

NOTES AND DESCRIPTIONS OF NORTH AMERICAN
PARASITIC HYMENOPTERA. VII.

BY CHARLES T. BRUES.

FAMILY BETHYLIDÆ.

Cephalonomia utahensis sp. nov.

Female. Length 2mm. Black, except the tip of the antennal pedicel and the basal two joints of the tarsi which are honey yellow. Head oblong, with parallel sides, not quite twice as long as wide. Eyes oval, one-third as long as the head, exclusive of the projecting mandibles; ocelli in a very small triangle. Surface of head shining, very minutely shagreened or punctulate. Face between the antennæ with a small raised prominence with parallel sides and truncate tip, bounded on each side by a large depression. Antennæ 12-jointed, about as long as the head; scape oblanceolate, about two and one-half times as long as thick; pedicel as long as the first and second flagellar joints together; joints of the flagellum about quadrate, increasing in size to the sixth, then becoming slightly smaller; apical joint two times as long as the penultimate. Thorax one-half longer than the head; propleura finely longitudinally striated; pronotum faintly shagreened with sparse microscopic punctures intermixed, nearly three times as long as the mesonotum which is nearly four times as wide as long and sculptured like the pronotum; with two very faintly indicated and widely separated parapsidal furrows. Scutellum with a prominent impressed line at the base; mesopleura with a large round fovea anteriorly and a smaller one centrally. Metanotum with a delicate median carina and raised lateral margins; the entire metathorax much more coarsely punctulate than the rest of the thorax. Legs as usual, only moderately stout; entirely black, except the basal two joints of the tarsi. Wings quite distinctly infuscated; submarginal cell only one-fourth the length of the wing; ending in a prominent black stigma which is distinctly separated from the margin. Just beyond is a much smaller, secondary stigma which is continuous with the margin. Edge of the wing ciliated, more prominently so along the submarginal cell and just beyond the apex.

Described from one complete specimen and a part of another.

Type in the collections of Cornell University, cotype in the Milwaukee Public Museum.

This is a slender species conspicuous by its black legs with distinctly pale base to the tarsi. It was reared from cedar berries at Milford, Utah and sent me for identification by Mr. C. R. Crosby of Cornell University.

FAMILY PROCTOTRYPIDÆ.

Proctotrypes longiusculus sp. nov.

Male. Length 10 mm. Black; legs, except the coxæ, and abdomen except extreme base, ferruginous. Head transverse, two times as wide as thick, strongly contracted behind the eyes and sharply margined behind. Eyes bare. Clypeus broad, its anterior margins straight; broadly truncate. Front, vertex, occiput and cheeks shining, minutely punctulate. Clypeus deeply sparsely punctate and with a large fovea on each side. Mandibles dark rufous with black tips. Antennæ entirely black, slender, strongly pubescent, scape two times as long as broad at tip; flagellar joints elongate; first to tenth gradually growing shorter, the penultimate about three-fourths the length of the first. Thorax very elongate; collar finely transversely aciculate above, and

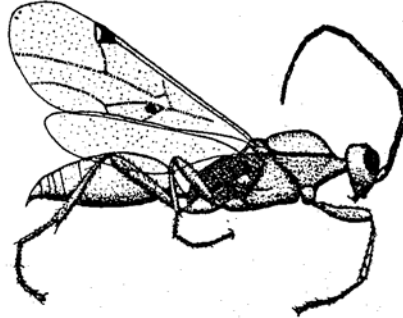


Fig. 1. *Proctotrypes longiusculus* sp. nov. Male.

faintly obliquely so on the sides below. Mesonotum shining, faintly punctulate, one and three-fourths times as long as wide. Scutellum normal, sculptured like mesonotum; metathorax very slightly arched above, as long as the mesonotum, regularly rugose reticulate, the reticulations forming quite distinct longitudinal series, but without median longitudinal carina. Plura shining, and faintly shagreened, the meso and metapleura each with a large convex, perfectly smooth area. Abdomen ferruginous, infuscated apically and black at the extreme base of the second segment and the petiole. The latter broader than long and coarsely rugose, extreme base of second segment with six short diverging carinae. Legs slender, ferruginous; coxæ, trochanters except tips, and tarsi black. Longer spur of hind tibia less than one-third the length of the metatarsus; tarsal claws simple. Wings quite distinctly infuscated: stigma, submarginal and radial veins fuscous; remaining veins distinctly indicated in pale brownish yellow; radial cell one-third as long as high and a trifle more than one-third as long as the stigma.

