

NOTES ON THE DIPTEROUS FAMILY ASILIDÆ,
WITH DESCRIPTIONS OF NEW SPECIESBY FRANK R. COLE
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Recent papers by Melander and Curran on robberflies of the subfamily Dasypogoninæ have added greatly to our knowledge of certain genera. There is a wealth of undescribed material in the western United States. A study of the Asilidæ in the collection of the California Academy of Sciences has revealed a number of interesting new forms, some of which are described in this paper. In some genera the hypopygium is inverted, as in *Lasiopogon*, the actual tergal portion (the epandrium) being sternal in position.

Lasiopogon actius Melander. I have one specimen of this species, taken at Rockaway, Oregon, August 19, 1919 (M. M. Reeher). The type locality is the sea beach near Seaview, Washington.

Lasiopogon fumipennis Melander. Among the specimens studied there are two females from Horse Lake, Oregon, altitude 6000 feet, taken by J. C. Bridwell, July 25, 1909; one female, taken by the writer at Hood River, Oregon, July 2, 1917. Melander had only females, and as the male is worthy of description some notes are given below and one specimen is made a neallotype.

Male. Length 5-6 mm. Very nearly like the female, but differs in the generally lighter color of pollen and the paler wings. Head more gray pollinose than brown. The male genitalia are remarkable, being broader than the abdomen and shining, dark red in color, with the usual patch of pile on the ninth sternite black in color; the genital styles are rounded and bulging (see fig. 1).

Neallotype, male, No. 1574, in collection of California Academy of Sciences, taken July 1, 1919, by C. L. Fox.

The specimen designated was taken in the type locality, Paradise Valley, Mt. Rainier, Washington, 8,000 feet elevation.

Lasiopogon aldrichii Melander seems to be quite common on Moscow Mount, Idaho. On June 23, 1919, I was one of a party, with Dr. Aldrich and Dr. Melander, that ransacked this locality for Diptera. I collected 18 specimens of this interesting species on that occasion.

Lasiopogon monticola Melander. I took a male of this species on Moscow Mount on the same day the above species was collected, and have a specimen taken at Horse Lake, Oregon, July 25, 1909, by J. C. Bridwell. In the California Academy collection there are specimens of both sexes taken in Paradise Valley, Mt. Rainier, Washington, on July 1, 1919 (C. L. Fox) and July 25, 1920 (E. C. Van Dyke).

Lasiopogon arenicola Osten Sacken, of which I have a paratype, was taken on the sand dunes near San Francisco. The species is still quite common in the type locality, but like other species, apparently quite local, will disappear with the spreading of the city over this interesting faunal area.

Lasiopogon littoris Cole, new species

Male. Length 5.5 mm. A small, black, silvery gray pollinose species, with pile and bristles all white. Antennæ black, rather unusual in shape (see fig. 2), the arista slightly longer than the third joint, pile beneath the first and second joints white. Facial convexity reaching almost to the antennæ, the mystax long and white. Head whitish gray pollinose, the frons, occiput, and beard white pilose. Palpi very small, black, without long pile.

Thorax and scutellum silvery white pollinose, with scant white pile and white bristles. No vittæ on mesonotum. Disc of scutellum flattened. Halteres yellowish white, the base of stem brownish.

Abdomen silvery gray pollinose and sparsely white pilose, the bases of second to fifth tergites semishining black, appearing more definite from certain angles. Genitalia black, gray pollinose and white pilose, with a characteristic fringe of dense white pile on the hypandrium; the tergal styles (surstyli) very large, rounded at the ends, but with a sharp angle below (see fig. 3). Legs black, gray pollinose, with white pile and bristles. Wings hyaline.

Holotype, male, No. 1575, in collection of California Academy of Sciences, taken April 25, 1919, by E. P. Van Duzee.

Type locality, Pismo, California.

The species is described from an unique male. It is a very distinct form. In a recent table of species published by Melander (*Psyche*, Oct., 1923) it would run to couplet 4, but is quite different from *actius* and *arenicola*. The antennal structure is suggestive of the genus *Lissoteles*, but the face and genitalia are typical of *Lasiopogon*.

Holopogon atrifrons Cole, new species

Male and female. Length 5-6.5 mm. Very nearly allied to *guttula* and *phænotatus* and keying to these species in Back's table. Male with noticeably narrowed frons and face, both dull black in color; in the female the face and frons thinly gray pollinose. Antennal style about three-fourths as long as the third joint. Pile of head, mesonotum, and scutellum wholly black, longer and more abundant in male, especially on the face. Both sexes have some white pile on the wholly black legs.

