



INVERTEBRATA PACIFICA

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HYMENOPTERA

SOME NEW GORYTES-LIKE WASPS

C. F. BAKER.

For several years a number of species of the old genus *Gorytes* have remained unnamed in my collection, even after considerable study of the literature. This summer I had the good fortune to be able to compare these species with the material in the collection of the Academy of Natural Sciences of Philadelphia. I found nothing like any of them there. Some of the forms described here may come within the specific limits of certain species described by Handlirsch, though it is impossible to determine that at present. The references to the modern Ashmeadian genera are given in each case.

5791 *Gorytes sapellonis* n. sp.

A large black species with narrow yellow markings, and the marginal cell deep smoky.

Female: Length 12 mm. Pubescence fine and rather dense, varying from silvery and longer on face to shining golden on penultimate segment and pygidial area, on these latter areas being also longer and denser.

Head distinctly narrower than thorax, the eyes gently emarginate within above, the orbits slightly convergent below. Face densely punctate above, to coarsely rugosely so on the clypeus which has two small yellow spots above. The mandibles are reddish at the tips. Upper inner angle of eyes very broadly rounded, the inner border standing at very much less than a right angle with the occipital border of the eye. Antennae piceous, articles 1-6 of flagellum bright ferruginous below.

Thorax coarsely punctured, thickly so on the mesonotum, less strongly but still thickly on the scutellum, sparsely on pleurae. Mesopleurae with an oblique foveolate furrow, metapleurae nearly smooth and with two deep foveae connected by a deep furrow. Upper triangular area of metanotum bounded caudad by foveolate furrows and terminat-

ed by a deep five-sided fovea. The deep median furrow of the upper area is continuous with that on posterior area where it is foveolate. The yellow markings on thorax are a narrow band on pronotum, tubercles, quadrangular patch below tegulae, small dashes near hind angles of mesonotum and postscutell. The tegulae are piceous within to ferruginous without.

Abdomen not petiolate, black, dorsal segments I to III with narrow subapical bands which are broadened laterally. On dorsum the puncturation is very fine and somewhat dense, below very sparse, the segments with a subapical line of very distinct punctures and about one-fourth of the length at the extreme base smooth and shining. Ventral segment I with a median dentiform tubercle, ventral segment II inflated to a blunt central point.

Legs black to piceous, with yellow marks on the tibiae outwardly and covered with a minute dense pale pubescence. Tarsi largely ferruginous. Tibiae without small spines on the outer surface.

Wings unevenly smoky, very deeply so in the marginal cell, the nervures very dark. Second cubital cell much longer than third on the cubital nervure. Third abscissa of radius about as long as first two together.

Taken in Sapello Canon, New Mexico, by Osler.

5792 *Hypomellinus flavicornis* n. sp.

A slender medium sized species, with the yellow markings predominant, the antennae pale reddish yellow, the wings pale fuscous.

Male:—Length 10.50 mm. Pubescence pale, very finely and closely appressed over the whole body.

Head as broad as thorax, the eyes not emarginate above, rather strongly convergent below. Head with larger scattering punctures on a very finely and densely punctate surface, the larger punctures disappearing on the sides of face and supra-clypeal area but present on clypeus. Upper inner angles of eyes with the sides standing at right angles. Face below antennae, narrow orbits except above, and mandibles except at tips, yellow. Antennae reddish throughout, the eighth flagellar article lengthened and the 9th and 10th broadly excavated below.

Thorax sculptured like the head above, the finer puncturation becoming obsolete on the pleurae. The mesopleurae are bordered in front and below by a foveolated groove, the broad shallow furrow between meso and metapleurae uniform throughout and carinately rimmed. Upper area of metanotum bordered by foveolated grooves with many small oblique grooves on the sides and with the median groove slender and terminating in a large irregular central fovea. Posterior portion of metanotum with the median groove becoming smaller, the petiolar area and sides of metathorax rugose. The yellow markings on the

thorax are a broad laterally expanded band on the prothorax, the tubercles, an L-shaped mark below, tegulae, dots on basal angles of mesonotum, scutellum and postscutellum, and very large oval spots on either side of metanotum.

Abdomen petioliform, very weakly and sparsely punctured on a shagreened background. The segments are all yellow except the extreme bases, broader on first and second, narrow on the remainder, the last segment ferruginous.

Legs reddish yellow, with coxae and trochanters largely, and femora towards base, piceous. Anterior femora gradually broadened below in to a broad flattened inflation.

Wings evenly fuscous, the veins towards base and the stigma pale straw colored, the remainder darker. Second cubital cell much shorter than third on the cubital nervure. Third abscissa of the radius twice the length of the first two together.

Taken at Claremont, Southern California (Baker).

5793. *Hoplisoides umbonatus* n. sp.

A rather small black species with yellow markings, the legs yellow and black and the wings dark fuscous on costal half.

Male: Length 8 mm. Pubescence very fine and appressed, inconspicuous excepting on last two abdominal segments, where it is longer and slightly golden.

