Flower and Insect Records from New Mexico

T. D. A. Cockerell
New Mexico Agricultural College

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Flower and Insect Records from New Mexico.

By T. D. A. Cockerell. 1901

The following records are offered as a contribution to the knowledge of the relations between insects and flowers. It is perhaps hardly necessary to say that in New Mexico this subject is a new one, and there is no part of the Territory where half an hour's observations at the right season will not yield unrecorded facts. Unfortunately, however, this ease in making new observations goes with the greatest difficulty in getting them recorded, for the reason that both flowers and insects are imperfectly understood, and in many cases only identified by the expenditure of much time, or through the assistance of specialists. Even many of the conspicuous roadside flowers have lately proved to be undescribed, and there still exists an uncomfortable possibility that several of the now-accepted names may require revision, although they are endorsed by the best authorities.

A being from another planet, after visiting one of our great city markets, might be so impressed by the variety of foods offered for sale as to report that mankind ate everything, was literally omnivorous. So a casual observer of the habits of insects might infer that they visited all sorts of flowers, and that it was useless to make records of flower-visits. Close study, however, shows us that this is far from being the case, and even those species which visit many kinds still have preferences and their aversions. At the same time it must not be inferred in any case that the insects reported to visit a flower are the only ones visiting it; for setting aside those which may have been collected but not yet identified, no flower has yet been watched sufficiently for us to make an exhaustive list of its insect-visitors.

COMMELINACEÆ.

Commelina dianthifolia D. C.—Visited by Bombus prunellæ Ckll.

IRIDACEÆ.

Iris missouriensis Nutt.—Visited by Bombus iridis Ckll. and Porter, B. ternarius Say, and B. juxitus Cress.
ENTOMOLOGICAL NEWS.

SALICACEÆ.

Salix sp., at Mesilla, May 4, 1897 (Ckll.). The following bees at the ♀ flowers: Prosoptis mesilla Ckll., ♀; Perdita salicis Ckll., ♀ ♀; Halictus subobscurus Ckll., ♀.


Salix sp., at Beulah, Sapello Canon, May 30th (Wilmatte Porter). Hym.: Andrea sapallonis Ckll.; Halictus armaticeps Cr., ♀; Osmia faceta Cr., ♀.

CHENOPODIACEÆ.

Atriplex canescens (Pursh)—At Mesilla Park, April 29th, a honey-bee (Apis mellifera ligustica Spin.) was observed busily working on the flowers.

NYCTAGINACEÆ.

Abronia turbinata Torrey—Lep.: Synchla lacinia Geyer, Mesilla Park, April 29th (Ckll.).

Wedelia incarnata (L.)—Anthophora maculifrons Cress., Las Cruces, August 23rd (Townsend).

RANUNCULACEÆ.

Paeonia (cultivated)—Hym.: Agapostemon texanus Cress., Las Vegas (W. Porter).

Delphinium scopulorum Gray—Hym.: Bombus nevadensis cressoni Ckll.; B. appositus Cress.

CRUCIFERÆ.

Dithyræa wislizenii Engelm.—Lep.: Synchla lacinia Geyer, Mesilla Park, April 25th (Ckll.).

Erysimum asperum (Nutt.)—Hym.: Halictus angustior Ckll., Rio Ruidosa (Townsend).

Lepidium castwoodiae Wooton—Hym.: Augochlora neglectula Ckll., La Cueva, Organ Mts. (Townsend).

Sophia andrenarum Ckll., ined. (The common species with yellow flowers in the Mesilla Valley, confused at first with Sisymbrium canescens, later with S. halictorum, but quite distinct. True Sophia halictorum has very inconspicuous flowers, and occupies, in the main, a higher zone, coinciding with the lower part of the Larrea-zone)—(1) Mesilla, April 12th; Hym.: Andrea satacinella Ckll., ♀, in numbers, hovering over the plants and alighting occasionally: Augochlora neglectula Ckll.; Halictus pectoraloides Ckll., ♀; H. subobscurus Ckll., ♀; H. pseudotegularis Ckll. var.; Dipt.: Tetanops polita Coq., det. Coq.; Clarops assimilis Macq., det. Coq. (2) Mesilla, April 22nd; Hym.: Agapostemon texanus Cress., ♀. (3) Mesilla Park, April 27th; Hym.: Apis mellifera ligustica Spin.
CAPPARIDACEÆ.