Holotype, male, No. 1576, and allotype, female, No. 1577, in collection of California Academy of Sciences, taken July 16, 1920, by F. R. Cole.

Type locality, Mill Creek Canyon, San Bernardino County, California.

There are several paratypes, taken with the types. Some of these specimens have the extreme bases of the tibiæ reddish. *H. tibialis* Curran has longer pile, the inner side of the front tibiæ short, dense, yellow pilose, etc.

Melander's recently published table of species for the genus *Dioctria* is a very good one, although it may be a little difficult to place females of some of the species. I have found *Dioctria nitida* Williston to be the commonest species in Oregon and California. *Dioctria vertebrata* Cole may prove to be a variety of *pusio* Coquillett; I have both forms from California, but no males of *vertebrata*. *Dioctria rubida* Coquillett may occasionally be taken in Mill Creek Canyon, San Bernardino County, California, in late summer.

There is a male of *Dioctria doanei* Melander in the collection of the California Academy of Sciences, swept from *Ceanothus*, near summit of Mt. Wilson, California, June 6, 1916, by Harold Morrison. I have two females of *Dioctria sackeni rivalis* Melander, taken at Dodson, Oregon, July 8, 1923, by C. D. Duncan; taken with these is a pair in copula, the male a typical *sackeni*, with the femora largely yellow.

In the collection of the California Academy of Sciences there is a female of *Cophura pulchella* Williston, taken on Mt. Timpanogos, Utah, July 8, 1922 (E. P. Van Duzee), also a female of *Cophura trunca* Coquillett, taken in Mill Creek Canyon, San Bernardino County, California, September 22, 1923 (E. P. Van Duzee).

The type series of *Metapogon setiger* Cole was taken at Dee, Oregon, in the upper Hood River Valley. Melander records the species from Washington, Idaho, and California. A pair of this species was sent to Dr. Mario Bezzi, who states that *M. setiger* and *M. pictus* Cole (a typical *Metapogon*) are certainly not congeneric. I leave it to the monographer to erect a new genus for *setiger*.

Dicolonus sparsipilosum Back was described from two males taken at Bozeman, Montana. There are specimens of this species in the collection of the California Academy of Sciences, from Gold Lake, Sierra County, California, July 27, 1921 (C. L. Fox), and from Lower Lake, Lake County, California, May 13, 1922 (E. P. Van Duzee).

Triclis tagax Williston is particularly abundant on the hills west of Stanford University during the early summer.

Myelaphus lobicornis Osten Sacken may be added to the list of Oregon Asilidæ. In the California Academy collection there are two specimens, one taken at the "P" Ranch, Harney County, Oregon, June 23, 1922 (E. C. Van Dyke), the other taken at Baker, Oregon, June 30, 1922 (E. C. Van Dyke).

Cyrtopogon tacomæ Melander is represented by three specimens in material studied, two from Paradise Valley, Mt. Rainier, Washington, August 7, 1919 (C. L. Fox), and one male from Burns, Oregon, taken May 12, in the collection of the Oregon Agricultural College. *C. perspicax* Cole was found in large numbers by E. C. Van Dyke in Muir Woods, Marin County, California, May 9, 1920. Dr. Van Dyke took a long series of *C. callipedilus* Loew in the Yosemite Valley, California, from May 20 to June 12, 1921. The same collector, together with W. J. Chamberlin of Oregon Agricultural College, collected a large series of *C. willistoni* Curran in the Stein Mountains, Harney County, Oregon, June 24, 1922.

***Cyrtopogon nitidus* Cole, new species**

Length 7 mm. Male. A shining black species. Head and appendages black. Third antennal joint longer than the first two combined, the style very short (see fig. 4). The callosity of the face, unusually large, filling almost the entire face, from side to side and from oral margin to base of antennæ. Central part of face with coarse, silky white pile which curves downward, the pile on either side black. Frons and upper occiput long black pilose; the beard white.

Scutellum shining black and yet flattened. Anterior portion of mesonotum inside humeri, and a narrow median line, golden pollinose. Pleura with a few pruinose spots, the meso- and pteropleura wholly shining. Sparse pile of mesonotum and scutellum black. Knob of halteres reddish, the stem brown.

Abdomen shining blue-black; some sparse pale pile on sides of tergites, longer on the first two; most of the abdominal pile very short, black in color. Posterior corners of tergites 2 to 5 with small silvery pollinose spots. Genitalia black, the surstyli plain, the gonostyli with an apical projection (see fig. 5). Legs black; the fine short pile on under side of tarsi and front and hind tibiæ golden yellow; bristles of legs black; pile of femora white and black; coxæ gray pollinose, white pilose. Wings hyaline, slightly virescent; r-m cross vein before middle of cell 1st M₂.

