

BULLETIN No. I  
OF THE  
COLORADO BIOLOGICAL ASSOCIATION.

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ON THE HYMENOPTERA  
OF  
COLORADO ;

DESCRIPTIONS OF NEW SPECIES, NOTES, AND A LIST OF  
THE SPECIES FOUND IN THE STATE,

BY  
WILLIAM H. ASHMEAD.

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Officers, 1889.

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WASHINGTON, D. C.

1890.

COLORADO, the State of lofty mountains, with its wonderful cañons, gorges, and plateaux, a dry climate, and remarkable for its great mineral wealth and fossil remains, from its position in the Rocky Mountains affords a peculiarly interesting Fauna..

In the present memoir, it is intended to elucidate, as far as possible, a part of this, the hymenopterous fauna, describe such species as appear to be unknown to science, give notes, a list of the species occurring in the State, and show as much of their life-histories as is practicable.

Since the publication of Mr. E. T. Cresson's admirable "Catalogue of the Hymenoptera from Colorado Territory," published in the Proceedings of the Entomological Society of Philadelphia, volume iv, 1865, twenty-five years ago, nothing of this kind has been attempted. Then it was a Territory; now it forms one of the precious jewels in the diadem of States of the Great Republic. Many new species, too, have been discovered and made known since its publication. the generic position of many of which has necessarily changed with our better knowledge of the structure and classification of these insects, so that it is believed a full enumeration of the Hymenoptera of that State now will not be without its value and probably will add considerable to our knowledge of their distribution.

The work was undertaken at the suggestion of Mr. T. D. A. Cockerell, of West Cliff, Custer county, Colorado, a most indefatigable collector in all branches of Natural History, a well-known writer on entomological and kindred topics, and a most valued friend and correspondent of the writer.

The present paper is, therefore, mainly the results of his labor in the field.

When he first made the suggestion—to compile a Catalogue of the Hymenoptera of Colorado, to be published as a Bulletin by the Colorado Biological Association—to which I at once acceded, I had no conception of the number of these insects already recorded from that State, or the labor it was to involve me in, in consulting works, identification, preparing the list, and in drawing up diagnoses of the many interesting new species he was to discover, or with my other work on hand, I should have hesitated about attempting it.

However, now that the task is completed, which has been greatly retarded by my official duties at Washington and from other causes, I can thank him for the great pleasure he has given me in its preparation and for the many enjoyable surprises I had,

as, from time to time, new material came in and some interesting new form was recognized.

It will be seen Mr. Cockerell has made numerous collections and turned up many new species which are described below.

One thing to be regretted, however, is that the Colorado microhymenoptera are so poorly represented; for, judging from those sent, they must be numerous in the mountainous regions of that State, and, notwithstanding the interesting new species herein described, the field is such a large one that a thorough investigator and collector who would devote special pains to their collecting could not fail to be richly rewarded in the discovery of numerous new species.

My thanks are also due to Mr. H. G. Smith, Jr., of Denver, for a small sending of these insects collected in his neighborhood; also to Mr. H. F. Wickham for some interesting Proctotrupids &c., collected by him at Greeley, Col.

The arrangement of the families and genera in this work is original with the author, consistent with what, from his present knowledge of them, he conceives to be in accordance with their affinities and evolutionary law.

The order of arrangement is from the highest to the lowest; the family *Apidae*, or the bees, as the most highly organized and specialized, is placed at the top, while the family *Mymaridae*, comprising low parasitic forms, the smallest, least specialized, and apparently the most degraded, is placed at the bottom.

## PART I.—DESCRIPTIONS OF NEW SPECIES.

### FAMILY I.—*APIDÆ*.

#### *Panurgus* Panzer.

*Panurgus rufocinctus* n. sp.

♀. Length 8 mm. Stature similar to *P. fimbriatus* Cr. Black; the head, thorax, and femora clothed with a dense, long, cinereous pubescence; on the tibiae and venter the pubescence is shorter and tinged with fulvous. Clypeus sub-convex, shining, bare, with some coarse, scattered punctures. Mentum with a sinus at the apical middle. Mandibles and antennae wholly black. Frons longitudinally aciculated. The sculpture of the thorax cannot be made out on account of the denseness of the pubescence. Legs black, the tarsi piceous, the scopa and basal joints with a golden lustre; claws deeply cleft, the outer tooth the longer, while the posterior femora beneath terminate in a blunt, laminate tooth.

Abdomen piceous, the apical margins of the segments broadly rufous, the 2d, 3d, and 4th segments with an apical depression a little beyond the middle, the basal segment at sides, the apices of 2d and 3d broadly interrupted in the middle, the 4th entirely and the apical segment, fringed with long, sparse, whitish, or cinereous hairs; venter mostly dark rufous, paler at the sutures of segments. Wings hyaline, slightly clouded at the apical margins; stigma and veins, except the subcostal, which is black, uniformly pale yellowish brown; the second submarginal cell is about one-fifth longer than the 1st, its apical margin one-fourth shorter than its basal margin, both recurrent nervures enter it at an equal distance from the transverse cubitals.

Described from one specimen collected by Mr. Cockerell at West Cliff. It comes nearest to *P. fimbriatus* Cr., and may prove to be but a variety of that species.

*Calliopsis* Smith.

*Calliopsis citripes* n. sp.

♂. Length 6 mm. Stature of *C. pauper* Cr. Black; the head and thorax opaque, closely punctate; abdomen shining, the apical one-fourth or slightly more of the 1st, 2d, 3d, and 4th segments constricted, and finely transversely aciculated, the basal portions convex, finely, closely punctate; the basal segment is smooth toward its base, with a deep central longitudinal fovea. The head and thorax are almost bare, only sparsely pubescent, the sparse pubescence on the frons and on the scape is tinged with ochraceous, on the pleuræ and femora it is white or cinereous and denser. The mandibles, except the tips, the clypeus, large triangular side pieces and a quadrate spot above the clypeus projecting above the triangular side pieces, the apical tips of femora and all tibiæ and tarsi lemon-yellow; the anterior tibiæ beneath and the middle and posterior tibiæ both beneath and above, are spotted with black. Antennæ 13-jointed, black, the flagellum slightly, obscurely rufous beneath; the 2d joint of the flagellum is only slightly shorter than the 1st, the joints beyond a little longer.

The short space below the post scutellum striated. Wings dusky hyaline, paler at base; tegulæ rufous; stigma and veins dark brown; the marginal cell truncate at apex; the 1st submarginal cell is at least one-third longer than the second; the 1st recurrent nervure enters the second submarginal cell one-half its length distant from the 1st transverse cubital, the second recurrent being almost interstitial with the 2d transverse cubital.

Described from one specimen captured by Mr. Cockerell at Smith's Park. The species comes nearest to *C. flavipes* Smith and *C. ornatipes* Cr.

FAMILY II.—ANDRENIDÆ.

*Cilissa* Leach.

*Cilissa albihirta* n. sp.

♀. Length 10 mm. Black; head, thorax, and legs covered with a dense, whitish pile, the abdomen is also pubescent, but more sparsely so as not wholly to hide the sculpture, which is finely reticulated, the hairs surrounding the apex black, the ventral segments fringed apically with long white hairs. The vertex of head is bare, densely, minutely punctulate; face densely hairy; mandibles black, with a grooved tooth inwardly before the apex. Antennæ black, the first joint of flagellum about as long as the scape and pedicel together, narrowed basally, the second joint short, about one-third the length of the first, the joints beyond equal, very slightly longer than the second. Legs black, the tarsi somewhat piceous, the claws deeply cleft, the knee plate of posterior tibiæ oval, the anterior legs outwardly and the middle legs beneath almost bare, posterior coxæ densely covered with long white hairs. Wings dusky hyaline; the subcostal vein and tegulæ black, the stigma and the other veins brown, the 2d and 3d submarginal cells together are not longer than the 1st, the 2d quadrate very slightly narrowed at apex, the 1st recurrent nervure joining it slightly beyond its middle, the 3d, along its base, is twice the length of the 2d, along its apex not longer than the 2d, the 2d recurrent nervure joining it before its apex.

Described from one specimen collected by Mr. Cockerell.

*Cilissa nigrihirta* n. sp.

♂. Length 7 mm. Black; face, cheeks, and thorax covered with long, black pile, on the vertex are a few pale hairs with some intermixed black hairs, the thorax, too, show a few pale hairs intermixed with the black. The abdomen is almost bare, the extreme apical margins of the segments piceous or tinged with rufous, the terminal segment alone being covered with yellowish-white pile, although the margins of most of the terminal segments are more or less fringed with sparse hairs; the venter is much more hairy, the hairs black, interspersed with a few white ones; the anal plate is rounded behind. Head and thorax opaque, densely punctulate. Antennæ 13-jointed, piceous black, the 1st joint of the flagellum short, about two-thirds the length of the scape, the 2d still shorter, as wide as long, the following joints are about equal and about as long as the 1st. Mesonotum with a median grooved line. Metathorax punctulate with indications of a carina basally. Legs black, the fringe on tibiae and tarsi fuscous, on posterior legs paler, tarsi piceous; spurs 1-1-2, very long, honey-yellow, claws pale, deeply cleft. Wings hyaline, stigma and veins, except the subcostal vein, which is piceous black, pale brown; tegulae black; the venation is similar to the preceding species, except the 1st recurrent nervure joins the 2d submarginal vein at the middle, the 2d recurrent nervure joins the 3d submarginal cell nearer to the middle than to its apex, and the outer nervure of this cell has a little stump of a vein at its basal third.

Described from one specimen taken by Mr. Cockerell.

*Cilissa erythrogaster* n. sp.

♀. Length 9 mm. This species has much the appearance of a *Sphecodes*, but the face, thorax, and legs are densely covered with long cinereous pile, and the basal nervure is straight. Head, thorax, and legs black, tarsi and abdomen red, the latter slightly dusky at base and sometimes the base of the second segment, the head is minutely, closely punctate, the space between the ocelli and base of antennæ longitudinally aciculated. Mandibles black, with a blunt tooth inwardly before the tip, a deep, longitudinal groove extends from this tooth to the base of the mandibles. Antennæ black, the flagellum ferruginous beneath. Thorax shining, microscopically punctate, with a few coarser punctures scattered over its disk. The scutellum is slightly depressed medially. Metathorax closely, very minutely punctate. Tibial spurs 1-1-2, long, pale. Claws deeply cleft. Abdomen smooth, with a sparse pubescence at the sides, the tip and the venter; anal plate blackish, with a longitudinal sulcus. Wings hyaline, the tegulae and subcostal vein black or piceous, the other veins and the stigma pale ferruginous, the venation as in *C. albihirta*.

Described from two specimens collected by Mr. Cockerell.

*Cilissa trizonata* n. sp.

♀. Length, 8½ mm. Black; head and thorax subopaque, closely punctate, covered with rather dense long white pubescence tinged with ochraceous; legs black and likewise pubescent, tarsi piceous beneath, the tibial spurs, as well as the posterior tibiae beneath, ferruginous; the claws are deeply cleft and the posterior femora are produced into a laminate spur at apex beneath. Face coarsely punctate; frons aciculated; ocelli pale; mandibles black. The mesonotum is centrally longitudinally grooved; metathorax closely finely punctate. Abdomen polished, alutaceous, the apex of the 3d, 4th, and 5th segments with a distinct fringe of white hairs, the 2d segment is also fringed, but the fringe is interrupted or wanting at the middle; all the ventral segments are narrowly fringed at the apex; the anal plate is triangular with a V-shaped frenum. Wings hyaline, the venation as in *C. albi-*

*hirta*, except the first recurrent nervure joins the 2d submarginal cell a little beyond the middle; stigma and veins pale yellowish.

The ♂, or what I take to be the ♂, agrees closely structurally with the above, except it is covered with white pile; the antennæ are 13-jointed, instead of 12-jointed, the flagellum being ferruginous beneath and often at the tips above. The abdomen above is banded as in the ♀, but beneath the ventral segments are not fringed, but the apices are narrowly rufous, with a delicate wavy sculpture; the anus is surrounded by tufts of hairs, and its structure cannot be ascertained; the venation is identical in both sexes.

Described from 1 ♀ 5 ♂ specimens taken by Mr. Cockerell.

### *Agapostemon* Smith.

*Agapostemon caruleus* n. sp.

♀. Length 11 mm. Entirely blue, except narrow yellow bands on 1st and 2d abdominal segments, and the apex of tibiæ and tarsi which are pale ferruginous; the insect is sparsely covered with a short, appressed, whitish pubescence, denser on face, and rather densely punctured. Antennæ ferruginous, blackish above. Metathorax abruptly truncate, concave, with a central groove. Wings hyaline, the stigma and veins pale, yellowish brown; the 1st submarginal cell about as long as the 2d and 3d together, the 2d the shortest, nearly quadrate, not as long as wide, the 3d nearly one-half longer along the base than at apex, and receives both recurrent nervures.

Described from one specimen, collected by Mr. Horace G. Smith at Denver. This species is very distinct from all other described species in our fauna, all of which, except *A. melliventris*, are in my collection, and is easily recognized by its color and the venation.

## FAMILY VII.—PHILANTHIDÆ.

### *Aphilanthops* Patton.

*Aphilanthops quadrinotatus* n. sp.

♂. Length 9 mm. Black; abdomen and legs red, the former sparsely punctate, with oblong yellowish white spots on 1st and 2d segments, and rather broad yellowish white apical bands on the 3d, 4th, and 5th segments, the band on the 3d a little narrowed at the middle, the anal plate quadrilateral slightly concave, margined, the posterior angles a little rounded, claspers broadly flattened, rounded off at apex. Head and thorax closely punctate; the face covered with glittering appressed pubescence, the anterior margin of clypeus broadly margined with yellow, mandibles yellow, tips black, a band on collar above, tegulæ, large spot beneath tubercles, band at base of scutellum and spots on scapulæ, post scutellum, and the posterior lateral angles of metathorax, all yellow or yellowish white. Wings hyaline, the stigma and veins ferruginous, a yellowish spot before the base of the stigma. The 1st submarginal cell is about as long as the 2d and 3d combined; the 2d the smallest; it, as well as the 3d, narrowed above; the marginal cell is truncate, appendiculate at apex.

Described from one specimen received from Mr. Horace G. Smith who took it at Denver.

A very beautiful and distinct species.

## FAMILY IX.—BEMBECIDÆ.

*Neolarra* n. g.

General appearance of an *Oxybelus*, the head transverse, as broad as the thorax; when viewed from in front, rounded. Ocelli 3, in a triangle, the front ocellus distinct, the posterior ones small or partially hidden; the labrum nearly as long as wide, subtriangular, folding over the tips of the mandibles, and in such a manner as to hide the characters of these organs; the clypeus is not separated. Antennæ short, 12-jointed, situated below the middle of the face; scape short, cyathiform, pedicel rounded, half the length of the scape. Thorax: collar short, transverse, visible from above only as a slight ridge, the lateral angles lobately produced, but do not extend quite to the tegulæ; mesothorax quadrate, with the anterior lateral angles a little rounded, and with a slight central longitudinal impressed line; scutellum transverse quadrate, the posterior lateral angles a little rounded, with a central impression posteriorly, making the angles slightly convexly prominent; postscutellum short, trapezoidal, prominent, with a slight central impression posteriorly; metathorax very short, not longer than the scutellum and postscutellum together. Abdomen subsessile, ovate, very slightly longer than the head and thorax together, the dorsum composed of 7 visible segments, the 1st slightly the longest, with a central longitudinal groove at base, the 2d, 3d, and 4th nearly equal, the others gradually shorter. Legs normal, tibial spurs 1-1-1, the last more than half longer than the basal tarsal joint. Wings hyaline, with two submarginal cells, three cubital cells, and one exceedingly short marginal cell, which will readily distinguish the genus. The marginal cell does not extend beyond the tip of the stigma.