Head large and thick, slightly broader than the thorax, subquadrate as viewed from above. Head very sparsely punctured on a background of exceeding fine and dense puncturation, sides of face and supraclypeal area nearly smooth. Inner orbits not at all emarginate above, and nearly parallel below. Face below antennae, inner orbits, and scape underneath, bright yellow. Flagellum piceous above, ferruginous below, the eighth article broadly excavated underneath.

Thorax very sparsely punctate on a smooth or somewhat shagreened background; scutellum minutely punctured. Mesopleurae bounded in front and below by a non-foveolated furrow, the broad and shallow furrow between meso- and metapleurae broader below, carinately rimmed, its anterior face rugose. Upper area of metanotum with seven or eight deep smooth closely approximated oblique grooves on either side of the median groove, the bounding foveolated groove rapidly broadening caudad to the rather small median fovea. The posterior face of metanotum is in large part covered with deep very coarse longitudinal rugae. The yellow markings on thorax are a broad line on pronotum, the tubercles, an irregular elongate patch below tegulae, narrow line on sides of metanotum. Tegulae ferruginous with a yellow dot. Abdomen not at all petiolate, black, with apical yellow bands, very broad and deeply emarginated on I and II, narrower on the others. The band is continuous on the venter only on the second segment.

Legs yellow, coxae and trochanters partly, femora above, and posterior tibiae above, black or piceous. Tibiae supplied with numbers of irregularly placed minute spines on outer surface.

Wings iridescent, the veins dark, the membrane deep smoky on costal half, subhyaline on anal half. Second cubital cell distinctly shorter than third on the cubital nervure. Third abscissa of radius somewhat longer than first two together.

Collected at Claremont in Southern California by C. F. Baker.

5794 *Hoplisoides arizonensis* n. sp.

A small compact black species with narrow yellow markings, figured wings and yellow legs.

Female: Length 8 mm. Pubescence very scant and fine everywhere, with a few long hairs between ocelli and along sides of abdomen.

Head as broad as pronotum, with a coarse and rather open puncturation on a minutely densely punctate background, sides of face nearly smooth. Face between eyes broader than long. Inner orbits not at all emarginate above, parallel below. Inner orbits below, basal two-thirds of clypeus, and scape underneath, yellow. Flagellum clavate, piceous above, ferruginous below.

Mesonotum punctured like the vertex, the scutellum less strongly. Mesopleurae coarsely sparsely punctate, with a non-foveolated rimmed furrow in front and below. Furrow between meso- and metapleurae with a simple but deep groove within, carinately rimmed only in front. Upper area of metanotum with a rather fine bounding groove, its disc bearing on either side of the median groove about twelve fine oblique carinae. Posterior face of the metanotum entirely coarsely rugoso-punctate, the rugae extending on to the sides apically. The yellow markings of thorax are a narrow pronotal line narrowest medially, the tubercles, and a bigeminate mark on scutellum. Tegulae ferruginous.

Abdomen black with narrow apical bands on segments I-V, the first broader and medially widely emarginate, the others slightly emarginate on the sides. Venter without yellow. Ventral median line of first segment deeply incurved on apical half. Pygidium bluntly rounded at tip, its entire surface coarsely longitudinally rugoso-punctate.

Legs bright ferruginous, coxae, trochanters, and femora within at base, black. Tibiae with a few stout spines laterally, the spines of tarsi in part remarkably long and stout.

Wings iridescent, irregularly fuscous, the veins dark, the stigma straw colored. The fuscous areas are a small one on transverse median nervure a simple but deep groove within, carinately rimmed only in front, and second discoidal cell, with the coloring extending into third discoidal and third submarginal cells. Second cubital cell distinctly shorter

than third on the cubital nervure. Third abscissa of radius longer than first two together.

Collected by Osler at Prescott, Arizona.

5795 *Hoplisoides clavatus* n. sp.

A small black compact species, almost entirely finely densely punctured and with very pale yellow narrow markings and subhyaline wings.

Male: Length 6.5 mm. Pubescence fine, closely appressed; some longer hairs about lower part of face.

Head large, subquadrate as viewed from above, slightly broader than the thorax. Inner orbits not at all emarginate above, strongly convergent below, so much so that the clypeus appears abnormally extruded, and the face has a dished appearance. Orbits below narrowly, scape underneath, clypeus on the apical two-thirds except a piceous blotch at the middle, yellow. Mandibles entirely piceous. Flagellum clavate, broadly pale ferruginous underneath, narrowly above and funicular article piceous.

The furrow between meso and metapleurae is very unique, being extremely broad without a deeper median groove, not carinately rimmed at the sides, but sharply demarked below by a continuation of the carinate rim of the mesopleurae, and in the place of the anterior rim, only the fine sharp groove of the suture; its two faces are sharply rather coarsely striate. Upper area of metanotum very large, very coarsely obliquely rugose on either side of the foveolate median groove which terminates in a long acutely pointed median fovea situated entirely within the upper area. Posterior face rugose, foveolate-rugose near the hind margin. The lateral shoulders of metathorax are covered with a mat of long silvery white hair. The yellow markings on thorax are a narrow line on pronotum, the tubercles, small spots below the tegulae, and a narrow line near the hind margin of scutellum.