Female. Length 7-8 mm. Very similar to the male. Mystax coarse and wholly black, the golden pollinose area on the mesonotum more distinct.

Holotype, male, No. 1578, and allotype, female, No. 1579, in collection of California Academy of Sciences, taken July 4, 1920, by E. P. Van Duzee.

Type locality, Forks, Clallam County, Washington.

There are three paratypes, a male and two females, taken with the types. This species is not a typical *Cyrtopogon*; the structure of the face, the very short antennal arista, the general lack of pollen on the body, and the flattened, shining scutellum, are unusual characters.

***Ablautus squamipes* Cole, new species**

Male. Length 8 mm. Head black, the occiput gray pollinose and white pilose. Antennæ black, long yellow bristles below on first joint; third joint longer than first and second combined. Face gray pollinose, largely covered by the dense mystax, which is mostly white, but yellow and brown over the oral margin. Frons golden brown pollinose, with white pile above.

Thorax black, largely golden brown pollinose, silvery on the humeri and just behind them. Pleura largely brownish pollinose, the hypopleura gray, with white pile. Metanotum gray pollinose. Bristles of mesonotum yellowish. Scutellum gray pollinose, with whitish, up-curved bristles on the margin, the base with a small, oval, shining black spot. Halteres dull yellow, brown at base of stem.

Abdomen black, gray pollinose, tinged brown on basal portion of second, third, and fourth tergites; tergites 2 to 6 with a black, bare spot in middle, near base; sides of tergites with larger black spot; sides of tergites and the venter with coarse white pile. Hypopygium small, blackish brown, the tergal portion projecting beyond the ventral. Femora and tibiæ black, with rather dense, coarse white pile and white bristles, the bristles especially long on middle tibiæ; tarsi reddish in ground color, bristles and pile white; claws black; last two joints of front tarsi with long, close-set scales, mostly brown in color, but black and narrow below. Wings hyaline and normal in venation; r-m cross vein a little beyond middle of 1st M_2 .

Holotype, male, No. 1580, in collection of California Academy of Sciences, taken March 23, 1917, by V. W. Owen.

Type locality, Chiricahua Mountains, Arizona.

The species is described from an unique male. In Back's table of species it would run to *mimus* O. S., but this species has no scales on the front tarsi and differs in other characters.

***Parataracticus* Cole, new genus**

Very nearly related to *Taracticus*. Head nearly twice as broad as high, face gently convex, the oral margin not prominent; mystax with considerable bristle-like pile which is confined to the lower half of face. Antennæ slender, elongate, segment three about four times as long as first and second combined, bare, with an emargination on the upper side near the apical fourth in which there is a short, forward-pointing bristle. Facial and frontal orbits nearly parallel, the latter slightly emarginate; ocellar tubercle of good size. Abdomen robust, convex dorsally, finely punctate, with small hairs in the punctures; posterior corners of tergites with short bristles, quite conspicuous on first four segments. Scutellum with 6-7 marginal bristles, but the median portion bare. Genitalia small, but easily made out at a magnification of fifteen diameters. Legs rather

robust, the hind tibiae slightly incrassate; front tibiae with a claw-like terminal spine; claws long, the *pulvilli* lacking. All cells on posterior margin of wing open.

Genotype: *Parataracticus rubidus*, new species.

***Parataracticus rubidus* Cole, new species**

Male. Length 5 mm. Entire body red, with spots of silvery pollen. First two antennal joints reddish yellow, the third brown, red at base, about four times the length of the first two joints combined; first joint with three or four strong yellow bristles below. Head broad, ocellar tubercle conspicuous, with two diverging yellow bristles on the back portion. Frons golden brown pollinose, silvery on sides. Face silvery pollinose, with a golden tinge, gently convex; mystax of strong and scattered yellow bristles, some few reaching up to base of antennae. Proboscis reddish brown; palpi reddish brown, very small. A few yellow post-orbital bristles.

Thorax red, the bristles yellow; a broad median brown stripe on mesonotum, with a spot on either side of it. Mesonotum and pleura partly silvery, partly golden brown pollinose; coxae silvery pollinose. A few pale bristles before the lemon yellow halteres. Scutellum shining red, flat, with rounded margin and rough disc, the sides narrowly silvery pollinose; a clump of 3-4 yellow bristles on margin below each silvery spot.

