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## Some Bees from Colorado

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*University of Colorado*

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INCORPORATED WITH

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chocolate brown, fringes brown and rather shining. Hind wings light brown with a slight rusty tinge on dorsal area. Underside light brown, somewhat glossy, paler on dorsal area of the fore wings.

Expanse, 22 millim.

Collection number, 1412.

A male specimen from Kanshirei (1000 feet), August 15th, 1908.

#### THYRIDIDÆ.

##### *Betousa reticulata*, sp. n.

♀. Fore wings slightly produced at apex, bluntly angled about the middle; pale cinnamon brown reticulated with darker, costa dull purplish brown expanding into a large irregular patch towards apex; antemedial band dull purplish-brown, broadest on costal area; postmedial band dull purplish-brown, broad on costal area where it unites with the apical blotch, twice contracted below middle; two spots in lower edge of the apical patch and three on its outer edge, pale marks on apical half of costa; terminal line dull purplish-brown, fringes rather paler. Hind wings, termen slightly excised before tornus; pale cinnamon brown, reticulated with darker; antemedial and postmedial bands dull purplish-brown, the postmedial broadest on dorsum and indistinct towards costa; terminal line and fringes as on fore wings. Underside as above, but bands on hind wings less clearly defined.

Expanse, 28 millim.

Collection number, 1872.

Two female specimens from Arizan, one taken in February and the other in April, 1909.

Comes nearest to *B. industalis*, Walk.

#### EPIPLEMIDÆ.

##### *Epiplema quadripunctata*, n. sp.

♂. Head and thorax white marked with ochreous and brown; abdomen white, hind segments ochreous tinged. Fore wings white, freckled and clouded with ochreous and darker brown except on the dorsal area; postmedial band ochreous with some blackish diffuse marks on it; four black dots on the terminal area below the apex; fringes ochreous, paler towards tornus. Hind wings white suffused with ochreous except on the dorsal area; discoidal mark black, traces of a medial band and a cluster of black scales beyond; a black dot about the middle of termen; fringes ochreous. Underside white; fore wings suffused with fuscous, except on the dorsal area.

♀. Similar, but the blackish marks on postmedial band of the fore wing, and the black dots on the terminal area are rather larger.

Expanse, 20 millim. ♂; 22 millim. ♀.

Collection number, 97A.

One example of each sex from Kanshirei (1000 feet), the female taken June 13th, 1906, and the male April, 14th, 1908.

Allied to *E. instabilata*, Walk.

## SOME BEES FROM COLORADO.

By T. D. A. COCKERELL.

*Osmia globosa*, Cresson, variety a.

♀. Length 9.5 mm.; hair of face and front mixed black and white, entirely white at sides of face, nearly all black on clypeus; occiput with long pale hair; thorax with long white (faintly ochreous-tinted) hair, abundant on scutellum; legs with mainly black hair, on anterior femora behind it is white; wings dilute reddish. Abdomen short but not globose.

*Hab.*—Bluebird, Boulder County, Colorado, July 25th, 1915 (Cockerell). At the same time and place I took *Titusella prinitens*, Ckll. and *Megachile wootoni* subsp. *rohveri*, Ckll. This looks like a distinct species, but is probably a form of *O. globosa*. It may be the hitherto unknown female of *O. globosiformis*, Ckll., but the wings are much darker and redder than in the male of that species.

*Osmia propinqua*, Cresson.

Boulder, Colorado, male visiting daffodil (*Narcissus*) flowers, April (Hazel Andrews).

*Osmia ramaleyi*, Cockerell.

Boulder Canon, in road, May 22nd, 1912; male.

*Osmia kenoyeri*, Cockerell, variety a.

♀. Hair of thorax above white, with a faint creamy tint; hind margins of abdominal segments blue-green.

Baldy Mtn., Boulder County, Colo., above timber-line, July 24th, 1915 (Cockerell).

*Halictus pruinosiformis*, Crawford.

Nebraska Hill, Colo., female at flowers of *Salix*, just below timber-line, July, 1915 (Kenoyer). This species ranges unchanged from the Middle Sonoran zone to the upper limit of the Hudsonian.

*Halictus fraseræ*, sp. n.

♀. Length about 8 mm.; head dark greenish, the clypeus black; mesothorax yellowish-green, especially the shining posterior middle; other parts of thorax blue-black; tegulae piceous, rufous posteriorly; wings suffused with brownish, stigma amber-colour; abdomen with the first two segments green, the others black; segments 1-4 with broad dense apical fringes of pure white hair, that on the first interrupted in middle. Hair of head and thorax dull white; clypeus

prominent; face broad; antennæ black; front extremely densely and minutely punctured; mesothorax closely punctured; area of metathorax densely sculptured, punctostriate; hind spur with short teeth. The largest American member of the *H. tumulorum* group, easily known from *H. arapahonum*, Ckll., by the dusker wings and dark tegulæ and antennæ, as well as the greater size. The clear white abdominal bands are also peculiar.