Abdomen not at all petiolate. Segments I-V with narrow apical bands, the first medially emarginate, the others, suddenly broadened laterally. Venter entirely black, shining, shagreened, with very few punctures. The pygidium is black, somewhat narrowed just before the ferruginous apex, the surface longitudinally rugoso-punctate.

Legs black, fore and middle femora beneath at apex, and hind tibiae posteriorly, yellow, tarsi piceous. Middle and hind tibiae with a considerable number of stout spines on posterior surface. Fore tarsi only with greatly elongated spines on outside.

Wings subhyaline, the nervures and stigma uniformly dark.

Second cubital cell nearly the same length as the third on the cubital nervure. Third abscissa of the radius slightly longer than the first two together.

Taken in Ormsby county Nevada by C. F. Baker.

5796 *Hoplisoides Birkmanni* n. sp.

A medium sized black species, with costal half of wings very dark fuscous, legs and markings reddish yellow, sides of metathorax ferruginous, and with the body mostly very coarsely irregularly deeply punctate, the punctures more or less separated and the interstices with more or less minute puncturation.

Female: Length 8 mm. Pubescence fine and appressed throughout. Head narrower than thorax, the orbits not emarginate above, parallel below.

The pleurae are very coarsely sculptured. The furrow between meso- and metanotum is not demarked, there being merely a broad shallow depression, but in this lies a deep smooth groove which is strongly bent below. Postsentel coarsely longitudinally rugoso-punctate. Upper area of metanotum high, short, and rather suddenly rounded into the posterior face, and not bounded posteriorly by furrows; its surface bears about fourteen very sharp longitudinal carinae. Posterior face very coarsely rugoso punctate, the rugae very pronounced near the posterior border, the central fovea illy defined, the median groove very slender. The yellow markings on thorax are a broad line on pronotum, the tubercles, a long mark below the tegulae, and the sentel. The tegulae, narrow lines on the sides of the mesonotum, and two large blotches on the metathorax are ferruginous.

Abdomen with the puncturation obsolete on the bases of the segments, very coarse on the second ventral segment, and coarsely rugoso-punctate on the fifth dorsal and the pygidium. The pygidium is very sparsely haired and broadly rounded at the tip.

Legs reddish yellow, the coxae and trochanters partly, and femora within at base, piceous. Tibiae outwardly with a number of small spines. Outer spines on fore tarsi greatly lengthened. Wings very dark fuscous on costal half, veins dark, stigma straw colored. Second cubital cell shorter than the third on the cubital nervure. Third abscissa of radius considerably longer than the first two together.

Taken at Fedor, Texas, by that indefatigable hymenopterologist the Rev. G. Birkman, to whom it is dedicated.

5797 *Hoplisoides pruinosis* n. p.

A small compact, black, narrowly yellowmarked species, with fuscous marked wings, reddish yellow legs, and the body covered with fine dense pruinose pubescence.

Female: Length 7 mm. Head distinctly narrower than pronotum, eyes not emarginate above, and distinctly converging below. Pubescence of face longer and silvery. Sides of face nearly smooth, and clypeus with a few shallow punctures. Inner orbits broadly, face below anten-

nae, mandibles except tips and scape underneath, yellow. Flagellum piceous, ferruginous underneath towards base.

Scutellum with but few of the larger punctures. Mesopleura bordered in front by a foveolated groove. The furrow between meso and metapleuræ replaced by a broad shallow depression but medially with a long narrow deep groove which is slightly bent below. Postscutellum longitudinally rugoso-punctate. Upper area of metanotum with about fourteen sharp carinae, the bounding groove wanting. The posterior face has very large punctures above and at sides, broadly depressed at middle below, the median groove replaced by a carina, the central fovea irregular, the surface below transversely rugose. The yellow markings of the thorax are a broad band on pronotum, the tubercles, a long mark below tegulae, the scutellum, and a dot within tegulae. The tegulae are ferruginous.

Abdominal tergites with apical yellow bands, broad on I and II, narrow on III, IV, and V, the first somewhat emarginate. All of the segments are basally impunctate, the second ventral and the fifth and sixth dorsals more coarsely punctate. The pygidium medially carinate towards apex.

Legs reddish yellow, the coxae and anterior trochanters partly piceous. Tibiae with very few weak spines outwardly.

Wings hyaline, smoky from (and including) the first discoidal to the marginal cells, the veins and stigma equally dark. Second cubital cell shorter than the third on the cubital nervure. The third abscissa of radius longer than the first and second together.

Taken at Fedor, Texas, by Rev. G. Birkmann. This species bears a strong superficial resemblance to *Birkmanni*, but in most of its details is very distinct.

DESCRIPTIONS OF NEW AMERICAN TIPHIIDAE

P. CAMERON.

5060 *Tiphia belizensis* sp. nov.

