

4-1-1906

## Descriptions and Records of Bees.— X.

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

Follow this and additional works at: [https://digitalcommons.usu.edu/bee\\_lab\\_ca](https://digitalcommons.usu.edu/bee_lab_ca)



Part of the [Entomology Commons](#)

---

### Recommended Citation

Cockerell, T. D. A., "Descriptions and Records of Bees.— X." (1906). *Ca*. Paper 364.  
[https://digitalcommons.usu.edu/bee\\_lab\\_ca/364](https://digitalcommons.usu.edu/bee_lab_ca/364)

This Article is brought to you for free and open access by the Bee Lab at DigitalCommons@USU. It has been accepted for inclusion in *Ca* by an authorized administrator of DigitalCommons@USU. For more information, please contact [digitalcommons@usu.edu](mailto:digitalcommons@usu.edu).





*Descriptions and Records of Bees.—X.*

By T. D. A. COCKERELL, University of Colorado.

*Halictoides fallugiæ*, sp. n.

*Halictoides fimbriatus*, var., Ckll. Entom. News, 1901, p. 41.

♀.—Length about  $7\frac{1}{2}$  mm.

Black, with no blue tints; pubescence white, rather abundant on head and thorax, a few fuscous hairs on scutellum; head seen from in front not far from round; clypeus projecting but not produced, shining, convex, with very few large punctures, lateral lower corners produced downwards, dentiform; front and vertex with dense small punctures; flagellum ferruginous beneath except at base, the apical part very stout; mesothorax very finely punctured; anterior part

of scutellum shining, irregularly sparsely punctured; area of metathorax sharply bordered and covered with exceedingly fine striae; tegulae shining rufo-piceous. Wings a little dusky, iridescent; stigma red-brown, nervures fuscous; venation essentially as in *H. marginatus*, but the stigma is larger and the marginal cell somewhat shorter. Legs black; abdomen shining, the hind margins of the segments broadly rufo-testaceous; there are basal white hair-bands and the hair of apex is pale sooty.

Easily known from *H. marginatus* by the shorter strongly margined area of metathorax, much darker stigma, &c. From *H. virgatus* it is known by the much finer striae of the area of metathorax, much less coarsely sculptured abdomen, and colour of hair of apical segment; it is also somewhat smaller and the abdomen is narrower. From *H. fimbriatus* it differs in the colour of antennae, shape of abdomen, &c. Last ventral segment with no longitudinal keel, but penultimate one with a transverse ridge.

*Hab.* Mesilla Park, New Mexico, April 30, 1900, at flowers of *Fallugia acuminata* (Wootton); two (Cockerell).

*Ctenoplectra chalybea*, Smith.

In Ann. & Mag. Nat. Hist., Sept. 1904, I described *C. vagans* from the Philippine Islands, separating it from a specimen of *C. chalybea*, ostensibly the type, from Celebes. I now find, however, that the real original type of *C. chalybea* was collected by Wallace at Mt. Ophir, Malacca, and is presumably in the Hope Museum at Oxford. I cannot tell from the description whether the Malacca insect is identical with the Celebes or the Philippine one, or different from both; but since Smith considered it to be the same as that from Celebes, we must so assume for the present.

*Melissodes hortivagans*, Ckll.

Fedor, Texas, May 29, June 7 (*Birkmann*).

New to Texas. One female is a partial gynandromorph, having the right side of the clypeus and labrum light lemon-yellow, while the other side is black, the colours sharply and evenly separated.

*Melissodes suffusa*, Cresson.

Fedor, Texas, May 28, 1901, ♂ (*Birkmann*). Another is dated June 9.

The male *suffusa* has no teeth at sides of seventh abdominal segment and the antennae are only moderately long.

*Melissodes grandissima*, Ckll.

A male from Fedor, Texas (*Birkmann*), is referred to this species. It runs in my tables to *M. comanche*, but differs in having the hair of b. j. mainly black or blackish (clear ferruginous in *comanche*), while that of basal joint of middle tarsus is a sort of pale purplish grey; lateral patches of abdomen better developed; face a little narrower; eyes light yellowish green; third joint of antennæ shorter; last joint black above and dull reddish below (entirely light red in *comanche*).

*Melissodes Baileyi*, sp. n.

♀.—Length about  $11\frac{1}{2}$  mm.

