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North-American Bees, and a New Homopteron

T. D. A. Cockerell

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Cockerell, 1851
1851

Cockerell 1903

North-American Bees, and a new Homopteron.

By T. D. A. COCKERELL.

APOIDEA.

Augochlora confusa coloradensis (Titus).

Augochlora coloradensis, Titus, Canad. Entom., May 1901, p. 133.

The difference in the colour of the legs between this and *A. confusa*, mentioned by Titus, does not hold good; but *coloradensis* is uniformly smaller, and seems to be a valid subspecies.

Hab. Mesilla Park, N. M., at flowers of *Aster tenacifolius*, May 20, 1 ♀ (*Martin D. Cockerell*); Roswell, N. M., Aug. 21, at flowers of *Euphorbia marginata*, both sexes (*T. D. A. Cockerell*).

New to New Mexico. I have confused the Mesilla Valley females with *A. neglectula*, which is a very much bluer species. The male of *neglectula* is very easily known from that of *coloradensis* by the fourth ventral segment of abdomen not being in the least emarginate, the darker and the very long antennæ, and the legs black with metallic tints, not in the least marked with pale yellow. The region between the antennæ and the ocelli in male *neglectula* is a particularly fine deep blue, while the clypeus and supraclypeal area are green. The third and fourth antennal joints (♂) are dull black and extremely short, being broader than long, but they have also this shape in *coloradensis*.

Andrena mimetica, sp. n.

♀.—12½ millim. long.

Head, metathorax, and legs black; abdomen and dorsum of thorax bluish green, exactly the colour commonly seen in *Osmia*; pleura dark blue; pubescence long and erect, black and rather dull white; on face (except at sides above), cheeks, and occiput it is white; on vertex black; facial quadrangle much broader than long; disk of clypeus shining, with strong close punctures, and an impunctate median line; facial foveæ short and black; process of labrum rather narrow, truncate, and strongly emarginate; tongue short; second and third joints of labial palpus triangular, fourth narrow-cylindrical; antennæ entirely black, fourth joint shorter than fifth, third at least as long as fourth and fifth together; mesothorax more or less granular, with strong

rather shallow punctures; metathorax roughened, the triangular enclosure very ill-defined; hair of thorax white, black on scutellum (except sides) and hind part of mesothorax, also black on pleura (except in front) and middle portion of metathorax; hair on legs black, but anterior femora behind, hind femora beneath, and hind tibiae beneath, each with a large amount of shining silvery-white hair; a little of the same hair springs from the keeled lower edge of the middle femur; spurs dark brown; tegulae shining black. Wings faintly dusky; nervures and stigma very dark brown, the latter unusually narrow; second submarginal cell nearly square, receiving the first recurrent nervure a little beyond the middle. Abdomen strongly and distinctly punctured, not in the least banded (except to some extent on ventral surface); white hair long and conspicuous on first segment; apical margin of each dorsal segment covered with erect black hair, only noticed on viewing the abdomen laterally; caudal fimbria black; sides of abdomen with shining white hairs.

♂.—Length about $10\frac{1}{2}$ millim.

Very much more slender; face black, the clypeus tinged with bluish green; hair of face black, long, a little paler below antennae; antennae wholly black, crenulated; second submarginal cell higher than long; hind femora decidedly bluish; sides of metathorax with black hair.

Hab. Placita, N. M. (near Las Vegas Hot Springs), May 2, 1903, two of each sex (*W. P. Cockerell*).

The females were at flowers of *Salix*, the males at flowers of *Ribes longiflorum*, variety. This splendid species is exactly like an *Osmia* in superficial appearance, and when the specimens were caught I had no idea that the females did not belong to that genus. Similar species of *Osmia* are common in the same region. The only similar species in New Mexico is *A. cerasifolii*, but *A. mimetica* is quite distinct from that and from all described species.

Andrena pluvialis, Ckll.

♂.—Like that of *A. carlini*, but more robust; first joint of flagellum somewhat longer; abdomen with a good deal of black hair, especially beneath; hair on inner side of tibiae and tarsi sooty with a sort of purplish tint; second submarginal cell much larger.

Hab. Placita, N. M., April 25, 1903, both sexes at flowers of wild plum (*W. P. & T. D. A. Cockerell*).