Black, shining, densely covered with long white pubescence, the calcaria and tarsal spines white; wings clear hyaline, the nervures and stigma black; apex of radius broadly roundly curved, its basal abscissa straight, oblique, about one fourth shorter than the second, the apex distinctly projecting beyond the second transverse cubital nervure which is broadly rounded, slightly sloped towards the cubitus and about twice the length of the second; the second recurrent nervure is received shortly beyond the middle, in front being roundly curved to shortly beyond the middle, the posterior shorter part is straight and has a much more oblique slope. Clypeus strongly punctured except at the

apex which is alutaceous, the middle slightly and broadly incised. Front closely punctured below, the punctures closer and finer below, where it is also opaque; above the antennae the punctures are stronger, more distinct and more closely separated, this being also the case with the vertex, except in front of the ocelli where there is a smooth space. Palpi testaceous, covered with white pubescence. Pronotum strongly punctured, except around the apex, the propleurae smooth, shining, obscurely striated at the base, the striated part wider below. Mesonotum broadly punctured in the center, the part inside the lateral furrows smooth, the puncturation at the apex closer and finer. Scutellum punctured like the base of mesonotum, more sparsely in the center; the post-scutellum is more strongly closely and uniformly punctured and more thickly covered with long fuscous hair than the scutellum. Metanotal area slightly narrowed towards the apex, which is transverse; the central keel does not extend to the apex, being about two-thirds the length of the lateral; only the upper three striae on metapleurae extend from the base to the apex, the others are more irregular, wider apart, and commence shortly behind the middle. The puncturation on the mesopleurae is weak and sparse. Base of first abdominal segment finely, sparsely punctured, the apex smooth with a wide, deep, closely, strongly crenulated furrow in the middle of the smooth part; the puncturation on the other segments becomes gradually stronger on the apex; that on the pygidium is close, deep and strong, with smooth line down the middle of the apical slope.

Taken in Belize, British Honduras, by Mr. J. D. Johnson.

5418 *Tiphia acuticollis* sp. nov.

Black; the head densely covered with longish white pubescence, above the antennae closely strongly punctured; the face weakly punctured, the clypens more strongly, its apex broad and transverse. Mandibles with a rufous band before the apex. Palpi dark fuscous, thickly covered with white pubescence. Base of pronotum distinctly bordered by a stout keel, the part behind the keel depressed and stoutly closely crenulated; the pronotum, except for a wide irregular curved space on the apex, punctured but not closely or strongly; the propleurae smooth, shining, aciculated below. Mesonotum inside the furrows, strongly but not very closely punctured, outside the furrows smooth. The scutellum is more strongly and closely punctured; at the apex is a small smooth space, widened behind. Postscutellum closely rugosely punctured all over, thickly covered with long fuscous pubescence. Metanotum with three keels, the outer slightly converging towards the apex, the central weaker towards the apex, its apical slope shagreened, densely covered with white pubescence; the upper half of the metapleurae with five stout keels, straight at the base, curved at the apex; the second from the top is short. Basal segment of abdomen more strongly

punctured than the others, at the apex (which is itself smooth) is a distinct crenulated transverse furrow; the pygidium is coarsely punctured with a smooth keel down the center of the apical half. Apical abscissa of radius roundly curved, the basal curved and slightly angled in the middle; the second recurrent nervure is received beyond the middle close to the base of the apical third; it has the front half roundly curved outwardly, the lower straight, oblique; the second transverse cubital nervure has the upper third obliquely sloped outwardly, the rest is almost straight; the wings have a violaceous iridescence, the nervures and stigma are deep black. Male. Length 6 mm. San Marcos, Nicaragua (Baker).

The second transverse cubital nervure is roundly curved outwardly to near the apex, not shaped like a reaping-hook as in *marcosensis*, which differs further from it in not having the post-scutellum closely rugosely punctured all over, its apical half being smooth. The form of the second cubital cellule separates it from *crenulata*; in that species the apex is not twice wider than the base; in the present species it is more than twice; the apex of the radius too, projects distinctly beyond it, which is not the case with *crenulata*. The wings, too, have a much more distinct violaceous tinge. A further distinction lies in the fact that the keel on the base of the thorax is much more prominent in *acuticollis* and the furrow bordering it is deeper, more clearly defined and strongly crenulated. The nervures in *crenulata* are fuscous, not deep black as in the present species.

5420. *Tiphia fulvicauda* sp. nov.

Black; the pubescence on the head, thorax, base of abdomen and legs white, on the apical segments of abdomen longer, denser, fulvous or pale golden; the pygidium is ferruginous; wings hyaline, slightly, but distinctly tinged with fulvous, the stigma black, the nervures fuscous. Metanotum with three keels, the central distinctly thinner than the outer. Female. Length 9 mm. Ormsby county, Nevada. July (Baker).

