INTRODUCTION.

The Eucerinae are bees of the family Anthophoridae, in which the paraglossae are very long and hairy. The antennae of the males are usually very long, and the two sexes generally differ much in appearance. No fossil eucrine bees are known; Calyptrapis from Florissant, at first supposed to belong here, proves to belong to the Bombidae. At the present time the subfamily is richly represented in the nearctic and palaearctic regions, and is also quite abundant in the neotropical (especially southward). In Africa it is widely scattered, but the species are not very numerous. In the Indian and Chinese regions there are rather numerous species, mostly, however, from the borders of the palaearctic. In the Malay and Austromalay regions they are absent; they are also absent from Australia and New Zealand, as well as from the islands of the Pacific and the Indian Ocean. Supposed species of Tetralonia recorded from Australia seem to belong to the nomiine group Reepenia of Friese.

The holarctic Tetralonia, with three submarginal cells in the anterior wings, and six-jointed maxillary palpi, must be regarded as the basic type of the subfamily. From this has arisen the palaearctic Eucera, with only two submarginal cells. This now well-defined group may have originated in a "mutation," for a specimen of Tetralonia acerba taken by Mr. G. Hite, at Boulder, Colorado, has only two submarginal cells on each side, and would be referred to Eucera were it not evidently an aberrant specimen of a well-known species of Tetralonia.²

1 The asterisk (*) indicates that the species is in the collection of the United States National Museum. Certain few specimens sent to the Museum by Prof. T. D. A. Cockerell and labeled cotypes are considered paratypes, as Prof. Cockerell uses the name "cotype" in the same sense in which the Museum uses "paratype." The Museum has a goodly lot of unworked material in this group and when this has been determined the number of species in this collection will be greatly increased. Of the 261 names in the following list, 79 are represented by specimens in the collection. Of this 79, 26 are types or paratypes.—S. A. Rohwer.

³University of Colorado Studies, 1907, p. 256, vol. 4.
Another line of modification is observed in the reduction of the number of joints in the maxillary palpi. This has evidently gone on independently in the New and Old Worlds, by a process of parallel evolution, which might be described as orthogenetic. In the case of the forms with five-jointed maxillary palpi, it is questionable whether Xenoglossodes of America and the Old World Tetraloniella should be kept apart. Melissodes of America is represented by Melissina in India, both having four-jointed maxillary palpi. The neotropical Thygater, with three-jointed maxillary palpi, is represented by Thygatina in Ceylon. In South America is a genus Melisseoptila Holmberg, with rather numerous species, having the maxillary palpi only two-jointed. According to the theory of successive radiation it may be maintained that the true evolutionary center of the Eucerines is neotropical, a suggestion which gains some support from the apparent absence of the group in the Tertiary strata of Europe and North America. On the other hand, the apparent stem-form Tetralonia is not only especially abundant in the holarctic, but appears on the wing earlier in the year than Melissodes, etc., being apparently adapted to cooler conditions. We also have the Asiatic series with the palpal joints reduced to four and three, and there is surely no reason to suppose that in the Old World the group had a southern origin.

The North American Eucerines were last catalogued in the Transactions of the American Entomological Society. Since that time numerous species have been added, and a few changes in nomenclature made. The present list gives the type-localities, which were omitted in the former one, and also the collectors of the types when known. There are also added references to the principal synoptic tables.

LIST OF SPECIES.

Genus TETRALONIA Spinola.

Type.—Macroceria malev (Rossi)=antennata (Fabricius).

Maxillary palpi six-jointed.

This genus is also well represented in the Old World.

Eusynhalonia Ashmead, type Eusynhalonia edwardsii (Cresson), is a name for the slightly differentiated group including this and its allies.

Synhalonia Patton has for its type Tetralonia (Melissodes) fulvitasris.

Tables.

(1) Cockerell.  Trans. Amer. Ent. Soc., vol. 32, 1906, pp. 74-91. (Species discussed in connection with the tables are included.)


