1942

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Recommended Citation

Bohart, G. E. 1942. A Synopsis of the Genus Micralictoides (Hymenoptera, Apoidea). Pan-Pac. Ent. 18(3): 119-123.

Reference: Bohart, G. E. 1942. A synopsis of the genus Micralictoides (Hymenoptera, Apoidea). The Pan-Pacific Entomologist 18(3): 119-123.

A SYNOPSIS OF THE GENUS MICRALICTOIDES (Hymenoptera, Apoidea)

By G. E. Bohart
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Genus Micralictoides (Timberlake)

Micralictoides Timberlake, 1939, Ann. Ent. Soc. Amer. 32:397 (as subgenus).

Size small (from 4 to 5 mm.); punctures of head and mesonotum broad and shallow as in beaten copper; legs black with testaceous markings or abdomen reddish and legs all black; body without metallic reflections; maxillary palpus nearly or quite as long as antennal flagellum of female; tibial spurs translucent pale testaceous with far separated, needle-like teeth, sometimes present on both margins; mesepisternal fossa extending anteriorly and posteriorly at a distinct groove from mesepisternal suture to posterior margin of mesepisternum; "enclosure" of propodeum with weak, irregular ridges disappearing toward posterior crest which presents a broadly rounded, obtuse profile; males without modified legs or antennal hairs; visible abdominal sternites of male simple, resembling those of female; seventh sternite of male with apical lobes slender, depressed, each with terminal incurved or hooked appendage; eighth sternite of male with a single median, articulating lobe and a simple slender apical lobe not over one-third the total sternite length; male genital capsule with stipites each bearing a simple, slender, apical lobe and with a common dilated basal portion larger than the cardo; sagittae small and scarcely arched basally above surface of stipites.

Genotype: Halictoides altadenae Michener

Micralictoides is apparently the simplest in structure of the bees allied to Dufourea and so may be considered the most primitive. Among the species of Dufourea, Micralictoides resembles most the small "Chloralictus-like" group found in western United States and especially the latter's most primitive representatives, leachi Timberlake and viridis Timberlake. This would indicate for the group as a whole a New World origin centered in California with Micralictoides representing most nearly the ancestral type and with the Old World receiving an early migration through Siberia from forms like leachi and arriving in Europe as the "typical" Dufourea represented by the genotype, minuta Lepeletier.

Key to the Known Species of Micralictoides

1. Abdomen largely red..... ruficaudus

-. Abdomen black.....2

2. Clypeus of female strap-like, at least three times as broad as long between anterior tubercles; male with antennal flagellar segments (except apical one) broader than long and with partially greyish facial hair..... altadenae

-. Clypeus of female longer in proportion to width; male with most antennal segments as long as or longer than broad and with white facial hair..... mojavensis

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Table 1. Comparative Measurements of Species of Micralictoides

Species and Sex	Body* Length	Anterior* Wing Length	Face Length anterior view**	Face Width anterior view**	Smallest distance between eyes**	Median Clypeal Length**
ruficaudas 5 males	4.1	2.5	43.2	50	33.2	21.5
ruficaudas 5 females	4.8	3.05	45.8	51.8	34.1	26.2
altadenae 3 males	4.5	3.05	44.3	54.2	34.8	18.3
altadenae 3 females	5	3.2	45	58.5	38	18
mojavensis 5 males	4.2	2.8	45.2	48.2	30.2	20.8
mojavensis 5 females	4.7	3.1	47	54.7	35.1	23

Micralictoides mojavensis Bohart, new species
(Pl. I, fig. 1, 3, 5)

Male: Black; apical two-thirds of mandibles reddish brown; antennae brownish black; abdominal venter and sixth and seventh tergites dark testaceous; first and second tarsal segments, bases and apices of tibiae and apices of femora pale testaceous; tibial spurs nearly white. Head: Clypeus less than twice as broad as long, sparsely punctate apically; frons and vertex coarsely, closely punctate, the punctures much less than one puncture width apart; lower half of face sparsely covered with decumbent white hair; apical five flagellar segments as long as or longer than broad. Thorax: Mesonotal punctures averaging about one puncture width apart; dorsum sparsely covered with erect white pubescence often longer than a flagellar segment: metathoracic leg with first tarsal segment slightly less than 4 times as long as broad; spurs of middle and posterior tibiae with teeth on both margins; "enclosure" of propodeum with irregular ridges rather strong almost to posterior margin. Abdomen: First three segments nearly glabrous medially and with small but distinct, apparently non-setigerous punctures, mostly many puncture widths apart; sides of first three segments and sides and dorsum of remaining segments sparsely covered with white pubescence.

Female: Color as in male except for flagellum which is yellowish brown apically, tarsi which are dark testaceous to dark brown and abdominal venter which is nearly black; tibial spurs toothed on one margin only, pubescence around pygidium testaceous.

Holotype, male, MOJAVE, CALIFORNIA, April 11, 1938, on Malacothrix (G. E. Bohart). Allotype, GAVILON, LOS ANGELES COUNTY, CALIFORNIA, April 30 1940, on Gilia multicaulis (P. H. Timberlake). Paratypes: 4 males, 10 females, GAVILON, CALIFORNIA, April 10, 17, 18, 30, 1940, on Gilia multicaulis, Platystemum californicus, Salvia columbariae, Baeria gracilis (P. H. Timberlake); 1 female, MOJAVE DESERT south of AVAUNTER MOUNTAINS, CALIFORNIA April 30, 1927, on Malacothrix californicus (P. H. Timberlake).