New to New Mexico. Also found at Placita on the same day were *Andrena erythrogaster* (Ashmead), common at

flowers of *Salix*, new to New Mexico; *A. Cressonii*, Rob. (the form *kansensis*, Ckll.); and *Halictus perdifficilis*, Ckll.

Perdita chamæsarachæ, Ckll.

Perdita sexmaculata, Ckll.

Both these species were taken at Roswell, N. M., Aug. 20, 1902, at flowers of *Chamæsaracha sordida*.

Epeolus occidentalis, Cr., ♀.

Exomalopsis solani, Ckll., ♀.

These were taken at Mescalero, N. M., Oct. 1 and 2, at flowers of *Bigelovia graveolens glabrata*. The occurrence of the *Exomalopsis* in this locality is rather surprising. *Diadasia diminuta*, Cr., was taken at Mescalero, Oct. 3, at flowers of *Sphæralcea Fendleri*.

Megachile cleomis lippix, Ckll., ♂.

Roswell, N. M., Aug. 20, 1902 (*Cockerell*).

Nomada modocorum, sp. n.

♂.—Length about $9\frac{1}{2}$ millim.

Black and yellow, with red on legs and abdomen. Head transversely oval, vertex broad; face, cheeks, and pleura covered with white hair; hair on top of head and dorsum of thorax ochraceous; clypeus except narrow hind margin, lateral face-marks (broad below, above rapidly narrowing to a line which ends about level with the antennæ), labrum, mandibles except tips, stripe behind lower part of eyes, linear marks on hind border of prothorax, tubercles, and semilunar mark on lower part of pleura, all *lemon-yellow*; no yellow on scutellum or metathorax; mandibles simple; scape swollen, yellow beneath, black above; third antennal joint a little shorter than fourth; flagellum ferruginous, black above on joints 3 to 6, or the first four joints of flagellum proper; mesothorax extremely densely punctured and quite hairy; scutellum inconspicuous; tegulæ testaceous, punctured. Wings nearly clear except the dusky apical margin; stigma ferruginous, nervures fuscous; lower inner angle of second submarginal cell quite acute; transverso-medial nervure joining the discoidal at its base. Legs ferruginous, varied with yellow, coxæ mostly black; hind femora blackened

behind except at apex, middle femora with a black streak behind; hind tibiae blackened outwardly on basal half; hair on inner side of basal joint of hind tarsi fuscous; abdomen of ordinary shape, minutely roughened, lemon-yellow, with the basal half of the first segment black, and the hind margins of all the segments ferruginous; sixth segment with a black spot at sides, overlapped considerably by fifth; apical plate hairy, ferruginous, notched, but so slightly as to appear at first sight entire; venter yellow varied with ferruginous, the last segment with a conspicuous patch of short white hairs.

Hab. Corvallis, Oregon, June (*Cordley*).

Received from Mr. Viereck.

Nomada Cordleyi, sp. n.

♂.—Length 7 millim.

Black with yellow markings and ferruginous stains; peculiar for its slender form, very long antennæ, and subclavate abdomen, which, taken with the attitude and appearance of the hind legs, is somewhat suggestive of such flies as *Syritta pipiens*. The hind coxæ are long, and the arched hind femora look as if they proceeded from the abdomen. Face transversely oval, vertex very broad; eyes pale green; clypeus, supraclypeal region, and labrum thickly covered with silver-white hair; mandibles simple; clypeus except two spots on upper border, lateral face-marks (broad below, continued as a line up orbital margin to level of antennæ), labrum, mandibles except tips, line beneath eyes, and broad stripe on scape beneath, lemon-yellow; scape swollen, black except the yellow stripe; third antennal joint extremely short, much shorter than fifth, and less than half the length of fourth, which is much longer than fifth; flagellum extremely long, black above, ferruginous beneath; thorax extremely densely punctured, hairy (the pubescence white), black without any yellow; tubercles and tegulæ largely dark brown. Wings iridescent, fairly clear, dusky on apical margin; second submarginal cell unusually narrow, its side towards the third bulging; transverso-medial nervure joining discoidal a short distance from its base. Legs yellowish ferruginous, the femora and tibiae (especially the hind ones) more or less black behind; abdomen yellowish ferruginous, with lemon-yellow spots on the sides of the segments; basal half of first segment black, the other segments with broad black bands with suffused edges; hind margins of segments rather dark reddish; apical plate emarginate; venter

yellowish ferruginous, with darker stains. First abdominal segment deeply grooved above.