Mandibles broadly ferruginous in the middle; the flagellum of antennae fuscous below. Clypeus projecting, clearly separated, of equal width throughout, its apex transverse, smooth and bare; the oral region is fringed with long pale golden hair. Front and vertex strongly but not closely punctured. Base of pronotum strongly closely punctured, the apex smooth; the pleurae with a broad punctured band around the edges above, the middle smooth, the rest closely strongly striated except on the narrowed lower part which is finely rugose. Mesonotum inside the furrows strongly irregularly but not closely punctured. Scutellum with a broad punctured band on the base, a narrow one on the sides and apex (almost a single row of punctures), and a few scattered ones in the smooth center. Metanotum in the center almost

smooth, the base and inner side of the outer areae strongly closely aciculated; the apical slope smooth, bare in the center, sparsely haired round the edges. The upper half of the metapleurae entirely and the apical half of the lower strongly regularly striated, the lower basal half smooth. The apical joints of the four anterior tarsi rufo-fulvous, the tarsal spines of a brighter red colour; the four anterior spurs white, the hinder blackish. The anterior part of the third transverse cubital nervure is roundly curved outwardly.

5424 *Tiphia fortistriolata* sp. nov.

Black, densely covered with longish white pubescence, the basal part of metanotum somewhat strongly transversely striated, the apex at the sides with three short stout keels; the central keel only reaching to the middle of the central area; it becomes gradually narrowed towards the apex; the outer keels slightly converge towards the apex; the apical slope is obscurely finely widely striated on the outer edges. Propleurae finely closely striated on the basal half above, the apex obscurely punctured, the rest strongly closely striated. Mesopleurae distinctly but not strongly or closely punctured. Metapleurae somewhat strongly closely striated, aciculated at the base. Front and vertex strongly closely punctured, a deep transverse furrow in front of the anterior ocellus. Pygidium strongly deeply punctured, without any central smooth line. The puncturation on the abdomen becomes stronger and closer towards the apex. Basal abscissa of radius in two equal slopes; the apical abscissa straight above, oblique below; it projects distinctly beyond the apical transverse cubital nervure; the upper part of the second recurrent nervure is roundly curved below. Male. Length 7 mm. Ormsby country, Nevada, July. (Baker).

Near the apex of the first abdominal segment is a punctured transverse furrow or depression. Basal slope of prothorax closely transversely rugose; the base is keeled above; the thorax above is closely finely punctured; the puncturation on the scutellum is sparser at the base and still more so in the middle.

Characteristic of this species is the strongly, if irregularly, striated metanotum, with the abbreviated or at least weakened, central keel. A smaller variety from Colorado has the puncturation and striolation less strongly developed.

5413 *Paratiphia erythroua* sp. nov.

Black, shining, the pubescence on the front and vertex very sparse dark and short; on the occiput dense long and white; except on the sternum the pubescence on the thorax is very sparse and short; the basal segment of abdomen is sparsely haired, the third to fifth fringed (especially laterally) with long white hair; the hair on the penultimate

is much denser, long and bright fulvous; pygidium reddish, bare, closely distinctly punctured; wings tinged with fuscous violaceous, the stigma blackish, nervures fuscous; basal abscissa of radius about one-fourth shorter than the second. Female. Length 5 mm. San Marcos, Nicaragua (Baker).

Lateral keels of metanotal area roundly curved, not touching at the apex, but distinctly separated, the area being four, not three angled, as in the other species; down its middle is a stout straight keel, on the sides are five irregular keels, the third and fourth on the outer side are curved; the apical slope is smooth, shining, bare, with a few minute striae around the edges, Basal half of metapleurae smooth, the apical stontly irregularly striated. The apex and the upper part of the propleurae aciculated, the rest stontly closely striated. Mesopleurae strongly, but not closely punctured. Four anterior and apical joints of posterior tarsi rufous; the hinder spurs white.

This species should be known by the keels of the metanotal area being somewhat widely separated at the apex and by the sides of the metanotum being striolated.

5416 *Paratiphia nicaraguaensis* sp. nov.

Black, densely covered with white pubescence, the abdominal hair fringe pale golden; clypeus yellow, slightly tinged with orange; the mandibles broadly reddish; palpi black tinged with fuscous; wings not very clear hyaline, the stigma and nervures black, the first abscissa of the radius oblique, slightly but distinctly shorter than the second the apical oblique, rounded, angled near its junction with the radius, which slightly projects; the fourth transverse cubital nervure is oblique, the lower half slightly rounded outwardly. Front and vertex closely, coarsely punctured, except for a small transverse space before the anterior ocellus. Clypeus strongly, but not closely punctured, its apex broadly rounded. Base of pronotum bordered by a sharp stout keel, behind which is a deep distinct furrow, widely crenulated; the middle is strongly punctured, the apex smooth. Mesonotum strongly closely punctured around the edges, the center much more sparsely punctured. Scutellum, except at the base, closely strongly punctured; the post-scutellum is more closely rugosely punctured. The basal two central areae of metanotum are wider than long, roundly broadly narrowed from the outer to the inner side, but not strongly; the inner half of the outer part is smooth, the outer stontly closely striated; the central two of the second row are almost square, the others longer than wide, the apical slope is irregularly sparsely striated around the edges. Propleurae coarsely reticulated at the base above, the rest almost smooth. Mesopleurae strongly, but not closely punctured; the base with a widely crenulated furrow. Metapleurae closely striated above, the striae on the rest oblique, somewhat widely separated. Pygidium

strongly deeply punctured; there is an aciculated smooth line down the apical two-thirds; the sides are furrowed and bordered by stout keels. The second recurrent nervure is received shortly below the middle and is roundly curved backwards from shortly above the middle. Male. Granada, Nicaragua (Baker).