albicans Provancher, 1896. Los Angeles, California (Coquillett).
Described from the male. "Bien distincte de l'abrita Cresson, par sa taille plus petite, les bande abron de l'abdomen plus distinctes, etc." (Provancher).
albopilosa Fowler, 1899. Berkeley, California (Fowler).
angustior Cockerell, 1897. Pasco, Washington State (Kincaid).
Identical with edwardsii.
annse Cockerell, 1906. Gibson, New Mexico (Anna Gohman). Tab. 3.
argyrophila Cockerell, 1909. Lee County, Texas (Birkmann.)
*brevitrinitis Smith, 1854. "North America?" Tab. 1.
*belfragei Cresson, 1872. Texas (Belfrage). Tab. 1, 4.
"Distinguished at once (female) by the three beautiful, rather broad, snow-white bands on abdomen" (Cresson). Mr. J. C. Crawford notes that female T. belfragei from Dallas, Texas, has the hair on basal joint of hind tarsi within deep red or inclining to sooty; in certain lights most show it distinctly reddish.
Type.—Cat. No. 1790, U.S.N.M.
birkmanniella Cockerell, 1906. Fedor, Texas, April 1 (Birkmann). Tab. 2.
Male "closely resembles edwardsii, but easily separated by the longer third joint of antennae, and differently formed intermediate tibiae and tarsi" (Cresson).
california Fowler, 1899. Berkeley, California (Fowler).
Name preoccupied: = fowleri.
Visits Chrysobotrya.
cordleyi Viereck, 1905. Corvallis, Oregon (Cordley). Tab. 1, 2.
* crenulaticomis Cockerell, 1898. Prude's Summit, Ruidoso, New Mexico.
(C. M. Barber).
Type.—Cat. No. 13190, U.S.N.M.
crenulaticomis maculata Cockerell, 1898. Big Rock, Ruidoso, New Mexico (Townsend).
Male variant, with small yellow spot on base of mandibles.
cressonianiana Cockerell, 1905. Texas. Tab. 1, 3.
dilecta Cresson, 1878. "Texas (Belfrage); Colorado (Ridings)." Tab. 1, 2, 4.
This is the T. speciosa of Tab. 4.
dubitata Cresson, 1878. Georgia. Tab. 4.
This name has been used for Tetralonia atriventris; the genuine dubitata is a valid species of Melissodes.
Tab. 2.
Perhaps a variety of T. rosae.
flagellicornis Smith, 1879. Oaxaca, Mexico.
* fowleri Cockerell, 1905. Los Angeles, California (Davidson).
Allied to T. belfragei.
Paratyp.—Cat. No. 15068, U.S.N.M.
frater Cresson, 1878. Colorado (Morrison). Tab. 1, 2.
Probably the female of fulvitaris; Canadian Entomologist, 1908, p. 234.
fulvohirta Cresson, 1878. Georgia (Morrison). Tab. 1.
fusiceps Robertson, 1900. Illinois (Robertson). Tab. 4.

Probably same as illinoensis; described as a variety of T. atriventris. The name is preoccupied (T. fusiceps Morawitz, 1894).
fusotincta Cockerell, 1905. Oak Creek Cañon, Arizona (F. H. Snow).
gillettei Cockerell, 1905. Fort Collins, Colorado, June 12.
Male of T. speciosa.
gillettei snoviana Cockerell, 1905. Clark County, Kansas (F. H. Snow). Tab. 1, 2.
hirsutior Cockerell, 1905. Banning, California (Davidson). Tab. 1.

Clypeus of male black with light hair.

* honesta Cresson, 1872. Texas (Belfrage; Boll). Tab. 1.

Same as belfragei, according to Robertson.

idiotes Cockerell, 1905. Rock Creek, California (Davidson). Tab. 1 (p. 91).

Probably a race of T. stretchii.

illinoensis Robertson, 1902. Illinois (Robertson). Tab. 4.

lata Provancher, 1888. Vancouver Island (Taylor).
latior Cockerell, 1897. Olympia, Washington (Kincaid).

Same as lata.

lepida Cresson, 1878. "Texas (Belfrage); Colorado (Morrison)". Tab. 1, 2.
lippiae Cockerell = Xenoglossodes lippiae.

* lycii Cockerell, 1897. Mesilla Valley, New Mexico (Cockerell). Tab. 2.

Type.—Cat. No. 5833, U.S.N.M.
medicata Cockerell, 1911. (Canadian Entomologist, p. 34.) Medicine Hat, Alberta (T. N. Willing).

Resembles T. atriventris (female), but pygidial plate narrower; hair of head (except occiput), of pleura and under part of thorax, all black; of thorax above, creamy white.

nevadensis Cresson, 1879. Nevada (Morrison.)

Same as intrudens.
nigricornis Provancher, 1888. Vancouver Island (Taylor).

phacelise Cockerell, 1911. Albuquerque, New Mexico (J. R. Watson).

Related to T. annae.

rose, Robertson, 1900. Illinois (Robertson). Tab. 4.

* speciosa Cresson, 1878. Colorado (Ridings, Morrison). Tab. 1, 2, 3.
territella Cockerell, 1905. Palisade, Colorado, May 7 (Gillette). Tab. 1, 2.

Described from the male.

trinidadensis Friese, 1908. Belmont, Trinidad, West Indies.

Male like nigrovena Smith, but face black, etc. Length, 9 mm.

truttae Cockerell, 1905. Trout Spring, New Mexico (Cockerell). Tab. 2.
virgata Cockerell, 1905. Los Angeles, California (Davidson).

Described as a subspecies of belfragei.

Genus CEMOLOBUS Robertson.

