Synopsis of the Genus Dalmannia in North America (Diptera, Conopidae)

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SYNOPSIS OF THE GENUS DALMANNIA IN NORTH AMERICA (DIPTERA, CONOPIDAE)*

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Genus Dalmannia Robineau-Devoidy

Dalmannia Robineau-Devoidy, 1830, Mem. Divers Savans Acad.

Dalmannia is holarctic in distribution and is represented in North America by six known species. Of these vitiosa Cq. occurs throughout North America, nigriceps Loe is limited to the eastern part of the continent, and the others are restricted to North America west of the Rockies. The species are all rare and, because of their close association in flight and flower habits with solitary bees, are probably parasitic upon them.

The genus was excellently diagnosed by Williston, 1883. The following characters will suffice for generic definition: Shining black species with bright yellow markings; antennae with distinctly dorsal arista; anal cell but little longer than the second basal.

Comprehensive works on the North American species were undertaken by Williston, 1883, and by H. C. Van Duzee, 1927, in their revisional papers on the Conopidae. The present paper brings the synonymy up to date, describes one new species, briefly discusses the known species and proposes a revised key.

Dalmannia Nigriceps Loev


This species is characterized by the very restricted yellow bands of the dorsum of the thorax and the uniformly pale pubescence of the dorsum except for the apical tergites. It was redescribed by Williston, 1883.

The type locality is given by Williston as Virginia. Dr. Banks recorded it from Falls Church, Virginia, collected in June, and sent me specimens from Holliston, Mass., collected at the end of May. So far as known to me it has not been observed in the western United States.

Dalmannia Picta Williston


This species has extremely short, uniformly pale hair and a tendency for strongly disjuncted bands on the abdominal tergites.

The type locality cited by Williston is New Mexico. Additional localities are: Mojave, Cali., April 10, 1930, (Bohart) where there were great numbers of Dianthra nesting and collecting pollen; Chiricahua Mountains, Cochise County, Arizona (V.H. Owen), Calif. Acad. Sci.

* Taken from The Pan-Pacific Entomologist (Vol.XIV. No. 3, pages 132-136)
Synopsis of the genus Dalmannia (cont.)

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Dalmannia Vitiosa Coquillett

vitiosa Coquillett, 1892, Ent. News., 3:150

Altho Coquillett in his original description, based on a single specimen, stated that the absence of the cross vein separating the discal and second submarginal cells might be an individual aberration, this character holds in five other specimens which I have examined. This very remarkable species is small and dark with completely black thorax and unclouded wings.

It has a wide geographical range, having been described from Los Angeles County, California, and collected later by Dr. Banks at Falls Church, and Chain Bridge, Virginia, in April. Additional records are: Manhattan, Kansas, April and May (Curtis Sabrosky); Silverado Canyon, Orange County, California, February (R. H. Bohart); Santa Rosa, Sonoma County, California, March (R. C. Dixon).

Dalmannia Blaisdelli Cresson


This, the largest and most boldly marked American species of the genus, has very short appressed golden pile on the dorsum of the thorax and heavily clouded wings.

It was originally described from Mokelumne Hill, Calaveras County, California. Other California records are as follows: Mt. Hamilton, near San Jose, April, on flowers and foliage of Rhus (G. E. Bohart); Little Yosemite, elev. 6000 ft., May; Independence, Inyo County, June (N. W. Frazier); Blue Lakes, Lake County, May (E. P. Van Duzee). The specimens which I have taken were collected in heavily wooded regions.

Dalmannia Pacifica Banks


This species is characterized by the hind and middle metatarsi of the female, which are greatly elongated and each bears along more than the half of its inner surface an elongate plate which seems to arise from the apex of the tibia and has flattened black bristles along the margin. In other species the homologous structures are small semicircular plates at the apices of the tibiae. It is further distinguishable in both sexes by the great extent of yellow on the abdomen. I have carefully compared the holotype of D. hirsuta V. D. with specimens of pacifica and find them to be the same, hirsuta being the female of pacifica.