Hair of head and thorax white; some black on vertex and a large black patch on dorsum of thorax, not, however, nearly reaching the tegulæ; eyes silver-grey; flagellum, except at base, dull ferruginous beneath; tegulæ piceous, with light hair; just behind tegulæ, at base of wing, is a tuft of pale golden hair. Wings rather short, hyaline; stigma and nervures fuscous; second submarginal cell very small, oblique, higher than broad, receiving the first r. n. about the middle. Legs black, with pale hair, that on basal joints of tarsi within orange, that at apex of middle tibiæ without dense and dark fuscous; scopa of hind tibiæ pale fulvous, coarse and not plumose. Abdomen with conspicuous silver-grey hair-bands, one at base of second segment and very broad, even, and entire, apical ones on segments 2 to 4; no sign of a median band on 2; 5 and 6 with black hair, white hairs projecting only at extreme side; hair of labrum yellowish, contrasting with the greyish white of face.

In my tables this runs to *M. sphæralcææ*, except that the hair on outer side of hind tibiæ and tarsi is light yellowish. It is not unlike *sphæralcææ*, but differs by the less shining abdomen, the duller surface of which is much less distinctly punctured, while the hind margins of the segments are scarcely pallid, except the first, and that narrowly. The middle of the mesothorax also has the punctures closer and more regular, and the second submarginal cell is quite differently formed. From *M. fimbriata*, Cress., it is easily known by the wings not fuscous on apical margin; third s.m. very large, not narrowed one-half to marginal; abdominal bands broad, &c. In Robertson's table it runs to *M. vernoniæ*, Rob., but it is easily known from that by the colour of hair on hind tarsi and the ornamentation of second abdominal segment.

*Hab.* Fedor, Texas, April 5, 1904 (*Birkmann*).

Named after Mr. Vernon Bailey, in recognition of his work on the zoology of Texas.

*Melissodes xanthopteralis*, sp. n.

♂.—Length about 12 mm.

Clypeus, labrum, and basal part of mandibles yellow; flagellum red beneath; pubescence dull whitish, except that of mesothorax and scutellum, which is dull light ochreous. Wings very yellow, the apex little infuscated; tegulæ red; hind margins of abdominal segments dull white, the subapical region broadly reddened; abdominal bands white (on middle of segments 2 to 4); segments 5 to 7 with brown-black hair; 7 with lateral spines.

Runs both in my table and Robertson's to *M. comptoides*, Rob., but it does not look like *M. compta*, and the abdominal fasciæ do not seem to agree. The account of *comptoides* would seem to apply even better (except in respect to the ferruginous tarsi) to male *galvestonensis*, but the female of that species does not agree with *comptoides*. *M. xanthopteralis* differs from *galvestonensis* by the broadly whitish hind margins of abdominal segments, third segment with a narrow white hair-band (an extremely broad one in *galvestonensis*), long hair at sides of segments 3 and 4 white (without the conspicuous black bristles seen in *galvestonensis* and also in *communis*), wings yellower and not so dusky, tarsi ferruginous, hair on outside of hind tibiæ and tarsi white (fulvous in *galvestonensis*), third joint of maxillary palpi shorter. From *M. kallstræmiæ phenacoides* (which it resembles in the colour of the wings and the colour and form of the abdominal bands) it differs in the conspicuously broader abdomen, the somewhat broader face, the broadly whitish hind margins of abdominal segments, and the absence of black bristles on basal part of segment 4. The abdomen is also much broader than that of *M. tepaneca* and the bands are quite differently coloured. From the colour of the wings, ferruginous nervures, and large oblique second submarginal cell, it cannot well be the male of *M. Bruesi*, Ckll.

*Hab.* Fedor, Texas, May 26, 1901 (*Birkmann*).

*Melissodes megacerata*, sp. n.

♂.—Length 13 mm.; antennæ 10 mm.

Black; head and thorax with abundant light ochreous pubescence; clypeus lemon-yellow, except for the usual

black dot on each side; labrum black, with a large yellow spot; mandibles with no yellow spot; antennæ very long, third joint at shortest point somewhat longer than second, flagellum deep red beneath; mesothorax dullish, with strong, rather close punctures; no dark hair on thorax above; tegulæ piceous, with a ferruginous margin. Wings dusky, but not noticeably yellowish; stigma and nervures dull ferruginous. Legs black, with ochreous hair; claw-joints ferruginous; hair on inner side of basal joint of hind tarsi ferruginous. Abdomen shining, first segment with much ochreous hair, remaining segments with brown-black hair, and no evident pale bands, but there are lateral oblique bands of light hair on sides of segments 2 and 3; hind margins of segments hyaline or whitish, the first narrowly, the others broadly; sides of apex of abdomen 4-dentate, the teeth on sixth segment dark, those on seventh red and directed more outwardly; apical plate narrow, truncate; mouth-parts only moderately elongated.