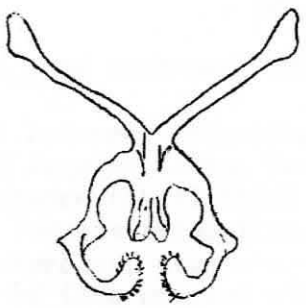
The long clypeus of the female, shorter tarsi, longer antennae, and peculiar seventh abdominal sternite of the male separate this from the other black species, altadenae Michener. The color of the tarsi and abdominal venter varies from pale testaceous to dark brown. The punctures of some specimens are more than one puncture's width apart on head and mesonotum. One female specimen from Mint Canyon, California, which may be a different species, has entirely setigerous abdominal punctures like altadenae.

Micralictoides ruficaudus (Michener)
(Pl. I, fig. 4, 6)

Halictoides ruficaudus Michener, 1937, Ann. Mag. Nat. Hist., 19(10): 397.

Black with dark brownish black appendages, first three and anterior half of fourth abdominal segments red. Head: Clypeus distinctly convex apically, less than twice as wide as long between anterior tubercles; lower half of face sparsely covered with decumbent white pubescence; punctures of frons coarse, dense, much less than one puncture width apart; antennal flagellar segments of male except the apical one broader than long. Thorax: Mesonotal punctures, except posteriorly on mesonotum, as coarse as those on head; dorsum covered sparsely with very short, erect white pubescence; legs entirely black to brownish black; metathoracic leg of male with first tarsal segment four times as long as broad; "enclosure" of propodeum with ridges irregular and not clearly distinct from one another. Abdomen: First three tergites nearly glabrous medially, with distinct, apparently non-setigerous punctures averaging a little more than one puncture width apart; pubescence of fifth and sixth tergites of female dark grey to black medially; impunctate posterior borders of first three tergites approximately unicolorous with the punctate portions.

Records: Type series (C. D. Michener) ALTADENA, LOS ANGELES COUNTY, CALIFORNIA, from Eschscholtzia californica; 1 female, SAUGUS, LOS ANGELES COUNTY, CALIFORNIA, April 15, 1939, from Cryptantha (R. M. Bohart); 12 females, 5 males, RIVERSIDE, RIVERSIDE COUNTY, CALIFORNIA, April 15, 1938, from Eschscholtzia californica (P. H. Timberlake); 1 female, PLACERVILLE, PLACER COUNTY, CALIFORNIA, April 6, 1939, from Nemophila menziesii (G. E. Bohart); 1 female, MUIR WOODS, MARIN COUNTY, CALIFORNIA, May 4, 1913 (E. C. Van Dyke).



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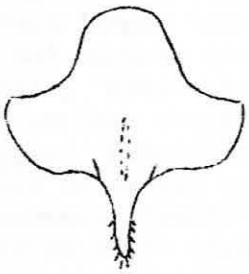

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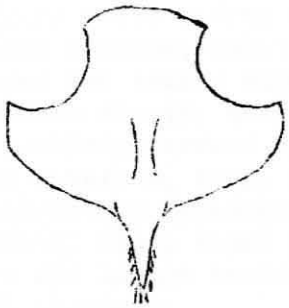

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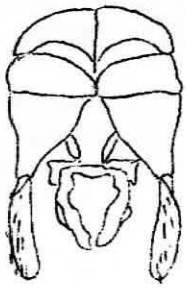

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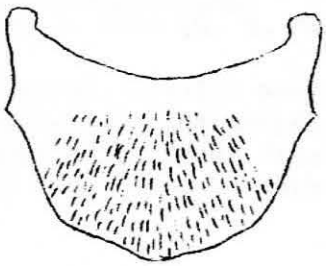

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Fig. 1, mojavensis, male seventh abdominal sternite; fig. 2, altadenae, male seventh abdominal sternite; fig. 3, mojavensis, male eighth abdominal sternite; fig. 4, ruficaudus, male eighth abdominal sternite; fig. 5, mojavensis, male genitalia in dorsal view; fig. 6, ruficaudus, male sixth abdominal sternite.

This species is easily distinguished by its red abdomen and wholly dark colored legs. There is some variation in the extent of red, in some specimens the fourth segment being wholly black and the second and third with dark lateral areas.

Micralictoides altadenae (Michener)
(Pl. I, fig.2)

Halictoides altadenae Michener, 1937, Ann. Mag. Nat. Hist., 19(10): 395.

Black; antennal flagellum of female, mandibles, venter of abdomen and tegulae brown; basitarsi, bases of other tarsal segments and femoro-tibial joint areas brownish testaceous. Head: Clypeus of females strap-like, usually as broad as long between anterior tubercles, truncate along anterior margin; male with lower half of face covered with nearly erect greyish hairs about as long as the clypeus and with antennal segments two to ten broader than long. Thorax: Mesonotal punctures moderately close, averaging slightly less than one puncture width apart; some mesonotal pubescence longer than an antennal segment; males with first posterior tarsal segment over five times and second segment twice as long as broad; "enclosure" of propodeum finely, irregularly carinate, the carinae continuing but weakening toward posterior margin. Abdomen: Punctures of tergum numerous, tiny, setigerous, uniform in number except on impunctate testaceous hind borders of segments; female with abundant, fine, short pubescence medially on first three tergites and longer testaceous pubescence medially on fifth and sixth tergites.

Records: Type series (C. D. Michener) EAGLE ROCK, LOS ANGELES COUNTY, CALIFORNIA, May 9, 1936, from Eriophyllum confertiflorum; 1 male, ALISO CANYON, LOS ANGELES COUNTY, CALIFORNIA, May 3, 1934 (C. D. Michener).

The very short clypeus, slender male tarsi, greyish pubescence, and setigerous abdominal punctures of this species are characteristic. The seventh abdominal sternite of the male shows differences from mojavensis as illustrated. Markings of the legs vary from light to dark testaceous.