Hab. Corvallis, Oregon, June 3, 1899 (*Cordley*).

Received from Mr. Viereck.

Nomada placitensis, sp. n.

♀.—Length about 10 millim.

Head and thorax ferruginous and black, the only yellow being a spot on tubercles and a very little at lower corners of face; legs bright ferruginous, a yellow spot at apex of first four femora above, much black on coxæ, a black spot on first four trochanters behind, a black stripe on anterior femora behind, a black spot at base of middle femora behind, a slight spot on hind femora not so basal, a small black stripe on hind tibiæ behind; abdomen narrow, bright lemon-yellow, base of first segment with a large black spot broadly margined with rufous; apical margin of first segment margined with black, and in front of the black with rufous; base of second segment with a very broad inverted triangle of rufous; apex of second segment broadly rufous; the next two sutures black, more or less broadly margined with rufous; venter pale reddish, suffusedly banded with yellow and black. Mandibles simply rufous except ends; first joint of labial palpi black, a little longer than the other three together; maxillary palpi long, not very much shorter than galea; clypeus (except hind margin), labrum, supraclypeal spot, lateral face-marks running to tops of eyes, posterior orbital margin, antennæ (except stripe on first three joints above), two large confluent spots on scutellum, large ill-defined mark on pleura, obscure band on postscutellum, four obscure narrow bands (the lateral ones marginal) on mesothorax, and tegulæ, all *ferruginous*; pubescence of head and thorax pale fulvous; scutellum with two prominent bosses; mesothorax as densely punctured as is possible; third, fourth, and fifth antennal joints of the same length. Wings dusky, stigma orange-fulvous, nervures pale brown; second and third submarginal cells each receiving the recurrent nervure at its middle; second submarginal cell narrowed above, about as broad as third on marginal nervure; transverso-medial nervure joining discoidal at its base.

Hab. Placita, N. M., May 2, 1903, at flowers of wild plum (*Cockerell*).

The abdomen is much like that of *N. civilis*, Cresson. I will take this opportunity to mention that the species recorded by me from Wet Mountain Valley, Colorado, in

Trans. Am. Ent. Soc. 1893, p. 339, as *N. fragilis*, Cresson, is (at least as represented by the single specimen I have kept) *N. civilis*.

Nomada accepta, Cresson.

I have this species from Colorado Springs, Colorado (*L. Bruner*, 24). *N. pacata*, Cresson, is a synonym; I determined this from the descriptions, and Mr. Viereck has confirmed it by a comparison of Cresson's types.

Melissodes humilior, sp. n.

♀.—Length hardly 10 millim.

Black with pale pubescence, white on the underparts of head and thorax, stained with pale ochreous on the upper parts, black on scutellum and hind part of mesothorax; a few black hairs on sides of vertex, which is broad and shining; facial quadrangle broader than long; clypeus confluent punctured; eyes pale grey; flagellum ferruginous beneath, except the first two joints; tegulæ piceous. Wings only faintly dusky, not darkened apically; nervures dark brown; third submarginal cell abruptly truncate. Legs clothed with white or whitish hair, the scopa on hind legs very large and dense; hair on outer side of anterior tarsi very dark purplish fuscous, in strong contrast with the white hair on outer side of middle tarsi; hair on inner side of tarsi dark shining ferruginous. Abdomen broad, the base and sides of first segment with white hair; the second to fourth segments with broad bands (especially broad on fourth) of appressed white hair; base of second segment with some white hair; basal part of third and fourth segments covered with velvety-black pile; apical segments with black hair. In my table in Bull. Denison Lab. xi., this runs to *M. gilensis*, but it is considerably smaller, the abdominal bands are white instead of yellowish, and there are other differences.

Hab. Organ, New Mexico, Sept. 28, alt. 5100 feet (*Cockerell*).

Another example, taken by Prof. C. H. T. Townsend at Las Cruces, N. M., Aug. 19, differs by having the second submarginal cell larger, the hair on the anterior part of the mesothorax quite strongly fulvous, the vertex covered with black hair, and the hind tarsi red, as also the small joints of the middle tarsi. The wings have a milky iridescence. This form may be known as var. α .