Type.—(Xenoglossa) Cemolobus ipomoeae (Robertson).

Female with clypeus trilobed; inner tooth of claws short; clypeus in male also trilobed, with a transverse apical whitish band; hind basitarsus of male arcuate, its upper apical border beveled, produced below. For other characters see Robertson, Trans. Amer. Ent. Soc., vol. 31, pp. 365 and 366.
ipomoeae Robertson, 1891. Carlinville, Illinois (Robertson).

Visits Ipomoea. Also in Pennsylvania.
Genus *XENOGLOSSA* Smith.

*Type.*—*Xenoglossa fulva* Smith.

Maxillary palpi five jointed, longer and more slender than in *Xenoglossodes*, the last joint well developed. The mandibles are bidentate at apex in the male of *X. fulva* Smith, the type of the genus, as determined from an examination of one of F. Smith’s specimens. In the similar *X. patricia* they are simple at apex in the male. They are also simple at apex in male *X. mustelina*.

**Subgenus.**

*Peponapis* Robertson.

*Type*—(*Xenoglossa*) *Peponapis pruinosa* (Say). Mandibles bidentate at apex in female. Male with first joint of flagellum short.

**Tables.**


*angelica* Cockerell, 1902. Los Angeles, California (Cockerell).

*apiculata* Cresson, 1878. Costa Rica (Gabb). Tab. 1 (p. 82).

*assimilis* Smith, 1879. Oaxaca, Mexico.

Described as a *Melissodes*, but an examination of specimens taken by Mrs. Cockerell at Quirigua, Guatemala, shows that it is a *Xenoglossa* of the subgenus *Peponapis*.

Third antennal joint of male very short.

*brevicornis* Cresson, 1872. Texas (Belfrage).


cressonii Dalla Torre, 1896.

Same as *brevicornis*.

*cucurbitarum* Cockerell, 1896. Mesilla, New Mexico (Cockerell). Tab. 2.

Same as *strenua*.

*Paratype.—Cat. No. 3364, U.S.N.M.*

davidsoni Cockerell, 1905. Los Angeles, California (Davidson).

Allied to *X. angelica*.

*exquisita* Cresson, 1878. Mexico (Sumichrast). Tab. 1 (p. 89).

*Triepeolus digueti* Cockerell is parasitic on this species.

*fulva* Smith, 1854. Puebla, Mexico. Tab. 2.

*Type of the genus.*—Third antennal joint of male of the long type, but considerably shorter and less slender than in *X. patricia*.


*fulviventris* Smith, 1854. “Mexico?”


gabbii Cresson, 1878. Costa Rica (Gabb). Tab. 1 (p. 81).

*holoppyrrha* Dours (Sichel MS.), 1869. Mexico.

Same as *fulva*.

*mustelina* Fox, 1893. San Jose del Cabo, Lower California (Eisen).

In Proc. California Acad. Sci., 1894, p. 118, Fox treated this as a synonym of *X. fulva*. I have cotypes of both species, and find *mustelina* considerably less robust, and with paler wings, than *fulva*.

*patricia* Cockerell, 1896. Mesilla, New Mexico (Cockerell). Tab. 2.

Visits *Cucurbita*.

*Paratype.—Cat. No. 3363, U.S.N.M.*

*patricia angustior* Cockerell, 1900. Buckeye, Arizona (Cockerell).

Common at Los Angeles, California.

*pruinosa* Say, 1836. Tab. 2.

pruinosa limitaris Cockerell, 1906. Brownsville, Texas (Snow).
Male; clypeus without any yellow spot; hair of head cinereous, with black hairs sparsely intermixed on face and vertex; hair of thorax above pale, with only a slight fulvous tint; legs red, more or less clouded with blackish; abdomen very black and shiny, with the usual bands much reduced.

* strenua Cresson, 1878. "Georgia, Texas, New Mexico."

strenua kansensis Cockerell, 1905. Clark Co., Kansas (Snow).
Male rather larger; legs dark reddish-fuscous;omentum of apical abdominal segments pale cinereous or whitish.

utahensis Cockerell, 1905. Utah. Tab. 1 (p. 90).
Female about 14 mm.; rather dark reddish-brown or ferruginous, legs bright ferruginous; maxillary palpi six-jointed, the last two joints very minute.
The South American genus *Swastra* Holmberg has five-jointed maxillary palpi, and resembles *Peponapis* in having the third antennal joint of the male short. The inner tooth of the hind claws is shorter than the outer, very much shorter in the female, an approach toward the condition found in *Cemobobus*. The mandibles are not bidentate at apex in either sex. *Swastra bombylans* Holmberg superficially resembles *Martinella luteicornis*.

Genus XENOGLOSSODES Ashmead.

