as their tarsi; fore tibiæ as 37, middle 44, and posterior ones as 50; joints of fore tarsi as 15-7-6-4-4; middle pair as 18-10-10-4-5; posterior ones 11-7-7-3-3. Calypters and knobs of halteres yellow, cilia of former black.

Wings nearly hyaline, but broken in the holotype.

FEMALE.—Face moderately wide, narrowed below, white pollinose; palpi a little smaller than in male, yellow; front shining blue; antennæ as in the male; color of legs and feet about as in the male, except that the hind femora are wholly blackish; fore femora with three bristles near tip on posterior side, tibiæ and tarsi about as in the male, but the hairs shorter, bristles of middle tibiæ as in the male; hind tibiæ and tarsi without the numerous bristles above, the tibiæ having only the usual bristles; hind tarsi with the hair below dense, but not as long nor abundant as in male; hind tibiæ of the same length as in the male, joints of their tarsi as 13-9-5-5-5; fore tibiæ and tarsi each of the same length as in the male; wings with third and fourth veins parallel, a little arched; last section of fifth vein as 30, the cross-vein as 11.

Types.—Holotype, male, and allotype, female, taken in Brazil; S. W. Williston collection.

***Chrysotus parvipalpus*, new species**

A small, stout species, with contiguous eyes, black antennæ with small third joint; legs yellow with apical fourth of hind femora black. Length, 1.8 mm.

MALE.—Eyes contiguous, obliterating the face; palpi small, yellow; front shining green; antennæ wholly black; third joint small, arista with long pubescence.

Dorsum of thorax and abdomen shining green with bronze and coppery reflections; hypopygium small with small, black appendages.

Fore coxæ yellow with a few black hairs; femora yellow with apical fourth of posterior ones black and with four black bristles on the side, the third from the tip

the longest; all femora with moderately long yellow hairs below; all tibiæ yellow, their hairs mostly yellow, except posterior pair, which have long bristly hairs; fore tibiæ with one small bristle above near base and small bristles below; middle tibiæ with one large bristle; tarsi yellow, darker at tip, their hair mostly yellow, hair on posterior pair long; length of fore tibiæ as 37, of middle and hind ones as 47; joints of fore and middle tarsi as 18-7-7-5-3; of posterior pair as 15-19-7-5-5, last joint of hind ones very slightly widened. Calypters and halteres yellowish brown, cilia of former black.

Wings hyaline; third and fourth veins parallel beyond the cross-vein, which is situated before the middle of the wing, anal angle of wing moderately prominent; last section of fifth vein two and a half times as long as cross-vein.

TYPE.—Male, probably from Brazil; S. W. Williston collection.

This is very much like *setosus*, new species; it differs in having the first joint of hind tarsi a very little shorter than the second; the bristly hairs on hind tibiæ and basitarsi are short and less numerous in this; hind tibiæ one and a half times as long as their tarsi and only the apical fourth of hind femora is black in this form.

***Chrysotus tuberculatus*, new species**

Length, 2.2 to 3 mm.

MALE.—Face moderately wide, narrower below, green with a little white pollen; palpi yellow; front green, rather dull; antennæ (Fig. 22) black, formed as usual in the *barbatus* group, but with a curved spur on inner apical corner of first joint; lower orbital cilia white; beard rather long, almost silvery white, some of the hairs slightly flattened.

Thorax green, scutellum usually blue; abdomen green with bronze reflections; hypopygium small, mostly concealed, its appendages small, yellowish brown.

Coxæ and trochanters black; fore coxæ with pale hairs; trochanters with black bristles at tip; femora green or black, anterior pair with apical fourth, middle with apical third or half yellow; fore femora with a row of five, middle with seven moderately long bristles on apical half of posterior surface, both with rather long pale hairs below; hind femora very much thickened at base and with a cluster of very long, black bristles on anterior surface near the middle; all tibiæ wholly pale yellow; anterior tibiæ without bristles, but with rather long hair, those below nearly erect; middle tibiæ (Fig. 23) with two swellings below and a deep emargination between them, they have several quite large spines below on each side of this emargination, basal part with another row of very short spines on apical half; hind tibiæ with three moderately large bristles on upper posterior and two on upper anterior surface and several at tip; tarsi blackened from second joint; anterior and posterior pairs with rather long hair; middle basitarsi (Fig. 24) bent, concave below, enlarged at base and with a little tubercle near base, which bears several minute black spines, this tubercle is seen when viewed from above; last joint of middle tarsi nearly as wide as long and somewhat round in outline; fore pulvilli a little enlarged; fore tibiæ as 48, middle 55 and posterior as 68; joints of fore tarsi as 15-10-6-4-4; middle as 25-13-8-5-5; posterior as 19-14-7-5-6. Calypters and halteres yellow, cilia of former black.