In my tables this runs to *M. rivalis*, Cress., except that the abdomen is not banded. It differs entirely from *rivalis* by the very much longer antennæ as well as other characters. There is a certain superficial resemblance to *M. georgica*, Cress., but, again, the antennæ are longer and the apical plate of the abdomen is much narrower than in *georgica*, and there are many other differences. There is also a superficial resemblance to *M. carolinensis*, D. T., but *megacerata* differs from that by the smaller abdomen, teeth at sides of seventh segment, absence of a white hair-band at base of second segment, &c.

*Hab.* Fedor, Texas, Oct. 13, 1897 (*Birkmann*).

In Robertson's table this runs to *M. autumnalis*; but that species, as I have recognized it, has the hair on inner side of basal joint of hind tarsi black; and Robertson, contrasting *autumnalis* with *cnici*, makes no reference to the most conspicuous difference shown by *megacerata*—the very much longer antennæ.

*Melissodes pimella*, sp. n.

♂.—Length about 7 mm.; antennæ about  $6\frac{1}{2}$  mm.

Runs in my table to *aurigenia* and in Robertson's to *agilis*, but it is smaller than these, and closely resembles *M. agilis* var. *subagilis*, from which it differs as follows:—Size somewhat smaller, especially the abdomen; orbits more parallel; eyes nearly black (not at all green); clypeus deeper (more chrome) yellow; labrum yellow; mandibles with most of

the base yellow; hair of thorax above pale fulvous; most of mesothorax and scutellum bare, shining, with sparse but distinct punctures. Wings shorter, faintly dusky, not milky; stigma and nervures fuscous, second submarginal cell less produced at lower inner corner. Claw-joints pale yellowish (not bright ferruginous); abdominal hair-bands more dense and compact and fulvous; punctures of second segment closer and finer; lateral teeth of last segment triangular, not sharp and pointed. The third antennal joint, except on upper side, is only about as long as second.

*Hab.* Arizona (no other particulars known).

In the Cresson collection.

*Melissodes agilis semiagilis*, subsp. n.

♂.—Length 10–11 mm.

Size and appearance of typical *agilis* (cotype from Texas compared), but labrum black and mandibles without a yellow spot at base. The nervures are darker and redder, the mesothorax is more shiny, and the red above the testaceous hind margins of the abdominal segments is very evident. From the *subagilis* form it is easily known by its larger size, with the face less narrowed below. The middle and hind tarsi and the tegulae vary from dark ferruginous to black. Eyes light green.

*Hab.* Fedor, Texas, May 29 (type); also May 25 and Oct. 22 (Birkmann).

*Melissodes petulciformis*, sp. n.

♀.—Length about 15 mm.

Runs in my tables to *M. petulca*, Cress., to which it has the closest possible superficial resemblance, but on close examination it is seen to differ as follows:—Somewhat larger; hair of labrum white (yellow in *petulca*); fuscous patch on thorax not nearly reaching tegulae (practically reaching tegulae in *petulca*). Wings not so dark; second submarginal cell hardly more than half size of first (little smaller than first in *petulca*); first r. n. meeting second t.-c. (entering second s.m. a considerable distance from the end in *petulca*); b. n. falling some distance short of t.-m. (meeting t.-m. in *petulca*). Abdomen finely and closely punctured, the punctures on the bare part of second and third segments very distinct (these parts practically impunctate in *petulca*); the apical bands of yellowish-white tomentum on segments 2 to 4 broad and even, not broadened in the middle, the black part of 3 and 4 scarcely wider than the

bands, but that on 2 distinctly though not very greatly wider; apical hair not reddened. In Robertson's table it runs exactly to *M. illinoensis*, Rob., but it differs from that in having the closely-punctured clypeus without a distinct median elevated line, the labrum not yellow, the nervures dark rufo-fuscous, the second s.m. much shorter than the first or third, apical margin of first abd. seg. only very narrowly testaceous. *M. petulca* has the labrum dull orange, and the submarginal cells more nearly equal, so that it is nearer to *illinoensis*. Someone had labelled the type of *M. petulciformis*, *M. intermedia*, but it cannot at all be reconciled with the description of that species.