The species recorded from the Mesilla Valley, N. M., as *M. intermedia*, Cresson (having been identified by Mr. Fox),

is extremely similar to *M. humilior*, but differs in having the hair on the inner side of the basal joint of the hind tarsi black or almost so. Both this insect and *humilior* have the two apical segments of the abdomen clothed with sooty hairs, whereas Cresson says that the hair on these segments in *intermedia* is pale. In both the New Mexico insects, also, the apical plate is triangular and bluntly pointed, I think not so broadly rounded as it should be in *intermedia*. These bees have an extremely close resemblance to certain species of *Synhalonia*, but their mouth-parts are those of *Melissodes*. The maxillary palpi of *Melissodes* are always said to be 4-jointed; but as a matter of fact the fourth joint usually bears a distinct rounded or cylindrical apical papilla, from which grows a single stout bristle; this papilla is evidently the rudimentary fifth joint. In *M. humilior* the papilla is unusually long, so that it really looks like a sort of small fifth joint; but the fourth joint broadens towards its base, and is not differentiated by a distinct suture from the third, which is quite stout. In *M. intermedia* (i. e. the New Mexico insect so named) the third joint is narrower, and is separated by a very distinct suture from the fourth, which is not at all broadened basally; the apical papilla is minute and inconspicuous.

No doubt *Synhalonia* is a more primitive type than *Melissodes*, but between the two stands *Xenoglossodes*, with distinctly 5-jointed maxillary palpi. The fourth joint in *Xenoglossodes* is much larger than the fifth, which would only need to be moderately reduced to reach the exact condition found in some *Melissodes*. Thus we have evidence of the gradual reduction of the fifth joint; it by no means disappeared suddenly by De Vriesian mutation!

I will now describe a species which has the palpi of *Xenoglossodes*, but altogether the external appearance of *Melissodes* or *Synhalonia*; in fact, it is so like *M. humilior* that at first sight I took it to be the same. It cannot go in *Florilegus*, which also has 5-jointed maxillary palpi, as the joints are not moniliform, and the general appearance of the bee is not at all the same.

Xenoglossodes excurrrens, sp. n.

♀.—Length about 10 millim.

Broad, similar to *Melissodes humilior*, but antennæ a trifle longer, the last joint longer than the penultimate (in *humilior* they are equal); pubescence of thoracic dorsum pale ochraceous, without any black; hair on inner side of basal joint of hind

tarsi fuscous; abdominal bands broader and more ochraceous. Flagellum red beneath, except basally; wings rather short, hyaline; tegulae piceous, very hairy; last two abdominal segments fringed with purplish-black hair. Easily known from other species of *Xenoglossodes* by the banded abdomen. Maxillary palpi with the second joint hardly so long as the third; fourth strictly cylindrical, hardly or not half length of third; fifth minute but very distinct, cylindrical, about or hardly half length of fourth, bearing a bristle at the end.

Hab. Roswell, N. M., Aug. 20, 1902 (*Cockerell*).

The following table will give some idea of the modifications in the mouth-parts of the Eucerini:—

| | | |
|--|----|--|
| Maxillary palpi 6-jointed; last joint long and narrow | 1. | |
| Maxillary palpi 5-jointed; last joint distinct | 2. | |
| Maxillary palpi 4-jointed, with a terminal papilla representing the fifth usually visible | 7. | |
| 1. Joint 6 much narrower than 5 | | <i>Synhalonia atriventris</i> , Sm. |
| Joint 6 scarcely narrower and almost as long as 5, but 5 conspicuously narrower than 4 | | <i>S. crenulaticornis</i> , Ckll. |
| 2. Maxillary palpi comparatively long and slender; joint 5 always well developed, cylindrical. (= <i>Xenoglossa</i> .) | 3. | |
| Maxillary palpi shorter, fifth joint smaller, sometimes very small. (= <i>Xenoglossodes</i> .) | 5. | |
| 3. Joint 5 conspicuously shorter than 4 .. | 4. | |
| Joint 5 long and narrow, nearly as long as 4; 4 narrower but not much shorter than 3 | | <i>X. fulva</i> , Sm., and <i>X. patricia</i> , Ckll. |
| 4. Joint 4 about as long as 3; 5 long and narrow | | <i>X. strenua</i> , Cr. |
| Joint 4 much shorter than 3; 5 not very long and narrow; palpus hairy .. | | <i>X. pruinosa</i> , Say. |
| 5. Joint 2 considerably longer than 3; 5 very small, conical | | <i>X. albata</i> , Cr. |
| Joint 2 shorter or not longer than 3 .. | 6. | |
| 6. Joint 5 long-conical | | <i>X. eriocarpi</i> , Ckll. |
| Joint 5 cylindrical | | <i>X. excurrens</i> , Ckll., and <i>X. imitatrix</i> , Ckll. & Porter. |
| 7. Last joint long and cylindrical (possibly = 4 and 5 fused), not very much shorter than 3; apex with two bristles; no distinct papilla | | <i>Melissodes luteicornis</i> , Ckll. |
| Last joint much shorter than third. ... | 8. | |
| 8. Last joint comparatively large, cylindrical, more or less tapering apically . | | <i>M. menuacha</i> , Cr., <i>M. bimaculata</i> , Lep., and <i>M. pallidicincta</i> , Ckll. |