_Cleome serrulata_ Pursh.—The following insects were all collected on the flowers at Las Vegas in 1899:—Hym.: _Halictus sisymbrii_ Ckll., ♀, July (Ckll. and W. H. Rishel); _Agapostemon texanus_ Cress., ♀, July (N. Stern and A. Garlick); _Andrena argemone_ Ckll., ♀, July 20th (W. Porter); _Anthidium parvum_ Cress., ♀, June 23rd (Ckll.); _A. perpictum_ Ckll., ♀, August 1st (Ckll.); _Melissodes agilis_ Cress., ♀ var., July 17th (A. Garlick); _M. gilensis_ Ckll., ♀, July 20-22 (W. Porter); _M. graminea_ Ckll., ♀, July 22 (W. Porter); _M. pallidicincta_ Ckll., ♀, July (Ckll., N. Stern); _M. tristis_ Ckll., ♀ (probably the ♀ of _pallidicincta_), July 20th (Ckll.); _Anthophora cardui_ Ckll., ♀, July 11th (Ckll.); _A. cleomis_ Ckll., ♀, August 1st (W. Porter); _A. montana_ Cress., ♀, July (M. Winters, N. Stern, A. Garlick); _A. occidentalis_ Cress., ♀, July 20th (W. Porter); _Cethios rufilarsis_ Sm., ♀, July 11th (Ckll.); _Megachile cleomis_ Ckll., ♀, July (N. Stern, W. Porter, etc.); _M. latimanus_ Say, ♀, July (Ckll., N. Stern, M. Winters); _Bombus americanarum_ Fabr.; _B. mormisoni_ Cress.; _B. nevadensis_ cressoni Ckll.; _Apis mellifera_ ligustica Spin.; _Pelo pennis_ servillei Lep., July 10th; _Sphex_ (Chalybion) sp.; _Aphidina_ sp.; _Sphex ichneumonea_ L., July 22nd (W. Porter). Diptera: _Odonomyia inaequalis_ Loew. det. Coq., August 1st; _Compsomyia macellaria_ Fab., July 11th; _Eristalis latifrons_ Loew., July 11th; _Lucilia_ sp., _Silvius_ sp.; Lep.: _Colias eurytheme eryphyle_ Edw., ♀, July 2; _Pyrameis cardui_ L., July 15th (W. H. Rishel); _Papilio_ sp.; _Ctenucha venosa_ Walk., July 16th (N. Stern); _C. cressonana_ Grote, July 12th (W. H. Rishel). Hemip.: _Lygaeus reclivatus_ Say, July 11th; _Marganta histrionica_ Hahn, July 11th (M. Winters, N. Stern). Coleop.: _Nemognatha bicolor_ Lec., July 5th (N. Stern); _Hippodamia convergens_ Guér., July 11th, very abundant; _Zonitis atripeennis_ July 10th, abundant; _Cerus abruptus_ Lec., July 10; _Cantharis biguttata_ July 11th (N. Stern).

SAXIFRAGACEÆ.

_Philadelphus argyrocalyx_ Wooton.—Dpt.: _Volucella anna_ Willist.; vide Townsend, Pr. Texas Acad., 1897, p. 53, where the plant is given as _P. serpyllifolius_.

_Ribes_ sp. (wild gooseberry).—Hym.: _Vespa diabolica fernaldi_ Lewis, Beulah, May 30th (W. Porter).

_Ribes_ sp. (wild gooseberry).—Hym.: _Osmia ribifloris_ Ckll., ♀, _O. lignaria_ Say, var. and ♀, _Cethios rufis_ Ckll., ♀, _Anthophora porterae_ Ckll., ♀; Dpt.: _Epalpus signifera_ Walker; all at Romersville, April 29th (W. Porter).

ROSACEÆ.

_Falugia paradoxa acuminata_ Wooton.—Flowers large, 26-40 mm. across (mostly of the larger size); stamens large, with large anthers; car-
pels concealed to the last in the bottom of the flower, their tips not above the level of the bases of the stamens; bracts and sepals frequently divided. Hym: *Apis mellifera ligustica* Spin., very many, April 30th, May 3rd; *Agapostemon splendens* Lep. var. *♀* (new to N. M.), April 30th; *Colletes* sp.; *Halictus sisymbrii* Ckll., *♀*, April 30th; *Halictoides fimbrilatus* (Cress.), *♀* var. (new to N. M.), April 30th; *Philanthus* aff. *albipilosus*, May 3rd; *Sphecodes* aff. *fortior*, May 3rd; Dipt.: *Compsonymia macellaria* Fabr., April 30th. Lep.: *Pyreneis cardai* L., April 30th; *Anosia stigosa* Bates, April 30th. All near Mesilla Park.