Comes near to *P. iridipennis* Cam. (Inver. Pacific. I, 69).

5419 *Paratiphia fortistriolata* sp. nov.

Black, densely covered with long white pubescence; the clypeus and basal half of mandibles whitish yellow; the fore tarsi rufo-fulvous; wings clear hyaline, the stigma and nervures black, the first abscissa of the radius not much more than half the length of second, the apical is almost straight below, roundly sloped above. Basal region of metanotum very strongly reticulated, the apical row shorter and broader than the basal, the two central basal areas irregular, widened outwardly at the base, the apical two longer than wide, narrowed from the outer side at the base, the apical slope finely reticulated above, closely rugose below; the metapleurae stoutly widely striated except at the base below, the striation there being close and at the apex running into reticulations. Propleurae closely punctured above, the rest closely reticulated. Mesopleurae strongly and regularly punctured. Pronotum closely, almost rugosely punctured. Mesonotum closely regularly punctured, the sides more widely strongly and irregularly, as is also the apex; the center smooth with a row of punctures down the middle and a few on the sides. Center of pygidium smooth, the smooth space widest in the middle, from where it becomes gradually narrowed to the apex. Male. Length 11 mm. Ormsby county, Nevada, July. (Baker).

Tibial spines black, the calcaria and tarsal spines white. This species is larger than any of the southwestern males known to me; in size it comes next to *robusta* Cam., known only in the female sex.

5425, 5429 *Paratiphia varipunctata* Cam. Invert. Pacifica, I, 106.

There are two specimens, taken at the same place and date as the type (Ormsby county, Nevada) which differ in the structure of the metanotal area. In one its central keel is irregular, smooth, and dilated in the middle, the sides of the area being irregularly wrinkled and aciculated; in the other there is a distinct narrow central keel which reaches to the apex and is bordered by a narrower keel not reaching to the apex, the lateral part bearing a few oblique striae. In all of the specimens the lateral striae vary; they become stronger towards the apex.

5410 *Paratiphia albilabris* Lep. cf. Cameron, Invert. Pacifica, I, 105.

As it is possible that the following described species from California may be Lepelletier's species, I propose to describe it under the name of *albilabris*, so that the name may be definitely used for some species. Only an examination of the type (if it still be in existence) can show what *albilabris* really is.

Black, closely punctured and covered densely with white pubescence like the other species; the clypeus, labrum and mandibles to near the middle, are white; the tips of mandibles are red, broadly black behind; wings hyaline, the stigma and nervures black; basal abscissa of the radius fully one-half the length of the second, the apex broadly uniformly rounded; the upper part of the fourth transverse cubital nervure is oblique, straight above, slightly rounded below, the lower shorter part straight. The two central areas of metanotum slightly longer than wide, of equal width throughout, transverse at the apex, the outer areas are longer and narrower; on the outer edge are two curved keels; the second row of areas are shorter and wider; the apical slope is aciculated, weakly irregularly striated above, more strongly closely and regularly below. Upper half of propleurae alutaceous, punctured on top, the lower strongly but not very closely striated. Base of metapleurae smooth, the rest strongly striolated, the striae longer (nearer the base) above than below. Pygidium strongly deeply punctured, a smooth line widened in the middle, down the center. Calcaria and the spines on hind tarsi white; on the anterior tarsi the spines are rufous.

Comes close to *P. occidentalis* from which it may be known by the much more regular clearly defined areas on the base of metanotum; in the present species there are four distinct longitudinal keels outside the two central areas; in *occidentalis* there is one central and an indistinct outer keel; in the latter, too, the metanotum is striated at the base below, the whole being almost regularly striated.

The nervures of *albilabris* are called "red", a colour I have not seen in any species of *Tiphia* or *Paratiphia*. In some species the nervures vary from black to fuscous or pale fuscous.

5423 *Paratiphia occidentalis* sp. nov.

Black; the clypeus except around the top creamy white; the basal half of mandibles yellow, tinged with rufous; palpi black; wings clear hyaline, the stigma and nervures black, the apex of the radius rounded above, straight and oblique below, there being a sharply pointed angle at the junction of the two. The two basal areas on metanotum confluent at the base, the dividing nervure being present only at the apex, the two form an area slightly longer than wide, slightly narrowed at the base; next to them is a larger square area, the outer part with some

stout striae; the apical transverse row of striae are stout, the middle three stouter and more widely separated than the others; the apical slope is irregularly striated around the edges; the center is finely obscurely striated. Propleurae smooth, irregularly striated down the center. The depressed base of metapleurae almost smooth, the rest stoutly regularly striated, the lower part more irregularly and weakly, and bounded behind by a closely striato-reticulated space, above by a smooth one. Pygidium strongly deeply punctured, with a smooth raised line running from the top to the bottom. Male. Length 6 mm. Ormsby county, Nevada, July (Baker).