This species differs from *P. caudatus* by its longer antennæ, less arched metathorax and generally much more slender form.

The head is strongly contracted behind while in *caudatus* it is very faintly so.

Described from one specimen from Harrisburg, Pa., sent me by Professor H. A. Surface. I have later seen a second collected by Mr. P. R. Meyers at Enola, Pa., Oct. 3, 1908, under a stone.

FAMILY SCELIONIDÆ.

Aphanomerus americanus sp. nov.

Female. Length 1 mm. Black, the antennæ except the club and the legs except the coxæ yellow. Head slightly more than twice as wide as thick anteroposteriorly, the vertex very sharply rounded above and quite acute. Ocelli in a triangle, the lateral ones removed from the eye margin by about their own diameter. Antennæ 7-jointed, the club large and unjointed except for a trace of sutures indicating four club joints; club as long or a trifle longer than the funicle; scape stout, thickened apically, but little longer than the club; pedicel as long as the first three joints of the funicle taken together; first funicle joint longer than broad, remaining one very short, but becoming broader; club large, ovate. Eyes bare. Surface of head shagreened. Thorax oval, pronotum visible from above, especially on the sides where it is quite broad. Mesonotum much narrowed anteriorly where it is fitted into the posteriorly excavated pronotum; with complete parapsidal furrows, its surface shagreened and thinly short whitish pubescent. Scutellum shagreened, rounded behind and provided with a marginal line. Metathorax very short, with two short, approximated strongly raised median carinae near the base, forming a sort of tooth when seen in profile. Abdomen as long as the thorax, widest near the apex of the second segment; subsessile, the first segment small, finely longitudinally fluted. Second occupying most of the surface of the abdomen, about one-fourth longer than wide and coarsely striated along the entire base; following segments very short. Legs stout, the femora strongly thickened, the tibiae however only very slightly clavate; tarsal claws about equal. Coxæ piceous, remainder of legs yellow. Wings nearly hyaline, with a slight yellowish tinge, veinless except for a clavate pale brown submarginal vein well separated from the costal margin and reaching two-fifths the length of the wing.

Described from a large number of specimens bred by Dr. George P. Barth from the cocoons of a species of *Crabro*. Type in the collections of the Milwaukee Public Museum.

This is the first time this genus has been found in America. It was first described by Perkins from Queensland, Australia* where it is represented by a number of species parasitic on the eggs of certain leaf-hoppers. That the present species attacks the *Crabro* directly seems probable, although it may of course be a hyperparasite. That it can be an egg-parasite however, appears to be extremely unlikely.

* Bull. Hawaiian Sugar Planters' Expt. Sta., No. 1, part 6, p. 200 (1905).

FAMILY PLATYGASTERIDÆ.

Rosneta, New Genus.

Related to *Fidiobia* Ashmead and *Anopedius* Foerster. Antennæ nine-jointed, the funicle four-jointed; club three jointed; scape clavate, long and stout; pedicel large; ocelli three, in a triangle, the lateral ones almost contiguous with the eye-margin; eyes bare. Mesonotum with deep, sulcate, parapsidal furrows on its posterior half. Scutellum flat, broad and short. Abdomen nearly one-half longer than the head and thorax together, narrowly sessile; second segment very long; tip of abdomen broadly rounded. Wings scarcely pubescent, not ciliate on the margins.

Type: *R. tritici* sp. nov.

Rosneta tritici sp. nov.

Female. Length 0.6 mm. Black, the legs including coxæ and antennæ except club, rather light yellow. Head twice as wide as thick, its occipital margins slightly concave; surface punctulate; ocelli in a broad triangle, the lateral ones removed by less than their own diameter from the eye-margins. Antennæ 9-jointed, short and stout, the scape two-thirds as long as all the following joints together, strongly incrassated; pedicel large, stouter and fully twice as long as the first flagellar joint, which is slightly longer than wide; second to fourth flagellar joints very small, quadrate, about as wide as the first; following three forming a very large stout oval club, the first two joints of which are quadrate and the apical one a trifle longer and conic. Eyes bare. Prothorax and mesonotum roughly punctulate, the scutellum smooth and shining; parapsidal furrows indicated only on the posterior one-half of the mesonotum, but very deep and broad, in the form of deep sulci which have a polished smooth surface. Scutellum broad and short, fully twice as broad as long, at its extreme sides with a longitudinal groove which is farther from the median line than the parapsidal furrow. Metanotum very short and sharply truncate behind; above with two widely separated median longitudinal carinæ just outside the postscutellum, and with the lateral margins less distinctly carinated. Abdomen oval, rounded at the tip, almost sessile at the base; first segment short, second long, fully three times as long as the following together which decrease rapidly in length to the tip. Legs stout, the femora strongly and the tibiæ more weakly clavate. Wings reinless, hyaline, not ciliate and only very weakly pubescent on the surface.