*Neolarra pruinosa* n. sp.

♀. Length less than 4 mm. Head and thorax black; abdomen rufous, the 2d, 3d, and 4th segments basally dusky. Mentum, mandibles, antennæ, tegulæ, tips of femora, the tibiæ, and tarsi rufous. The thorax very densely, legs and abdomen covered with a short, appressed, pruinose pubescence. Head and thorax densely, closely punctate, opaque. Wings hyaline, the veins yellowish brown, the stigma darker.

Described from one specimen collected by Mr. Cockerell at West Cliff. This remarkable insect exhibits strong Larrid affinities in shape, general appearance, and in the partially aborted ocelli, and I was inclined at first to place it in the family Larridæ, but the distinctly produced labrum, only noticed when describing, induced me to place it finally with the *Bembecidæ*; and it will probably form a distinct tribe in this group, although in its wing characters it is entirely different from any Hymenoptera known to me.

## FAMILY XXVII.—PROCTOTRUPIDÆ.

*Epyris* Westwood.*Epyris monticola* n. sp.

♂. Length 4 mm. Black, smooth, shining. Head sparsely punctate, each ocellus surrounded in front by a depression. Antennæ black, covered with a fuscous pubescence, 13-jointed, reaching to the middle of the metathorax, the 1st joint the thickest, the length of the 4th, the 2d joint the shortest, the 3d slightly longer, the 4th and following joints slightly longer

than the 3d and about of an equal length, or very nearly so; terminally the antennæ are a little thinner than at base. Thorax above with some rather long, fuscous hairs, trapezoidal, the mesonotum with two grooves, slightly converging towards each other posteriorly but widely separated. Scutellum flattened, with two small, widely-separated foveæ at base, each fovea being exactly opposite the termination of the mesonotal grooves. Mesopleuræ finely, microscopically sculptured, with a rounded impression or fovea at the middle. Metathorax quadrate, truncate behind, the margins delicately keeled and a delicate longitudinal keel down the centre, the disk towards the base is delicately longitudinally wrinkled; on each side, between the wrinkled portion and the lateral margins, is a smoother space that exhibits a minutely transverse strigose sculpture; the truncature is a little depressed in the middle and with a delicate median keel. Legs black; the tibiæ and tarsi are rather densely covered with a brownish pubescence and in consequence appear brown. Abdomen black, polished, the 2d segment the longest. Wings hyaline, veins brown; the 2d basal cell is half the length of the basal nervure, longer than the 1st, the radius very long, as long as the 2d basal cell.

Described from a single specimen taken by Mr. Cockerell at Wales' Cañon.

*Monocrita* Förster.

*Monocrita nigripes* n. sp.

♂. Length  $1\frac{1}{2}$  mm. Black, subopaque, with a fine, granulated sculpture; the face, above the insertion of the antennæ, with some transverse aciculations. Antennæ 10-jointed, black, the flagellum about twice the length of the scape, pedicel twice as long as thick, narrowed at base, the 2d joint minute, the 3d slightly swollen outwardly, the following joints very slightly longer than wide, truncate at tips and rounded off at base, or cup-shaped, and connected by a very short pedicel. Parapsidal grooves distinct, converging and almost meeting at base of scutellum. Scutellum high, convex, with a deep, transverse depression at base. Mesopleuræ smooth, polished, with a curved impression across the disk; metapleuræ densely covered with a griseous pubescence; the metathorax and petiole more sparsely pubescent. Legs black, the knees slightly, anterior legs beneath, and all the tarsi more or less piceous or reddish. Abdomen highly polished, oblong oval, as long as the head and thorax together, the petiole not longer than wide, striated, the 2d segment occupying fully three-fourths of its length, the following segments exceedingly short and about equal in length. Wings hyaline, pubescent, the submarginal and basal veins distinct, the former clubbed at tip.

Described from a single specimen received from Mr. H. F. Wickham; collected at Greeley, Col.

*Ectadius* Förster.

*Ectadius pallipes* n. sp.

♀. Length  $2\frac{3}{4}$  mm. Black, sub-opaque, finely granulately sculptured; face smooth, polished, microscopically transversely aciculated just above the insertion of the antennæ. Mandibles rufous. Antennæ 10-jointed, the flagellum one and a half times as long as the scape; the scape, pedicel, and the three or four following joints pale brownish-yellow, the joints beyond black or brown-black; the pedicel is thrice as long as thick, the 1st joint of flagellum small, annular, the three following joints cylindrical, less than twice as long as thick, the four terminal joints much thicker and larger, the last being twice as long as thick, the others a little shorter.

The parapsidal grooves distinct, converging posteriorly; the middle lobe thus formed projects slightly on to the scutellum. Scutellum sub-convex.



Pleuræ smooth, polished, the mesopleuræ with a grooved furrow extending obliquely to the base of middle coxæ; metapleuræ densely pubescent; the petiole and the hind coxæ at base are also slightly pubescent. Legs uniformly pale brownish-yellow, with all coxæ black. Abdomen about twice as long as the head and thorax together, and projecting considerably beyond the tips of the wings when folded. Wings hyaline, pubescent.

The ♂ measures but 2 mm. in length; the face is sculptured as the rest of the body, and the antennæ are wholly pale brownish; otherwise similar to the ♀, except the following structural differences: The antennæ are shorter, the club 6-jointed instead of 4-jointed, the pedicel only a little longer than wide; the 1st joint of flagellum is small but triangular, the second enlarged, swollen, nearly as broad as long; the following 6 joints, which constitute the club, are narrower and cylindrical, the 1st the shortest, the terminal one the longest, being about twice as long as the preceding. The abdomen is not much longer than the head and thorax together, and the wings, when folded, project beyond its tip. Indeed, it might easily be mistaken for a genuine *Platyaster*.

Described from 5 ♀, 3 ♂ specimens, collected at Greeley, Col., by Mr. H. F. Wickham.

*Ectadius nigrifemur* n. sp.

♀. Length 3 to 3½ mm. Black, sculptured as in previous species, except the face is not so smooth. Antennæ wholly black, the pedicel about twice as long as thick, otherwise the joints are similar to *pallipes*. All coxæ and femora black, the tibiæ and tarsi reddish, sometimes the anterior femora are also red, but usually they are piceous or obscured above; the tibiæ, too, sometimes are more or less dusky. Abdomen more than twice longer than the head and thorax combined, the petiole being more pubescent than usual, the sides being almost as dense as on the metapleuræ. Wings hyaline.

The ♂ is but 2 mm. in length and agrees in color and sculpture with the ♀, except that the tibiæ and tarsi are darker than in that sex; structurally it is like the ♂ of *pallipes*.

Described from 4 ♀, 3 ♂ specimens collected at Greeley, Col., by Mr. H. F. Wickham.

### *Isocybus* Förster.

*Isocybus nigriclavus* n. sp.

♀. Length 3½ to 4 mm. Black, closely, finely punctured, the face rugulose. Head subquadrate, the occiput concave. Antennæ 10-jointed, yellowish-brown, the 6 terminal joints constituting the club black; the pedicel is more than twice as long as thick, the two following joints a little shorter, cylindric, the joints of the club a little stouter and a little longer than thick, the last being the longest and less than twice as long as thick. Parapsidal grooves distinct, converging but not quite meeting posteriorly. Scutellum convex, sparsely covered with a fuscous pubescence, and separated from the mesonotum by a transverse furrow at base. The mesopleuræ alone smooth and shining, with a large, deep fovea on the disk. Metapleuræ and metathorax rather densely pubescent, the former divided by a longitudinal grooved line or impression. Legs yellowish-brown, all coxæ black. Abdomen a little longer than the head and thorax together, polished, the petiole roughened, pubescent, and about one-third longer than wide. Wings dusky hyaline, pubescent.

### *Synopeas* Förster.

*Synopeas inermis* n. sp.

♀. Length 1½ mm. Black, shining, alutaceous. Antennæ 10-jointed, reddish, the pedicel twice as long as thick, the three following joints very

slender, cylindrical, the first two about equal in length and twice as long as thick, the 3d hardly half as long as the 2d, the 4th short but stouter, not longer than thick; the four following joints, comprising the club, are much stouter; the 1st of these is the shortest, the 2d and 3d about twice as long as thick, the 4th or terminal joint being the longest, and more than twice as long as thick; these joints are slightly pedicellated.

Thorax without grooves or only faint indications of them posteriorly. Mesopleuræ smooth and only slightly impressed on the disk. Metapleuræ and petiole hairy. Legs, including coxæ, honey-yellow, the tarsi, except the terminal joint, pale or whitish. The abdomen is about one-third longer than the head and thorax together, prolonged into a point at apex, the second segment occupying fully more than one-half of its whole surface, the segments beyond nearly equal. Wings hyaline, pubescent.

Described from one specimen collected by Mr. T. D. A. Cockerell.

### *Ismarus* Haliday.

*Ismarus atropetiolatus* n. sp.

♀. Length 2 mm. Black polished, with some long, scattered, sparse, greyish pubescence, the face more densely pubescent, as well as the metapleuræ and petiole. Face prominent. Eyes bare. Antennæ 13-jointed, black, pubescent, the scape very long, slender, a little more than twice as long as the third joint; the pedicel short, much less than half as long as the third, narrowed at base, the 3d and 4th joints of about an equal length, the 5th and joints beyond slightly shorter than the third, and all narrowed at base and of about an equal length. Thorax smooth, without grooves. Mesopleuræ smooth, bare, with a slight furrow a little below the middle, more distinct anteriorly and almost obliterated posteriorly. Scutellum smooth, quadrate behind, the margins delicately keeled, and with two rather deep oblong foveæ at base. Metathorax and metapleuræ delicately sculptured; the metathorax has a delicate median longitudinal keel, which becomes forked posteriorly. Legs dark red, pubescent. Abdomen polished, bare, except a few hairs surrounding the apex; the petiole is about half the length of the abdomen, opaque, fluted, and hairy. Wings subhyaline, pubescent; veins pale brown, the marginal vein black or piceous; the marginal cell is exceedingly long and narrow, lanceolate, closed.

Described from one specimen taken by Mr. Cockerell at West Cliff.

### *Psilomma* Förster.

*Psilomma coloradense* n. sp.

♀. Length 3 mm. Black, polished, pubescent, the pubescence shorter and denser than in *I. atropetiolatus*. Eyes bare. Mandibles brown. Antennæ filiform, broken at tips, dark brown above, yellowish beneath; scape very long, cylindrical, the pedicel not much longer than wide, not narrowed at base, the 3d joint about half the length of the scape, the following joints slightly shorter, and all of a uniform cylindrical thickness. Thorax with two parallel grooves; between them anteriorly are two short grooves that do not extend to the middle of the mesonotum. Mesopleuræ smooth, polished, with a deep impression at the middle, ending in a large fovea posteriorly. Scutellum smooth, rounded off posteriorly, and with a large quadrate fovea all across the base. Metathorax smooth, with a delicate keel down the centre and delicate side keels. Legs, including all coxæ, brownish-yellow, the posterior pair slightly dusky. Abdomen pointed ovate, polished, brownish-piceous, the petiole very long, blackish, opaque, and fluted.

Wings hyaline; veins pale brown; the marginal vein is about as long as the short, triangular closed marginal cell.

Described from one specimen captured by Mr. Cockerell at West Cliff.

*Belyta* Jurine.

*Belyta monilicornis* n. sp.

♀. Length 3 mm. Robust, black, shining, covered with a fine, fuscous pubescence. Eyes bristly. Mandibles piceous. Antennæ 15-jointed, the joints of the flagellum, after the first, moniliform, the 1st joint about twice as long as the pedicel; the scape is reddish brown, the rest of the antennæ fuscous. Parapsidal grooves distinct but not deeply impressed. The scutellum has a large fovea at base. Mesopleuræ deeply impressed posteriorly. Metathorax truncate and squared off at apex. Legs dark honey-yellow, the coxæ black, the posterior femora slightly dusky above or in the middle. Abdomen about as long as the head and thorax together, smooth, polished, the petiole stout, a little longer than thick, grooved and hairy above, the 2d segment which occupies a large proportion of the whole surface, has a median longitudinal groove at base, the tip is surrounded by sparse, whitish hairs. Wings hyaline, pubescent, the radial cell closed, about twice the length of the marginal vein.

Described from one specimen.

*Zelotypa* Förster.

*Zelotypa coloradensis* n. sp.

♀. Length 3 mm. Subrobust, black, polished, pubescent. Face with a deep impression just above the clypeus. Eyes pubescent. Antennæ yellowish brown, a little dusky toward tips; scape stout, hardly twice as long as the 3d joint, pedicel globular, 3d joint narrowly contracted for one-third its length basally, the following joints shorter, about thrice as long as thick. Thorax with two grooves, divergent anteriorly; mesopleuræ impressed across the disk; scutellum subconvex with a deep fovea across, the base; metathorax short, with some short keels. Legs brownish yellow, the posterior coxæ dusky at base. Wings hyaline, pubescent; veins pale brown, the marginal vein is only one-third the length of the closed marginal cell.

Described from one specimen taken at large, at West Cliff, by Mr. Cockerell.

*Miota* Förster.

*Miota glabra* n. sp.

♀. Length 2½ mm. Black, shining, pubescent, slender. Mandibles pale. Antennæ 15-jointed, cylindrical, brown, darker toward tips; the scape is only slightly longer than the 3d joint, the pedicel long oval, the joints beyond the 3d gradually become shorter and shorter, the 14th joint hardly longer than wide, the 15th being fusiform and about twice as long as the 14th. Thorax with two grooves. Mesopleuræ with a transverse groove below the middle. Scutellum smooth, polished, with a large, deep fovea at base. Metathorax with three delicate keels, the posterior lateral angles a little prominent. Legs brownish yellow, the posterior pair somewhat rufous. Abdomen pointed ovate, piceous black, the petiole subopaque, fluted, pubescent beneath, the 2d segment occupies nearly the whole surface of the abdomen, the 3d and terminal segment only visible as a slight brownish point. Wings hyaline, pubescent, veins brown; the marginal vein is about as long as the closed triangular marginal cell.

Described from one specimen, taken by Mr. Cockerell at West Cliff.

## FAMILY XXVIII.—CYNIPIDÆ.

*Figites* Latreille.*Figites coloradensis* n. sp.

♀. Length 5 mm. Black, polished; the head finely wrinkled, face striated, the cheeks distinctly margined. Antennæ 13-jointed, wholly black, the joints delicately fluted. Thorax with two grooves that are widely excavated posteriorly; the collar and pleuræ densely, longitudinally striated. Scutellum scabrous, with two broad, deep foveæ at base, separated from each other only by a slight keel. Metathorax with two short parallel keels on the disk, the sides impressed and rugose.

Legs black, the apical two-thirds of anterior femora, the tibiæ and tarsi honey-yellow, tips of middle and posterior femora and three basal joints of tarsi honey-yellow. The abdomen, as usual, highly polished, but the short segments 4, 5, and 6, and the 3d beneath and at apical margin, show a very delicate punctuation. Wings hyaline, bare, the venation pale-yellowish, slightly stained with piceous; the triangular marginal cell closed.

Described from one specimen taken by Mr. Cockerell at West Cliff. It is the only species in our fauna with wholly black antennæ.

*Diastrophus fusiformans* n. sp.

Gall. A slight fusiform swelling of the stem of a species of *Potentilla*, caused by the cynipid larvæ living in numbers in the pith. The gall is not always fusiform, but is sometimes greatly curved or otherwise deformed; varying in length from one and a half to three or four inches.