- Last joint small but robust, truncate,
with apical tubercle evident *M. ruidosensis*, Ckll.,
M. agilis aurigenia, Cr., and *M. intermedia*, Cr., Fox.
- Last joint small, tapering 9.
9. Palpus robust, very bristly *M. grindeliae*, Ckll.
- Palpus not so bristly; apical tubercle
unusually long *M. humilior*, Ckll.

Melissodes luteicornis falls in a new subgenus, which I propose to call *Martinella*, after my little son. Besides the characters of the palpi, it is distinguished by its yellow antennæ in the male, and strongly banded abdomen. I am myself confident that it was derived from some *Synhalonia*-like form quite independently of the rest of the genus *Melissodes*; if this can be proved, *Martinella* will, of course, rank as a genus.

DASIAPIS, gen. nov.

Belongs to the Anthophorini. Similar to *Diadasia*, but clypeus and labrum in male white; middle and hind tibiæ of male incrassate; tarsi of male normal, except that first joint of hind tarsi is somewhat curved; maxillary palpi with six long cylindrical joints, the third and fourth without the lateral brushes of hair seen in *Diadasia* *.

Dasiapis ochracea, sp. n.

♂.—Length about 10 millim.

Covered all over (except the smooth shining vertex) with light ochraceous pubescence; facial quadrangle much longer than broad, narrowed below; face densely covered with hair; clypeus, labrum, and basal part of mandibles white; mandibles simple; antennæ very short (as in *Diadasia*), flagellum ferruginous beneath; scape slender, black; mesothorax dull; tegulæ large, ferruginous. Wings faintly dusky; stigma rather large, ferruginous; nervures fuscous; venation as in *Diadasia*; second submarginal cell narrowed above; third rounded (not truncate) at end; basal nervure meeting transverso-medial. Legs with long coarse hair; tarsi ferruginous; abdomen rather long and narrow, shining but covered with appressed ochraceous hair; first segment with no transverse keel; venter shining, with apical hair-bands on the segments.

Hab. Las Cruces, N. M. (type locality), end of August, at

* The same brushes occur in *Entechnia* on the second and third joints, but these are no doubt morphologically the third and fourth, the long first joint representing two united.

flowers of *Sphæralcea Fendleri lobata*. Also found at Santa Fé, August 17th.

Dasiapis ochracea is common in New Mexico, but has been confused with *Diadasia enavata*, Cr. It is to *Diadasia* somewhat as *Anthophorula* is to *Exomalopsis*. The longer abdomen will readily separate the genus from *Anthophorula*, and the paraglossæ show that it belongs to the Anthophorini. The form of the galea and the maxillary palpi show that the genus is near to *Diadasia*, and quite distinct from *Anthophora*.

The galea in *Dasiapis ochracea* is broad at the base, but rapidly tapers to a long narrow apical portion. The maxillary palpi are more than half the length of the galea; the first four joints are long and subequal, the first being a little shorter than the second; the fifth is considerably shorter than the fourth, perhaps by one third, and the sixth is considerably the shortest. The third joint of the labial palpi is attached a short distance from the tip of the second.

Anthophora euops, sp. n.

♂.—Length 15 millim.; tongue about $11\frac{1}{2}$.

