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NEW ANTHOPHORID BEES FROM ARIZONA AND WYOMING

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The bees described below were obtained by the American Museum Expedition, the collector being Dr. Frank E. Lutz unless the contrary is stated. The types are in The American Museum of Natural History.

***Melissodes sabinensis*, new species**

♂.—Length about 12 mm.; black; the dorsal surface, including abdomen, densely covered with pale fulvous hair, but disc of scutellum with a transverse crescentic band of black hair; mesothorax with no dark hair; cheeks, face and under side of thorax with white hair; clypeus, labrum and basal half of mandibles cream-color; eyes pale reddish; face narrow; antennæ as usual in the genus, the long flagellum bright ferruginous beneath; third joint much longer than wide; tegulæ red, densely covered with appressed pale hair; wings dusky; stigma and nervures dusky reddish; second submarginal cell very broad; hair of legs white with a yellowish tint, bright ferruginous on inner side of tarsi; spurs pale reddish; abdomen densely covered with appressed fulvous hair, white and shining at extreme base of second segment (this only visible when the segment is much exerted); subapical spines very strong; apical plate covered with appressed pale reddish hair.

ARIZONA.—3 ♂: Sabino Basin (type locality); Sta. Catalina Mts.; 3800 ft. alt.; July and August, 1916. 1 ♂: Sta. Cruz Village, Comobabi Mts., about 32° 1' N., 111° 54' W.; 3150 ft. alt.; August 10–12, 1916. 1 ♂: West side of Santa Rosa Valley, about 32° 1' N., 111° 43' W.; 3400 ft. alt.; August 9–10, 1916.

In my key in Trans. Amer. Ent. Soc., 1906, this runs to *M. townsendi* Cockerell, to which it is very closely allied. *M. townsendi* is, however, certainly distinct, being considerably larger and more robust, with pea-green eyes.

***Melissodes manni*, new species**

♂.—Length about 13.5 mm., anterior wing 11 mm.; black, with the clypeus, labrum and bases of mandibles lemon-yellow; apical part of mandibles with an orange area; head and thorax above with light fulvous hair, inclining to fuscous on disc of scutellum; face with very pale yellowish hair, cheeks and under side of thorax with white; facial quadrangle conspicuously higher than broad, distinctly broadened above; clypeus dullish and rugose; eyes pale greenish; antennæ long, third joint longer than second, but not nearly twice as long; flagellum bright ferruginous beneath; mesothorax shining, strongly punctured; tegulæ ferruginous; wings strongly yellowish, the apical field dusky; second submarginal cell very broad, receiving first

recurrent nervure not far from end; stigma and nervures brown; legs with pale hair, bright ferruginous on inner side of tarsi; tarsi ferruginous apically; abdomen black, hind margins of first two segments obscurely reddened; first segment loosely covered with long creamy-white hair except apically; segments 2 to 5 with conspicuous pure white hair-bands, widely interrupted on second, narrowly on third, and entire on fourth and fifth, but narrowed mesally by a posterior broad emargination; sixth segment and apex with brown-black hair; hind margins of ventral segments pallid and reddish; a pair of conspicuous spines at sides of fifth segment posteriorly.

ARIZONA.—1 ♂: Garden Canyon, Huachuca Mts., (W. M. Mann).

Closely resembles *M. kallstroemiæ* Cockerell, but considerably larger, with a band of white hair on fifth abdominal segment. By the strongly yellow wings it resembles *M. xanthopteralis* Cockerell from Texas, but it is also easily distinguished from that by the white band on fifth segment. There is also some resemblance to *M. hortivagans* Cockerell.

***Tetralonia annæ patruelis*, new subspecies**

♀.—Similar in all respects to *T. annæ* Cockerell, except that the white band on third abdominal segment is only about half as broad (its width being a little over half a millimeter) and that on fourth segment is also much narrower, while on fifth segment the white bands at sides are very narrow. There is a bright red patch on the ventral surface of abdomen, near the base.

WYOMING.—2 ♀: Cheyenne; about 6000 ft. alt.; at *Erysimum asper*; June 11, 1920.

T. annæ is known from New Mexico.

***Tetralonia lata lautipes*, new race**

♀.—Somewhat smaller than *lata*, length about 14 mm.; hind basitarsi with hair on inner side ferruginous instead of dark fuscous.

WYOMING.—14 ♀: Jackson; about 6300 ft. alt.; moderately moist pasture land; July 13–17, 1920.

Certainly only a local race of *T. lata* (Provancher), which occurs in the Northwest. Mr. J. C. Crawford observed that *T. belfragei* (Cresson), at Dallas, Texas, varied in the color of the hair on hind basitarsi, from deep red to more or less sooty. The Wyoming insect above described is quite uniform in the color of this hair.

***Diadasia lutzi*, new species**

♂ (Type).—Length about 8 to 9.5 mm.; black with dark reddish tegulae, flagellum faintly reddish beneath; eyes gray; hair of head and thorax long and abundant, white; of abdomen long and white on first two segments (no black at base of second), segments 3 to 5 with black hair, except the white marginal bands; hind tibiae incrassate, narrowed at base; hind basitarsi strongly curved, the apical half

with long hair behind. In my table (Amer. Naturalist, XXXIX, p. 742) this runs to *D. afflictata* Cresson, but is considerably smaller; the hind tibiae have a shorter narrowed portion or neck; and the dentiform processes or spines at end of abdomen are much more divergent. It most resembles *D. skinneri* Cockerell, from Utah, but *skinneri* has the apical spines closer together, the apical part of the abdomen with longer, shaggier, yellowish-tinted hair, and the hair on head and thorax above yellowish. In *skinneri* there are broad bands of erect pale hair on hinder parts of segments 3 to 5, and anterior to these bands the segments are almost bare. *D. lutzii* has the effect of narrow clear white bands on these segments, which readily distinguishes it from *skinneri*. *D. afflictata* Cockerell, from New Mexico, has very short tomentum on abdomen, and hardly needs comparison.

♀.—Length about 8 to 9 mm.; broad, with white hair, but very dark fuscous at apex of abdomen, and dark sooty on outer side of hind tibiae and tarsi. It is also dark on under side of abdomen, except laterally. The abdomen is thinly pubescent, the segments with narrow clear white hair-bands. In my key this runs to *afflictata*, but is smaller, with the abdominal hair-bands narrow (not definitely broadened in middle), and pure white, while the lateral bosses on the segments are highly polished and shining.

WYOMING.—8 ♂, 6 ♀: Green River; about 6100 ft. alt.; July 2, 1920.

One male has abnormal venation. On the right side there are only two submarginal cells, the first recurrent nervure meeting the intercubitus. On the left side the second submarginal is small, triangular, and petiolate above.