Described from six specimens reared from wheat stubble collected at Middleport, N. Y. and sent me by Mr. C. R. Crosby of Cornell University.

Anopedius error Fitch has also been reared from *Diplosis tritici* affecting wheat, but I do not believe it could possibly be this species, even though Fitch's original account is rather too indefinite to place his species very accurately.

FAMILY EURYTOMIDÆ.

Bephratoides New Genus.

Related to *Bephrata* Cameron, but differing in the form of the anterior femora which are greatly swollen, as large as the posterior ones, grooved beneath for the reception of the tibiae and denticulate below for their entire length. Head and thorax coarsely punctate; metanotum short, abruptly declivous, with a deep median sulcus; pronotum as long as the scutellum and slightly contracted posteriorly. Antennæ inserted above the middle of the face, 11-jointed, with one ring joint; joints of flagellum long, cylindrical, the first two-thirds the length of the scape. Abdomen oval as long as the thorax, greatly compressed, in side view higher than the thorax, but seen from above it is only about one-third as broad as the pronotum; eighth segment reduced into a small stylus or aculeus. Wings with marginal, stigmal and postmarginal veins long.

Type species.—*B. maculatus*, sp. nov.

Bephratoides maculatus sp. nov.

Length 5 mm. Black, marked with yellow; legs mostly yellow; head transverse, a little more than two times as broad as thick and somewhat broader than high. Occiput deeply arcuately emarginate between the eyes, the emargination extending halfway to the front of the head; ocelli in a curved line, close to the emargination of the occiput, equidistant from each other and the eye-margin. Antennæ filiform, 11-jointed, black except the basal three-fourths of the scape and the tip of the pedicel: first flagellar joint three times as long as thick, second two-thirds as long as the first, following growing shorter gradually to the club-joints which decrease rapidly. Eyes ovate, nearly circular, bare; but little longer than the cheeks; front above the antennæ with a deep groove for the reception of the antennal scapes. Face nearly flat, coarsely confluent punctate and sparsely clothed with stiff white hairs. Malar groove present. Head behind with raised margin which however does not extend to the occiput. Mandibles stout, obliquely truncate at the tip, with two faintly indicated teeth at the apex. Palpi slender, short; front and vertex sculptured like the face; occiput smooth or faintly vertically aciculated. Prothorax two-thirds as wide as the head, one-half broader than long and quite distinctly narrowed posteriorly, its surface coarsely punctured, most roughly so along the median line, the punctures growing smaller laterally and on the pleuræ, near the coxæ giving place to fine transverse aciculations. Mesonotum evenly punctate, its punctures the size of those along the sides of the pronotum, a little shorter than the pronotum and one-fourth broader than the pronotum behind where it is much widened. Scutellum and axillæ punctate like the

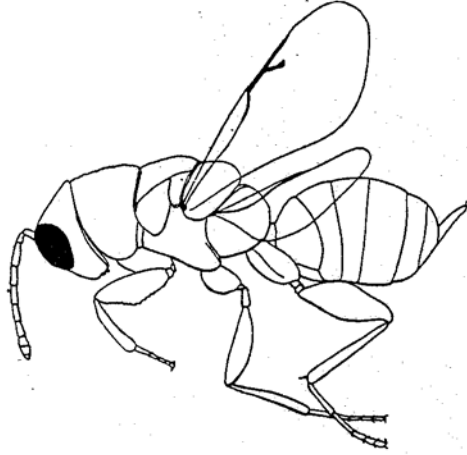


Fig. 2. *Bephratoides maculatus* sp. nov. Female.

mesonotum, the scutellum more coarsely so, rounded behind and as long as the pronotum. Metathorax punctate with a deep smooth longitudinal sulcus. Abdomen oval, very sharp above, as long as the thorax. First segment very small, following four segments of nearly equal length, sixth and seventh much shorter, the latter punctulate, eight forming an aculeus about as long as one of the basal segments. Legs stout, especially the anterior and posterior femora; anterior femora with an obtuse lobe below toward the apex and denticulate for its entire length; posterior femora as large as the anterior ones and faintly denticulate below medially; posterior tibia with two short spurs. Wings hyaline, veins yellow; marginal vein one-fourth the length of the submarginal; stigmal one-half as long as the marginal, knobbed; postmarginal one-fourth longer than the marginal. Head black on the vertex and occiput, elsewhere yellow; prothorax yellow except the dorsum and a fine marginal line posteriorly on the pleurae; mesothorax except tegulae, and metathorax entirely black; abdomen yellow, with the extreme base, a dorsal line to near the tip, lower basal one-half and an irregular subapical spot black, aculeus black. Legs yellow, all femora and tibiae with abbreviated black lines exteriorly.