Gall-fly. ♀. Length  $4\frac{1}{2}$  mm. Black; vertex of head, clypeus, mandibles, and basal half of abdomen obscure rufous; legs, including coxæ, brownish red. Antennæ 14-jointed, black, the 2d joint one-third longer than the 4th. Head closely, finely punctate; thorax less closely and more coarsely, irregularly punctate, subopaque; parapsidal grooves broad, deep, complete, with a less sharply defined median groove between them; scutellum rugose. Wings subfuscous; veins black, the areolet large, the cubital cell closed, the vein at base of radial cell arcuated. The abdomen is as long as the head and thorax together, compressed from below and towards apex, the 2d segment occupying about half its whole surface, smooth and always rufous, the following segments are short and of nearly an equal length, most frequently black, sometimes, though, obscurely rufous toward tips, and delicately reticulately sculptured; the ventral valve prominent, acute.

Described from 5 specimens, reared from the gall at West Cliff, by Mr. Cockerell, and named in MS. *Diastrophus fusiformans*.

*Rhodites* Hartig.*Rhodites rosæfolii* n. sp.

Galls. Small, flattened, circular, disk-like swellings on the leaves of *Rosa arkansana*, from  $2\frac{1}{2}$  to 3 mm. in diameter.

Gall-fly. ♀. Length 2 mm. Black, sparsely pubescent and somewhat coarsely irregularly punctate. Mandibles red with black tips. Antennæ entirely black, 14-jointed, the two basal joints short, nearly equal, the 3d the longest joint, less than twice the length of the 4th, the joints beyond the 4th very slightly subequal to the last, the last being slightly longer than the penultimate. Face closely and distinctly punctate. Parapsidal grooves rather broad, distinct, but not sharply defined and with a delicate median groove between, extending the whole length of the mesonotum. Scutellum convexly elevated. Legs reddish yellow, slightly dusky basally. Abdomen

red basally, beyond the 2d segment black, the ventral valve sharp plow-share shaped. Wings fusco-hyaline, the venation dark brown, the areolet large, distinct, triangular.

Described from one specimen received from Mr. Cockerell, and named in MS. *rosæfolii*.

*Rhodites polita* Ashm.

Gall. A small, rounded gall, somewhat similar to *R. bicolor*, and like that species often found coalescing, but without the long, distinct spines, although the surface of some of them are minutely spinulose or tuberculose. It occurs on the leaves of *Rosa californica*, and I have seen specimens from California, Dakota, and Colorado.

Gall-fly. ♂, ♀. Length variable from 2 to 4 mm. Entirely black with red legs. The head and thorax are finely confluent punctate, with some coarser, scattered punctures over the surface. Antennæ 14-jointed in both sexes, black, the 3d joint being fully twice the length of the 4th. The mesopleuræ are usually smooth and polished. Scutellum convex, much longer than wide. The highly-polished black abdomen in the ♀ is slightly longer than the head and thorax together, compressed below, the ventral valve large, projecting, and acutely pointed. Wings hyaline, veins stout, black, the basal vein of the closed marginal cell a little angulated, the cubital cell closed, the areolet large, distinct.

Described in a paper to be published in the proceedings of the U. S. National Museum.

Under the MS. name of *Spinoseilus*, Mr. Cockerell has sent me specimens of a small globular gall, which is probably the same thing, although, as no flies were reared, I cannot make sure of their identity.

*Rhodites fusiformans* n. sp.

Gall. Irregular, fusiform swellings on the stems of *Rosa arkansana*, varying in length from one-quarter to three-quarters of an inch, and from one-quarter to nearly half an inch in diameter.

This gall could be confused with *R. ignota*, but it is always smaller and less globose.

Gall-fly. ♀. Length 2mm. Black; head delicately punctate, the face with a distinct fovea above the clypeus. Antennæ black, 14-jointed, the 3d joint about one-half longer than the 4th, the joints beyond about equal; in the ♂ the 3d joint is  $2\frac{1}{2}$  times longer than 4th. Thorax finely, closely punctate; parapsidal grooves distinct, a short median groove between them posteriorly, and two short ones anteriorly; mesopleuræ finely rugoso-punctate, with a smooth, polished space on disk. Legs red, the coxæ slightly dusky on basal half, and sometimes the posterior tibiæ and tarsi are more or less dusky. Wings hyaline, the radial vein and marginal cell enclosed in a dusky cloud, the veins brown-black; the basal vein of marginal cell is strongly arcuate, with a slight angular projection at the middle; the areolet of moderate size.

In the ♀ the abdomen is red, becoming dusky or piceous posteriorly; in the ♂ black.

This species resembles *R. rosæfolii*, but can be readily separated by the mesonotal lines. It was reared by Mr. Cockerell at West Cliff, and sent to me under the MS. name *R. fusiformans*.

## FAMILY XXXII.—TENTHREDINIDÆ.

*Dineura* Dahlb.*Dineura pallida* n. sp.

♀. Length 5 mm. Uniformly pale reddish-yellow. Antennæ wholly, stemmaticum, inner orbits narrowly, labrum, spot in front of anterior coxæ, mesopectus, spot at apex of posterior femora and apex of posterior tibiæ and their tarsi, black. The antennæ are very long, nearly as long as the body, the 3, 4, and 5 joints of about an equal length, the following joints slightly shorter, the two apical joints a little compressed. The middle lobe of mesothorax has a delicate central grooved line its entire length. Claws with a large subapical tooth, the wings subhyaline, venation piceous, the lanceolate cell petiolate.

Described from one specimen taken by Mr. Cockerell at West Cliff.

*Mesa* Leach.*Mesa salicis* n. sp.

♀. Length 8 mm. Head and thorax black, punctate, sericeous; labrum rufous, emarginate anteriorly; mandibles piceous.

The middle mesothoracic lobe has a central grooved line anteriorly half its length. Legs rufous, all coxæ black, the anterior and middle legs slightly fuscous, extreme tips of posterior tibiæ and tarsi black. Abdomen rufous, the basal plates and 3 or 4 apical segments black. Wings hyaline, venation piceous black, the 2d recurrent nervure interstitial with the 2d transverse cubital.

Described from one specimen captured by Mr. Cockerell on willow at West Cliff.

The only other species in this genus described in our fauna is *M. hyalina* Norton, from which it is at once distinguished by the color of the labrum, mandibles, and legs.

## FAMILY XXXIII.—BRACONIDÆ.

*Microbracon* n. g.

I propose this new genus for the reception of those species in the genus *Bracon*, having the recurrent nervure joining the first submarginal cell between the middle and its apex, restricting the genus *Bracon* to those species having the recurrent nervure interstitial with the first transverse cubital. The majority of the species belonging in this new genus known to me are all small, and closely resemble certain Rhyssalids.

*Microbracon sulcifrons* n. sp.

♂. Length 2½ mm. Black, polished, subpubescent. Head transverse, as wide as the widest part of the thorax; face covered with white pile, and there is a sulcus or fovea below the anterior ocellus. Antennæ 31-jointed, a little longer than the whole insect, the joints of the flagellum about twice as long as thick. Thorax with delicate but distinct parapsidal grooves, the grooves lined with hairs. Scutellum smooth, covered with whitish pubescence; tegulæ black; mesopleuræ smooth, subconvex, with a slight fovea at about the middle, near the posterior suture. Legs black, hairy, with the knees and tarsi obscure rufous. Abdomen ovate, obscurely rufous, the disks of the segments transversely dusky, almost black, the sutures paler. Wings subhyaline; costæ, stigma, and veins dark brown or brownish black; the median and submedian cells of an equal length, the recurrent nervure joining the 1st submarginal cell between its middle and the apex, the 1st branch

of the radius about half the length of the 2d branch, or about as long as the 2d transverse cubital nervure, the 2d submarginal cell one-third longer than wide along its upper margin, and twice as long as wide along its lower margin.

Described from two specimens taken by Mr. Cockerell at Smith's Park Gulch.

*Cænophanes* Förster.

*Cænophanes atrata* n. sp.

♂ ♀. Length  $2\frac{3}{4}$  to 3 mm.; ovip.  $\frac{3}{4}$  mm. Black; head quadrate, smooth, with a few transverse aciculations on the vertex; thorax shining but finely punctulate, trilobed; mesopleuræ smooth, polished, the sutures minutely rugoso-punctate; metathorax rounded, rugose. Antennæ in ♂ 18-jointed, black, the two basal joints rufous; in ♀ 19-jointed, the two basal joints dusky, almost black. Legs red, the femora and tibiæ slightly obfuscated, the trochanters and tarsi yellowish. Abdomen ovate, showing 5 distinct segments, the first two longitudinally aciculated, the following smooth, highly polished. Wings dusky hyaline; stigma and veins brown, the submedian cell a little longer than the median, the 1st and 2d submarginal cells confluent, but showing a slight trace of a transverse cubital nervure above.

Described from 4 specimens, 1 ♂ 3 ♀, taken by Mr. Cockerell at West Cliff.

*Hormius* Nees.

*Hormius americanus* n. sp.

♀. Length  $2\frac{3}{4}$  mm.; ovip.  $\frac{3}{4}$  mm. Black, shining. Head transverse, rounded behind, the occiput distinctly margined. Antennæ long, black, multiarticulate (broken at tips), the joints of flagellum a little more than thrice as long as thick. Thorax trilobed, smooth, polished, except the middle lobe posteriorly just in front of the scutellum where it is minutely wrinkled or rugose. The sutures at sides crenulated. Mesopleuræ polished, with a smooth, longitudinal grooved line separating it from the mesopectus. Tegulae and legs red, the femora obfuscated, the posterior pair being almost black. Scutellum smooth, with two large, shallow foveæ at base, the bottom of which is crenulated, at the sides of the scutellum is a crenulated suture that extends from the tegula to its summit. Metathorax minutely rugose. Abdomen rufous, alutaceous, the shield on the 1st segment sculptured, with parallel raised lateral margins. Wings hyaline, strongly iridescent: stigma and veins brown, the median and submedian cells of an equal length, the subdiscoidal nervure interstitial with the anal nervure, the recurrent nervure oblique and joins the 2d submarginal cell at its produced basal angle, this cell being twice as long along its lower side as it is along its upper side, the 2d transverse cubital is a little longer than the 1st branch of the radius and very pale, almost hyaline in color.

Described from one ♀ specimen captured at West Cliff by Mr. Cockerell.

This is the first species in this genus to be described in our fauna, the *Hormius aciculatus* Cresson, not being a genuine *Hormius*; besides this species, however, I have two or three other undescribed species in my collection.

*Chelonus* Jurine.

*Chelonus atripes* n. sp.

♀. Length  $2\frac{3}{4}$  mm. Entirely black, including antennæ and legs, except a rufous line on anterior tibiæ beneath; the legs are covered with a fine seri-

ceous pubescence. Antennæ 16-jointed reaching to tip of metathorax. Posterior face of metathorax slightly concave, the lateral angles not prominent. Abdomen as long as the head and thorax together, the apex with a slight transverse impression, the ovipositor slightly exerted. Wings subhyaline, iridescent, stigma and veins black, submedian cell longer than the median, recurrent nervure interstitial, the 2d branch of the radius a little longer than the 1st, the 3d straight, not at all curved.

Described from one specimen.

Its smaller size, black legs and antennæ will at once separate the species from *C. fissilis* Prov.

*Chelonius aculeatus* n. sp.

♀. Length 4 mm. Stature similar to *S. texanus* Cr. Black; face transversely striately rugose, with a carina between the antennæ; vertex smoother. Antennæ 27-jointed, involuted at tips. Metathorax with two median carinae, the posterior lateral angles acute. Legs black, the apical one-third of anterior femora and their tibiæ and tarsi, knees of middle legs and tibiæ and tarsi, and basal half of posterior tibiæ and the basal joint of their tarsi, dark honey-yellow. Abdomen as long as head and thorax together, rugose, except the apical one-third, which is smooth, polished, the ovipositor terminates in a sharp point. Wings hyaline, the stigma and veins black or dark brown, except the external medial and the basal nervures which are dark honey-yellow; the submedian cell is much longer than the median and the 1st branch of the radius is a little longer than the 2d branch.

Described from one specimen captured at West Cliff by Mr. Cockerell. The polished apical one-third of the abdomen is a unique character in this genus and will readily distinguish the species.

### *Apanteles* Förster.

*Apanteles leviceps* n. sp.

♂ ♀. Length 2 to 2½ mm. Black, subpubescent. Head smooth, polished; face subconvex, with an indistinct, delicate medial keel; mandibles black; palpi pale brown. Thorax closely, finely punctured. Scutellum smooth, polished. Mesopleura, except anteriorly, where it is slightly, delicately punctured, smooth and shining; across the disk, a little below the middle, is a large oblong fovea. Metathorax rugose, with a medial and lateral keels. Legs yellowish brown, all the coxæ and trochanters, and a spot at apex of posterior femora, black; the tibial spurs are less than half the length of the basal tarsal joint. Abdomen is hardly as long as the thorax, wholly black, the two basal segments roughly sculptured, the following smooth and polished; the shield of the basal segment is wider than long, trapezoidal, its width posteriorly about equal to the width of the 2d segment. In the male the abdomen is depressed; in the ♀ it is compressed below into a plow-share-shaped keel at apex, but the ovipositor is hidden. Wings hyaline; stigma and veins brown; the transverse medial nervure joins the discoidal cell at the middle.

Described from several specimens, reared at West Cliff, by Mr. Cockerell.

*Apanteles monticola* n. sp.

♂. Length 2 mm. Black; head and mesopleura smooth, the latter with a shallow furrow; mesonotum and scutellum finely, closely punctate, pubescent; metathorax only a little wrinkled, shining, with a delicate medial



keel. Legs, except a yellowish annulus at base of tibiae, wholly black, the tibial spurs, short, white. Abdomen shaped as in previous species, but the shield of the 1st segment is linear, longer than wide, the sides about parallel to near the apex, where they are rounded off toward each other, and join a short trapezoidal-shaped shield on the 2d segment; both of these shields are minutely sculptured, and the lateral membranous portion of the segments are rather wide; all the other segments are smooth and polished. Wings hyaline, iridescent; the stigma and veins brown.

Described from one specimen.

### *Pentapleura* Förster.

#### *Pentapleura alticola* n. sp.

♀. Length 4 to 4½ mm.; ovip. 1 mm. Black, polished, sparsely pilose; mandibles, 2d joint of antennae, and legs red; palpi pale yellowish. Face with a median carina. Thorax without parapsidal grooves, but with a large longitudinal fovea just in front of the scutellum. Scutellum with a large fovea across the base with two median keels. Mesopleura with a crenulate furrow across the disk and along the mesoplectus, the disk formed by these furrows smooth and polished. Tegulae red. Metathorax rugulose, the spiracles large, round. Abdomen ovate, the 1st segment occupying about one-third its length and longitudinally striated, the rest of the abdomen smooth, highly polished, the sutures of the segments indistinct. Wings hyaline, the stigma and veins black or piceous; the submedian cell is a little longer than the median; the recurrent nervure joins the first submarginal cell at its apex, and is almost interstitial with the first transverse cubital; the 1st branch of the radius is about half the length of the 2d branch. In one specimen the recurrent nervure is interstitial.

Described from 5 specimens, all taken at West Cliff by Mr. Cockerell.

### *Homophyla* Förster.

#### *Homophyla atrocavalis* n. sp.

♀. Length 1½ mm.; ovip. short. Black, polished, subpubescent. Antennae broken, two basal joints only left; these are black. Clypeus red; mandibles orange at base; palpi yellowish; legs obscure rufous, the coxae black, the anterior and middle pairs showing a dark rufous tinge, the femora and the posterior tibiae toward apex and their tarsi are dusky, the sutures of tibial joints pale. Thorax smooth, without parapsidal grooves, but there is a slight fovea on the disk back of the middle. The scutellum is hardly separated from the mesonotum by a slight crenulate furrow, which does not extend entirely across its base. Mesopleurae smooth, not furrowed. Metathorax smooth basally, toward apex slightly rugose. Abdomen short ovate, smooth, black, except the soft lateral margins of the 1st segment, which are reddish. Wings hyaline, the stigma large, lanceolate, it, as well as the veins, brown; the submedian and median cells are of an equal length, the 2d submarginal cell long; the recurrent nervure joins it at the basal corner, the 1st branch of the radius very short, about one-third as long as the 2d transverse cubital nervure; the 1st discoidal cell is petiolated.

