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PROCEEDINGS
OF THE
CALIFORNIA ACADEMY OF SCIENCES
FOURTH SERIES

VOL. XII, No. 8, pp. 105-112

JUNE 7, 1923

VIII
EXPEDITION OF THE CALIFORNIA ACADEMY
OF SCIENCES TO THE GULF OF
CALIFORNIA IN 1921¹

NEW DOLICHOPODIDÆ (Long-legged Flies)

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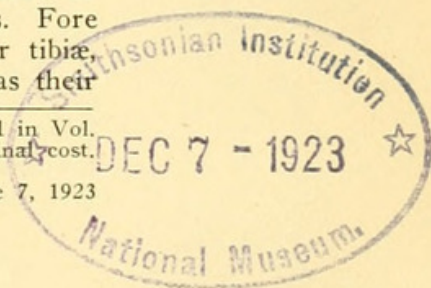
1. *Asyndetus disjunctus* M. C. Van Duzee, new species

Male: Length 2.5 to 3 mm. Face and front wide, opaque with silvery white pollen. Palpi yellow with silvery white pollen and about six black hairs on their disk; probosis black. Antennæ black; third joint usually short and flattened in outline at tip, but sometimes rounded or even a little pointed; arista nearly apical, or subapical, its first joint short. Lateral and inferior orbital cilia white, increasing in length below; lower part of the head with quite an abundant long white beard. Thorax and scutellum thickly covered with white pollen, which almost conceals the coppery ground color; acrostichal bristles large, in a single row; prothorax with two black bristles above the base of the fore coxæ. Abdomen green with coppery reflections, clothed with coarse black hair and with considerable white pollen. Hypopygium concealed, its bristles long and stout.

Coxæ and femora metallic green; trochanters and knees yellowish; coxæ with black bristles, the fore pair with a few stiff black hairs on the anterior surface. All femora with coarse black hair and two rows of long hairs or slender bristles on lower surface, these about half, or more than half, as long as width of femora. Fore tibiæ yellow with conspicuous black hair and a few bristles; middle pair yellow with apical fourth brown, their bristles long; hind tibiæ mostly blackish, more or less yellow on upper edge of basal half, with two rows of bristles. Fore and middle tarsi nearly one and a half times as long as their tibiæ, black, more yellowish brown at base; hind tarsi about as long as their

¹A map showing the islands, etc., visited by this Expedition will be found in Vol. XII, No. 6, of these Proceedings. Copies of which can be supplied at nominal cost.

June 7, 1923



tibiae, wholly black, all their joints gradually decreasing in length; fifth joint of all tarsi slightly flattened so as to appear nearly round when viewed from above; all pulvilli much enlarged, longer than fifth joint, yellow. Calypters, their cillia and the halteres pale yellow.

Wings grayish hyaline, veins brown, yellow at root of the wings; sometimes the alternate veins more yellowish; third vein running close to second and parallel with it as far as its tip, then bending backward so that it ends about half way from the tip of second to the apex of the wing; the thin fourth vein broken opposite the end of second, its apical portion far forward of the basal part but nearly parallel with it, ending in the apex of the wing, this apical portion very slender, almost invisible at tip but extending over first part at its basal end; sixth vein conspicuous; posterior cross-vein about opposite the apical third of first vein.

Female: One female taken at Tepoca Bay, Sonora, April 25, agrees with the male described above in having the same silvery pollen on its face, front and body; the color of the legs is about the same and it has white palpi which are a little smaller; the third antennal joint is smaller, the arista dorsal; the last section of the fourth vein is scarcely broken and is a little stronger. This female measures only 2 mm. and I think there can be no doubt but it belongs to the same species with the males described above.

Described from 15 males and one female. The males were taken at Puerto Refugio, Angel de la Guardia Island, June 29. The larger specimens seem to be more hairy than the smaller. Although there is no doubt they are all of one species I am choosing the holotype from the large ones.

Type: Male, No. 961, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 29, 1921, at **Puerto Refugio, Angel de la Guardia Island, Gulf of California.**

2. *Asyndetus terminalis* M. C. Van Duzee, new species

Male: Length 2 mm. Face and front wide, the latter slightly wider above, covered with thick black pollen; palpi black, edged with yellow and covered with white pollen. Antennae black; third joint small, rounded at tip; lower orbital cilia white. Thorax and scutellum so thickly covered with white pollen as almost to conceal the metallic ground color; pollen on center of dorsum brown, contrasting with the white on the rest of the dorsum; acrostichal bristles six, in a single row. Abdomen green, covered with thin white pollen and black hairs; bristles at its tip stout. Hypopygium small.