One specimen. Brownsville, Texas, sent me by Mr. Charles Schaeffer. This is a most interesting insect, of undoubted tropical affinities and I believe generically distinct from *Bephrata* Cameron.

FAMILY PTEROMALIDÆ.

Asaphes rufipes sp. nov.

Female. Length 1.4—1.6 mm. Greenish aeneous black with the legs except coxæ reddish or brownish yellow. Head seen from above a little wider than the thorax at the base of the wings; about twice as wide as thick. Occiput concave, but not strongly excavated, its edge finely margined. Vertex finely punctulate. Eyes bare; ocelli in a triangle the lateral ones as far from the median one as from the eye margin. Front strongly excavated medially below the ocelli, its surface shining and sparsely hairy. Cheeks about two-thirds as long as the eye-height; mandibles fuscous. Malar furrow wanting. Antennæ 13-jointed, gradually clavate; scape two-fifths the length of the flagellum, rather slender and nearly straight; pedicel one-third as long as the scape, obovate; two ring joints; funicle joints increasing a very little in length, but considerably in width, the first a trifle longer than thick and the last fully one-half wider than long; joints of club consolidated, together as long as the three preceding taken together and little broader than the last funicular joint. Pronotum long, nearly as long as the mesonotum, considerably narrowed anteriorly. Mesonotum with deep, very distinct, strongly convergent parapsidal furrows, its surface and that of the pronotum shagreened. Axillæ extending in as far as the parapsidal furrows. Scutellum shagreened on its basal half, posteriorly smooth and polished; at the apical third with a cross furrow made by confluent punctures. Metathorax microscopically rugose above; below on the pleuræ smooth; the pleuræ above with a longitudinal elevation which is sparsely clothed with long fine white hairs. Petiole of abdomen coarsely fluted and finely rugulose on the surface, shorter than the second segment and distinctly longer than wide. Body of abdomen triangular in lateral view, fully three-fourths as high as it is long on the dorsum; second and third segments of equal length; fourth one-half as long and the fifth only one-half as long as the fourth; apex of abdomen produced as a very short stylus. Wings hyaline, veins pale brown, the marginal vein five or six times as long as thick; stigmal about one-third longer, slender, knobbed at the tip postmarginal about one-fourth longer than the marginal. Legs slender, pale reddish brown, the posterior femora somewhat infuscated.

Described from four specimens bred from a species of *Aphis* (probably *A. atriplicis* Linn.) on *Chenopodium album* at Forest Hills, Mass., October 30, 1908 by Mr. Paul Hayhurst of the Bussey Institution. Type in the collections of the Public Museum of the City of Milwaukee.

FAMILY EULOPHIDÆ.

Chrysocharis aeneus sp. nov.

Female. Length 1.5 mm. Shining greenish black, the antennal scape and pedicel and most of the legs except sometimes the anterior femora, yellow. Head very flat, attached to the thorax near its upper side; viewed from the front it is one-third higher than broad. Front with a deep longitudinal depression above the insertion of the antennæ which is however, markedly narrowed above the middle of the front. Antennæ inserted close to the clypeus; 9-jointed, with one ring-joint; scape stout, reaching one-half way from its insertion to the vertex; pedicel one-third as long as the scape, contracted basally; ring-joint so small as to be scarcely discernible; funicle joints three, about equal, nearly quadrate or slightly moniliform when seen in side view; seen in another plane they grow thicker apically the third being nearly twice as broad as long and as wide as the first joint of the ovate club; second club-joint much narrowed apically, third extremely small, pointed and appearing as an appendage of the second. Eyes small, oval, bare; separated by three-fourths their length from the base of the mandibles. Thorax elongate, smooth; pronotum as long as wide at the base, anteriorly narrowed, mesonotum with sharply defined furrows which converge posteriorly where they are very nearly continuous with two parallel grooves on the scutellum, metanotum with a delicate median carina which forks at the extreme tip, curving outward and forward to form a lateral divergent carina which terminates basally near the lateral margin of the scutellum. Abdomen sessile, as long or but little longer than the thorax and slightly flattened; first five segments of about equal length, slightly increasing in width to the fourth; apex rounded, ovipositor not projecting. Legs slender, yellow, except the coxæ which are black, and the anterior femora which are piceous, except at the tip; posterior tibiæ with a single spur about three-fourths the length of the first tarsal joint. Tarsi four jointed. Wings hyaline, marginal vein about one-fourth longer than the submarginal; stigmal clavate, one-fourth the length of the marginal; postmarginal faintly indicated but extending for a considerable distance.