Described from one specimen.

### *Trachyusa* Ruthe.

#### *Trachyusa americana* n. sp.

♂. Length 2½ mm. Black, opaque, finely minutely punctured, and covered with a fine, sericeous pile; there is a smooth shining space on the

anterior part of the thorax and the disk of the mesopleura. Head when viewed from in front triangular, the upper orbits and the mandibles orange-red. Antennæ filiform, 23-jointed, the joints beyond the 4th only a little longer than thick. Legs black or brownish-black, the tips of all femora and their tibiæ and tarsi, brownish-yellow. Abdomen ovate, closely punctulate or granulated, black, the soft/lateral parts of the 1st segment, orange. Wings subhyaline, the large ovate stigma and veins brown; the median and submedian cells are of an equal length, the recurrent nervure joins the 1st submarginal cell a little beyond the middle, the 2d submarginal cell in consequence is distinctly petiolated; the 1st branch of the radius is directed forward and is as long as the 2d transverse cubital, the radius does not attain the apical margin; the submedian cell of posterior wing is less than one-third the length of the median.

Described from one specimen taken at West Cliff by Mr. Cockerell.

*Adelura* Forster.

*Adelura montana* n. sp.

♀. Length  $1\frac{1}{2}$  mm.; ovip. only slightly exerted. Differs from the other described forms in having entirely black antennæ, redish-yellow legs, a black abdomen, except the 2d segment which is more or less piceous or brownish, and in the venation of the anterior wings. The recurrent nervure is almost interstitial with the 1st transverse cubital, joining the 2d cubital cell at its basal angle; the 2d submarginal cell is very long, two and a half times as long as the 1st and almost as wide at apex as at base; the 2d transverse cubital nervure is about thrice as long as the 1st branch of the radius.

Described from one specimen captured by Mr. Cockerell at West Cliff. Unfortunately the antennæ are broken and the number of joints could not be given, but the characters given readily separate the species from others in my collection.

*Adelura ampla* n. sp.

♀. Length  $2\frac{1}{2}$  mm.; ovip.  $\frac{3}{8}$  mm. Entirely black, except the two basal antennal joints and the legs which are yellow. Thorax smooth without grooves. Scutellum slightly elevated with a transverse grooved line at base. Mesopleuræ smooth with a groove or fovea on the posterior middle near the dividing suture. Metathorax and 1st abdominal segment minutely rugose. Wings large, hyaline, the greatly elongated stigma and the veins, brown; the submedian cell is a little longer than the median; the recurrent nervure joins the 2d submarginal cell at its basal angle, this cell being very long; the 1st branch of the radius is a little more than one-third longer than the 2d branch, or as long as the 2d transverse cubital nervure.

Described from one specimen collected by Mr. Cockerell at Brush Creek.

*Cœlinius* Nees.

*Cœlinius nigripes* n. sp.

♂. Length 4 mm. Entirely black, polished, the tibiæ and tarsi alone slightly piceous. Antennæ 38-jointed, very long. Metathorax minutely rugose. Wings hyaline, the stigma and veins brown; the 1st branch of the radius is only one-third as long as the transverse cubital, the median and submedian cells equal.

Described from a single specimen taken by Mr. Cockerell at West Cliff. The black abdomen and legs will at once distinguish the species from all others in our fauna.

*Praon* Haliday.*Praon coloradensis* n. sp.

♂. Length  $1\frac{1}{2}$  mm. Black, smooth, polished; face sparsely punctate, pubescent. Antennæ 19-jointed, entirely black, a little longer than the body, the joints of the flagellum thrice as long as thick. Mesothoracic grooves distinct, the metathorax smooth. Legs flavo-testaceous, the posterior coxæ brownish at base. Abdomen brownish, the petiole about twice as long as wide with parallel sides, the spiracles at about one-third its length but not prominent. Wings hyaline, the stigma and veins pale.

Described from one specimen taken at Brush Creek by Mr. Cockerell.

*Aphidius* Nees.*Aphidius montanus* n. sp.

♂. Length  $2\frac{1}{2}$  mm. Agrees well with *A. lachni* Ashm., but differs as follows: Clypeus, mandibles, and palpi flavo-testaceous. Antennæ 20-jointed, brown-black, the joints of flagellum delicately fluted, about  $2\frac{1}{2}$  times as long as thick, the last joint about one-third longer than the preceding.

Legs flavo-testaceous, the posterior coxæ at base and femora, tibiæ, and tarsi dusky or brown, the tarsi not quite as long as the femora, the basal joint being as long as the three following joints together. Abdomen brown, becoming black toward apex, the apex of the petiole and the suture between the second and third segments flavo-testaceous; the petiole is long and slender, about three and a half times longer than wide, slightly constricted in the middle above. Wings hyaline, stigma and veins pale.

Described from one specimen taken at Brush Creek (Cockerell).

*Aphidius atropetiolatus* n. sp.

♂. Length 3 mm. Black, shining. Clypeus, mandibles, palpi, first joint of antennæ, and legs flavo-testaceous; posterior coxæ and middle and posterior legs above black. Antennæ 23-jointed, much longer than the body, the joints of the flagellum about thrice as long as thick, the last joint not longer than the penultimate. Abdomen entirely black, short, shining; the petiole finely rugose, a little more than thrice as long as thick, and with a constriction a little beyond the middle above. Hind tarsi about as long as tibiæ, the basal joint nearly as long as the four following joints together. Wings hyaline, stigma and veins pale yellowish, the former very long and narrow, the 2d branch of the radius nearly twice as long as the transverse cubital.

Described from two specimens taken at Brush Creek and Lee's Cabin (Cockerell).

## FAMILY ICHNEUMONIDÆ.

*Phygadeuon* Grav.*Phygadeuon ater* n. sp.

♀. Length  $5\frac{1}{2}$  mm.; ovip. 3 mm. Entirely black, smooth, shining; the collar and pleuræ rugoso-punctate; metathorax rugose, obliquely sloping off posteriorly, with the carinæ wanting, except the one at the upper margin of the slope and a slight one extending forward from the small round spiracles. Legs, including the coxæ, rufous, the posterior tibiæ at tips and their tarsi black. All the femora are swollen, and the posterior legs are rather long. Abdomen long ovate, subopaque, closely, finely punctate. Wings subhyaline, tinged with fuscous.

Described from one specimen, with broken antennæ, taken at West Cliff by Mr. Cockerell.

*Phygadeuon laticinctus* n. sp.

♀. Length  $3\frac{2}{3}$  mm.; ovip. 1 mm. Black, smooth, shining. Antennæ short, involuted, 20-jointed; the six basal joints, mandibles, legs, and second abdominal segment rufous, the femora above and the posterior coxæ at base black or dusky. Mesopleuræ and abdomen polished, impunctured. Metathorax sculptured, areolated, and deeply excavated behind. Wings hyaline, the stigma and veins fuscous, costæ and median veins basally pale yellowish.

Described from one specimen taken by Mr. Cockerell at West Cliff.

*Nematopodius* Grav.*Nematopodius orbitalis* n. sp.

♀. Length 9 mm.; ovip. 4 mm. Very elongate, slender, the abdomen being one-third longer than the head and thorax together. Head, antennæ, collar, mesonotum, scutellum, and the sutures behind, a spot on coxæ behind and posterior trochanters, black. Legs, mesopleuræ, metathorax, and abdomen ferruginous. Orbits interrupted behind, spot on middle of face, spot on clypeus, spot on middle of mandibles, palpi, tegulæ, a line before and below, and on collar, white. Head impunctured; the thorax moderately, closely punctured, the parapsidal grooves distinct, sharply defined. Metathorax with only a single transverse carina toward base, and a slight indication of a carina at the posterior lateral angles. Wings fusco-hyaline, stigma and veins dark brown, the areolet small, subquadrate, the second recurrent nervure interstitial with the outer nervure.

Described from one specimen taken by Mr. Cockerell at West Cliff.

The species might easily be mistaken for a *Mesostenus*, and I suspect some of the species described in that genus really belong here.

*Hemiteles* Grav.*Hemiteles stigmatus* n. sp.

♂. Length  $2\frac{2}{3}$  mm. Black, shining, but finely, delicately punctate. Metathorax opaque, not areolated, with a median groove toward base. Antennæ apparently (?) 20-jointed, the two basal joints and the suture between 2 and 3 yellowish. Mandibles red. Parapsidal grooves wanting. Legs, reddish-yellow, the posterior pair dusky, all coxæ except at tips black, tips and trochanters, yellow. Abdomen polished, the petiole and 2d segment finely punctate, the suture between 2d and 3d segments and extending slightly to the surrounding surface, yellowish. Wings hyaline, the stigma rather large black, with a fuliginous cloud beneath extending about half way across the wing; the costa, between the basal nervure and the base of the stigma, and the tegulæ white; veins dark-brown, pale toward base of wing.

Described from one specimen taken by Mr. Cockerell at West Cliff.

*Hemiteles cincticornis* n. sp.

♀. Length  $3\frac{1}{2}$  to 4 mm.; ovip.  $1\frac{1}{2}$  mm. Black, shining. Parapsidal grooves anteriorly distinct for two-thirds the length of the mesonotum, the middle lobe posteriorly is slightly depressed and rugose. Metathorax distinctly areolated. Antennæ 28-jointed, black, the two basal joints beneath, red, the 12th joint white. Clypeus and mandibles red. Palpi white. Legs honey-yellow; the posterior pair rufous, their coxæ black, the tibiæ and tarsi outwardly fuscous. Abdomen black, the apex of 2d segment margined with

red, the terminal segment always white or yellowish-white, the petiole is longitudinally aciculated, the two following segments finely shagreened, rest smooth. Wings hyaline; tegulae yellowish-white; stigma and veins dark brown; the submedian cell is a little longer than the median.

Described from 3 specimens, reared from cocoons of *Apanteles laeviceps* Ashm., taken by Mr. Cockerell, at Cusack Ranch.

*Hemiteles atticola* n. p.

♀. Length  $2\frac{3}{8}$  mm.; ovip.  $\frac{1}{2}$  mm. Near *H. cincticornis*, but the antennae are not annulated, the mesonotum is opaque, with the grooves indicated only anteriorly, mandibles pale, legs honey-yellow, the posterior coxae only black, the petiole and 2d abdominal segment longitudinally aciculated, the apex of 2d segment red. Wings hyaline, the stigma and veins brown, the submedian cell not longer than the median.

Described from one specimen taken by Mr. Cockerell at West Cliff.

Unfortunately the antennae are broken at tips and the exact number of joints cannot be ascertained.

*Pezolochus* Förster.

*Pezolochus atratus* n. sp.

♀. Length  $2\frac{3}{8}$  mm.; ovip.  $\frac{3}{8}$  mm. Entirely black, shining, although finely, closely punctate. Flagellum, knees, tibiae and tarsi dark brown. Head thrice as broad as thorax, the face short. Antennae apparently 18-jointed, the basal joint black, obliquely truncate at tips, other joints brown, becoming gradually darker toward tips. Thorax strongly constricted at the middle, the metathorax with a deep central groove on the disk. Legs brown-black, trochanters, knees, tibiae and tarsi pale, the tibiae outwardly dusky. The petiole is but slightly expanded posteriorly, the spiracles a little beyond the middle, subprominent.

Described from 2 specimens reared by Mr. Cockerell from cocoons of an *Apanteles*.

*Casinaria* Holmg.

*Casinaria americana* n. sp.

♀. Length 8 mm.; ovip.  $\frac{3}{8}$  mm. Black; face and metathorax with appressed glittering white pubescence, the mandibles, except tips, palpi, and four anterior legs, yellow-ferruginous; the posterior legs, apex of 2d abdominal segment, and the 3d, 4th, and 5th wholly, rufous; all coxae, the first joint of posterior trochanters, and apex of posterior tibiae and tarsi, black. The whole insect is rather coarsely, closely punctate, the eyes emarginate within, the metathorax gradually sloping off behind, and its apex somewhat prolonged beyond the insertion of posterior coxae. Wings hyaline, strongly iridescent; the stigma and veins brown, the former narrow lanceolate; areolet small, petiolated.

Described from one specimen taken by Mr. Cockerell at West Cliff.

It can be distinguished from a true *Limneria* only by the emarginate eyes. The entirely black antennae and color of abdomen will at once distinguish it from *C. texana* Ashm.

*Dolichopselephus* n. g.

Resembles *Atractodes* Grav., but at once distinguished from it by the abnormally-lengthened maxillary and labial palpi. The maxillary palpi are 5-jointed, extending nearly to the hind coxæ; the labial palpi 4-jointed, extending back of anterior coxæ. Wings as in *Atractodes*, with a large triangular stigma and without an areolet.

*Dolichopselephus Cockerelli* n. sp.

♀. Length  $4\frac{1}{2}$  mm.; ovip.  $2\frac{1}{2}$  mm. Black, shining, but moderately punctate. Anterior margin of clypeus and mandibles, except tips, yellowish. Palpi fuscous; the incisions of joints yellow. Antennæ nearly as long as the body, 30-jointed, black. Thorax without grooves; the collar at sides with a deep, broad depression. Mesopleuræ with a broad, shallow furrow across the disk. Metathorax areolated. Legs rufous, coxæ and first joint of trochanters black; posterior legs brown; tibial spurs white. Abdomen longer than head and thorax together; subcompressed, black; the venter of 2d segment honey-yellow; 1st and 2d segments finely, longitudinally aciculated, the other segments smooth. Wings hyaline; strongly iridescent; the stigma and veins brown; the tegulæ and costæ at base, yellow.

Described from one specimen taken by Mr. Cockerell at Smith's Park.

*Atractodes* Grav.*Atractodes politus* n. sp.

♀. Length 5 mm.; ovip. about 2 mm., slightly curving upwards. Black, shining, punctate. Antennæ 29-jointed, black, 2d joint red at apex. Palpi and legs, ferruginous, anterior and middle coxæ piceous, hind coxæ and femora, except tips, black. Metathorax longer than high; sloping off posteriorly, closely punctate, without raised lines, except a slight carina surrounding the upper margin of truncature. Abdomen nearly twice as long as head and thorax together, clavate, highly polished, black, except obscure rufous spots toward apex of 2d, 3d, and 4th segments. Wings slightly dusky, strongly iridescent; the large stigma and veins dark-brown; areolet wanting, the submedian cell a little longer than the median, the 3d discoidal cell a little narrowed toward base.

Described from two specimens captured by Mr. Cockerell at Lee's Cabin.

In one specimen the apex of the abdomen is more or less piceous, and I should not be surprised to find the species very variable.

What I take to be the ♂ of this species was taken at Timber Line, and agrees well with the ♀ except the abdomen is entirely black and the areolet closed, the outer nervure of which, however, is pale, nearly obliterated.

*Thersilochus* Holmg.*Thersilochus montanus* n. sp.

♂. Length  $3\frac{1}{2}$  mm. Black, shining, sparsely punctate and covered with a sparse, whitish pubescence. Antennæ 19-jointed, black, three or four of the basal joints, which at least beneath are always pale. Metathorax very short, areolated. Legs reddish-yellow, the posterior coxæ black. Abdomen clavate, polished black, except the apical margin of 2d segment, a transverse streak across the 3d, and small apical segment, which are yellowish, as well as the venter of the 2d and 3d segments. Wings hyaline, the

large triangular stigma black, veins brown; the submedian cell is slightly longer than the median, while the 3d discoidal cell is a parallelogram about two and a half times as long as wide.