Type.—(Xenoglossa) Xenoglossodes albata (Cresson).
Maxillary palpi five-jointed, the fifth joint sometimes very small.
This is almost identical with the Old World genus *Tetraloniella* Ashmead; see Cockerell, Ann. Mag. Nat. Hist., July, 1911, p. 185.

**Tables.**


* albata Cresson, 1872. Texas (Belfrage). Tab. 1, 2.

"Very distinct by the white pubescence, that on abdomen having a satiny or silky luster" (Cresson).

* eriocarpi Cockerell, 1898. Fillmore Cañon, Organ Mountains, New Mexico (Tucsonsend). Tab. 1, 2.

Female, 9 mm.

* excrens Cockerell, 1903. Roswell, New Mexico (Cockerell). Tab. 2, 3.

* gutierreziae Cockerell, 1905. Fillmore Cañon, Organ Mountains, New Mexico (C. H. T. Townsand). Tab. 3.

* imitatix Cockerell and Porter, 1899. Las Vegas, New Mexico (A. Garlick). Tab. 1, 2, 3.

Visits *Sphaeralcea*.

* lippiae Cockerell, 1904. La Cueva, Organ Mountains, New Mexico (C. H. T. Townsand). Tab. 3.

Described as a variety of *Tetralonia crenulaticornia*.

* lippiae semilippiae Cockerell, 1905. Oak Creek Cañon, Arizona (Snow).


Allied to *X. lippiae*.

Genus FLORILEGUS Robertson.

Type.—(Meliosodes) Florilegus condigna (Cresson).
For the characters of this genus, see Robertson, Trans. Amer. Ent. Soc., vol. 31, 1905, pp. 365–366. The maxillary palpi are five-jointed.

* condigna Cresson, 1878. "Illinois, Kansas."

* lanieri Guérin, 1845. Cuba.

* palustris Robertson, 1892. Illinois (Robertson).

Same as *condigna*. 
Genus ANTHEDON Robertson.

**Type.**—(*Melissodes*) Anthedon compta (Cresson).

"Scopa of female simple"; male antennæ black, not surpassing thorax. For other characters see Robertson, Trans. Amer. Ent. Soc., vol. 31, pp. 365 and 366. The female tibial scopa is in reality very briefly plumose, as may be seen under the compound microscope.

* compta Cresson, 1878. Georgia (Morrison).

Genus MARTINELLA Cockerell.

**Type.**—(*Melissodes*) Martinella luteicornis (Cockerell.)

Maxillary palpi four-jointed, last joint long and cylindrical, not very much shorter than third; apex with two bristles. Malar space practically absent.

* luteicornis Cockerell, 1896. Rincon, New Mexico (Cockerell).

Visits *Prosopis glandulosa*. Male antennæ yellow.

**Paratype.**—Cat. No. 3362, U.S.N.M.

Genus MELISSODES Smith. 1

**Type.**—(*Macroeca*) Melissodes rustica (Say), designated by Patton.

Maxillary palpi four-jointed, last joint much shorter than third. Sometimes there are only three joints. (See Robertson, Can. Ent., Aug., 1901, p. 231.)

**Melissina** Cockerell is an analogous genus, with four-jointed maxillary palpi, found in India. (See Ann. Mag. Nat. Hist., Nov., 1911, p. 670.) The malar space in this genus is practically obsolete.

**Epimelissodes** Ashmead is a subgeneric name for *Melissodes atripes* (the type of the subgenus) and allied species.

The males have the seventh abdominal segment without lateral spines.

**TABLES.**

(1) Cockerell. Trans. Amer. Ent. Soc., vol. 32, 1906, pp. 74–90. (I include references to species discussed in connection with the tables.)


* agilis Cresson, 1878. Texas (Belfrage). Tab. 1, 4.

Variation; Bull. S. California Acad. Sci., Feb., 1905, p. 28.


agilis semiaurigis Cockerell, 1906. Fedor, Texas (Birkmann).

Male labrum black, and mandibles without yellow spot; nervures darker and redder; mesothorax more shiny.


Male labrum all black; no yellow spot on mandibles.

ambigua Smith, 1879. Mexico.


americana Lepeltier, 1841. Carolina.

apicata Lovell and Cockerell, 1906. Waldoboro, Maine (Lovell).

assimilis Smith, 1879. Oaxaca, Mexico.


Same as *Xenoglossa assimilis* (Smith).

atrata Smith, 1879. Oaxaca, Mexico. Tab. 1.