Described from a large number of females bred by Dr. George F. Barth at Milwaukee, Wisconsin, from the cocoon of a species of *Crabro*.

Nesomyia cimbicis sp. nov.

Female. Length 1.25—1.5 mm. Metallic green, head more bluish; spots on the axillae and the occiput below, and the face, more or less cupreous. Head transverse, about three times as long as thick. Face above the insertion of the antennæ finely rugose punctate, above on the vertex shagreened. Ocelli large, in a small triangle. Eyes pubescent. Vertex and front with a few stiff white erect hairs. Mandibles small, acute, bidentate; cheeks short, about one-eighth the eye-height; malar furrow present. Antennæ 9-jointed; scape, pedicel, one ring joint, three funicle joints and a three jointed club, the club with only two distinct joints, the apical one being very small and slender, styluslike; funicle joints each about two times as wide as long; first club joint slightly shorter and thicker; second as long as the first, tapering; all the antennal joints rather hairy; mesonotum and scutellum scaly punctate, the parapsidal furrows indicated posteriorly as depressions, obsolete anteriorly; scutellum nearly as long as the mesonotum, acutely rounded behind, with a long bristle on each side near the middle; postscutellum very short, very broadly angled medially at the tip. Metanotum very short, finely rugulose. Abdomen sessile, almost orbicular, with obtusely pointed apex; segment two the longest; three to six shorter, nearly equal, the last small, triangular. Wings hyaline, pubescent, with short marginal cilia; submarginal vein one-half as long as the pale marginal; stigmal short, clavate; postmarginal nearly two times as long as the marginal. Legs slender, pale yellow, almost white, their coxæ æneous black except at the extreme apices.

Three specimens, bred from eggs of *Cimbex americana* Leach, collected at Milwaukee, Wisconsin. Type in the Milwaukee Public Museum. They were brought to me for identification by Mr. Henry Severin of the University of Ohio.

FAMILY BRACONIDÆ.

Cosmophorus hypothememi sp. nov.

Female. Length 1 mm. Piceous black; face and first three joints of antennæ yellowish brown; legs fuscous, trochanters, knees, base and tips of tibiæ and base of tarsi yellowish or testaceous. Head one and three-fourths times as wide as thick, much excavated on the occiput. Front with a deep excavation above the insertion of the antennæ, the median ocellus placed on its upper margin. Antennæ inserted on a projecting ledge which bears two approximated teeth at the insertion of the antennæ. Antennæ 14-jointed, filiform, the scape stout and

short, almost globose; first joint of flagellum longer, but much more slender than the pedicel; second joint subequal, stouter; following gradually becoming shorter to the tip, all however more than twice as long as thick. Face below the antennæ rugose; clypeus short and broad, punctate. Mandibles broad, leaving a broad opening when closed. Eyes small, oval; sparsely pubescent. Surface of head smooth and highly polished. Thorax short, mesonotum without furrows, smooth and shining, at the base of the scutellum with a transverse groove, scutellum rather long, rounded off on the sides and behind. Metanotum finely rugose, incompletely areolated; two very closely approximated median longitudinal carinæ, a lateral carina on each side and a transverse V-shaped one across the upper edge of the posterior slope. Pleuræ irregularly rugose-punctate. Abdomen petiolate, the petiole longer than the metathorax and equalling the remainder of the abdomen, its surface above finely longitudinally rugose, two and one-half times as long as broad at tip and but slightly widened behind. Body of abdomen globose, the second segment occupying most of its surface. Ovipositor almost as long as the abdomen. Wings hyaline, stigma and nervures pale brownish piceous, the extreme base of the stigma pale. Stigma large, ovate nearly as long as the radial cell; first discoidal and first cubital cells confluent; second discoidal cell open.

One specimen, bred by Professor H. A. Surface from a species of *Hypothenemus*, thought by Dr. A. D. Hopkins to be undescribed.

Ashmead has already described one American representative of this genus, differing from the present species by its much larger size, different antennæ, etc.

Public Museum, Milwaukee, Wis.
March 1, 1909.