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A New Species of *Dufourea* from California

(Hymenoptera : Halictidae)¹

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The following description of a new species of *Dufourea* is published to make the name available to J. W. MacSwain of the University of California for his study of bees pollinating the onagraceous genus *Clarkia*.

Dufourea macswaini G. E. Bohart, new species

HOLOTYPE MALE.—Length 9 mm, length of anterior wing 6 mm; integument intense black, shining, without distinct microscopic crenulation or tessellation; pubescence of dorsum mostly dark, that of pleura, venter and legs, mostly pale; body elongate. **Head:** Face and antenna seen from in front as in fig 1, in profile with eye four-fifths as broad as cheek; the segments proportionately broader laterally; mouthparts in profile as in fig. 2, in dorsal view with galea slightly over 3 times as long as broad, lacinia equal in length to hindtibia; pubescence dark brown but mixed with long, pale hairs on vertex, dorsal margin of scape, ventral portion of cheek; punctation of clypeus close and fine, elsewhere close and moderately fine except a little sparser between scape and eye, quite sparse below median ocellus, irregular in size and distribution between lateral ocellus and margin of vertex. **Thorax:** Pronotal angles unusually produced (right-angled in dorsal view, narrowly rounded in lateral view); scutum with punctures irregular in size and distribution, averaging slightly more than one large puncture width apart, sparser postmedially, those of scutellum sparse sublaterally, otherwise moderately close, those of metanotum fine, close, uniform, those of pleura fine, mostly very sparse, except absent ventrally on hypoepimeral area; forefemur a little more than, and mid- and hindfemora a little less than twice as long as broad; foretibia more than twice and hindtibia about three times as long as broad, the latter longer than hindfemur (7:5.8); midtibial and outer hindtibial spurs as in figs. 3, 4; tarsomere I of all legs slightly more than three times as long as broad, that of hind leg gently bowed and with posterior hair fringe over twice as long as width of segment; tarsomeres II-IV of foreleg, and II-III of mid- and hindlegs broader than long; tarsomeres II-IV of hindleg produced posteroapically; pubescence of scutum dark, sparse, mostly short, that of pleura pale, sparse, longer; wings uniformly brownish infuscated, the veins dark brown; venation as in fig. 5. **Propodeum:** Sides, posterior face with pale, rather long, sparse pubescence; dorsal enclosure carinate behind, coarsely striate throughout, with about 12 striae on each side. **Abdomen:** Terga shining, with moderate-sized, deep punctures, close basally, becoming sparse apically, absent on posterior impressed borders which are dark piceous; pubescence of terga I-IV dark, short, semierect except each with single row of short, stiff, white hairs basally; sterna without sublateral hook-

¹ In cooperation with the Utah Agricultural Experiment Station.

lets; sterna VI-VIII and genitalia as in figs. 6-13, the ventral tuft on sternum VI with mixed dark and light hairs.

FEMALE.—Differs from holotype in usual characters influenced by sex but otherwise similar except as follows: Postocellar area more rounded, only slightly depressed sublaterally, and only slightly over twice as long as an ocellar diameter; facial punctures sparser between scape and eye (about two puncture diameters apart); clypeus more convex, very sparsely punctured distally but coarsely, more closely punctured basally; width of cheek subequal to that of eye in profile; flagellomere VII unusually broad, at least twice as broad as long; pronotal angles more rounded but unusually prominent for female; short spines on apical margins of fore- and midtibiae numerous and well developed; tibial scopa light brown to pale, suberect, unusually long, sparse, not at all concealing integument in any view; dorsal fringe of hind tarsomere I light brown, slightly appressed, about half as long as tarsomere; tarsomeres II-IV of all legs at least slightly longer than broad; dorsal enclosure of propodeum more closely striate on median half; tergal pubescence very short and sparse, anal fimbria dark brown; tergum III definitely broader than others.

Holotype male, (deposited in Calif. Acad. Sci.) 4-8 MILES NORTH OF NORTH FORK, MADERA COUNTY, CALIFORNIA, 20 June 1963, on *Clarkia dudleyana* (Abrams) Macbr. (J. W. MacSwain). *Paratypes*: (Housed at U. C. Berkeley, U. C. Riverside, Utah State U., Logan) four females and one male, same locality and date as holotype, on *Clarkia dudleyana* and *C. purpurea* (Curt.) A. Nels Macbr. (J. W. MacSwain, J. A. Chemsak, and R. W. Thorp); one female, 1.5 miles northwest of Tollhouse, Fresno Co., Calif., 20 June 1963, on *Clarkia cylindrica* (Jepson) Lewis & Lewis (J. A. Chemsak).

The type series is uniform. The single paratype male, like the females, has closer median striations on the propodeum than has the holotype. *D. macswaini* is probably related most closely to *D. echinocacti* Timberlake but it differs in having darker integument, shorter, darker pubescence, shorter antennae, less modified legs, less flattened face, and no modified flagellar hairs on the male. Other species in the same group include *D. vernalis* Timberlake and *D. vandykei* Bohart.

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FIG. 1. Face and antenna of male in frontal view. FIG. 2. Mouthparts distal to cardo in lateral view. FIG. 3. Midtibial spur of male. FIG. 4. Outer hindtibial spur of male. FIG. 5. Forewing of female. FIG. 6. Sixth abdominal sternum of male in ventral view. FIG. 7. Sixth abdominal sternum of male in lateral view. FIG. 8. Seventh abdominal sternum of male in dorsal view (left) and ventral view (right). FIG. 9. Seventh abdominal sternum of male in lateral view. FIG. 10. Eighth abdominal sternum of male in ventral view (left) and dorsal view (right). FIG. 11. Eighth abdominal sternum of male in lateral view. FIG. 12. Genital capsule of male in ventral view (left) and dorsal view (right). FIG. 13. Genital capsule of male in lateral view.