Coxae and femora metallic green; fore femora with a row of delicate hairs below; hind femora nearly bare below. Trochanters, extreme tips of the femora, and all the tibiae yellow; fore tibiae without bristles; middle pair with one bristle near the base in front and one at the middle above; hind ones with several slender bristles which are black at tip for one fourth their length; fore and middle tarsi black from tip of first joint, the former one and a fourth, the latter one and a half times

as long as their tibiæ; hind tarsi wholly black, about equal to their tibiæ in length; all pulvilli distinctly enlarged, dark yellow. Calypters, their cilia and the halteres yellow.

Wings a little grayish; veins brown, yellow at root of the wings; third vein nearly straight to its tip, parallel with second; fourth vein broken, its apical portion placed in front of basal part but very nearly parallel with it, ending in the apex of the wing; posterior cross vein nearly opposite apical third of first vein.

Female: Face and front as in male, the bronze ground color showing through a little on the front; third antennal joint smaller, the arista placed at its base above; third vein of wing a little more bent at tip; legs colored as in male.

Described from one male and two females. The male was taken at Puerto Refugio, Angel de la Guardia Island, June 29. One female was taken at Mulegé, Lower California, May 14. Another female, taken at Gualan, Guatemala, October 22, 1905, is in my own collection.

Type: Male, No. 962, and *allotype*, female, No. 963, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 29, 1921, at **Puerto Refugio, Angel de la Guardia Island, Gulf of California.**

This form, together with *interruptus* Loew, *latus* Van Duzee, and *disjunctus*, new species, form a group having the front and face very wide, with their sides nearly parallel and completely covered with white pollen so as to conceal the ground color, or very nearly so. In this group, *interruptus* is at once separated by its having the tibiæ black with more or less metallic green reflections; they are without yellow, except the extreme knees, and the thorax has the pollen less thick than any others except *latus*; of this form I have seen one or two males from the east and two females from California. *Disjunctus* differs from all others in the group in having large white or yellow palpi in both male and female; from *latus* and *terminalis* it differs in both sexes by having the hind tibiæ black with the upper edge yellowish on basal half above only, while in the other two the hind tibiæ are yellow with about apical fourth black. *Terminalis* is separated from all others in the group having the fore pulvilli small, not, or scarcely at all, enlarged; in having the third vein straight, not bent backward at tip, and in having the pollen on the center of the dorsum of the thorax brown, contrasting with the white pollen on the rest of the thorax; the female of *terminalis* is

very much like that of *latus*, the legs of both being colored alike, and, as the third vein bends backward in the female of *terminalis* more than it does in the male it cannot be separated on this character; the pollen on the dorsum of the thorax is also less brown in the female and less conspicuously different from that on the sides; the females can, however, be separated by the thicker pollen on the dorsum of the thorax of *terminalis*.

3. *Asyndetus brevimanus* M. C. Van Duzee, new species

Male: Length 2.5 mm. Face rather wide, blue-green, dulled with gray pollen; front shining metallic green; palpi brown; probosis black; antennæ black; third joint about one and a half times as long as wide, nearly straight above, rounded below so as to make the upper apical angle pointed; arista inserted near middle of upper edge of third joint; lateral and inferior orbital cilia sordid whitish. Thorax bright green with coppery reflections, slightly dulled with white pollen. Abdomen metallic green; apical segments and base of second and third coppery; the bristles at its tip stout but short; hypopygium small, mostly concealed.

Fore coxæ green with stiff black hairs or bristles; middle and hind ones black; all femora green, anterior pair with bristle-like black hairs below, which are longest near the base. All tibiæ dark yellowish; posterior pair black at tip. Fore tarsi about as long as their tibiæ, yellow at base, blackened from tip of first joint which is a little longer than the remaining four taken together; second and fifth of about equal length; third slightly shorter, the fourth still shorter, being about as long as thick. Middle tarsi as long as their tibiæ, yellow with last two joints blackened; second joint half as long as first; fourth shorter than fifth; hind tarsi wholly black, first and second joints of nearly equal length. Calypters, their cilia and the knobs of the halteres, pale yellow. Wings grayish, veins blackish; thin fourth vein bent, not broken, ending back of apex of wing; cross-vein nearly opposite middle of first vein.

Female: About as in male except that the third antennal joint is very short and rounded at tip.

Described from two males and three females taken at Tepoca Bay, Sonora.

Type: Male, No. 964, and *allotype*, female No. 965, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 25, 1921, at Tepoca Bay, Sonora, Mexico.