Described from specimen taken at Cimmaron by Mr. Cockerell, and seems to come close to *T. errabundus* Prov.

In describing *T. pallipes* Abbe Provancher failed to observe that Holmgren has described an European species under that name, and I therefore propose the name *Provancheri* for his species.

### *Orthocentrus* Grav.

*Orthocentrus leucopsis* n. sp.

♂. Length  $3\frac{3}{8}$  mm. Black, shining; the swollen face, extending upward to middle of anterior orbits, lower half of cheeks and the mandibles, yellowish-white. Antennæ 24-jointed, yellowish beneath, dusky above. Legs yellowish, posterior coxæ and thighs, except apices, black. Metathorax smooth without raised lines. Tegulæ yellow. Abdomen entirely black, shining, the venter yellowish. Wings hyaline, the stigma and veins pale.

Described from one specimen taken by Mr. Cockerell at Brush Creek.

### *Pimpla* Fabr.

*Pimpla sexcincta* n. sp.

♂. Length  $3\frac{3}{8}$  mm. Similar to *P. indagatrix* Walsh. Black, shining; a small dot at summit of eyes, clypeus, mandibles, palpi, middle and anterior coxæ and trochanters, tegulæ, a line on mesothorax before and apical edges of abdominal segments from the 2d, white. Antennæ as long as the body, black, 30-jointed. Metathorax gradually sloping off posteriorly, closely punctate, without raised lines. Legs, except as before mentioned, reddish-yellow, the posterior trochanters, tibiae and tarsi fuscous. Abdomen linear, the 1st segment  $\frac{1}{4}$  longer than the 2d, the following beyond the 2d gradually becoming shorter, the last transverse. Wings hyaline, iridescent, the stigma and veins brown; the submedian cell is much longer than the median, otherwise the venation is as usual in the genus.

Described from one specimen taken by Mr. Cockerell at Cusack Ranch.

## FAMILY XXXIX.—CHALCIDIDÆ.

### *Stibula* Kirby.

*Stibula montana* n. sp.

♀. Length  $2\frac{1}{2}$  mm. Black, shining, but covered with a fuscous pubescence. Head long, triangular; the space between the eye and base of mandibles very long; face closely punctate; mandibles sickle-shaped with two inner teeth. Antennæ apparently but 12-jointed; the ring-joint not detected, the 3d joint long, as long or possibly a little longer than the scape, the 4th joint about half as long as the 3d, the following very slightly shorter. Thorax highly convex without grooves; mesopleuræ longitudinally striated; scutellum very long, cone-shaped, obliquely directed posteriorly and projecting over the metathorax, longitudinally aciculated, with the apex emarginate; metathorax short, with two parallel median carinæ. Abdomen as usual in the subfamily *Eucharinæ*, petiolated, polished, black, the 2d segment overlapping the following; the petiole is a little longer than the posterior coxæ, wider at base than at apex, smooth and shining. Legs ferruginous, the coxæ and femora, except at tips, black. Wings hyaline, with a dense, dusky pubescence.

Described from two specimens captured by Mr. Cockerell at West Cliff.

This is the most interesting and remarkable addition to our fauna yet discovered in Colorado, the genus, so far as known, being confined to South America. I may remark, however, that I have another species in this genus taken last summer in Virginia.

*Eurytoma Illiger.*

*Eurytoma bigeloviae* n. sp.

♀. Length  $4\frac{3}{8}$  mm. Black, coarsely umbilicate punctate, covered with a coarse glittering white pubescence. Head transverse, the face flat, the space between the eye and base of mandibles longer than the length of the eye. Antennæ entirely black, except a slight rufous spot at base of scape beneath; scape thrice as long as the 3d joint, the 3d joint a little longer than the 4th, narrowed at base, the following joints of nearly an equal length cup-shaped, club less than thrice as long as the last funicular joint. Collar transverse quadrate, its width being about twice its length. Parapsides well defined. Tegulae black. Legs black, apical one-third of anterior femora, and their tibiae and tarsi, honey-yellow, while the apex of middle and posterior femora, and base and apex of tibiae and tarsi wholly, honey-yellow. Abdomen conic-ovate, about one-third longer than the head and thorax together, the apical segments prolonged into a long point as in *E. gigantea* Walsh, the 3d segment and beyond closely punctate, sparsely so at the sutures, the sides rather densely covered with coarse, white hairs. Wings hyaline, the venation pale; the marginal vein linear as long as the stigmal, the post marginal one-third longer.

Described from a specimen reared by Mr. Cockerell at West Cliff, from *Trypeta bigeloviae* Ckll. MS.

This species comes nearest to *E. gigantea* Walsh and *E. Bolteri* Riley, but the abdomen is not so compressed, the dorsum not highly arched and more decidedly punctured.

*Monodontomerus Westw.*

*Monodontomerus montivagus* n. sp.

♀. Length  $2\frac{3}{8}$  mm.; ovip.  $1\frac{1}{8}$  mm. Metallic green, closely punctate and sparsely pubescent. Scape beneath, mandibles, trochanters, extreme tips of anterior femora, and all tibiae and tarsi, ferruginous, the tibiae more or less obfuscated at the middle outwardly; tegulae and all coxae and femora metallic green. Scutellum with a cross furrow a little behind the middle, the anterior portion punctate, the posterior portion scaly, with a raised rim at apex.

Metathorax at base with a V-shaped space intersected by a median keel, which extends to apex of metathorax. Abdomen metallic green varied with purple, the 1st segment smooth, cupreous, the posterior margin straight, the following segments with delicate transverse lines, the sides pubescent. Wings hyaline, veins dark brown; the stigmal vein is not half the length of the marginal, with a hook at apex running parallel with the post-marginal, the latter two-thirds the length of the marginal; from the tip of the stigmal vein projects a slight fuscous streak or cloud.

Described from one specimen taken by Mr. Cockerell at West Cliff. This species is very closely allied to *M. dentipes* Boh., of Europe.



*Megastigmus* Dalman.*Megastigmus nigrovariegatus* n. sp.

♀. Length  $3\frac{1}{2}$  mm.; ovip. 3 mm. Yellow; antennæ, except scape and 2d joint beneath, spot on middle of face, stemmaticum, occiput and hinder parts of cheeks, collar beneath, middle lobe of mesonotum, except apex, mesopleuræ, metathorax, spot at base of abdomen and apex of 2d segment, black. Legs pale yellow, posterior coxæ and upper part of posterior femora, in the middle, brownish. Wings hyaline, stigma abnormally large, circular, black.

Described from specimens collected at Greeley, Col., and Vancouver Island by Mr. Wickham.

The species comes nearest to *M. collaris* Boh.

*Syntomaspis* Förster.*Syntomaspis lazulella* n. sp.

♀. Length  $2\frac{3}{8}$  mm.; ovip. 1 mm. or more. Similar to *S. cyanea* Boh., and possibly the North American representative of that species.

Wholly blue except slight metallic tings on face and pleuræ, closely punctate, the collar and mesonotum with transverse aciculations over the punctures. Antennæ black. Anterior tibiæ and all tarsi, except apical joints, pale yellowish white, the tibia usually with a blue streak above; middle and posterior tibiæ, except narrowly at base and apex, blue. Abdomen smooth, impunctured, except a delicate scaly punctuation at the sides. Wings hyaline, venation pale; the marginal vein about six times as long as the postmarginal, the latter being twice as long as the stigmal, the stigmal very short, with a slight uncus.

Taken by Mr. Cockerell at West Cliff.

*Torymus* Dalman.*Torymus rudbeckiæ* n. sp.

♀. Length  $2\frac{1}{2}$  to  $3\frac{1}{8}$  mm.; ovip. about 2 mm. Blue, closely, finely punctate, the mesonotum a little rugulose, lower part of face green. Antennæ black, scape beneath pale yellow. Parapsides distinct, but not sharply defined, the lateral lobes not very convex, the middle lobe being about two and a half times as long as wide. At base of the insertion of anterior wings and on the metapleuræ are bright, polished, cupreous spots. Legs yellow-ferruginous, all tarsi pale, the hind tibiæ fuscous. Abdomen about as long as the head and thorax together, subcompressed, blue, with some greenish tings at apex, the sides of segments with sparse long hairs, and with a microscopical, wavy sculpture. Wings hyaline; tegulæ and submarginal vein, yellowish, other veins brown; the maginal vein is about thrice as long as the postmarginal, the stigmal short with a prominent hook. In the ♂, the legs are waxy-yellow, the antennal scape very short, flagellum much stouter, longer, and cylindrical, the dorsum of abdomen concave at base; otherwise as in ♀.

Described from 1 ♂, 1 ♀, reared by Mr. Cockerell from a gall on *Rudbeckia*.

*Dipara* Walker.*D. latipennis* n. sp.

♂. Length 2 mm. Blue with metallic tings and a scaly punctuation, the abdomen æneous, the 2d segment above slightly cupreous. Antennæ dark brown, the scape and pedicel bronzy green, except a reddish spot at base beneath. Mandibles rather close together at base, toothed, ferruginous. Palpi yellow. Collar transverse, contracted into a little conical neck ante-

riorly. Parapsides delicate but complete. Scutellum with a cross-furrow just before the tip. Metathorax a little longer than high, gradually sloping off behind, punctate; the metapleuræ cupreous, with a tuft of sparse, long hairs above. Legs yellow ferruginous, all the coxæ the color of the thorax. Abdomen petiolated, the petiole smooth, as long as the hind coxæ and trochanters combined, the 2d segment occupying half the remaining part of the abdomen, the segments beyond very short, about equal in length. Wings hyaline, broadened out greatly toward apex, otherwise similar to *D. petiolata* Walk.

Described from a single specimen received from Mr. Cockerell.

With the group *Diparides* should be placed Haliday's genus *Lelaps*.

*Eutelus?* *flavipes* Walk.

Mr. Cockerell has sent me several specimens of an *Eutelus*, not in very good condition, reared by him from an unknown gall, which is doubtfully referred to the above Walkerian species.

### *Habrocytus* Thomson.

*Habrocytus obscuripes* n. sp.

♀. Length 2 to 3 mm. Bronze-green, closely punctate; scape of antennæ, trochanters, apical tips of femora, tibiæ and tarsi, yellow or yellow-ferruginous, sometimes the tibiæ are more or less obfuscated at the middle. Head broader than thorax, the face quite wide, twice the length of the scape; clypeus emarginate at the middle, with converging striæ. Antennæ 13-jointed, with 2 ring-joints, flagellum brown-black, hardly thicker at apex than at base, the 1st joint about one-third longer than the 2d, the joints beyond about as wide as long, the apical joint being wider than long. Collar short, transverse, a little arcuate. Mesonotum with the parapsidal grooves wanting posteriorly half its length. Metathorax very short, the spiracles small, oval. Abdomen sessile, conic-ovate, the apex acuminate, from one-third to half longer than head and thorax together, the dorsum flattened, the color is usually æneous with metallic tings, some of the segments exhibit delicate microscopic cross-lines, and the apex is sparsely pubescent. Wings hyaline, venation brown; the marginal vein is a little shorter than the post-marginal and about as long as the stigmal with its club, the club of stigmal is small.

Described from many specimens reared by Mr. Cockerell from various rose-galls.

### *Rhopalicus* Förster.

*Rhopalicus coloradensis* n. sp.

♀. Length 5 mm. Golden green, variegated with blue and purple, closely, somewhat coarsely, punctate. Antennæ black, with 2 ring-joints, the scape ferruginous beneath; flagellum cylindrical, the 1st joint about  $2\frac{1}{2}$  times as long as wide, narrowed toward base, the 2d joint about  $1\frac{1}{2}$  times as long as wide, the others a little shorter.

Parapsides oblique, terminating at two-thirds the length of mesonotum. Metathorax very short, the spiracles linear, with a deep sulcus behind. Legs concolorous with the thorax, the tips of all the femora, tibiæ, and tarsi, except terminal joint, yellow. Abdomen sessile, conic ovate, one-third longer than the head and thorax combined, the segments, after the 1st, with delicate, transverse aciculations, capreous and purple. Wings hyaline, veins yellowish, the submarginal vein about twice the length of the marginal, the

marginal one-fourth longer than the stigmal, the latter ending in a slight club with a small hook, the postmarginal slightly shorter than the marginal.

Described from one specimen taken by Mr. Cockerell at West Cliff.

*Homalotylus* Mayr.

*Homalotylus bifasciatus* n. sp.

♀. Length  $2\frac{1}{2}$  mm. Ferruginous; vertex, occiput, cheeks, upper part of collar, middle of mesonotum, scutellum, mesopleuræ, metathorax, and dorsum of abdomen, black; collar, except as mentioned, sides of mesonotum, and legs yellow, the apical two-thirds of middle and posterior femora and apical half of posterior tibiæ black, middle tibiæ fuscous. Head finely, closely punctate, with a few larger punctures scattered here and there over its surface. Antennæ slender, with 2 ring-joints, the club obliquely truncate. Scutellum and scapulæ with an æneous tinge. Wings hyaline, with two wide fuliginous bands, one at the middle and one at the apex; the marginal vein is longer than the stigmal, the postmarginal a little shorter than the marginal.

Described from one specimen collected by Mr. Cockerell at West Mountain Valley.

PART 2.—A LIST OF THE HYMENOPTERA OF  
COLORADO.

SEC. I.—HYMENOPTERA MONOTROCHA

FAMILY I.—APIDÆ.

SUBFAMILY I.—APINÆ.

*Apis* Linn.

*A. mellifica* Linn.

SUBFAMILY II.—BOMBINÆ.

*Bombus* Latrille.

*B. affinis* Cress.  
*B. appositus* Cress.  
*B. bifarius* Cress.  
*B. borealis* Kirby  
*B. centralis* Cress.  
*B. consimilis* Cr.  
*B. dubius* Cr.  
*B. Edwardsii* Cr.  
*B. fervidus* Fabr.  
*B. flavifrons* Smith  
*B. Howardii* Cr.  
*B. hudsonicus* Cr.  
*B. improbus* Cr.  
*B. juxtus* Cr.  
*B. mixtus* Cr.  
*B. Morrisonii* Cr.

*B. nevadensis* Cr.  
*B. pennsylvanicus* De Geer  
*B. perplexus* Cr.  
*B. Putnamii* Cr.  
*B. Ridingsii* Cr.  
*B. rufocinctus* Cr.  
*B. separatus* Cr.  
*B. sylvicola* Kirby  
*B. ternarius* Say  
*B. terricola* Kirby  
*B. vagans* Smith  
*B. virginicus* Oliv.

*Apathus* Newman.

*A. Ashtonii* Cr.  
*A. elatus* Fabr.  
*A. insularis* Smith

*Centris* Fabr.

*Xylocopa* Latreille.

*X. arizonensis* Cr.  
*X. virginicus* Drury

SUBFAMILY III.—ANTHOPHORINÆ.

*Clisodon* Patton.

*C. terminalis* Cr.

*Anthophora* Latreille.

- A. abrupta Say
- A. albata Cr.
- A. bomboides Kirby
- A. montana Cr.
- A. occidentalis Cr.
- A. simillima Cr.
- A. Smithii Cr.
- A. urbana Cr.

*Habropoda* Smith.

- H. Morrisonii Cr.
- H. mucida Cr.

*Entechnia* Patton.*Emphor* Patton.*Diadasia* Patton.

- D. australis Cress.
- D. diminuta Cr.
- D. enavata Cr.

*Synhalonia* Patton.

- S. atriventris Smith
- S. frater Cr.
- S. fulvitaris Cr.
- S. speciosa Cr.

*Xenoglossa* Smith.

- X. pruinosa Say

*Melissodes* Latreille.