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1 *Melissodes* is usually credited to Latreille, but it was defined, and species assigned to it, by F. Smith in 1854. Lepeltier described what was understood to be Latreille's insect as *Melissoda latreilli*; this is *Acanthopus goryi* Romand. Mr. J. C. Crawford writes in a letter that Romand in 1841 included a species in *Melissodes*; I have not had access to this work.
atratula Dalla Torre, 1896.
   Same as atrata.
atrifera Cockerell, 1910. Mexico (Deppe).
atrifera sandiarum Cockerell, 1910. Sandia Mountains, New Mexico (J. R. Watson).
   Name preoccupied: = carolinensis.
* atripes Cresson, 1872. Texas (Belfrage). Tab. 1.
atripes acomanche Cockerell, 1905. Fedor, Texas (Birkmann).
baileyi Cockerell, 1906. Fedor, Texas, April 5 (Birkmann).
   Varieties a, b, c, Cockerell, Canadian Entomologist, July, 1905, p. 267. The species
goest west to Kansas.
binotata Say, 1837. Indiana.
   Same as bimaculata.
blakei Cockerell, 1905. Beulah, New Mexico (Cockerell). Tab. 1, 3.
   Falls Church, Virginia, August and September (N. Banks). Very like M. perplexa,
   but smaller; differs from M. illata by the smaller average size, band on middle
   of second abdominal segment entire or almost, and tuft on end of hind femora pale.
   Allied to petalostemonis.
cajennensis Lepeletier, 1841. Cayenne.
   Also in the West Indies.
californica Smith, 1879. California.
   Name preoccupied: = smithii.
* caliginosa Cresson, 1878. Georgia (Morrison, Ridings). Tab. 1.
carolinensis Dalla, Torre, 1896. Tab. 1.
   New name for Tetralonia atrifrons Smith, from North Carolina.
chrysothamni Cockerell, 1905. Embudo, New Mexico (Cockerell). Tab. 1, 3.
   Visits Chrysothamnus.
civica Cockerell, 1910. Mexico (Forrer).
* enici Robertson, 1901. Illinois. Tab. 1, 4.
colliciata Cockerell, 1910. Mexico (Deppe).
* coloradensis Cresson, 1878. Colorado (Ridings, Morrison). Tab. 1, 4.
   Ranges to Illinois (Robertson).
* comanche Cresson, 1872. Texas (Belfrage, Boll). Tab. 1.
   Female resembles M. obliqua.
* communis Cresson, 1878. "Georgia, Illinois." Tab. 1, 2.
comptoides Robertson, 1897. Illinois (Robertson). Tab. 1, 4.
* confusa Cresson, 1878. Colorado (Ridings, Morrison). Tab. 1.
   Also in the mountains of New Mexico.
* confusiformis Cockerell, 1906. Fedor, Texas (Birkmann).
   Resembles M. gilensis. Also occurs in Colorado; see Univ. of Colo. Studies, vol. 4,
   1907, p. 255.
   Resembles M. lupina and agilis, but male antennae much shorter.
denticulata Smith, 1854. "United States."
* dentiventris Smith, 1854. Georgia. Tab. 1.
* desponsa Smith, 1854. Ohio. Tab. 1.
desponsiformis Cockerell, 1905. Corvallis, Oregon. Tab. 1, p. 89.
**dubitata** Cresson, 1878. Georgia (Ridings, Morrison).

A valid species. See Cockerell, Canadian Entomologist, 1911, p. 34.

**duplocincta** Cockerell, 1905. Bill Williams’ Fork, Arizona (Snow). Tab. 1.

**epicharina** Cockerell, 1905. Oak Creek Cañon, Arizona (Snow).

Female peculiar for the one-banded abdomen, giving it a curious resemblance to *Epicharis maculata*. A variety has two bands.

* festonata* Provancher, 1888. Cap Rouge, Canada (Provancher).

Differs from *M. nigripes* by its smaller size and less elongated abdomen, and from *M. despansa* by the whitish abdominal bands. Male: clypeus yellow, antennae testaceous beneath, last two segments of abdomen with lateral teeth. Female: hair pale yellow, mixed with black on vertex and mesothorax, tegulae black, hair of legs reddish brown.

* fimbrata* Cresson, 1878. Texas (Belfrage). Tab. 1.


Allied to *M. agilis*. Male has some black hairs on dorsum of thorax.

Type.—Cat. No. 3354, U.S.N.M.

**fremontii** Cockerell, 1907. Florissant, Colorado (Rohwer).

Allied to *M. confusa*. Visits *Geranium fremontii*.


**georgica** Cresson, 1878. Georgia (Morrison). Tab. 1.


variety of the female, with much less black hair on vertex than type, was taken by Eldred Jeane at North Yakima, Washington, July 24, 1903.

Cotype.—Cat. No. 3358, U.S.N.M.

* glenwoodensis* Cockerell, 1905. Glenwood Springs, Colorado (Gillette). Tab. 1, 2, 3.

Paratype.—Cat. No. 15069, U.S.N.M.

**grandissima** Cockerell, 1905. Fedor, Texas (Birkmann). Tab. 1.


* grindeliae* Cockerell, 1898. Santa Fe, New Mexico (Cockerell). Tab. 1.

Paratype.—Cat. No. 4077, U.S.N.M.