Wings nearly hyaline, of nearly equal width, the anal angle forming nearly a right angle with hind margin of wing and sixth vein nearly parallel with it; cross-vein situated a little before the middle of the wing; last section of fourth vein straight and parallel with third, ending in apex of wing; cross-vein but little shorter than last section of fifth vein.

TYPES.—Seven males: holotype and three paratypes, although without locality labels, were taken with the three other paratypes at Piedra, Blaena, Bolivia; S. W. Williston collection.

This is one of the group for which Dr. Becker erected the genus *Achradocera*, describing three species: *femoralis*, *angustifacies*, and *meridonalis*. Loew described *barbatus*, and *tuberculatus* is the seventh described by the author (*excavatus*, *arcuatus*, *edwardsi*, *shannoni*, *chilensis*, *contractus*, and *tuberculatus*). *C. tuberculatus* is nearest *contractus*, but *contractus* has the apical half of fore tibiæ black or brown, also the hind tibiæ blackish at base and tip, while in *tuberculatus* all tibiæ are wholly yellow; the middle tibiæ have the emargination deeper in this and have longer spines below. The tubercle on middle basitarsi is sometimes difficult to see.

***Chrysotus longiventris*, new species**

Length, 2 mm.

MALE.—Eyes contiguous, leaving only a small brown pollinose triangle above; palpi yellow, with several black hairs; front dark blue, scarcely shining; antennæ yellow, third joint almost an equilateral triangle, the point slightly rounded and with long hair; arista inserted just above the point; upper orbital cilia black, a few white cilia on the side orbits.

Dorsum of thorax bronze-green, not very shining; scutellum blue; pleura white pollinose; abdomen somewhat coppery, rather slender, depressed, its hairs mostly black, a few pale hairs on the sides and venter; venter black; hypopygium black, mostly concealed, with small, black, somewhat triangular outer lamellæ which are fringed with white hairs.

Fore coxæ wholly yellow with a few rather long yellow hairs; middle and hind coxæ yellow, blackened on basal half or more; femora and tibiæ yellow, tips of hind femora a little blackened above; tarsi yellow, brownish from tip of first joint; fore femora with a row of six black bristles on lower posterior surface; middle ones with a few pale hairs below and one preapical bristle; posterior femora with a row of three bristles on lower anterior edge; last joint of hind tarsi slightly widened; length of fore tibiæ as 26, middle 32, posterior as 37; fore tibiæ without bristles; middle tibiæ with two bristles, one at basal fourth and one at middle; hind tibiæ with several bristles above; last three joints of fore tarsi as 5-3-3; joints of middle tarsi as 17-7-6-3-4; of posterior pair as 12-8-5-4-4. Calypters, their cilia and the halteres yellow.

Wings grayish; third and fourth veins straight and parallel; last section of fifth vein very little curved, its length as 31; cross-vein as 7.

TYPE.—Male, without locality label, probably from Brazil; S. W. Williston collection.

***Syntormon rotundicornis*, new species**

Length, 2.2 mm.

MALE.—Eyes contiguous, obliterating the face; palpi and proboscis black; front dark, but shining blue, almost violet; occiput green with a little brown pollen; antennæ (Fig. 25) black, first joint bare; second joint overlapping third to beyond its middle on inner side, the overlapping part being nearly round; third joint large, nearly round, arista apical, pubescent; lower orbital cilia white.

Thorax and abdomen dark but bright shining green with slight bronze reflections, fore part of thorax more coppery; hairs of abdomen abundant, rather long, black; hypopygium (Fig. 26) black with small black lamellæ, fringed with small hairs, inner appendages somewhat hook-shaped, central organ long, black, extending upward nearly to top of hypopygium.

Coxæ, legs, and feet wholly blackish with a slight reddish-brown tint and black hair and bristles; femora with a few little hairs below; bristles of hind tibiæ strong; hind tarsi (Fig. 27) with a few little bristles below on first two joints, these are not more than stout hairs and some of them have their tips bent at nearly a right angle, otherwise all tarsi are plain with rather long hair; joints of fore tarsi as 28–10–8–5–5; middle pair 28–12–9–7–4; posterior pair as 19–14–10–7–5. Calypters and halteres black, cilia of former formed of stout black hairs.

Wings a little grayish; third and fourth veins parallel, a little arched, fourth ending in apex of wing; last section of fifth vein as 25, cross-vein as 8.

TYPE.—Male, taken in Brazil.