- M. aurigenia Cr.
- M. bimaculata St. Farg.
- M. coloradensis Cr.
- M. confusa Cr.
- M. desponsa Smith
- M. dilecta Cr.
- M. lepida Cr.
- M. menuacha Cr.
- M. montana Cr.
- M. obliqua Say
- M. pennsylvanica St. Farg.
- M. rustica Say
- M. Snowii Cr.
- M. saavis Cr.

*Eucera* Scop.*Ceratina* Latreille.

- C. dupla Say

## SUBFAMILY IV.—MEGACHILINÆ.

*Megachile* Latr.

- M. addenda Cr.
- M. avara Cr.
- M. brevis Say
- M. bucephala Smith
- M. coloradensis Cr.
- M. comata Cr.
- M. exilis Cr.
- M. fidelis Cr.
- M. fortis Cr.
- M. frigida Cr.
- M. inimica Cr.
- M. latimanus Say
- M. manifesta Cr.
- M. melanophœa Smith
- M. mellitarsis Cr.
- M. mendica Cr.
- M. montivaga Cr.
- M. perbrevis Cr.
- M. pruina Cr.
- M. relativa Cr.

*Lithurgus* Latreille.

- L. apicalis Cr.
- L. compressus Smith
- L. gibbosa Smith

*Anthidium* Fabr.

- A. emarginatum Say
- A. formosum Cr.
- A. interruptum Say
- A. jocosum Cr.
- A. jugatorium Cr.
- A. maculifrons Smith
- A. montivagum Cr.
- A. occidentale Cr.
- A. parvum Cr.
- A. Ulkei Cr.
- A. venustum Cr.
- A. zebratum Cr.

*Monumetha* Cresson.

- M. borealis Cr.

*Alcidamea* Cresson.

- A. producta Cr.

*Andronicus* Cresson.

*Chelostoma* Latr.

*Heriades* Spinola.

H. denticulatum Cr.

H. variolosum Cr.

*Osmia* Panz.

O. adjecta Cr.

O. abnormis Cr.

O. albiventris Cr.

O. armaticeps Cr.

O. atriventris Cr.

O. bella Cr.

O. brevis Cr.

O. coloradensis Cr.

O. densa Cr.

O. dubia Cr.

O. fulgida Cr.

O. integra Cr.

O. inurbana Cr.

O. juxta Cr.

O. lignaria Say

O. longula Cr.

O. mandibularis Cr.

O. maura Cr.

O. marginipennis Cr.

O. megacephalus Cr.

O. montana Cr.

O. nigrifrons Cr.

O. proxima Cr.

O. pusilla Cr.

O. sericea Cr.

*Ocelioxys* Latreille.

C. alternata Say

C. aperta Cr.

C. coloradensis Cr.

C. deplanata Cr.

C. editha Cr.

C. lucrosa Cr.

C. mœsta Cr.

C. 8-dentata Say

C. sodalis Cr.

*Stelis* Panz.

S. elegans Cr.

S. montana Cr.

S. monticola Cr.

S. subcærulea Cr.

S. submarginata Cr.

SUBFAMILY V.—NOMADINÆ.

*Bombomelecta* Patton.

B. thoracica Cr.

*Melecta* Latr.

*Ericrocis* Cr.

E. lata Cr.

*Epeolus* Latr.

E. compactus Cr.

E. donatus Smith

E. lunatus Say

E. mercatus Fabr.

E. occidentalis Cr.

E. remigatus Cr.

*Phileremus* Latr.

P. americanus Cr.

P. pulchellus Cr.

*Nomada* Fabr.

N. americana Kirby

N. accepta Cr.

N. adducta Cr.

N. affibilis Cr.

N. bisignata Say

N. citrina Cr.

N. civilis Cr.

N. dilucida Cr.

N. fragilis Cr.

N. grandis Cr.

N. incerta Cr.

N. lepida Cr.

N. libata Cr.

N. modesta Cr.

N. Morrisonii Cr.

N. munda Cr.

N. pacata Cr.

N. parata Cr.

N. Putnamii Cr.

N. pygmæa Cr.

N. Ridingsii Cr.

N. scita Cr.

N. Snowii Cr.

N. superba Cr.

*N. vicinalis* Cr.

*N. zebrata* Cr.

*Perdita* Smith.

*P. affinis* Cr.

*P. albipennis* Cr.

*P. hyalina* Cr.

*P. zebrata* Cr.

*Calliopsis* Smith.

*C. albitarsis* Cr.

*C. atricornis* Cr.

*C. citripes* Ashm.

*C. clypeatus* Cr.

*C. coloradensis* Cr.

*C. ornatipes* Cr.

*C. pauper* Cr.

*C. pictipes* Cr.

*C. scitulus* Cr.

*C. zebratus* Cr.

*C. zonalis* Cr.

*Panurgus* Panz.

*P. æthiops* Cr.

*P. andrenoides* Cr.

*P. fimbriatus* Cr.

*P. halictulus* Cr.

*P. maurus* Cr.

*P. marginatus* Cr.

*P. rufocinctus* Ashm.

FAMILY II. — ANDRENIDÆ.

SUBFAMILY I. — ANDRENINÆ.

*Megacilissa* Smith.

*Macropis* Panz.

*Cilissa* Leach.

*C. albihirta* Ashm.

*C. erythrogaster* Ashm.

*C. nigrihirta* Ashm.

*C. trizonata* Ashm.

*Nomia* Latr.

*N. Nortoni* Cr.

*Eunomia* Cresson.

*E. apacha* Cr.

*Scrapper* St. Farg.

*Andrena* Fabr.

*A. bicolor* Fabr.

*A. hirticeps* Smith

SUBFAMILY II. — HALICTINÆ.

*Agapostemon* Smith.

*A. cœruleus* Ashm.

*A. pulcher* Smith

*A. texanus* Cr.

*A. tricolor* St. Farg.

*Augochlora* Smith.

*A. humeralis* Patton

*A. purus* Say

*Halictus* Latr.

*H. confusus* Smith

*H. lævissimus* Smith

*H. ligatus* Say

*H. parallelus* Say

*Parasphcodes* Smith.

*Sphcodes* Latr.

*S. dichroa* Smith

*Prosapis* Fabr.

*P. affinis* Smith

*P. basalis* Smith

*P. elliptica* Kirby

*P. modestus* Say

*P. varifrons* Cr.

*P. verticalis* Cr.

*Colletse* Latr.

*C. albescens* Cr.

*C. americana* Cr.

*C. consors* Cr.

*C. inæqualis* Say

*C. simulans* Cr.

FAMILY III. — CRABRONIDÆ.

*Oxybelus* Latr.

*O. emarginatus* Say

*O. Forbesii* Robtn.

*O. 4-notatus* Say

*O. similis* Cr.

*O. subulatus* Robtn.

*Entomognathus* Dahlb.

*Thyreopus* St. Farg.

*T. advenus* Smith

*T. coloradensis* Pack.

*T. conspicuus* Cr.

*T. latipes* Smith

*T. succinctus* Cr.

*Crabro* Fabr.

- C. ater Cr.
- C. atriceps Cr.
- C. atrifrons Cr.
- C. bellus Cr.
- C. contiguus Cr.
- C. cristatus Cr.
- C. dilectus Cr.
- C. frigidus Cr.
- C. gracilissimus Pack.
- C. honestus Cr.
- C. montanus Cr.
- C. nigrifrons Cr.
- C. odyneroides Cr.
- C. Packardii Cr.
- C. purvulus Pack.
- C. 6-maculatus Say
- C. vicinus Cr.

*Rhopalum* Kirby.

- R. pedicellatum Pack.

*Trypoxylon* Latr.

- T. clavatum Say
- T. frigidum Smith
- T. texense Sauss.

## FAMILY IV.—PEMPHREDONIDÆ.

*Diodontus* Curtis.*Passalœcus* Shuck.

- P. cuspidatus Smith
- P. mandibularis Cr.

*Pemphredon* Latr.

- P. concolor Say

*Cemonus* Jurine.

- C. inornatus Say

*Stignus* Jurine.

- S. fraternus Say

*Spilomena* Shuck.

## FAMILY V.—MELLINIDÆ.

*Mellinus* Fabr.

- M. rufinodus Cr.

## FAMILY VI.—MIMESIDÆ.

*Psen* Latr.

- P. leucopus Say

*Mimesa* Shuck.

- M. argentifrons Cr.
- M. denticulata Pack.
- M. proxima Cr.
- M. uncinata Cr.

## FAMILY VII.—PHILANTHIDÆ.

*Cerceris* Latr.

- C. biungulata Cr.
- C. deserta Say
- C. rufinoda Cr.
- C. sexta Say
- C. vicina Cr.

*Eucerceris* Cresson.

- E. canaliculatus Say
- E. flavocinctus Cr.
- E. fulvipes Cr.
- E. rubripes Cr.
- E. superbus Cr.

*Aphilanthops* Patton.

- A. laticinctus Cr.
- A. quadrinotatus Ashm.

*Philanthus* Fabr.

- P. albifrons Cr.
- P. basilaris Cr.
- P. bilunatus Cr.
- P. frontalis Cr.
- P. flavifrons Cr.
- P. gloriosus Cr.
- P. lepidus Cr.
- P. scelestus Cr.
- P. sublimis Cr.
- P. ventilabris Fabr.

## FAMILY VIII.—NYSSONIDÆ.

*Gorytes* Latr.

- G. montanus Cr.

*Hoplisis* St. Farg.

- H. abdominalis Cr.
- H. atricornis Pack.
- H. modestus Cr.
- H. phaleratus Say
- H. venustus Cr.

*Euspongius* St. Farg.*Alyson* Jurine.

- A. oppositus Say

*Paranysson* Guer.*Nysson* Latr.

- N. aurinotatus* Say  
*N. fidelis* Cr.  
*N. mellipes* Cr.  
*N. rufiventris* Cr.

*Hyponysson* Cresson.

## FAMILY IX. — BEMBECEIDÆ.

## SUBFAMILY I. — SPECIINÆ.

*Specieus* Dahlb.

- S. nevadensis* Cr.  
*S. speciosus* Drury  
*Megastizus* Patton.  
*M. brevipennis* Walsh  
*Stizus* Latr.

- S. uncinatus* Say

## SUBFAMILY II. — BEMBECEINÆ.

*Bembecinus* Costa.*Monedula* Latr.

- M. emarginata* Cr.  
*M. pulchella* Cr.  
*M. speciosa* Cr.  
*M. ventralis* Say  
*Steniola* Patton.

- S. obliqua* Say

*Microbembex* Patton.

- M. monodonta* Say  
*Bembex* Fabr.  
*B. fasciata* Fabr.  
*B. nubilipennis* Cr.  
*B. Sayi* Cr.

## SUBFAMILY III. — NEOLARRINÆ.

*Neolarra* Ashm.

- N. pruinosa* Ashm.

## FAMILY X. — LARRIDÆ.

## SUBFAMILY I. — LARRINÆ.

*Tachytes* Panz.

- T. distinctus* Smith  
*T. fulviventris* Cr.  
*T. pepticus* Say

*Larra* Latr.

- L. æthiops* Cr.  
*L. argentata* Beauv.  
*L. montana* Cr.  
*L. semirufa* Cr.  
*L. tarsata* Say

*Lyroda* Say.

- L. triloba* Say

*Liris* Fabr.

- L. brunneipes* Cr.

*Astata* Latr.

- A. elegans* Cr.  
*A. montana* Cr.  
*A. nigropilosa* Cr.  
*A. nubecula* Cr.  
*A. unicolor* Say

## SUBFAMILY II. — PISONINÆ.

*Pison* Spinola.

## FAMILY XI. — AMPULICIDÆ.

*Rhinopsis* Westw.

## FAMILY XII. — SPECIDÆ.

*Priononyx* Dahlb.

- P. atrata* St. Farg.  
*P. thomæ* Fabr.

*Harpactopus* Smith.

- H. læviventris* Cr.

*Sphex* Linn.

- S. ichneumonea* Linn.  
*S. pennsylvanica* Linn.

*Isodontia* Patton.

- I. philadelphica* St. Farg.

*Podium* Fabr.*Chlorion* Latr.

- C. cœruleum* Drury

*Chalybion* Dahlb.

- C. cœruleum* Linn.

*Pelopæus* Latr.

- P. architectus* St. Farg.  
*P. cementarius* Drury

*Ammophila* Kirby.

- A. argentifrons* Cr.



*A. collaris* Cr.  
*A. communis* Cr.  
*A. extrematata* Cr.  
*A. ferruginosa* Cr.  
*A. gryphus* Smith  
*A. juncea* Cr.  
*A. luctuosa* Smith  
*A. macra* Cr.  
*A. mediata* Cr.  
*A. polita* Cr.  
*A. pruinosa* Cr.  
*A. robusta* Cr.  
*A. strenua* Cr.  
*A. valida* Cr.  
*A. varipes* Cr.  
*A. vulgaris* Cr.

FAMILY XIII.—POMPIDIDÆ.

*Pepsis* Fabr.

*P. formosa* Say  
*P. marginata* Beauv.  
*Mygimima* Smith.

*M. ustulata* Dahlb.

*Ceropales* Latr.

*C. bipunctatus* Say  
*C. fraternus* Smith  
*C. nigripes* Cr.

*Aporus* Spinola.

*Planiceps* Latr.

*Parapompilus* Smith.

*Notocyphus* Smith.

*Agenia* Schiödt.

*A. congrua* Cr.

*Prionocnemis* Schiödt.

*P. alienatus* Smith  
*P. conicus* Say  
*P. flammipennis* Smith  
*P. nigripes* Cr.  
*P. terminatus* Say  
*P. unifasciatus* Say

*Pompilus* Fabr.

*P. æthiops* Cr.  
*P. angustatus* Cr.  
*P. arctus* Cr.  
*P. atrox* Dahlb.

*P. biguttatus* St. Farg.  
*P. luctuosus* Cr.  
*P. marginatus* Say  
*P. parvus* Cr.  
*P. philadelphicus* St. Farg.  
*P. scelestus* Cr.  
*P. tenebrosus* Cr.

FAMILY XIV.—MASARIDÆ.

*Masaris* Fabr.

*M. marginalis* Cr.  
*M. occidentalis* Cr.  
*M. vespoides* Cr.  
*M. zonalis* Cr.

FAMILY XV.—VESPIDÆ.

*Vespa* Linn.

*V. arenaria* Fabr.  
*V. carolina* Drury  
*V. crabo* Linn.  
*V. diabolica* Sauss.  
*V. germanica* Fabr.  
*V. infernalis* Sauss.  
*V. maculata* Linn.  
*V. media* Oliv.—  
*V. occidentalis* Cr.

*Polistes* Latr.

*P. annularis* Linn.  
*P. aurifer* Sauss.  
*P. variatus* Cr.

*Polybia* Sauss.

*P. flavitarsis* Sauss.

FAMILY XVI.—EUMENIDÆ.

*Zethus* Fabr.

*Z. spinipes* Say

*Eumenes* Latr.

*E. coloradensis* Cr.  
*E. fraternus* Say  
*E. globulosus* Sauss.  
*E. verticalis* Say

*Monobia* Sauss.

*M. quadridens* Linn.

*Nortonia* Sauss.

*N. symmorpha* Sauss.

*Odynerus* Sauss.s. g. *Odynerus* Sauss.

O. annulatus Say

O. colon Cr.

O. leucomelas Sauss.

O. pennsylvanicus Sauss.

O. rufinodus Cr.

O. sulfureus Sauss.

s. g. *Symmorphus* Sauss.

S. albomarginatus Sauss.

S. debilis Sauss.

S. Walshianus Sauss.

s. g. *Ancistrocerus* Sauss.

A. albophaleratus Sauss.

A. birenimaculatus Sauss.

A. campestris Sauss.

A. capra Sauss.

A. tigris Sauss.

A. unifasciatus Sauss.

*Pterochilus* Klug.