The basal abscissa of the radius is slightly oblique and is about one-fourth shorter than the second; the apical transverse cubital nervure is straight and oblique to below the middle; the lower part is roundly curved outwardly.

5430 *Paratiphia texana* sp. nov.

Black, the labrum and the mandibles except for a black mark near the apex in front, red, the base of wings hyaline, the apex from the stigma fuscous violaceous, the stigma black, the nervures blackish brown; the metanotal area slightly longer than it is wide at the base, the keels roundly curved, not meeting at the apex nor reaching to the transverse keel, to which they are united by two short straight keels. Head and thorax closely strongly punctured; a smooth space in front of the ocelli and at the apex of the propleurae in the middle, this latter space being narrowed and longitudinally striated. Base of metapleurae closely aciculated, the rest striated, the striae not strong, curved in the central part, oblique above and below where they are closer and more regular. There is a straight keel down the middle of the metanotal area which is finely irregularly transversely striated and aciculated; the sides of the metanotum are coarsely aciculated. Abdomen strongly closely punctured, the puncturation becoming stronger towards the apex. Pygidium closely strongly longitudinally reticulated, striated to near the middle, the rest closely finely punctured, reddish along the sides. The pubescence on the abdomen and legs is long dense and white, the calcaria are white, the spines on the fore tarsi are long and white, tinged with rufous. The third transverse cubital nervure is straight, oblique, not roundly curved; the first abscissa of the radius is as long as the second.

The male has the clypeus and mandibles white except at the tips, the pubescence is denser and the puncturation stronger; on the base of the metanotum are two areas which are slightly narrowed towards the apex; the central keel is stouter than the lateral and is continued past the first transverse keel to the second; the parts outside it are irregularly striated; between the two transverse keels are a number of longitudinal ones which are closer to each other and more oblique on the

outer than on the inner side. The upper half of the metapleurae are stoutly obliquely striated, the lower closely rugosely punctured; the apical slope of metanotum closely strongly reticulated. The abdomen is much more strongly and closely punctured than in the female; the pygidium is strongly deeply closely punctured, keeled down the middle from the base to near the apex; the sides are more strongly keeled. Wings colored as in the female except that the nervures are deep black.

5405 *Paratiphia neomexicana* sp. nov.

Black, the clypeus and mandibles, except at the apex creamy white; the labrum reddish, palpi fuscous: base of metanotum without any central basal area, but with two large lateral ones, bounded by roundly curved keels; the apex in the center with two depressions, with a stout keel between them, and a weaker one on the outside, there being none bounding the base which is thus open; the space between the basal lateral areas and the transverse apical keel is stoutly, but not closely striated; the apical slope is closely distinctly longitudinally striated, the striae more or less intermixing. Propleurae strongly closely punctured above, the depressed center obliquely striated, smooth above and below. Mesopleurae, as usual, strongly punctured. Metapleurae strongly, more or less obliquely striated, except on the lower basal part, which is aciculated and has only weak indications of striae; the striae above are weaker and more irregular than they are below; they also intermix at the apex. The fringe on the abdominal segments is fulvous or pale golden; the pygidium is strongly deeply punctured, with a broad opaque smooth band down the center of the apical slope. Wings clear hyaline, the stigma and nervures black; the apex of the radial cellule wider than usual, the radius broadly rounded; the third transverse cubital nervure obliquely sloped, slightly rounded outwardly below. Male. Length 8 mm. Santa Fe, New Mexico (Osler).

Characteristic of this species is the absence of the usual well defined central areas on the base of the metanotum.

5417 *Paratiphia ormsbyensis* sp. nov.

Black, the clypeus and mandibles, except the teeth, clear white; the two central areas on the base of the metanotum of equal width, longer than wide though not much so; the pygidium shining, strongly punctured, the punctures large, irregular, deep; there is a smooth space at the base in the middle which is small and triangular, and from it an indistinct smooth narrow line runs to the apex; wings clear hyaline, the stigma and nervures black, the former not so deeply black as the latter; the first abscissa of radius slightly shorter than the second; the apex rounded but with a slight rounded angle below. Male. Length 7 mm. Ormsby county, Nevada. July (Baker).

Front and vertex closely strongly punctured, a large smooth bare shining space in front; the space between and at the sides of the ocelli smooth bare and shining. Clypeus as strongly but not so closely punctured as the front; it is gradually narrowed to a bluntly rounded point which is depressed and fulvous in color; the clypeus and mandibles are covered, but not thickly, with long white hair. Central areae on metanotum smooth and deep; the lateral basal part irregularly strongly punctured at the base, the apical half smooth; the middle of the apical area has the longitudinal keels indistinct except the central one; the outer area stronger. Propleurae punctured distinctly above below with curved stout striae at the base, the apex with finer closer oblique striae; the mesonotum more closely and strongly and more regularly punctured than the mesonotum which is only widely punctured in the middle. The last ventral segment has a smooth line down the middle; the basal half is raised and strongly punctured, the apical strongly aciculated. The four anterior tarsi are bright fulvous red, the basal joint of the middle broadly black; the posterior tarsi are of a duller red towards the apex.