4. *Asyndetus singularis* M. C. Van Duzee, new species

Male: Length 2 mm. Face rather narrow for this genus, its sides parallel, dark green with a little white pollen, sometimes quite shining, hollowed longitudinally. Front shining blue-green, widened a little at vertex. Palpi and probosis black. Antennæ black; third joint but

little longer than wide, truncate at tip, making it appear subquadrate; second joint extending along upper edge of third nearly to its middle. Lateral and inferior orbital cilia white. Thorax and abdomen dark shining green, the former with a double coppery stripe on center of front half of dorsum, the latter with coppery incisures. Hypopygium small, its bristles very short.

Coxæ and femora metallic blue-green; fore and middle coxæ with a few black bristles. Lower edge of fore femora carrying a row of seven regularly placed bristles of uniform length, and scarcely longer than the hairs on the upper edge; middle femora with about 10 hairs or slender bristles on lower edge, the apical two or three about twice as long as the others which are about as long as the long hairs on the upper edge; hind femora nearly bare below. Fore tibiæ yellow with only very small bristles; middle pair blackish on basal half, more yellow on apical half, with two rather stout bristles besides those at tip; hind tibiæ black with four bristles above. Fore tarsi a little longer than their tibiæ, yellow, blackish at tip; first joint nearly as long as the remaining four taken together; last four of nearly equal length; middle tarsi yellowish brown, last joint black; hind tarsi black. Pulvilli of all tarsi small, whitish. Calypters, their cilia, and the halteres, whitish.

Wings a little grayish; costa black, veins brown; the third vein straight and close to second as far as its tip, then bent back a very little; last section of fourth vein thin, bent a little anterior to a point opposite the tip of second vein; the posterior cross vein entirely wanting.

Female: Front and face of equal width and with parallel sides, the face being a little wider than in the male and the front narrower at the vertex; fore tibiæ more brownish than in the male; wings as in the male, the posterior cross-vein wanting as in that sex.

Described from one male and four females, taken on San Francisco Island, May 30, and three females on San Lorenzo Island, May 9. This differs from our other described species in the absence of the posterior cross-vein.

Type: Male, No. 966, and *allotype*, female, No. 967, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 30, 1921, on San Francisco Island, Gulf of California.

5. *Diaphorus argentipalpis* M. C. Van Duzee, new species

Male: Length 2 mm. Face broad, silvery white; front green, dulled with thin white pollen; palpi long and narrow, nearly as long as the face, silvery white; antennæ black; third joint subquadrate, not very large; arista inserted just above the upper apical corner. Lower orbital cilia white. Thorax green with coppery reflections; dorsum dulled with thin gray pollen. Abdomen green; bristles at tip small. Hypopygium small, its central filament long.

Coxæ and femora metallic green, their tips yellow; fore and middle coxæ with delicate pale hairs; femora nearly bare below. All tibiæ yellow, nearly bare; posterior ones with small bristles. All tarsi black

from tip of first joint. Pulvilli about as long as the claws. Calypters, their cilia and the halteres whitish.

Wings nearly hyaline; first vein reaching a little more than one third the distance to tip of second; last section of fifth vein nearly twice as long as the cross-vein.

This is very much like *alienus* Van Duzee in the form of the antennæ and its small size, but in this the palpi are long and narrow and the hind tibiæ are wholly yellow as are the basitarsi, except their tips, while in *alienus* the palpi are normal but yellow and the tips of hind tibiæ and the whole of their tarsi are blackish. *D. alienus* was described from Oregon.

Type: Male, No. 968, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, May 19, 1921, at **Loreto, Lower California.**

6. *Paraclius maritimus* M. C. Van Duzee, new species

Male: Length 3.8 mm., of wing 3 mm. Face rather wide, a little narrowed below, covered with white pollen, the green ground-color showing through a little on upper portion, its suture near apical fourth, lower edge straight. Front shining green or reddish coppery. Antennæ yellow; third joint brown at tip, small, about as long as wide, slightly pointed at tip; arista with long pubescence. Lateral and inferior orbital cilia whitish; about eight of the upper cilia on each side black. Dorsum of thorax green with coppery red reflections, sometimes wholly dull coppery red; the velvety black stripe above the root of the wing narrow, not conspicuous; the white spot at the suture large but not as bright as in some species; anterior portion of dorsum dulled with brownish gray pollen; pleuræ green, with white pollen. Abdomen green or coppery, with the posterior margins of the segments black, its sides with spots of white pollen, this pollen extending on to the dorsum. Hypopygium black; its lamellæ with a small basal portion yellow, with small yellow hairs; furnished with a long black flattened tapering filament; fringed with long black hairs on one edge, this filament as long as the hypopygium and quite wide at base.