*Hab.* Fedor, Texas (*Birkmann*).

A second specimen, not so large as the type, was taken at Fedor, June 20, 1898.

*Melissodes Helenæ*, sp. n.

*Melissodes humilior*, var. *a*, Ckll. Ann. & Mag. Nat. Hist., Oct. 1903, p. 447 (Las Cruces, New Mexico, Aug. 19, C. H. T. Townsend).

The females of the *M. humilior* group are small compact insects with black hair on middle of dorsum of thorax. *M. Helenæ* runs in my tables to *M. trifasciata*, Cress., but it is not closely allied to it. In the following table the new species is defined and separated from its allies:—

Abdominal segment 4 with a conspicuous median triangular black patch, which has black hairs at its sides; segment 2 with a narrow, entire, conspicuous, median white hair-band, the distance between it and the basal band in the median line being less than the distance between it and the hind margin; third segment with its hind margin very broadly black and bare; fourth segment with a large black basal area, covered with short black hair, and obtusely emarginate in the middle posteriorly; hair of anterior part of thorax light fulvous, of vertex with much black (especially behind the ocelli), of face white; small joints of middle and hind tarsi clear red.....

*M. Helenæ*, Ckll.

- |   |    |
|---|----|
| Segment 4 not so marked; segment 2 without such a median band, the second band being either broader or covering the whole hind margin ..... | 1. |
| 1. Hind margins of segments 2 and 3 broadly bare, at least in middle .....  | 2. |
| Hind margins of segments 2 and 3 covered  |    |

- with hair, or only narrowly bare, the abdominal bands very broad ..... 4.
2. Wings clear; stigma and nervures yellowish ferruginous; bare hind margin of second abd. segment reddish; hair of two apical segments chocolate-colour; hair on inner side of b. j. dark fuscous ..... *M. intermediella*, Ckll.
- Wings smoky; stigma darker, nervures dark fuscous; bare hind margin of second segment black. Eyes greenish ..... 3.
3. Abdominal bands white; hair on inner side of b. j. ferruginous ..... *M. humilior*, Ckll.
- Abdominal bands yellowish; hair on inner side of b. j. rufo-fuscous ..... *M. humilior catalinensis* (*M. intermediella catalinensis*, Ckll.).
4. Flagellum dark red beneath ..... *M. pecosella*, Ckll.
- Flagellum bright red beneath .... (*M. pecosella verbesinarum*, Ckll.).

For other distinguishing characters, see the original descriptions. *M. p. verbesinarum* was described from a single example, but I have another collected at Las Cruces, N. M., Sept. 23, at flowers of *Isocoma Wrightii*.

*Melissodes confusiformis*, sp. n.

♀.—Length about 12 mm.

The broad bands on abdominal segments 2 to 4 pale ochraceous, that on 4 entire and covering margin, its upper edge in median line produced to a blunt point; band on second segment broad like that on third and a little arched. The hair on inner side of b. j. is fusco-ferruginous, or ferruginous stained with black: if the insect is classed with those having this hair ferruginous, it goes in my tables to *M. gilensis*, Ckll., which, in fact, it closely resembles; if it is classed with those having this hair black or fuscous, it runs to *M. nigrosignata*, Ckll., but it is also closely similar to *M. confusa*, Cress., and *M. grindeliæ*, Ckll. (*montana*, Cress., ♀). It is best defined by comparing it with the four species mentioned. From *M. gilensis* it differs by the flatter and less robust abdomen; the band on fourth segment not nearly so broad (in *gilensis* it almost covers the segment); the wings smaller and hyaline (strongly dusky in *gilensis*), the b. n. falling short of t.-m. (meeting it in *gilensis*); the shorter black hair of scutellum; the shorter (very broad for its length) head; the yellowish (not green) eyes; and a few minor characters. From *M. nigrosignata* it differs by its much less robust form, with conspicuously narrower abdomen; yellower abdominal bands; pale ferruginous spurs; hair on middle tarsi yellowish white above (*i. e.* outside),

black in front, and pale ferruginous beneath; flagellum ferruginous beneath, &c. From *M. confusa* (with which someone had identified one of the specimens) it differs by the conspicuous tufts of light hair at extreme sides of fifth abdominal segment; the broader face; the light hair of labrum; the colour of the antennæ; the colour of hair of middle tarsi; the light hair on tegulæ, &c. From *M. grindeliæ* it differs by the sides of the mesothorax being broadly covered with pale ochreous hair, the black hair not closely approaching tegulæ; the light hair on tegulæ; the abdominal bands narrower and not so yellow; the apical plate broader; the colour of hair on middle tarsi, &c.