**helene** Cockerell, 1906. Las Cruces, New Mexico, August 19 (Townsend).

Allied to *M. humilior*.

**helianthelli** Cockerell, 1905. Mesilla, New Mexico (Cockerell). Tab. 1, 3.

Female almost 18 mm. Visits *Helianthus ciliaris*.

**herricki** Cockerell, 1905. New Mexico (F. H. Snow). Tab. 1.

**hewetti** Cockerell, 1905. Santa Fe, New Mexico (Cockerell). Tab. 1, 3.


**hirsuta** Smith, 1879. Oaxaca, Mexico.


**hitel** Cockerell, 1908. Pueblo, Colorado, August 17 (G. M. Hite).

Resembles *M. martini*.

**hortivagans** Cockerell, 1905. Garden City, Kansas (H. W. Menke). Tab. 1.


**humilior** Cockerell, 1903. Organ, New Mexico (Cockerell). Tab. 1.

**humilior catalinensis** Cockerell, 1905. Catalina Island, California (Davidson).

Described as a variety of *M. intermediella*.

* hymenoxidis* Cockerell, 1906. Florissant, Colorado (Cockerell).

Related to *M. perplexa*. Hair of pleura black in female. Visits *Hymenoxys*.

Paratype.—Cat. No. 150671, U.S.N.M.

**illata** Lovell and Cockerell, 1906. Waldoboro, Maine (Lovell).

Visits *Solidago*. 
illinoensis Robertson, 1895. Illinois (Robertson). Tab. 4.
intermedia Cresson, 1872. Texas (Belfrage). Tab. 1, p. 90.
intermediella Cockerell, 1905. Mesilla Valley, New Mexico (Cockerell). Tab. 1.
intorta Cresson, 1872. Texas (Belfrage). Tab. 1.
    Male with black clypeus; antennæ not half as long as in tristis.
kallstroemia Cockerell, 1905. Mesilla Park, New Mexico (Cockerell). Tab. 1.
kallstroemia phenacoides Cockerell, 1905. Las Cruces, New Mexico (Cockerell).
    Tab. 1.
Formerly confused with M. communis (male), but easily separated by the total absence of black hair on thorax and entirely ferruginous tarsi.
*labiatarum Tucker, 1896. San Rafael, Vera Cruz, Mexico (Townsend).
    Superficially rather like Tetrallonaria atriventris.
*labiatarum Tucker, 1896. San Rafael, Vera Cruz, Mexico (Townsend).
Type.—Cat. No. 3356, U.S.N.M.
loena Cockerell, 1909. Lee County, Texas (Birkmann).
    Male with eyes bluer green and diverging less above; mesothorax more shiny.
Type.—Cat. No. 12878, U.S.N.M.
*macheraanthera Cockerell, 1904. Near White Sands, New Mexico (Cockerell).
    Tab. 1.
Also in Arizona. Male almost 15 mm. long.
manipularis Smith, 1854. Georgia. Tab. 1.
The thoracic dorsum of male has some black hair, not mentioned by Smith.
martini Cockerell, 1905. Las Valles, New Mexico (T. and W. Cockerell). Tab. 1, 3.
    Visits Petalostemon in August.
masuca Cockerell, 1909. Fedor, Texas (Birkmann).
    Runs in Tab. 1 to vicinity of aurigenia and agilis (males).
maura Cresson, 1865. Cuba (Gundlach). Tab. 1.
megacerata Cockerell, 1906. Fedor, Texas, October 13 (Birkmann).
    Male antennæ very long (10 mm.).
melandri Cockerell, 1906. Fedor, Texas, October (Birkmann). Tab. 2.
melanosa Cockerell, 1905. Fedor, Texas (Birkmann).
    In Canadian Entomologist, July, 1905, p. 266, is a table comparing this with M. pernigra, atrata, and bimaculata.
*menuacha Cresson, 1868. New Mexico (S. Lewis). Tab. 1.
    Colorado. (See Cresson).
*menuacha semilupina Cockerell, 1905. Los Angeles, California (Davidson).
    Male; labrum not black at sides; red of antennae darker; mandibles with yellow spot.
*menuacha submenuacha Cockerell, 1897. Las Cruces, New Mexico (Cockerell).
    Male with mandibles black, without any yellow spot; nervures dark.
microsticta Cockerell, 1905. Vancouver Island. Tab. 1.
*mimica Cresson, 1869. Cuba. Tab. 1.
    Also in Jamaica, according to Fox.
*mizese Cockerell, 1905. Las Vegas, New Mexico, (S. L. Mize). Tab. 1, 3.
    Visits Grindelia. A variety was found by Mr. Eldred Jenne at North Yakima, Washington, September 26, 1903.
*montana Cresson, 1878. Colorado (Ridings); New Mexico (Lewis). Tab. 1.
    The female described is the same as M. grindelia, but the male is another species.
morosa Cresson, 1878. Mexico (Sumichrast). Tab. 1, p. 82.
*mysops* Cockerell, 1905. Maybell, Colorado. Tab. 1, 2.
Visits thistle flowers.