Coxæ yellow, outer surface of middle pair largely black; anterior pair wholly yellow with black hairs and bristles. All femora and tibiæ wholly yellow; middle and hind femora each with one preapical bristle; middle tibiæ with two large bristles on lower edge, one at middle and one at apical fourth; posterior pair with one small bristle on lower edge. All tarsi almost wholly infuscated, only the fore tarsi and base of the first joint in the others yellowish; anterior tarsi with the last three joints of nearly equal length; hind tarsi with the first and third joints of equal length, second longer. Calypters and halteres yellow, the cilia of the former black.

Wings grayish; last section of fourth vein bent just beyond its middle, the apical portion arched, the concave side backward, its tip close to the tip of the third vein; last section of fifth vein as long as the cross-vein.

Female: Face slightly wider, with gray pollen; middle coxæ black with yellow tips, hind ones also largely infuscated; legs and feet with longer hair than in the male, especially on the upper edge of the hind femora, which are fringed above with rather long, close-set, black hair. Otherwise about as in the male.

Described from two males and six females, the latter taken at Gonzales Bay, Lower California, April 29. The males were taken at San Evaristo Ranch, June 10.

Type: Male, No. 969, and *allotype*, female, No. 970, Mus. Calif. Acad. Sci., the type collected by E. P. Van Duzee, June 10, 1921, at **San Evaristo Ranch, Lower California.**

7. *Paraclius hebes* M. C. Van Duzee, new species

Male: Length 2.5 to 3 mm. Face moderately wide, white, more yellowish on upper part, the suture below the middle; lower edge straight. Front nearly opaque with brownish pollen. Antennæ yellow; third joint rounded, brown at tip; arista pubescent, blunt, with a minute spine at tip. About eight of the upper orbital cilia on each side black, those below white. Dorsum of thorax bronze brown with coppery reflections, dulled with brownish pollen; the velvety black stripe above root of wing narrow; sutures on each side with moderately large round spots of white pollen. Abdomen green, with or without coppery reflections, with large spots of white pollen on the sides of the segments, this pollen extending on to the dorsum; hairs of the abdomen black. Hypopygium black; not large but of about the usual length; its lamellæ with a rather small, rounded, shining basal portion having a few minute yellow hairs at base; from these project backward along the sides of the hypopygium a long black filament which is wide at base, tapers to a point, is about half as long as the hypopygium and is fringed near the tip with long black hairs on both edges.

Fore coxæ yellow with a blackish spot at base on outer surface, its hairs and bristles black; middle and hind coxæ black with yellow tips. All femora and tibiæ yellow, the former with rather long hair on lower anterior edge; middle and hind pairs each with one preapical bristle; middle tibiæ with a large, hind ones with a small, bristle on lower anterior edge and with the usual bristles above. Fore tarsi scarcely as long as their tibiæ, yellowish, infuscated from tip of first joint which is slightly longer than the remaining four taken together; second and fifth of equal length, third shorter, fourth still shorter. Middle tarsi black from tip of first joint, hind ones blackish, the first yellow at base. Calypters and halteres yellow, the former with long black cilia.

Wings grayish; last section of fourth vein bent just beyond its middle, the apical part beyond this bend nearly straight, its tip close to tip of third vein; last section of fifth vein slightly longer than the cross-vein which is scarcely at right angles with the fourth vein; anal angle of wing rounded.

Female: Agrees with the male in color, form of tarsi and legs, venation, and in having the arista blunt at apex; the femora have some rather long hair on lower anterior edge.

Described from 10 males and 17 females, all taken by E. P. Van Duzee at Tepoca Bay, Sonora, April 25.

This is very much like the preceding species and *vicinus* Aldrich. The male and female both differ from *maritimus* in having the arista more blunt at tip, the fore coxæ with a blackish spot at base on outer side and the other coxæ darker in color. The male of *hebes* has the filament on the lamellæ only half as long as the hypopygium, while in *maritimus* it is fully as long; this latter character also separates *maritimus* from *vicinus* which likewise has the coxæ more largely black. *P. hebes* differs from *vicinus* in having the arista blunt at tip in both sexes, while the female of *vicinus* differs from the females of both the others in having the thorax and scutellum more blue or violet and much brighter.

Type: Male, No. 971, and *allotype*, female, No. 972, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 25, 1921, at Tepoca Bay, Sonora, Mexico.



Van Duzee, M. C. 1923. "Expedition of the California Academy of Sciences to the Gulf of California in 1921. New Dolichopodidae (Long-legged flies)." *Proceedings of the California Academy of Sciences, 4th series* 12, 105–112.

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