**Fallugia micrantha** n. sp. or var. Flowers small, 23-26 mm. diam.; carp is protruding, forming a green blunt cone, longer than the stamens, which are small, with small anthers; sepals rounded-truncate, with a green acuminate appendage about 2 mm. long, occasionally with two appendages; bracts linear, entire and simple, 3½ 4½ mm. long; leaves and stems like *acuminata*. Hym.: *Oxybelus* sp.; *Apis mellifera ligustica* Spin.; *Philanthus* aff. *albipilosus*. Hemip.: *Phymala fasciata* Gray. All near Mesilla Park, May 3rd.

When first I found *F. micrantha* I thought it might be a dimorphic from of *F. paradoxa acuminata*, tending toward a diecious condition, but against this is the fact that both forms fruit abundantly; and while some plants of *acuminata* were observed to have less fruit than usual, others were covered with fruit. Neither is the difference described owing to any difference in the age of the flowers; it is equally apparent in the old flowers and in the unopened buds. I therefore treat *F. micrantha* as a species, at least pending any proof which may be offered to the contrary. Wooton's *acuminata* was intended to include all the Fallugias of this region, the differences in the flower not having been noticed; but one of Wooton's original specimens, in his herbarium, and also Torrey's figure which he cites pertain to the form here designated *acuminata*.

**Potentilla thurberti** Gray.—Hym.: *Bombus monardae* Ckll. and Porter; *B. prunella* Ckll.; *Megachile fortis* Cress.; *Colletes gitensis* Ckll., *♀*; *Vespa occidentalis* Cress. All taken on the Rio Ruidoso by C. H. T. Townsend. This *Potentilla* has dark red flowers.

**Rosa neomexicana** Ckll. = *fendleri* Wats. (part), not of *Crepis*. The insects here recorded were found on the flowers of this rose in Mesilla; the roses had been planted, and do not grow wild anywhere in the vicinity. On May 4, 1894, I collected the bees *Prosopis mesiliea* Ckll., *♀*, *Agapostemon* sp., *♀*, and *Diadasia apacha* Cress. On April 27, 1898, Mr. C. M. Barber collected the bees *Apis melli­fera* L., *Augochlora neglectula* Ckll., *Halictus armaticeps* Cress., *H. sisymbrii* Ckll., *H. oleosus* Ckll., *Prosopis mesiliea* Ckll., and *Ceratina nanula* Ckll., *Rosa neomexicana* grows wild in the Sacramento Mountains, N. M.; it is closely allied to *R. woodsii*.

*Rosa neomexicana* was collected in plenty by Prof. E. O. Wooton at Cloudcroft, N. M.; I have also seen it there. It differs from *sayi* by the leaflets cuneate at base, teeth simple or slightly compound; from *woodsii* by the much taller stature (often 6 ft. high or
Prunus (cultivated plum).—(1) Mesilla, 1897; *Andrena fracta* Casad and Ckll., ♀, March 24; *Halictus amicus* Ckll., ♂, April 4; *Bombus sp.*, *Thecla halesus* and *Diabrotica 13-punctata* April 15th, the last mentioned eating the pollen.  (2) Mesilla Park, April 13-14, 1898; Hym.: *Andrena prunorum* Ckll.; *A. fracta*, Csd. and Ckll., many; *A. monilicarnis* Ckll.; *A. saucinella* Ckll.; *Anthophora maculifrons* Cress.; *Halictus pruinosis* Rob.; *Bombomeleca alfreddi* Ckll.; *Parandrena andrenoides* (Cress.); *Halictus armaticeps* Cress.; *Prosopis messilae* Ckll., ♀; *Meleca maculata* Cress.; *Halictoides sp.; Colletes woolloni* Ckll.; Lep.: *Synchis lacinia* Geyer, many; Dipt.: *Bibio palipes* Say, det. Coq., also *Eristalis*, *Volucella* and *Ceria*.

Prunus (wild plum).—Hym.: *Bombus ternarius* Say; *B. juxta* Cress.; *Megachie pollicar is pereximia* Ckll., ♀; *Andrena sapellonis* Ckll.; *A. vicina* Smith; *Vespa maculata* L. All at Beulah May 30th (Wilmatte Porter).

LEGUMINOSAE.

*Prosopis glandulosa* Torrey.—Hym.: *Prosopis mesilae* Ckll., ♂ ♀; *P. asinia* Ckll. and Casad., ♂; *Perdita exclamans* Ckll.; *Ashmeadiella prosopidis* Ckll. All at Mesilla, May 7, 1897.