Black, with white and black pubescence; eyes in life deep sea-green; labrum (except narrow black margin and two large brownish spots at posterior corners), clypeus (except lateral margins very broadly, so that the yellow on its upper part is a mere band), a narrow supraclypeal stripe, rose-thorn-shaped lateral marks, and broad stripe on scape, all primrose-yellow; mandibles slender, entirely black, furnished within near tip with a large keel-like prominence; flagellum entirely black; clypeus nude; hair of face, occiput, and cheeks long and white, some black hair on vertex; hair of thorax long and white; mesothorax and scutellum dull, minutely malleate-granular, almost entirely without hair (at least in the specimen described); tegulæ large, black. Wings slightly dusky. Legs with long white hair; inner side of tarsi with orange-fulvous hair; hind legs simple; middle tarsi rufous except at base and apex, the rufous portion with a quantity of ferruginous hair, the hairs curiously flattened and broadened; apical half of claw-joint broadened, black, fringed laterally with black hair; middle and hind femora and tibiæ with long black hairs beneath. Abdomen not banded; first two segments with erect white hairs, the remaining segments with black hair, the sixth fringed with white; venter with long white hairs.

Hab. Placita, N. M., May 2, 1903 (*T. D. A. & W. P. Cockerell*).

It was industriously visiting the flowers of *Ribes longiflorum*, variety, and occasionally going to the flowers of wild plum immediately adjacent. Allied to *A. Porterae*, Ckll., *A. lesquerellæ*, Ckll., *A. Crotchii*, Cr., and *A. pyralitarsis*, Dours. It is easily distinguished from *Porterae* by the large amount of black on clypeus, the squarer labrum, and especially the flattened red hairs on middle tarsi; from *lesquerellæ* by the nude clypeus and labrum, the smaller black fringe on claw-joint of middle tarsi, &c.; from *Crotchii* by the pale (instead of pale yellow) face-marks, the absence of ochreous hair on head and thorax, &c.; from *pyralitarsis* by the absence of any reddish hair at base of abdomen and the absence of black hair on first joint of middle tarsi. The clypeus is marked much as in *A. pyralitarsis*.

HOLCOPASITES, Ashmead.

Mr. Ashmead has very kindly allowed me to examine the undescribed type of this genus, which was taken by Mr. F. C. Pratt at Washington, D.C. It is a female, and is very like *Neopasites pulchellus* (*Phileremus pulchellus*, Cr.), but the marginal cell is shorter and appendiculate, and the second submarginal is more narrowed above. I am rather disinclined to consider *Holcopasites* distinct from *Neopasites*.

Cœlixys grindeliæ, Ckll., var. *α*.

♀. Hair on face and lateral spots on mesothorax white; tegulæ dark brown.

Hab. Mescalero, N. M., Oct. 2 (*Townsend & Cockerell*).

Cœlixys rufitarsus rhois, subsp. n.

♀.—Length $14\frac{1}{2}$ millim.

Tegulæ and nervures black.

Hab. Rio Ruidoso, White Mts., N. M., about 6500 ft., at flowers of *Rhus glabra*, July 22 (*C. H. T. Townsend*).

For an account of other specimens and other particulars, see 'Canadian Entomologist,' 1900, p. 298.

Osmia Kincaidii, Ckll.

Alum Rock Park, San José, California, 1 ♂ (*E. M. Ehrhorn*).

Mr. Ehrhorn also sends me *Bombus californicus*, Sm., from the same locality.

Xylocopa orpifex, Sm.

Mountain View, California, June 1902, 5 ♂ (*E. M. Ehrhorn*).

Mr. Ehrhorn also sends *Synhalonia acerba*, Cr., ♂, from this locality.

Ceratina neomexicana, Ckll.

A new locality is Rio Ruidoso, N. M., about 7600 ft., at flowers of *Verbena Macdougali*, Aug. 3 (C. H. T. Townsend).

Ceratina submaritima Ehrhorni, subsp. n.

♂.—Length 4 millim.

Yellowish green (*submaritima* is bluish green); face decidedly narrower than in *submaritima*. Hind femora produced to an acute angle. Apical plate of abdomen small and narrow as in *submaritima*. Very likely a distinct species; probably confused with *C. tejonensis*.

Hab. Alum Rock Park, San José, California, May 3, 1902, 2 ♂ (*E. M. Ehrhorn*).

Ceratina Townsendi, sp. n.

♀.—Length 8 millim.

Similar to *C. neomexicana*, Ckll., but differing by the yellower tint of the green, the darker wings, the smaller and closer punctures of the abdomen, and the closer and more uniform punctuation of the scutellum. It has been confused with *C. dupla*, Say, from which it differs by the much sparser punctuation of the vertex and front, the more pronounced rim of the metathoracic enclosure, and the darker wings. From *C. Crewi*, Ckll., it differs by its brassy-green colour, and especially by the sparser punctuation of the vertex on each side of the ocelli, this region in *Crewi* being very closely and coarsely punctured.