This species is unusual in having third antennal joint round and in having the legs and feet wholly black. This is the third species known to me from America having the posterior basitarsi plain and without special bristles; *simplicitarsis* Van Duzee has the first two antennal joints yellow, third brown, long and pointed at tip; the other two species have the antennæ wholly black; *edwardsi* has the third antennal joint long and obtusely pointed at tip and legs yellowish, while *rotundicornis* has third antennal joint nearly round and the legs and tarsi blackish.

***Neurigona grossicauda*, new species**

Length, 3.5 mm.

MALE.—Face very narrow, a little wider below, silvery white; front gray pollinose, vertex narrowly shining blue; occiput black with a little gray pollen; antennæ, palpi and proboscis yellow; lower orbital cilia white.

Dorsum of thorax dark yellow, pleura wholly pale yellow; depressed area before the scutellum blue, this color forms a large triangle in front of the depressed space, the apex of which reaches nearly to the middle of the mesonotum; posterior margin of the scutellum quite widely yellow; metanotum and lower surface of scutellum black; abdomen yellow, dorsum of second and following segments widely dull blackish in the middle at base, this black narrowing on the sides and shading into the yellow toward the hind margin of the segments; hairs on the dorsum mostly black, those on

lower part of the sides yellow; hypopygium (Fig. 28) black on basal part, which is large, rounded, a little longer than wide, shining; apical part mostly yellow and somewhat smaller than basal portion, its outer lamellæ pale yellow, quite large (partly hidden in type).

All coxæ, femora and tibiæ yellow; middle tibiæ with a bristle at apical third of upper posterior surface and one near base on upper anterior edge, also two small bristles below; hind tibiæ with four bristles on upper posterior surface, one near base and the last at apical fourth, none below; fore tibiæ without bristles; tarsi slender, brownish yellow, scarcely darker at tip; middle tarsi with one or two minute bristles; hind basitarsi with a pair of bristles below at apical third; fore tibiæ as 111, hind ones as 152; joints of fore tarsi as 42-51-19-15-9; middle pair 95-36-26-14-8; posterior as 44-51-32-16-9. Calypters, their cilia and the halteres pale yellow.

Wings gray; third vein nearly straight; first vein reaching about half-way to cross-vein; last section of fourth vein nearly straight and parallel with third, its tip a little back of apex of wing; last section of fifth vein not quite twice as long as the cross-vein.

FEMALE.—Colored like the male, except that the vertex is black like the front and with brownish-gray pollen; face a little wider, gray pollinose, but narrow for a female; middle tibiæ with three large bristles above, hind ones with five; scutellum greenish blue, the margin broadly yellow.

TYPES.—Holotype, male, and allotype, female, taken February 21, 1913, in British Guiana.

This is colored something like *signifer* Aldrich, which was described from St. Vincent, but the male of that species has the hypopygium club-shaped and wholly shining black.

***Paraclius plumicornis*, new species**

Length, 2.5 mm.

MALE.—Face narrow below, white pollinose; palpi small, yellow; antennæ wholly yellow (Fig. 29), third joint quadrilateral in outline with a notch at tip; arista dorsal, rather short, a little more than twice as long as antenna, short pubescent, except on apical fourth, where the pubescence becomes gradually longer then short again at tip, giving the arista the appearance of being enlarged at tip; lower orbital cilia yellow.

Thorax and abdomen green, not very shining, their hair and bristles black.

All coxæ, fore and middle femora and tibiæ and fore tarsi pale yellow, middle coxæ with three bristles on upper anterior edge, and a row of about ten little spines on the upper posterior surface, which are not as long as diameter of tibia; middle tibiæ with three large bristles on upper anterior surface; length of fore femora as 67, of their tibiæ as 46, tarsi one and one-fourth times as long as tibiæ, joints of fore tarsi as 26-11-9-6-6. Calypters and halteres yellow, cilia of former black.

Wings grayish; costa not enlarged; third vein straight; last section of fourth vein bent at its middle, arched from this bend to tip, so that it is concave posteriorly, its tip close to tip of third vein and far before apex of wing; cross-vein at right angles to fourth vein, its length as 16, last section of fifth vein as 18; anal angle of wing narrowed and not very prominent.

TYPE.—Male, taken at Pasagua; S. W. Williston collection.

It is with some misgivings that I have described this species, as the tip of the abdomen, middle tarsi and posterior legs are missing in the type, but the antennæ are of such unusual form that it seems to make the future determination of the species easy. The wing venation is typical of the genus *Paraclius*, as is also the form of the face; the fore tibiæ have the row of little spines or bristles on upper surface which are almost always found in the genus *Gymnopternus* Loew. I cannot see any hairs on upper surface of first antennal joint. It is, so far as I know, the only American species in the genus with the apical part of the arista enlarged in any way.