Described from Corvallis, Oregon, June 2. California records are: Berkeley, March to May (G. E. and R. H. Bohart); Davis, May (B. E. White). It occurs in open grassy fields.
Synopsis of the genus Dalmannia (cont.)

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Dalmannia heterotricha G. Bohart, n. sp.

Holotype female: Length, 7.5 mm.; black, with at least half of face and abdomen yellow; dorsum with very long erect pubescence.

Head: First and second segments of tongue following palpi each approximately 1.8 mm. in length; head yellow except for black antennae, occiput, vertex, and median portion of frons; pile of frons pale and shorter than arista, that of vertex mostly black, directed forward and considerably longer than arista, that of lateral portion of occiput pale and approximately as long as second antennal segment.

Thorax: Dorsum black except for humeri and apical half of scutellum which are yellow; pile of dorsum semi-erect altho directed posteriorly, nearly uniformly longer than second antennal segment and mostly slightly shorter than apical margin of the discal wing cell; pile of middle third of dorsum of thorax mostly black, that of fore and hind thirds mostly pale; hind and middle coxae mostly black, front coxae mostly yellow; tibiae and femora yellow except for brown proximal spots on fore femora and black apical ring on hind femora; tarsi and apical half of claws black; pulvilli and basal half of claws pale; pile of legs black, that along dorsal margins of femora mostly longer than arista; metatarsi less than twice as long as length of their respective second tarsal segments; apical plate-like processes of tibiae extending along less than the basal half of their respective metatarsi; wings lightly and uniformly grayish, subcostal cell very little broader at apex than elsewhere, a distinct cross vein between discal and second basal cells.

Abdomen: Dorsum black with apical third of second tergite, trilobed apical two-thirds of third and fourth tergites, apical triangular area of fifth tergite, and median spot of sixth tergite yellow; venter yellow; fifth and sixth sternites, and basal triangular area terminating at apex of third sternite black; pile of first five tergites pale and medially shorter than second antennal segment, laterally mostly as long as second antennal segment; pile of sixth tergite black; that of second sternite black and longer than second antennal segment.


Similar in hair length to pacifica Bks., but differing by hair characters as given in the key, smaller extent of yellow on the abdomen, and the normal hind and middle metatarsi.

Key to the species of Dalmannia in North America

1. Scutellum and humeri wholly black; discal and second basal cells usually not separate by a cross vein, cross vein, if present, conspicuously weakened or broken anteriorly; subcostal cell at least twice as broad at apex as at narrowest point; small species, not more than 4 mm....vittiosa

   Scutellum and humeri partly yellow; discal and second basal cells always separated by a cross vein; subcostal very little broader at apex than elsewhere; larger species, at least 6 mm. ........................................ 2
2. Pile of dorsum of thorax wholly pale, whitish; hairs of dorsum of thorax averaging shorter than length of arista or cross vein between discal and second basal wing cells; wings completely clear........picta

Pile of dorsum black, at least in the center.........................3

3. Pile of dorsum of thorax golden anteriorly and blackish posteriorly, hair of both areas closely appressed and distinctly shorter than arista or cross vein between discal and second basal wing cells; hind femora black except for small apical ring of yellow; wings smoky...blaisdelli

No golden hair on thorax, pile of dorsum at least as long as arista or cross vein between discal and second basal cells, if not evidently so, hind femora mostly yellow .........................................................4

4. Yellow of tergites produced forward laterally and in the middle; hair of scutellum at least partly dark, or if not, at least twice as long as arista..............................5

Yellow of tergites produced forward only in the middle; hair of scutellum wholly pale; wings smoky..........................nigriceps

5. Black bands on tergites two to five inclusive broken by the forward production of yellow; pile of dorsum of abdomen with considerable amount of black on every segment; hair of vertex little, if any, longer than second antennal segment and very sparse; hind tibia of female bearing an apical process extending along more than half the length of the metatarsus which is long and arculate..........................pacificapacifica

Black bands on tergites continuous; pile of dorsum of abdomen white except for black hairs on fifth tergites; longer hair on vertex one-third to one-half longer than second antennal segment; pile generally very long and dense; hind tibia and metatarsus of female not as above...........heterotricha