Abdomen rather short, robust, largely red in color, verging on burnt sienna; tergum punctate and with sparse, short, fine pile in punctures. Narrow lateral margins of tergites yellowish pollinose, silvery on posterior corners of 2, 3, 4, and 5, and with short yellow bristles on these posterior corners, especially strong on first three segments. Genitalia rather small, yellowish red, with a deep cercal emargination on ninth tergite; genital styles simple, curved, slender.

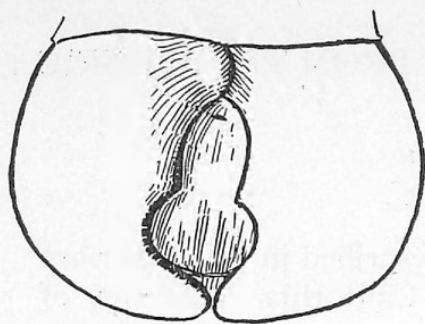
Legs rather heavy, the hind tibiae noticeably incrassate; front tibiae with slender, black, terminal claw-like spine. Legs wholly red, with pale yellow and white bristles and with short, reclinate yellow pile; short black bristles on posterior margins of tarsal joints. Claws long, black, strong; no *pulvilli* present. Wings of normal size, costal and subcostal veins yellow, other veins brown; r-m cross vein in middle of cell 1st M₂; all cells on posterior margin of wing open, the cell 1st A narrowly.

Female. Practically the same in color and marking as the male. In the type specimen the antennae are honey yellow, the third joint relatively shorter than in male and with emargination and microscopic bristles nearer tip. Sides of abdominal tergites silvery pollinose. Ninth segment with terminal circlet of brown bristles.

Holotype, male, No. 1581, and allotype, female, No. 1582, in collection of California Academy of Sciences. Holotype taken June 13, 1917, by W. M. Giffard; allotype taken July 27, 1917, by M. C. Lane.

Type locality, Niles Canyon, Alameda County, California. The allotype taken at Bird's Landing, California.

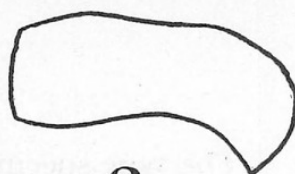
There is a paratype in the Stanford University collection, taken at Palo Alto, June 21, 1892. One other specimen is in the collection of Dr. M. Bezzi, in Italy; Bezzi identified this as an undescribed species in a genus near *Rhadinus*.



1 *L. fumipennis*



2



3

L. littoris

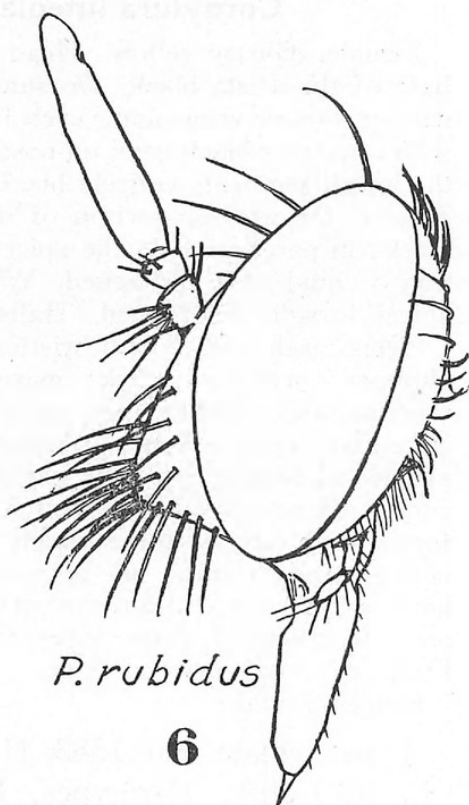


4



C. nitidus

5



P. rubidus

6

Dr. E. C. Van Dyke has presented his entire collection of Coleoptera to the California Academy of Sciences but will retain supervision over them during his life. This is one of the largest and most valuable collections of North American Coleoptera ever assembled on the Pacific coast, being especially rich in Pacific Coast forms, and in the families Carabidæ, Elateridæ, and the forest groups of beetles. The species are represented by large series, showing both the geographical range and the degree of variation. The Van Dyke collection, together with the material in this order already in the museum of the Academy, gives to the California Academy of Sciences a collection of Coleoptera that takes its place among the more important collections of this country, and makes it one that must be consulted by any one working with western species.



Cole, Frank R. 1924. "Notes on the Dipterous Family Asilidae, with descriptions of new species." *The Pan-Pacific entomologist* 1, 7-13.

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