Variation; Entomologist, December, 1907, p. 269. Also at North Yakima, Washington, July 27, 1903 (Eldred Jenne). A male from North Yakima, August 22, 1903 (E. Jenne) is placed as a variety of *M. mysops*, but it has the apical part of flagellum bright ferruginous beneath. It is unfortunately in bad condition; possibly it is the undescribed male of *M. desponsiformis*.

*nevdensis* Cresson, 1879. Nevada (Morrison). Tab. 1.

Same as *bimaculata*.

*nigripes* Smith, 1854. "United States."
Smith’s male is *M. cincta*.

*nigroaenea* Smith, 1854. Brazil.
Bertoni and Schrottky (1910) state that they received it from Texas, labelled *M. menuacha*. A female *nigroaenea* received from Schrottky has the facial quadrangle broader and shorter than in *menuacha*. It is from San Juan, Argentina.

*nigrosignata* Cockerell, 1905. Oak Creek Cañon, Arizona (Snow). Tab. 1.

*pallidisignata* Cockerell, 1905. Oak Creek Cañon, Arizona (Snow). Tab. 1.

*nivea* Robertson, 1895. Illinois (Robertson). Tab. 4.
Falls Church, Virginia, September (N. Banks).

*otomita* Dalla Torre, 1896.
Same as *hirsuta*.

*obliqua* Say, 1837. Indiana. Tab. 1, 4.

*opuntiella* Cockerell, 1911. Brownsville, Texas (Jones and Pratt).
Type.—Cat. No. 14105, U.S.N.M.

*parosela* Cockerell, 1905. Mesilla, New Mexico (Cockerell). Tab. 1.
Visits *Parosela scoparia*.

*pecosella* Cockerell, 1905. Pecos, New Mexico (W. P. Cockerell). Tab. 1.

*pecosella* verbesinarum Cockerell, 1905. Las Cruces, New Mexico (Cockerell).
Tab. 1.
Identical with *Xenoglossodes excurrens*.


*pennigra* Cockerell, 1896. San Rafael, Vera Cruz, Mexico (C. H. T. Townsend).
Resembles *M. atrata* and *bimaculata*. Visits *Ipomoea*. Male clypeus dark.

*perplexa* Cresson, 1878. "Georgia (Morrison); Texas (Belfrage)." Tab. 1, 2.
Falls Church and Glencary Lyn, Virginia, July to September (N. Banks).

*personatella* Cockerell, 1901. La Jolla, California (Cockerell). Tab. 1.
Type.—Cat. No. 13189, U.S.N.M.

*petalostemonis* Robertson, 1900. Illinois (Robertson). Tab. 4.
Near *M. communis*.

*petulca* Cresson, 1878. Georgia (Morrison). Tab. 1.

*petulca suffusa* Cresson, 1878. Texas (Belfrage, Heilígbrodt).
The Rev. G. Birkmann writes that he believes *suffusa* to be a valid species, distinct from *petulca*, but that males which have been ascribed to *suffusa* really belong to *petulca*. He takes *suffusa* during the first half of May, *petulca* from about the middle of May to the middle of June.

*petulciformis* Cockerell, 1906. Fedor, Texas (Birkmann).
Closely resembles *M. petulca*. 

A small species resembling *agilis*.

inguis Cresson, 1878. Mexico (Sumichrast). Tab. 1.

inguis velutinella Cockerell, 1897. San Rafael, Mexico (C. H. T. Townsend).
The abdominal pile yellowish white.

praelauta Cockerell, 1905. Oak Creek Canon, Arizona (Snow). Tab. 1.
pullata Cresson, 1855. Cuba. Tab. 1.

gymnea Cresson, 1872. Texas (Belfrage). Tab. 1, p. 91.

* raphaelis Cockerell, 1896. San Rafael, Mexico (Townsend). Tab. 1, 2.
Quirigua, Guatemala (W. P. Cockerell).

_Type.—Cat. No. 3355, U.S.N.M.
rivalis Cresson, 1872. Texas (Belfrage, Boll). Tab. 1.

*rufodontata Smith, 1854. St. Vincent, Grenada.
ruidosensis Cockerell, 1896. Ruidoso Creek, New Mexico.
Same as *confusa*.

_Cotype.—Cat. No. 3361, U.S.N.M.
rustica Say, 1837. Indiana.

Female; looks like *Xenoglossodes imitatrix*.

semitristis Cockerell, 1905. Oak Creek Cañon, Arizona (Snow). Tab. 1.