*Halictus fraseræ* is closely related to *H. virgatellus*, Ckll., but differs in the colour of the tegulæ and the abdomen. Possibly the two may prove to be races of a single species.

*Hab.*—Tolland, Colorado, at flowers of *Frasera*, July, 1915 (L. A. Kenoyer).

*Halictus dasiphoræ*, Cockerell.

Kingston, Colorado, on flowers of *Frasera*, just above timberline, July, 1915 (Kenoyer); Nebraska Hill, Colo., on *Polemonium confertum* flowers, July 18th (Kenoyer). New to Colorado.

*Halictus inconditus*, sp. n.

♀. Length about 7 mm., anterior wing about 5.4; black, with scanty pale pubescence; head rather broad; clypeus prominent, shining, with scattered punctures more or less running into grooves; supraclypeal area shining, minutely punctured; mandibles black; antennæ black, the flagellum very obscurely fuscous beneath; front perfectly opaque, as also the sides of the vertex; mesothorax with very little hair, shining, extremely finely punctured, with a microscopical lineolation between the punctures; scutellum also shining and finely punctured, depressed in middle; area of metathorax semilunar, appearing entirely granular under a lens, but actually covered with very fine anastomosing ridges, between which are exceedingly delicate cross-lines; posterior truncation of metathorax rounded at sides above; tegulæ piceous with a dark reddish spot; wings hyaline suffused with brown, stigma and nervures dark rufous; legs black, with white hair; hind spur of hind tibia with two large very oblique teeth; abdomen shining, the depressed apical portions of the segments not discoloured; no hair-bands or patches; ventral segments fringed with white hair.

*Hab.*—Tolland, Colorado, at flowers of *Frasera*, July, 1915 (L. A. Kenoyer).

This is separated from the species it most resembles, thus:

Area of metathorax with coarse rugæ . . . . *pectoralis*, Smith.

Area of metathorax very finely sculptured . . . . 1.

1. Vertex on each side of ocelli dull and roughened; tegulæ without a clear red spot . . . . *inconditus*, Ckll.

Vertex on each side of ocelli smooth; tegulæ partly clear ferruginous . . . . *macoupinensis*, Rob. (including *divergens*, Lov.).



*Halictus regis*, sp. n.

♀. Length a little over 5 mm., anterior wing about 4.6; black, with thin pale hair; facial quadrangle longer than broad; clypeus projecting; cheeks broad; clypeus shining, with scattered punctures; front dull, densely and minutely punctured; upper orbital margins narrowly shining; sides of vertex dull; flagellum clear ferruginous beneath; mesothorax somewhat shining, very minutely punctured and microscopically lineolate; area of metathorax not defined, with very delicate irregular plicæ mainly confined to the basal part; posterior truncation small, sharply defined at sides except the upper fourth; tegulæ rufopiceous; wings greyish hyaline, stigma and nervures pale dull testaceous; legs black, with pale hair; hind spur with short saw-like teeth; abdomen shining, especially basally; no hair-bands, but slightly indicated thin hair-patches at basal corners of second and third segments.

*Hab.*—Kingston, Colorado, at flowers of *Fraseria*, just above timber-line, July, 1915 (*L. A. Kenoyer*). Close to *H. dasiphoræ*, but considerably smaller, with the area of metathorax quite differently sculptured.

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A NEW GENUS OF TRICHOGRAMMATIDÆ FROM AUSTRALIA CHARACTERISED BY BEARING A POSTMARGINAL VEIN.

By A. A. GIRAULT.

With the exception of *Pseudobrachysticha semiaurea*, Girault, which bears a short, triangular postmarginal vein, the following new species is the only member of the family yet known to me which has that vein distinct.

*Thoreauia*, new genus.

*Female.*—Similar to *Pseudoligosita*, Girault, but neither the pedicel nor funicle is elongate, the funicle joint being subglobular (wider than long) the, pedicel twice its length, two and a quarter times longer than wide at apex. There are the following additional differences: The body is slender, the thorax and abdomen each long, the latter somewhat longer than the former, distinctly *compressed* and with the valves of the ovipositor slightly, distinctly extruded; the pronotum is prolonged over the head in the form of a button-like medial projection. The long scutum seems to be divided transversely at distal three-fourths, leaving a crescentic sclerite between it and the scutellum, the suture being concave. Caudal femora swollen, coarsely scaly. All tibiæ dorsad armed with four or five weak, setigerous teeth. No oblique hairless line from stigmal vein. Mandibles

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