*Hab.* Fedor, Texas, May 6, 1902 (type), and Sept. 30, 1897 (*Birkmann*).

*Melissodes agilis*, Cresson, var. *subagilis*, Ckll.

Four males from Fedor, Texas (*Birkmann*), represent a variety between *agilis* proper and *subagilis*. The size is small and the mandibles have no yellow spot; the labrum is sometimes entirely black, sometimes with a yellow spot. The pubescence, while very pale, is yellowish, not pure white like that of *M. Snowi*. The rather narrow face agrees with *subagilis*, and they should rank with that form rather than with true *agilis*.

*Melissodes Wheeleri*, Ckll.

What I think must be the ♂ of this is from Fedor, Texas, May 31, 1901 (*Birkmann*). It runs in my tables to *M. perplexa*, but has a large light spot on labrum, upper part of clypeus without black, and less black hair on mesothorax. I presume that it will be impossible to certainly match the sexes of the closely allied species of this group without field-observations.

*Xenoglossa brevicornis* (Cress.).

Mr. Birkmann has taken both sexes at Fedor, in June. The female, which I had not before seen, runs in my tables of *Melissodes* &c. nearest to *M. spissa*, and is indeed extraordinarily like that insect, differing from it as follows:—Face broader; anterior margin of clypeus not red, but with a pair of obscure yellow spots; eyes more convex and prominent; marginal cell obliquely truncate (pointed in *spissa*); claws with a divergent basal tooth of considerable size on all

the legs (*spissa* has front and middle claws with a median notch or small tooth, hind ones with an evident tooth); abdomen not stained with red, the hair-bands much broader, and the apical hair much darker and redder. *M. spissa* has abundant light fulvous hair on the ventral surface of abdomen, that of *X. brevicornis* being much shorter and mostly paler. The tibial scopa of *spissa* is beautifully plumose.

*Megachile Harrisoni*, sp. n.

♀.—Length about 16 mm.

Allied to *M. amputata*, Sm., from Borneo, *M. ferruginea*, Friese, from Siam, and *M. rufipes* (Fabr.) from Africa. In Bingham's table of Indian species it runs to *M. dimidiata*, Sm., but has the abdomen and scopa differently coloured. From *M. amputata* it is readily known by the abdomen not being fasciate; from *M. ferruginea* by the dark antennæ and the greater amount of red hair on abdomen above. Black; the legs, except the coxæ and the greater part of the trochanters, ferruginous red; pubescence of body mostly short and moss-like, especially on abdomen above; hair of head and thorax entirely orange-fulvous, of abdomen above bright orange-fulvous on the first three segments and basal half of fourth, beyond that black; ventral scopa black on last three segments, more or less tipped with red, though not conspicuously; on segments 2 and 3 the scopa is bright orange-fulvous; on the first segment is no scopa, but only short yellowish-white hair; hair of legs orange-fulvous. Head rather large; eyes long, light red; antennæ black, the flagellum dark brownish beneath; clypeus shining, with punctures of two sizes, and a strong median keel, not reaching anterior margin; anterior margin straight, not at all emarginate, but appearing finely crenulate when looked at rather from above; mandibles long, with only two teeth, which are apical and occupy much less than half of the long cutting-edge; lateral ocelli much further apart than either is from eye; mesothorax shining, with very numerous and regular, but well-separated punctures; tegulæ red, rugulose. Wings strongly stained with orange, the apical region very broadly dusky; marginal cell with the obtuse apex away from costa; claws simple.

*Hab.* Goenong Soegi, Lampong, Sumatra, Oct.—Nov., 1901 (*A. C. Harrison, Jr., and Dr. H. M. Hiller*). In Coll. Acad. Nat. Sci. Philadelphia.

In regard to the mandibles, this approaches the subgenus

*Pseudomegachile*, Friese (type, *M. ericetorum*, Lep.), but in other characters there is no resemblance. The real affinity is with the subgenus *Eumegachile*, Friese, which might perhaps, with a suitable modification of the diagnosis, be regarded as a valid genus to include a large number of Asiatic species.

University of Colorado,  
Boulder, Colorado, U.S.A.,  
Feb. 11, 1906.