5411 *Paratiphia intermedia* sp. nov.

Black, the apical half of the clypeus yellowish white, the tips of the mandibles rufous; basal abscissa of the radius two-thirds the length of the second, the apical angled in the middle, the upper and lower branches of equal length, straight, oblique; the fourth transverse cubital nervure has almost the front three-fourths obliquely sloped, the lower part straight. Central area of metanotum of equal width throughout, those bordering it are as wide at the base, but are narrowed at the apex; the outer areae are regular, slightly narrowed at the apex, all longer than wide; the second row are shorter and wider; there is a similar but smaller apical row. Pygidium at the base and sides strongly, closely and deeply punctured; there is a smooth keel in the center of the apical two-thirds. Pronotum, except at the apex, strongly closely punctured; the puncturation on the mesonotum is stronger except at the base and sparser especially in the middle.

Scutellum smooth in the middle, the smooth part widest in the middle. Postscutellum closely rugosely punctured. Metapleurae strongly and widely striated above, more closely and finely below. Male. Length 6 mm. Claremont, California (Baker).

Should be known by the black upper half of clypeus, by the black mandibles, and by the apical slope of the metanotum being reticulated.

5422 *Paratiphia parvula* sp. nov.

Black, the apex of the clypeus white, of the mandibles red; the flagellum of antennae inclining to fuscous below; wings hyaline, the

stigma fuscous, the nervures darker; the basal abscissa of the radius about one-fourth shorter than the second, the apex wide, broadly roundly dilated in the middle. Central areae of metanotum slightly longer than wide, wider at the apex on the inner than on the outside, the sides at the base rugosely punctured; the middle areae of the second row are square, the outer longer than wide; the apical slope is aciculated with some obscure striae around the top. Metapleurae on the upper apical half with some stout irregular longitudinal striae, the rest smooth. Propleurae smooth, irregularly wrinkled at the base. Mesopleurae strongly closely punctured. Pygidium with a smooth keel down the middle, extending from the base to the apex and of equal thickness, the rest smooth on the inner, strongly punctured on the outer half. Apex of fore tibiae and the greater part of the tarsi rufous. Male. Length 4.5 mm. Ormsby county, Nevada (Baker).

This is the smallest of the North American species. It has the yellow apical line on the elyptens narrower than it is in *intermedia*, from which it differs further in the keel on the pygidium running from the base to apex, not on the apical half only; it differs also in the fuscous stigma and in the apical abscissa of the radius being broadly rounded; the pubescence on the head and thorax is less dense and the third transverse cubital nervure is straight oblique in one slope, not angled below as in *intermedia*.

A NEW MUTILLID NEAR BRACHY CISTIS FROM CALIFORNIA

C. F. BAKER

At Claremont, California I captured, flying by day, a single specimen of a most remarkable small shining black mutillid, a male, which in many features was like *Brachycistis* and which possessed a most remarkable superficial resemblance to a figitid. A very high, arched mesonotum, very broad first abdominal segment, and very deep second segment, gives it a habitus quite distinct from that of *Brachycistis*. Its wing venation is, moreover, quite peculiar. The stigma is very large and dark. The marginal cell is extremely small, very narrow, extends from apical third of stigma to costal margin and is not appendiculate. The single submarginal cell is subquadrangular but much broader apically. There are two discoidals, the first rectangular and but little longer than broad. The veins are mostly nearly colorless. The transverse median between first and second segments is scarcely evident as viewed from nervure is nearly interstitial with the basal vein. The constriction above, but from the side the depth of second segment accentuates the ventral sinus. The prothorax is very short—a narrow band from above. The ocelli are minute, not at all enlarged, the hind ocelli being about as far from eyes as from each other.

There are certain *Brachycistis* in which the venation is somewhat reduced, but I do not know of one that even approaches the remarkable combination of characters presented by this insect. It may prove to be the yet unknown male of some other genus, but it would be hard to even make a guess concerning it now. In the meantime it may carry the at least temporary genus name of *Brachycistellus* and the species I call *figitiformis*.

This insect is 4 mm. long, shining black, with very thin longish whitish pubescence; the wing bases, mandibles and tarsi are piceous; the scape and funicular article are also slightly piceous; the flagellum is opaque black. The surface of the body is mostly smooth and shining, with very few scattering but rather strong punctures, more dense on clypeus, pronotum, hind margin of scutellum, and first abdominal segment. The narrow upper portion of metathorax is separated from the rather concave posterior declivity by an arched transverse carina; above this carina the surface is strongly, roughly, longitudinally rugoso-punctate; below it is first a row of large punctures and then the surface is finely roughened. The hind tibial spurs are very long, being half the length of the first tarsal article.