_Comparison with *perplexa*; Psyche, October, 1906, p. 111.

smithii Dalla Torre, 1896.


_Pubescent white.

spheralceae Cockerell, 1896. Santa Fe, New Mexico (Cockerell). Tab. 1.

Male clypeus black.

_Paratype.—Cat. No. 3360, U.S.N.M.
spiisa Cresson, 1872. Texas (Belfrage). Tab. 1.

*stearnsi Cockerell, 1905. Los Angeles, California (Davidson). Tab. 1.

_Paratype.—Cat. No. 15070, U.S.N.M.
suavis Cresson, 1878. Colorado (Morrison). Tab. 1, p. 91.

"A very pretty little species, the abdomen (female) appearing white with four narrow shining black bands." (Cresson.) Flagellum rufo-testaceous beneath.

_superciliosa Cresson, 1878. Texas (Belfrage, Heiligbrodt). Tab. 1.

_See *M. petulca suffusa*.
tepanea Cresson, 1878. Mexico (Sumichrast). Tab. 1.
tepanea aschenborniana Cockerell, 1912. Guatemala (W. P. Cockerell).
texana Cresson, 1872. Texas (Belfrage, Boll). Tab. 1.
texana flavericte Cockerell, 1906. Roswell, New Mexico (Cockerell).

Visits *Flaverea*.

*thelypodii Cockerell, 1905. La Cueva, Organ Mountains, New Mexico (Townsend).

Tab. 1, 3.
townsendi Cockerell, 1896. Las Cruces, New Mexico (Townsend). Tab. 1.

Male large and robust, the abdomen covered with fulvous hair.


"This may prove to be the female of mimica." (Cresson.) Jamaica.
*trifasciell* Ashmead, 1900. Kingstown, St. Vincent, West Indies (H. M. Smith). Female 8 to 9 mm.

**Type.—**Cat. No. 6396, U.S.N.M.

**trinodis** Robertson, 1901. Illinois (Robertson). Tab. 4.

Maxillary palpi often three-jointed.

*tristis* Cockerell, 1904. Mesilla Valley, New Mexico (Cockerell). Tab. 1.

**Paratype.—**Cat. No. 3559, U.S.N.M.

**tristis malvina** Cockerell, 1902. Cerro Chilicote, State of Chihuahua, Mexico (Towsend.)

Male smaller than *tristis*, eyes dark brown, flagellum dark reddish beneath, nervures mostly piceous. Probably a distinct species. Visits Malvaceae.

* Tuckeri* Cockerell, 1909. Plano, Texas, October (E. S. Tucker).

Resembles *perplexa* (female), but mesothorax shining, and closely beset with very deep and large punctures.


**vernonensis** Viereck, 1905. Vernon, British Columbia (Harvey). Tab. 1.

Described as a subspecies of *M. menuacha*.

*vernonie* Robertson, 1902. Illinois (Robertson). Tab. 4.


**wheeleri** Cockerell, 1906. Fedor, Texas, May 23 (Birkmann). Tab. 2.


**wickhami** Cockerell, 1906. Fedor, Texas, May 3 (Birkmann). Tab. 2.

**xanthopteralis** Cockerell, 1906. Fedor, Texas, May 26 (Birkmann).

Wings very yellow.

**Genus** THYGATER Holmberg.

**Type.—**(*Tetracionia*) *Thygater terminata* (Smith).

Maxillary palpi three-jointed. Malar space large.

**Macroglossapis** Cockerell, type (*Macroglossa*) *Macroglossapis oribazi* Radoszkowski, is the same genus. This genus, on account of the large malar space and other characters can not well have been derived from the *Melissodes* group.

**Thygatina** Cockerell is an analogous genus, with three-jointed maxillary palpi, found in Ceylon. (See Trans. Amer. Ent. Soc., vol. 37, p. 237.)

**Tables.**


*abilabris* Cresson, 1878. Mexico (Sumichrast). Tab. 1.

**analis** Lepeltier, 1841. Brazil. Tab. 1.

According to Friese the Mexican *oribazi* is the same.

*cockerellii* Crawford, 1906. San Jose, Costa Rica (Crawford).

Described from the female. Quirigua, Guatemala (W. P. Cockerell).

**Type.—**Cat. No. 10076, U.S.N.M.

**modesta** Smith, 1879. Oaxaca, Mexico. Tab. 1.


**montezuma** Cresson, 1878. Mexico (Sumichrast). Tab. 1.

*nigravillosa* Crawford, 1906. San Jose, Costa Rica (Crawford).

Described from the male. Quirigua, Guatemala (W. P. Cockerell).

**Type.—**Cat. No. 10077, U.S.N.M.

**oribazi** Radoszkowski, 1884. Mexico.

Same as *analis*, according to Friese. Female 16 mm.

**rubricata** Smith, 1879. Oaxaca, Mexico. Tab. 1.


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