P. 5-fasciatus Say

FAMILY XVII.—SAPYRIDÆ.

*Sapyga* Latr.

S. aculeata Cr.

S. coloradensis Cr.

S. confluenta Cr.

S. emarginata Cr.

*Eusapyga* Cr.

E. proxima Cr.

FAMILY XVIII.—THYNNIDÆ.

FAMILY XIX.—SCOLIIDÆ.

*Elis* Fabr.s. g. *Dielis* Sauss.

D. plumipes Drury

D. 4-notatus Fabr.

s. g. *Triclis* Sauss.

T. xantiana Sauss.

T. zonaria Cr.

*Scolia* Fabr.s. g. *Discolia* Sauss.

D. amœna Cr.

D. bicincta, Fabr.

D. consors Sauss.

D. dubia Say

D. flavocostalis Cr.

D. inconstans Cr.

D. Ridingsii Cr.

s. g. *Triscolia* Sauss.*Myzine* Latr.

M. confluens Cr.

M. hyalina Cr.

M. sexcincta Fabr.

*Paratiphia* Sichel.

P. albilabris Spin.

*Tiphia* Fabr.

T. inornata Say

T. luteipennis Cr.

T. tarda Say

FAMILY XX.—MUTILLIDÆ.

*Methoca* Latr.

M. bicolor Say.

*Myrmosa* Latr.

M. unicolor Say.

*Chyphotes* Blake.*Photopsis* Blake.

P. alcanor Blake

P. ampla Blake

P. atrata Blake

P. clara Blake

P. concolor Cr.

P. glabrella Cr.

P. lepidus Blake

P. nitida Cr.

P. nubecula Cr.

P. sobrinus Blake

*Sphaerophthalma* Blake.

S. ægina Cr.

S. asopus Cr.

S. bellona Cr.

S. bioculata Cr.

S. californica Rad.

S. comanche Blake

S. contumax Cr.

S. creusa Cr.

S. fenestrata St. Farg.

S. ferrugata Fabr.

S. fulvohirta Cr.  
 S. gibbosa Say  
 S. hispada Blake  
 S. macerata Blake  
 S. media Cr.  
 S. mixtura Blake  
 S. molliosa Blake  
 S. monticola Cr.  
 S. montivaga Cr.  
 S. occidentalis Linn.  
 S. orcus Cr.  
 S. propinqua Cr.  
 S. pygmæa Blake  
 S. simillima Smith  
 S. vesta Cr.

*Mutilla* Linn.

M. Grotei Blake  
 M. hexagona Say  
 M. ornativentris Cr.

FAMILY XXI.—DORYLIDÆ.

*Labidus* Jurine.

FAMILY XXII.—FORMICIDÆ.

*Camponotus* Mayr.

C. castaneus Latr.  
 C. herculaneus Linn.  
   var. pictus Forel  
   var. pennsylvanicus De Geer  
 C. marginatus Latr.  
 C. sylvaticus Oliv.  
   var. MacCooki Forel  
   var. vicinus Mayr

*Colobopsis* Mayr.

*Myrmecocystus* Wesm.

M. melliger Llav.

*Polyergus* Latr.

P. lucidus Mayr

*Formica* Linn.

F. aterrima Cr.  
 F. ciliata Mayr  
 F. fusca Linn.  
   var. rufibarbis Fabr.  
   var. subpolita Mayr  
   var. subsericea Say

F. integra Nyl.

  var. similis Mayr

  var. subpetiolata Mayr

F. rufa Linn.

  var. obscuripes Mayr

  var. obscuriventris Mayr

F. Schaufussi Mayr

*Lasius* Fabr.

L. claviger Mayr

L. flavus Fabr.

L. niger Linn.

  var. alienus Först.

*Brachymyrmex* Mayr.

*Prenolepis* Mayr.

P. nitens Mayr.

*Iridomyrmex* Mayr.

*Dorymyrmex* Mayr.

D. pyramicus Rogers

*Liometopum* Mayr.

*Tapinoma* Förster.

T. sessilis Say

*Dolichoderus* Lund.

FAMILY XXIII.—ODONTOMACHIDÆ.

*Odontomachus* Latr.

FAMILY XXIV.—PONERIDÆ.

*Proceratium* Rogers.

*Discothyrea* Rogers.

*Ponera* Latreille.

P. contracta Latr.

*Lobopelta* Mayr.

*Amblyopone* Erichson.

FAMILY XXV.—MYRMICIDÆ.

*Atta* Fabr.

*Aphaenogaster* Mayr.

*Pogonomyrmex* Mayr.

P. barbatus Smith

P. occidentalis Cr.

*Myrmica* Latr.

M. lævinodis Nyl.

  var. ruginodis Nyl.

- M. scabrinodis Nyl.  
 var. lobicornis Nyl.  
*Leptothorax* Mayr.  
*Tetramorium* Mayr.  
 T. guineense Fabr.  
 T. caespitum Linn.  
*Stenamma* Westw.  
*Myrmecina* Curt.  
*Monomorium* Mayr.  
 M. Pharaonis Linn.  
 M. minutum Mayr  
*Pheidole* West.  
 P. pennsylvanica Rogers  
*Solenopsis* Westw.  
 S. germinata Fabr.  
*Cremastogaster* Lund.  
 C. læviuscula Mayr  
 C. lineolata Say  
*Pseudomyrma* Guer.  
*Strumigenys* Smith  
 FAMILY XXVI.—CHRYSIDIDÆ.  
 SUBFAMILY I.—PARNOPINÆ.  
*Parnopes* Fabr.  
 SUBFAMILY II.—CHRYSIDINÆ.  
*Stilbum* Spinola.  
*Chrysis* Latr.

- C. clara Cr.  
 C. cœrulans Fabr.  
 C. densa Cr.  
 C. dorsalis Aaron  
 C. faceta Aaron  
 C. inflata Aaron  
 C. lateridentata Aaron  
 C. lauta Cr.  
 C. pacifica Say  
 C. parvula Fabr.  
 C. Pattoni Aaron  
 C. perpulchra Cr.  
 C. propria Aaron  
 C. scitula Cr.  
 C. tota Aaron.  
 C. venusta Cr.

## SUBFAMILY III.—ELAMPINÆ.

*Hedychrum* Latr.

- H. cupricolle Cr.  
 H. obsoletum Say  
 H. violaceum Brulle

*Hedychridium* Perrin.

- H. cœruleum Nort.  
 H. viride Cr.

*Holopyga* Dahlb.

- H. ventralis Say  
*Notozus* Först.  
 N. viridicyaneus Nort.  
*Diplorrhous* Aaron.  
 D. plicatus Aaron

*Elampus* Spinola.

- E. Cressoni Aaron  
 E. variatus Aaron  
*Omalus* Panzer.  
 O. semicircularis Aaron  
 O. sinuosus Say

## SUBFAMILY IV.—CLEPTINÆ.

*Cleptes* Latreille.

- C. aliena Patton

## SEC. II.—HYMENOPTERA DITROCHA.

## FAMILY XXVII. PROCTOTRUPIDÆ

## SUBFAMILY I.—BETHYLINÆ.

*Bethylus* Latr.

- B. cellularis Say  
 B. pedatus Say  
*Epyris* Westw.  
 E. monticola Ashm.

## SUBFAMILY II.—EMBOLEMINÆ.

## SUBFAMILY III.—DRYININÆ.

## SUBFAMILY IV.—CERAPHRONINÆ.

## SUBFAMILY V.—SCELIONINÆ.

## SUBFAMILY VI.—PLATYGASTERINÆ.

*Ectadius* Förster.

- E. pallipes Ashm.  
 E. nigrifemur Ashm.

*Polygnotus* Förster.

P. error Fitch

SUBFAMILY VII.—HELORINÆ.

SUBFAMILY VIII.—PROCTOTRUPINÆ.

SUBFAMILY IX.—BELYTINÆ.

*Ismarus* Hal.

I. atropetiolatus Ashm.

*Psilomma* Först.

P. coloradensis Ashm.

*Miota* Först.

M. glabra Ashm.

SUBFAMILY X.—DIAPRIINÆ.

FAMILY XXVIII.—CYNIPIDÆ.

SUBFAMILY I.—EUCOILINÆ.

SUBFAMILY II.—FIGITINÆ.

*Figites* Latr.

F. coloradensis Ashm.

SUBFAMILY III.—ALLOTRIINÆ.

SUBFAMILY IV.—INQUILINÆ.

*Ceroptres* Hartig.

C. ficus Fitch

C. petiolicola O. S.

*Periclistus* Förster.

P. futilis O. S.

P. pirata O. S.

*Synergus* Hartig.

S. lana Fitch

S. lignicola O. S.

S. oneratus Harris

SUBFAMILY V.—CYNIPINÆ.

*Neuroterus* Hartig.

N. batatus Harris

N. floccosus Bass.

N. saltatorius Hy. Edw.

*Holcaspis* Mayr.

H. globulus Fitch

*Biorhiza* Westw.

B. forticornis Walsh

B. hirta Bass.

*Acraspis* Mayr.

A. erinacei Walsh

A. pezomachoides O. S.

*Cynips* Linn.

C. (?) mellaria Riley

*Andricus* Hartig.

A. flocci Walsh

A. petiolicola Bass.

*Callirhytis* Först.

C. conigera O. S.

C. punctata Bass.

C. seminator Harris

*Amphibolips* Reinh.

A. confluens Harris

A. prunus Walsh

A. spongifica O. S.

*Diastrophus* Hartig.

D. cuscuteformis O. S.

D. fusiformans Ashm.

D. nebulosus O. S.

D. radicum Bass.

D. turgidus Bass.

*Rhodites* Hartig.

R. bicolor Harris

R. dichlocerus Harris

R. ignota O. S.

R. fusiformans Ashm.

R. polita Ashm.

R. radicum O. S.

R. rosæ Linn

R. rosæfolii Ashm.

R. tuberculator Riley

SUBFAMILY VI.—IBALINÆ.

*Ibatia* Latr.

I. ensiger Norton

I. maculipennis Hald.

I. montana Cr.

FAMILY XXIX.—ORYSSIDÆ.

*Oryssus* Latreille.

O. occidentalis Cr.

O. Sayi Westw.

## FAMILY XXX.—URO CERIDÆ.

*Xiphidia* Latr.

X. maculata Say

*Urocerus* Geoff.

U. areolatus Cr.

U. caudatus Cr.

U. cyaneus Fabr.

U. flavicornis Fabr.

U. fulvus Cr.

U. Morrisoni Cr.

*Tremex* Jurine.

T. columba Linn

## FAMILY XXXI.—CEPHIDÆ.

*Cephus* Latreille.

C. bifasciatus Cr.

*Phyllocus* Newman.

P. clavata Nort.

P. fasciatus Cr.

## FAMILY XXXII. TENTHREDINIDÆ

## SUBFAMILY I.—XYELINÆ.

*Xyela* Dalm.

X. minor Nort.

## SUBFAMILY II.—LYDINÆ.

*Lyda* Fabr.

L. albomarginata Cr.

L. brunnicans Nort.

L. cavifrons Cr.

L. multesignata Nort.

L. rufocincta Cr.

*Lophyrus* Latr.

L. Abbottii Leach

## SUBFAMILY III.—TENTHREDININÆ.

*Tenthredo* Linn.

T. addenda Cr.

T. bella Cr.

T. ferrugineipes Cr.

T. fumipennis Nort.

T. mellina Nort.

T. mimula Cr.

T. moroso Cr.

T. occidentalis Cr.

T. pectoralis Nort.

T. pleuralis Cr.

T. rufipes Say

T. sectilis Cr.

T. semirufa Nort.

T. variata Nort.

T. variegata Nort.

T. xanthus Nort.

*Strongylogaster* Dahlb.

S. fidus Cr.

S. rubipes Cr.

*Labidia* Prov.

L. opimus Cr.

L. originalis Nort.

*Macrophya* Dahlb.

M. epinota Say

M. pallidifrons Ashm.

M. pulchella Klug

M. zonata Ashm.

*Allantus* Jurine.

A. basilaris Say

A. occidaneus Cr.

A. uncinatus Nort.

*Selandria* Leach.

S. decolorata Cr.

*Eriocampa* Hartig.

E. cerasi Peck

*Monostegia* Costa.

M. obscurata Cr.

*Hoplocampa* Hartig.

H. gentilis Cr.

H. lenis Cr.

H. montana Cr.

H. spissipes Cr.

*Phymatocera* Dahlb.

P. montivaga Cr.

*Monophadnus* Hartig.

M. bardus Say

M. irrogatus Cr.

M. scelestus Cr.

M. rubi Harris

*Blennacampa* Hartig.

B. parva Cr.

*Dineura* Dahlb.

D. pallida Ashm.

*Dolerus* Jurine.

D. abdominalis Nort.

D. aprilis Nort.

D. bicolor Beauv.

D. coloradensis Cr.

D. similis Nort.

D. sericeus Say

*Aulocomerus* Spinola.

A. ebenus Nort.

*Messa* Leach.

M. salicis Ashm.

*Nematus* Jurine.

N. brunneus Nort.

N. concolor Nort.

N. discolor Nort.

N. integer Say

N. lateralis Nort.

N. pectoralis Cr.

*Euura* Newm.

E. orbitalis Nort.

E. ovum Walsh

*Priophorus* Dahlb.

P. sycophanta Walsh

*Cladius* Illig.

C. isomera Harris

## SUBFAMILY IV.—HYLOTOMINÆ.

*Hylotoma* Latr.

H. clavicornis Fabr.

*Schizocerus* Latr.

S. abdominalis Cr.

S. plumiger Klug

## SUBFAMILY V.—CIMBICINÆ.

*Zarcea* Leach.

Z. americana Cr.

*Trichiosoma* Leach.

T. triangulum Kirby

*Cimbex* Oliv.

C. americana Leach

## FAMILY XXXIII.—BRACONIDÆ.

## SUBFAMILY I.—BRACONINÆ.

*Bracon* Fabr.

B. croceiventris Cr.

B. croceus Cr.

B. disputabilis Cr.

B. dissitus Cr.

B. montivagus Cr.

B. palliventris Cr.

B. uniformis Cr.

B. xanthostigmus Cr.

*Microbracon* Ashm.

M. sulsifrons Ashm.

*Vipio* Latr.

V. coloradensis Ashm.

## SUBFAMILY II.—EXOTHECINÆ.

## SUBFAMILY III.—SPATHIINÆ.

*Spathius* Nees.

S. trifasciatus Riley

## SUBFAMILY IV.—HECABOLINÆ.

*Cænophanes* Först.

C. atrata Ashm.

## SUBFAMILY V.—PAMBOLINÆ.

## SUBFAMILY VI.—DORYCTINÆ.

*Doryctes* Haliday.

D. faretus Prov.

## SUBFAMILY VII.—HORMIINÆ.

*Hormius* Nees.

H. americanus Ashm.

## SUBFAMILY VIII.—RHOGADINÆ.

*Rhogas* Nees.

R. lectus Cr.

R. intermedius Cr.

## SUBFAMILY IX.—SIGALPHINÆ.

*Sigalphus* Nees.

S. cureulionis Fitch

## SUBFAMILY X.—CHELONINÆ.

*Phanerotoma* Wesm.

P. tibialis Hald.

*Chelonus* Jurine.

- C. atripes Ashm.
- C. aculeatus Ashm.
- C. insularis Cr.
- C. iridescens Cr.
- C. lævifrons Cr.
- C. rufiventris Cr.
- C. sericeus Say

## SUBFAMILY XI.—MICROGASTERINÆ.

*Apanteles* Förster.