*Parosela scoparia* (Gray).—Hym.: *Megachie sidalceae* Ckll., Mesilla, August 23, 1897.

*Parosela formosa* (Torrey).—Hym.: *Centris lanosa* Cress., ♂, several at Little Mtn., Mesilla Valley, May 1st (Ckll.).

*Psaralea temuflora* Pursh.—Hym.: *Cotioxyxis gilensis* Ckll., ♀; *Megachie exilis* Cress., ♀. Gallinas R. at La Cueva, August 6th (Ckll., W. Porter).

*Petalostemon candidus* (Willd.)—The following were all taken at the flowers at Las Vegas, 1899. Dijpt.: *Physcephila ochreiceps* Bigot-det. Coq., July 21. Hym.: *Andrena argentonis* Ckll., ♀, July, August (W. Porter, Ckll.); *Anthophora cardui Ckll., ♂, August 11th (W. Porter); *Anthidium perpicuum* Ckll., ♀, August 11th (W. Porter); *A. porteri* Ckll., ♀, August 11th (W. Porter); *Megachile manicata* Cress., ♀, August (W. Porter); *Bombus fervidus* Fabr.; *B. scutellaris* Cress.; *Cerceris venator* Cress., July 21st.

*Medicago sativa* L. (alfalfa).—The following were taken at Las Vegas, 1899: *Megachile cleonis* Ckll., ♀; *M. latimanus* Say, ♀; *Melisodes agilis aurigena* Cress., ♀; *Prosopis messilae* Ckll., ♀; *Anthophora bomboides neomexicana* Ckll., ♂; *A. urbana alamosana* Ckll., ♂; *Apis mellifera ligustica* Spin.

more), and small solitary flowers; from *blanda* by the infrastipular spines normally in pairs, and the solitary flowers; from *aciculara* (Ckll. described as *blanda* var.) by similar characters. The flowers of *neomexicana* are sometimes two or three together, but then only one fruit seems to mature. The fruits are small, scarlet, oblong. Sepals entire, with more or less foliaceous tips. Stipules entire, but glandular-margined.


*Lupinus silgreavesii* Wats.—Hym.: *Bombus nevadensis aztecus* Ckll.

*Astragalus humistratus* Gray.—Hym.: *Megachile fortis* Cress., Rio Ruidoso (Townsend).

*Vicia* sp. prob. new, near *pulchella* H. B. K. (Wooton’s No. 288).—Hym.: *Megachile fortis* Cress.; *Melissodes ruidosensis* Ckll.; *Bembex spinola* Lep., ♀; *Colletes gilensis* Ckll., ♂; *Cielioxys gilensis* Ckll., ♂; *Bombus fervidus* Fab.; *B. sonarus* Say; *B. juxtus* Cress.; *B. ternarius* Say; *B. prunelle* Ckll. All collected by C. H. T. Townsend on the Rio Ruidoso. Prof. Wooton considers this *Vicia* distinct from *V. pulchella*, and knows of no name that can be applied to it.

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**A New Ceratina from New Mexico.**

By T. D. A. COCKERELL.

*Ceratina neomexicana* n. sp.

*Female.*—Length 7½—9 mm.; dark green; occiput dark blue; mesothorax with a slight coppery tint at the sides of the middle; first three segments of abdomen dorsally rather olive green; clypeus with a broad-pyriform cream-colored patch; ends of tubercles also cream-colored or ivory-white; wings strongly suffused with reddish brown; nervures and stigma dark. Allied to *C. dupla* Say, but usually larger and easily distinguished by the more sparsely-punctured face, with a shining impunctate supraclypeal space, and similar spaces above the lateral pieces of the clypeus; the sides of the vertex very sparsely punctured; the mesothorax smooth and shining, with sparse punctures on the anterior third, and rather close punctures round the edges, but otherwise impunctate; cheeks with small and very sparse punctures, a broad band behind the eyes impunctate; punctures of middle of abdominal segments smaller and sparser than in *dupla*; flagellum black above, last six joints reddish brown beneath.

*Hab.*—Chicarico Cañon, near Raton, N. M., Aug. 25, 1900 (Ckll.); Santa Fé, N. M., July 10 (Boyle), July 7, at flowers of *Aquilegia* (Ckll.).

MRS. E. M. SWAINSON, 2131 Guildford Ave., Baltimore, Md., will collect in Jamaica, commencing about April 1st. She will be pleased to hear from anyone interested in Jamaica insects.