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## New Californian Bees

T. D. A. Cockerell  
*University of Colorado*

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## New Californian Bees

By T. D. A. COCKERELL

In a small collection of bees recently received from Pomona College, I find four new species, which are described herewith.

### *Tetralonia pomonæ* sp. n.

♂ Length 10 mm., black with the clypeus pale lemon yellow, notched at sides; labrum pale yellow, but mandibles entirely black; antennæ black, flagellum reaching end of second abdominal segment; third antennal joint a little longer than broad; eyes (dry) very dark brown; face broad, covered with long dull white hair; thorax above with very pale ochreous hair; disc of mesothorax brilliantly shining, feebly and sparsely punctured; tegulæ fuscous with a rufous spot posteriorly; wings dusky hyaline; nervures rufo-piceous; second s. m. narrowed above, receiving first r. n. a little beyond beginning of last third; legs with dull white hair, orange-ferruginous on inner side of tarsi; small joints of tarsi clear ferruginous, but basitarsi at most obscurely reddened apically; hind spur normal; abdomen with hind margins of segments narrowly hyaline; first segment with long pale hair; second with thin pale hair basally, but short fuscous hair subapically; third like second, but with a definite basal band of dull white tomentum; fourth covered with dull white tomentum, but a little fuscous hair just before margin; fifth like fourth, except that hind margin has a dense white fringe, and no fuscous; apical plate ferruginous, with fulvous hair on each side.

*Hab.*—Laguna, California (*R. La Follette*, B 2). In my tables in *Trans. Amer. Ent. Soc.*, 1906, this runs to *T. lepida*, but it has not the narrow face of that species. It resembles *T. birkmanniella* Ckll. and *T. poetica* Ckll., but the three are easily separated thus: Flagellum about 12 mm. long, reaching beyond end of third abdominal segment; upper margin of clypeus broadly black.

*poetica* Ckll.

Flagellum 10 mm. or less; upper margin of clypeus not black. 1.

Hymenoptera. Apoidea. Halictidae. Halictinae. Augochlora

Anthophoridae. Eucerinae. Tetralonia

Emphorinae. Diadasia

Exomalopsinae. Exomalopsis

1. Second s. m. a little broader above than below; apical plate of abdomen broad at end; hair on outer side of hind basitarsi scanty and rather short. *birkmanniella* Ckll.

Second s. m. narrower above; apical plate of abdomen narrow at end; hair on outer side of hind basitarsi abundant and long. *pomonæ* Ckll.

*Diadasia crassicauda* sp. n.

♂ Length about 10 mm.; black, with abundant though not very dense grayish-white hair; eyes narrow, grayish-green; face broad; clypeus shining, with fine punctures; flagellum entirely black; mesothorax shining, with small punctures very sparse on disc posteriorly; area of metathorax microscopically sculptured, with an opaque median sulcus; tegulae reddish brown, blackened anteriorly; wings hyaline, slightly reddish; legs black, with long white hair, small joints of tarsi obscurely reddish; hind basitarsi gently curved, but not produced at end; first two abdominal segments with long loose pale hair, the others with appressed hair, and segments 2 to 6 with narrow white marginal bands; apex of abdomen bilobate, the lobes large and blunt, covered with very pale ochraceous hair except at the ends, which appear black; stipites with long red hair on posterior margin.

*Hab.*—Laguna, California (R. La Follette, B 7). Allied to *D. sphaeralcearum* Ckll., but larger, with very much broader lobes at end of abdomen, those of *sphaeralcearum* being spine-like. It does not seem probable that this is the male of *D. albovestita* Provancher.

*Exomalopsis nitens* sp. n.

♀ Length about or nearly 7 mm.; robust, black, mandibles dark red in middle, flagellum ferruginous beneath except at base; hair of head and thorax rather long, dull white, pale ochraceous dorsally; head and thorax shining, finely punctured; tegulae piceous; wings grayish hyaline, nervures dark, stigma sepia; legs black, with small joints of tarsi ferruginous; scopa of hind legs large and beautifully plumose, dull whitish on tibia, gray (variably dark) on tarsi; first abdominal segment shining, the basal declivity bounded above by a distinct rim, the hind margin at each side with a broad, dense

white hair-band, wholly absent from the middle half; segments 2 to 4 with very broad entire bands of grayish-white tomentum; apex of abdomen with ochreous hair.

*Hab.*—Laguna, California (R. La Follette, B 5, B 8). In Friese's table of *Exomalopsis* (1899) this runs to *E. texana* Friese, but that is a much smaller species, with quite differently colored tegulae and stigma. *E. texana* belongs to the genus or subgenus *Anthophorula* and *E. nitens* is doubtless to be referred to the same group, although the male is unknown. It is quite distinct from *A. coquilletti* (Ashm.), which Baker has taken at Claremont.

*Augochlora pomoniella* sp. n.

♀ Length about 8 mm.; bright emerald green, face tinted with golden, mesothorax bluer green, abdomen yellowish-green; clypeus strongly punctured, broadly black apically; mandibles with a small green spot at base; face very broad, eyes deeply emarginate (about as in *A. pura*, much more so than in *A. confusa*); front extremely finely and densely punctured; anterior lateral corners of prothorax rounded; tubercles prominent; mesothorax very finely and densely punctured; area of metathorax with many fine short plicae, but the margin thickened, obtuse, without definite sculpture; tegulae piceous, pallid anteriorly; wings dusky hyaline, nervures fuscous, stigma very dull ferruginous; first r. n. meeting second t. c. or entering extreme base of third s. m.; hair of head and thorax above scanty, dull white; femora largely green, tibiae and tarsi black, anterior tibiae with metallic tints in front; hind spur of hind tibia appearing simple under a lens, but the margin actually with about 20 little nodules; abdomen shining, very finely punctured, the first two segments with a hardly noticeable dark margin; fifth segment dark blue-green, with fuscous hair; venter black.

*Hab.*—Aliso Canyon, California (R. La Follette, B 15). A species of the group of *A. pura* and *A. confusa*. From *A. pura* (*robertsoni*) it is known by the much smoother, more finely punctured supraclypeal area, the thick rounded rim of area of metathorax and the dark nervures. From *A. confusa* it is known by the deeply emarginate eyes, broad face, much shorter plicae of metathorax and dark nervures. From *A. neglectula* by the much broader head,

smooth and brilliantly shining posterior truncation of metathorax, etc.

At the same locality Mr. La Follette took *Agapostemon radiatus* Say (B 16) and *Halictus farinosus* Smith (B 1, B 11); the latter also at Laguna (B 3). Aliso Canyon is about two miles from Laguna Beach.

The specific name chosen, connecting the species with Pomona College, should in strictness be written *pomonæella*, but the derivation is ultimately from pomum, and it seems permissible to choose the less cumbersome form.