- A. acronyctæ Riley
- A. carpatius Say
- A. congregatus Say
- A. læviceps Ashm.
- A. monticola Ashm.
- A. smerinthi Riley
- A. xylina Say

*Microplitis* Förster

- M. ceratominæ Riley
- M. gortynæ Riley

*Microgaster* Latr.

- M. gelechiæ Riley

## SUBFAMILY XII.—AGATHIDINÆ.

*Agathis* Latr.

- A. atripes Cr.
- A. exoratus Cr.
- A. media Cr.
- A. nigripes Cr.
- A. vulgaris Cr.

*Earinus* Wesm.

- E. limitaris Say

*Microdus* Nees.

- M. fulvescens Cr.
- M. longipalpus Cr.
- M. medius Cr.
- M. terminatus Cr.

*Orgilus* Haliday.

- O. terminalis Ashm.

## SUBFAMILY XIII.—EUPHORINÆ.

## SUBFAMILY XIV.—METEORINÆ.

*Meteorius* Hal.

- M. dimidiatus Cr.
- M. vulgaris Cr.

## SUBFAMILY XV.—CALYPTINÆ.

*Eubadizon* Nees.

- E. americanus Cr.
- E. pleuralis Cr.

## SUBFAMILY XVI.—BLACINÆ.

## SUBFAMILY XVII.—LIOPHRONINÆ.

*Liophron* Nees.

- L. lævis Cr.

## SUBFAMILY XVIII.—ICHNEUTINÆ.

## SUBFAMILY XIX.—TOXONEURINÆ.

*Toxoneura* Say.

- T. explorator Say
- T. seminigra Cr.

## SUBFAMILY XX.—HELCONINÆ.

*Helcon* Nees.

- H. dentipes Nees.
- H. occidentalis Cr.

*Gymnoscelis* Först.

- G. fulvipes Cr.

## SUBFAMILY XXI.—MACROCENTRINÆ.

*Macrocentrus* Curtis.

- M. delicatus Cr.

## SUBFAMILY XXII.—OPIINÆ.

## SUBFAMILY XXIII.—ALYSIINÆ.

*Alysia* Latr.*Pentapleura* Först.

- P. alticola Ashm.

*Homophyla* Först.

- H. atrocoxalis Ashm.

*Trachyusa* Ruthe.

- T. americana Ashm.

*Adelura* Först.

- A. ampla Ashm.
- A. montana Ashm.

## SUBFAMILY XXIV.—DACNUSINÆ.

*Caelinius* Nees.

- C. nigripes Ashm.
- C. longulus Ashm.

## SUBFAMILY XXV.—APHIDIINÆ.

*Praon* Haliday

- P. coloradensis Ashm.



*Aphidius* Nees.

A. atropetiolatus Ashm.

A. montanus Ashm.

*Lysiphlebus* Förster.

L. salicaphidis Ashm.

*Lipolexis* Förster.

L. chenopodiaphidis Ashm.

SUBFAMILY XXVI.—RHOPALOMINÆ.

*Rhopalosoma* Cress.

FAMILY XXXIV.—ICHNEUMONIDÆ

SUBFAMILY I.—ICHNEUMONIDÆ.

*Ichneumon* Linn.

I. allapsus Cr.

I. animosus Cr.

I. apicalis Cr.

I. audax Cr.

I. bipunctatus Cr.

I. bizonatus Cr.

I. brevicinctus Say

I. brevipennis Cr.

I. caliginosus Cr.

I. cordatus Cr.

I. delicatus Cr.

I. devinctus Say

I. discus Cr.

I. dorsalis Cr.

I. galenus Cr.

I. grandis Brullé

I. Grotei Cr.

I. inconstans Cr.

I. infucatus Cr.

I. inurbanus Cr.

I. insolens Cr.

I. involutus Cr.

I. jucundus Brullé

I. limbifrons Cr.

I. lividulus Prov.

I. longulus Cr.

I. macilentus Cr.

I. pedalis Cr.

I. pictifrons Cr.

I. seditiosus Cr.

I. semilævis Cr.

I. subcaneus Cr.

I. subfulvus Cr.

I. variegatus Cr.

I. ventralis Cr.

I. vinulentus Cr.

I. vultus Cr.

*Hoplismenus* Grav.

H. flavitarsis Cr.

H. morulus Say

*Amblyteles* Wesm.

A. coloradensis Cr.

A. expunctus Cr.

A. luctus Cr.

A. magnus Cr.

A. montanus Cr.

A. nubivagus Cr.

A. quebecensis Prov.

A. subfuscus Cr.

A. subrufus Cr.

A. suturalis Say

*Nematomicrus* Wesmael.

N. coloradensis Ashm.

*Phæogenes* Wesm.

P. ater Cr.

P. exiguus Cr.

P. hebrus Cr.

P. helvolus Cr.

P. lævigatus Cr.

P. montivagus Ashm.

SUBFAMILY II.—CRYPTINÆ.

*Exolytus* Förster.

E. compressus Cr.

*Phygadeuon* Grav.

P. ater Ashm.

P. laticinctus Ashm.

P. montanus Cr.

P. subfuscus Cr.

*Cryptus* Fabr.

C. americanus Cr.

C. Blakei Cr.

C. coloradensis Ashm.

C. crassicornis Cr.

C. extrematus Cr.

C. incertus Cr.

C. leucopus Ashm.

C. luctuosus Cr.

C. monticola Ashm.

C. nuncius Say  
 C. proximus Cr.  
 C. propitius Cr.  
 C. pumilus Cr.  
 C. robustus Cr.  
 C. violaceipennis Ashm.

*Linoceras* Tasch.

L. excelsus Cr.

*Nematopodius* Grav.

N. orbitalis Ashm.

*Mesostenus* Grav.

M. gracilis Cr.

*Ischnocerus* Grav.

I. montanus Ashm.

*Orthopelma* Tasch.

O. coloradensis Ashm.

O. rosæcola Ashm.

*Heemiteles* Grav.

H. cincticornis Ashm.

H. orgyæ Riley

H. stigmatus Ashm.

H. thyridopterygis Riley

*Pezolochus* Först.

P. atratus Ashm.

SUBFAMILY III.—OPHIONINÆ.

*Ophion* Fabr.

O. bifoveolatum Brullé

O. bilineatum Say

O. macrurum Linn.

O. purgatum Say

*Thyredon* Brullé

T. morio Fabr.

*Nototrachys* Marsh.

N. reticulatus Cr.

*Exochilum* Wesm.

E. mundum Say

*Heteropelma* Wesm.

H. flavicornis Brullé

*Anomalon* Grav.

A. ambiguum Nort.

A. curtum Nort.

A. fulvescens Cr.

A. propinquum Cr.

A. rufulum Prov.

*Opheltes* Holmg.

O. glaucopterus Linn.

*Paniscus* Grav.

O. geminatus Say

*Campoplex* Grav.

C. laticinctus Cr.

*Casinaria* Holmg.

C. americana Ashm.

*Limneria* Holmg.

L. (*Cryptus*) ductilis Say.

L. fugitiva Say

L. macer Cr.

L. solenobiæ Ashm.

L. tibiator Cr.

L. valens Cr.

*Mesochorus* Grav.

M. agilis Cr.

*Atractodes* Grav.

A. nigricoxus Prov.

A. politus Ashm.

*Dolichopselephus* Ashm.

D. Cockerelli Ashm.

*Thersilochus* Holmg.

T. montanus Ashm.

*Porizon* Grav.

P. albipennis Cr.

P. fuscipennis Cr.

*Exetastes* Grav.

E. abdominalis Cr.

E. affinis Cr.

E. cœruleus Cr.

E. consimilis Cr.

E. decoloratus Cr.

E. fascipennis Cr.

E. flavipennis Cr.

E. flavitarsis Cr.

E. niger Cr.

E. obscurus Cr.

E. scutellaris Cr.

*Ceratosoma* Cress.

C. apicalis Cr.

*Banchus* Fabr.

- B. spinosus Cr.  
B. superbus Cr.

## SUBFAMILY IV.—TRYPHONINÆ.

*Tryphon* Grav.

- T. communis Cr.  
T. obscurus Cr.

*Ecyston* Schiödte.

- E. abdominalis Cr.  
E. excelsus Cr.  
E. venustus Cr.

*Exochus* Grav.

- E. lævis Cr.

*Orthocentrus* Grav.

- O. leucopsis Ashm.  
O. trifasciatus Walsh

*Bassus* Grav.

- B. maculifrons Cr.  
B. orbitalis Cr.  
B. sycophanta Walsh  
B. tibialis Cr.

*Metopius* Grav.

- M. comptus Cr.  
M. laticinctus Cr.  
M. mirandus Cr.  
M. montanus Cr.  
M. pollinatorius Say  
M. pulchellus Cr.  
M. rufipes Cr.

## SUBFAMILY V.—PIMPLINÆ.

*Rhyssa* Grav.

- R. persuasoria Linn.

*Thalessa* Holmg.

- T. atrata Fabr.  
T. lunator Fabr.  
T. Nortoni Cr.

*Ephialtes* Grav.

- E. irritator Fabr.  
E. occidentalis Cr.  
E. perlongus Cr.

*Theronia* Holmg.

- T. fulvescens Cr.

*Pimpla* Fabr.

- P. annulipes Brullé  
P. conquisitor Say  
P. inquisitor Say  
P. notanda Cr.  
P. pedalis Cr.  
P. rufipectus Cr.  
P. rufovariata Cr.  
P. sexcincta Ashm.  
P. tenuicornis Cr.

*Polysphincta* Grav.

- P. texana Cr.

*Glypta* Grav.

- G. coloradensis Cr.  
G. varipes Cr.

*Arenetra* Holmg.

- A. nigrita Walsh  
A. rufipes Cr.

*Lampronota* Curtis

- L. americana Cr.  
L. coloradensis Cr.  
L. montana Cr.  
L. pleuralis Cr.  
L. rufipes Cr.

*Meniscus* Schiödte

- M. elegans Cr.

*Phytodietus* Grav.

- P. pleuralis Cr.

*Euxorides* Cr.

- E. americanus Cr.

*Xylonomus* Grav.

- X. cincticornis Cr.

*Odontomerus* Grav.

- O. abdominalis Cr.  
O. æthiops Cr.  
O. mellipes Say  
O. vicinus Cr.

*Echthrus* Grav.

- E. nubilipennis Cr.

*Labena* Cr.

- L. grillator Say

## FAMILY XXXV.—TRIGONALIDÆ.

## FAMILY XXXVI.—STEPHANIDÆ.

## FAMILY XXXVII.—PELECINIDÆ.

*Pelecinus* Latreille.*P. polyturator* Drury.

## FAMILY XXXVIII.—EVANIIDÆ.

*Aulacus* Jurine.*A. firmus* Cr.*A. occidentalis* Cr.*A. resutorivorus* Westw.*A. ruftarsis* Cr.*Gasteruption* Latreille.= *Fœnus* Fabr.*G. affectator* Fabr.(= *montanus* Cr.)*G. incertum* Cr.*G. occidentale* Cr.*G. perplexum* Cr.*G. tarsatorius* Say*Hyptia* Illig.*H. reticulata* Say

## FAMILY XXXIX.—CHALCIDIDÆ.

## SUBFAMILY EUCHARINÆ.

*Stibula* Kirby.*S. montana* Ashm.

## SUBFAMILY PERILAMPINÆ.

*Perilampus* Latr.*P. hyalinus* Say*P. platygaster* Say*P. triangularis* Say.

## SUBFAMILY EURYTOMINÆ.

*Decatoma* Spinola.*D. antiqua* Scudd (Fossil)*D. hyalipennis* Walsh*D. simplicistigma* Walsh*D. varians* Walsh.*Eurytoma* Illig.*E. bigeloviae* Ashm.*E. diastrophii* Walsh*E. studiosa* Say*Isosoma* Walk.*I. hordei* Harrisvar. (?) *flavipes* Fitch

## SUBFAMILY CHALCIDINÆ.

*Smicra* Spinola.*S. bioculator* Cr.*S. encausta* Cr.*S. mariæ* Riley.*S. microgaster* Say*Chalcis* Fabr.*C. coloradeusis* Cr.*C. minuta* Linn.

## SUBFAMILY LEUCOSPIDINÆ.

*Leucospis* Fab.*L. affinis* Say

## SUBFAMILY TORYMINÆ.

*Monodontomerus* Westw.*M. montivagus* Ashm.*Megastigmus* Dalm.*M. nigrovariegatus* Ashm.*Syntomaspis* Först.*S. lazulella* Ashm.*S. racemariæ* Ashm.*S. splendens* Prov.*Torymus* Dalm.*T. cœruleus* Ashm.*T. chrysochlora* O. S.*T. magnificus* O. S.*T. rudbeckiæ* Ashm.*T. Sackenii* Ashm.*T. splendidus* Walk.

## SUBFAMILY ORMYRINÆ.

*Ormyrus* Westw.*O. rosæ* Ashm.

## SUBFAMILY PTELOMALINÆ.

*Rhopalicus* Förster.*R. coloradensis* Ashm.*Dipara* Walk.*D. latipennis* Ashm.

*Pteromalus* Swed.  
P. vanessæ Harris

*Eutelus* Walk.  
E. (?) flavipes Walk.

*Habrocytus* Thom.  
H. obscuripes Ashm.

SUBFAMILY EUPELMINÆ.

*Eupelmus* Dalm.  
E. mirabilis Walsb.

SUBFAMILY ENCYRTINÆ.

*Homalotylus* Mayr.  
H. bifasciatus Ashm.

SUBFAMILY APHELININÆ.

*Aphelinus*.  
A. mytilaspidis Le Baron

SUBFAMILY TETRASTICHINÆ.

*Tetrastichus* Hal.  
T. rosæ Ashm.

FAMILY XL MYMARIDÆ.

# SUMMARY.

MONOTROCHA.		
Families.	Genera.	Species.
I. Apidae . . . . .	29	204
II. Andrenidae . . . . .	10	30
III. Crabronidae . . . . .	5	31
IV. Pemphredonidae . . . . .	4	5
V. Mellinidae . . . . .	1	1
VI. Mimesidae . . . . .	2	5
VII. Philanthidae . . . . .	3	22
VIII. Nyssonidae . . . . .	4	11
IX. Bembecidae . . . . .	8	14
X. Larridae . . . . .	5	15
XI. Ampulicidae . . . . .	0	0
XII. Sphecidae . . . . .	8	27
XIII. Pompilidae . . . . .	6	24
XIV. Masaridae . . . . .	1	4
XV. Vespidae . . . . .	3	13
XVI. Eumenidae . . . . .	8	23
XVII. Sapygidae . . . . .	2	5
XVIII. Thynnidae . . . . .	0	0
XIX. Scoliidæ . . . . .	6	18
XX. Mutillidae . . . . .	5	40
XXI. Dorylidae . . . . .	0	0
XXII. Formicidae . . . . .	8	18
XXIII. Odontomachidae . . . . .	0	0
XXIV. Poneridae . . . . .	1	1
XXV. Myrmicidae . . . . .	7	12
XXVI. Chrysidae . . . . .	9	29
DITROCHA.		
XXVII. Proctotrupidae . . . . .	7	9
XXVIII. Cynipidae . . . . .	15	42
XXIX. Oryssidae . . . . .	1	2
XXX. Uroceridae . . . . .	3	8
XXXI. Cephidæ . . . . .	2	3
XXXII. Tenthredinidae . . . . .	28	72
XXXIII. Braconidae . . . . .	34	69
XXXIV. Ichneumonidae . . . . .	56	87
XXXV. Trigonaliidae . . . . .	0	0
XXXVI. Stephanidae . . . . .	0	0
XXXVII. Peleciniidae . . . . .	1	1
XXXVIII. Evaniidae . . . . .	3	10
XXXIX. Chalcididae . . . . .	22	40
XL. Mymaridae . . . . .	0	0

Total: Families, 33; Genera, 247; Species, 897.