Hab. San Rafael, Rio Nautla, Vera Cruz, Mexico, on flowers of *Bidens* and *Verbesina*, March 8 to 19, 9 ♀ (*C. H. T. Townsend*).

? *Tettigoniidæ*.

How.

Oncometopia undata garryce, subsp. n.

♂.—Length 11 millim. (to tips of closed elytra).

Light ground-colour (*i. e.* all except the black) of head, thorax, and sides of abdomen lilac, except that the black markings are mostly narrowly edged with dull white, and the lateral spots on the scutellum are orange-vermilion; the reversed **A** in black on the vertex is very distinct, and its

upper part encloses a triangular space which is emarginate behind and produced and much narrowed in front; from the emargination runs a light line dividing the space longitudinally; the lower (posterior) ends of the **A** enclose the lateral ocelli; the scutellum presents on a black field two median rather short bars, a large apical subreniform spot, two small lateral spots, and anterior to these two rather large oblong marks, of these markings the last mentioned being orange-vermilion and the others lilac; underside of abdomen lilac, with black at the bases of the segments; elytra green in life, but in a dry specimen purplish grey by reflected and deep rose-pink by transmitted light; the costa very narrowly dull orange; a large, very irregular, pale green patch next to the costa about the middle of the elytron, and touching it anteriorly a short black bar; apical field smoky hyaline bordered with black, the black next to the purple-grey rather broadly edged on the inner side with chrome-yellow. Plates of ♂ genitalia somewhat longer than in Ball's figure of typical *undata*.

Hab. Dripping Spring, Organ Mts., N. M., frequent on *Garrya Wrightii*.

I could not find any, or any other form of *O. undata*, on other plants in the Organ Mts., and I believe the insect is restricted to the *Garrya*, with which its colours harmonize well. Mr. O. Heidemann kindly examined a specimen, and considered it near *O. alpha*, Fowler, which Mr. Ball considers a mere form of *O. undata*. I suspect that we should understand better the many varieties or subspecies of *O. undata* if in every case we knew the food-plant.

East Las Vegas, New Mexico, U.S.A.,
May 3, 1903.

POSTSCRIPT.

Another new Anthophora.

Much to my surprise a second new *Anthophora* has been caught in this vicinity this spring.

Anthophora Gohrmance, sp. n.

♂.—Length 12 millim.

Black; the abdomen with a slight bluish lustre, the hind margins of the segments narrowly brown; tongue comparatively short, about 6 millim. long; two apical joints of maxillary palpi very small; mandibles black; eyes deep olive-

green ; facial quadrangle a little longer than wide, the inner orbits convex ; labrum (except very narrow margin and two large spots at basal corners), clypeus (except very narrow anterior edge and a long black mark on each lateral margin), supraclypeal band, rose-thorn-shaped lateral face-marks, and broad stripe on scape, all very pale yellow ; hair of head, thorax, legs, and first two abdominal segments abundant, long, erect, and white, *with no black hairs intermixed* ; flagellum entirely black ; third antennal joint long and narrow, suddenly enlarging, trumpet-like, at the apex ; thorax dull, densely rugoso-punctate ; tegulæ black. Wings clear, nervures black or almost so. Legs black, even to the tarsi ; hair on inner side of tarsi shining coppery red when seen in the proper light ; middle tarsi long and slender, twice as long as their tibiæ, but not otherwise peculiar ; spurs very long ; *basal joint of hind tarsi with a prominent oblique tooth on the anterior margin* ; abdominal segments 3 to 5 with erect black hair, and some light hairs intermixed ; sixth with light hair, not conspicuous ; *no hair-bands* ; apical dorsal segment with short appressed silvery hair, narrowly truncate, with lateral margins showing a strong double curve ; claspers very large, deeply bifid or bidentate, the posterior margin obtusely angled, the base of each posterior tooth emitting a long cylindrical light brown fleshy organ, beset with short hairs ; ventral surface of abdomen with long white hair.

Hab. Las Vegas, N. M., May 7, 1903 (*Anna Gohrman*). Flying around *Ribes longiflorum* (along with *A. Porteræ*), but the tongue seems too short to suck from that flower. It is allied to *A. Edwardsii*, Cresson.

