

NEW HYMENOPTERA MOSTLY FROM NICARAGUA

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The Hymenoptera of Nicaragua and the adjacent States are practically unknown. The following are the first of a lot of new species and genera collected by Prof. C. F. Baker.

ICHNEUMONIDAE.

1462 *Pristomeridia? microdonta* sp. nov.

Rufo-testaceous; the face, clypeus, inner orbits, mandibles except at apex, and palpi yellow; the occiput with a large black mark incised above in the center; the sides of mesonotum, metanotum and the basal three segments of abdomen above, black, the other segments of abdomen above pale yellow. Legs rufo-testaceous, the coxae and trochanters yellowish, the hind tibiae broadly black at the base and apex; the hind tarsi black, testaceous at the base. Wings clear hyaline, the nervures and stigma black, as are also the apex of the prosternum and the whole of the mesosternum. Antennae black, the scape testaceous. Female. Length 4 mm; ovipositor 2 mm. Chinandega, Nicaragua.

Smooth and shining; the metanotum minutely punctured, thickly covered with white pubescence; the areae are all clearly defined; the apical slope in part rufous. Face distinctly raised in the center, clypeus roundly convex, distinctly separated from it; on either side of it above is a large fovea, its apex broadly rounded; labrum projecting. Femoral tooth minute, indistinct.

This may not be a *Pristomeridia*, the femoral tooth being small and indistinct, not "strong", but it possesses the other characters of the genus and tribe.

BRACONIDAE

1469 *Bracon Managuae* sp. nov.

Luteous, the abdomen and legs paler, the head with the front, vertex, occiput, upper half of outer orbits, flagellum of antennae and hind tarsi, black; wings hyaline, highly iridescent, the nervures and stigma fuscous. Length of male 2.5 mm. Managua, Nicaragua.

Head smooth, shining, the face aciculated. Palpi pale yellow. Median segment with some longitudinal striae on the basal half. Second abdominal segment strongly aciculated, without a basal area, the first longitudinally striated. Third abscissa of radius longer than the basal two united.

1467 *Bracon Chinandegaensis* sp. nov.

Black, the face below the antennae, the inner orbits narrowly, the upper more broadly, the malar space, mandibles, the apex of abdomen and

the ventral surface, the second and following three segments of the abdomen broadly on the sides, rufo-testaceous; the legs testaceous, the tibiae and tarsi black. Wings hyaline, suffused with fuscous, clearer at the apex, the stigma testaceous, the nervures darker. Female. Length 2 mm., terebra 1 mm. Chinandega, Nicaragua.

Face aciculated; the front hollowed below, with a smooth keel in the center. Mesonotum opaque, thickly covered with white pubescence. Metanotum aciculated, as are also the second and third abdominal segments. The testaceous lateral stripe on the second segment is widest at the base, the black central mark being thus triangular. The first and second abscissae of the radius are equal in length, the third is almost twice their length; the first cubital cellule is widened at the apex through the cubitus being bent obliquely downwards to where the recurrent nervure is received.

1458 *Bracon Nicaraguaensis* sp. nov.

Black, the head except the front and vertex, broadly in the center, a triangular large mark on the apex of pronotum, the sides and base of mesonotum broadly, scutellum, greater part of metanotum, the mesopleurae except at the base, the metapleurae and the breast, black; the abdominal segments infuscated on the back, closely and minutely but distinctly punctured; the second segment with a fine keel down the center, not dilated at the base, the suturiform articulation curved in the middle, the lateral part straight, directed obliquely blackwards. Wings hyaline, highly iridescent, the stigma and nervures dark fuscous, the apical abscissa of the radius slightly longer than the basal two united; the recurrent nervure received almost the length of the second transverse cubital in front of the first. Female. Length 2 mm., terebra about 1 mm. Chinandega, Nicaragua.

Antennal scape rufous. Head and thorax smooth and shining, the face aciculated. Mesopleurae with an obscure row of punctures in the center. Middle lobe of mesonotum raised, gradually narrowed to a point at the apex, where the base of the scutellum is clearly raised above it. Metanotum strongly aciculated. First abdominal segment deeply depressed on the basal half, the raised apical part aciculated, the other segments closely finely longitudinally striated. Apex of metanotum rounded, more strongly aciculated—almost punctured—than the base, and with a short smooth keel in the center of the apex.

1463 *Bracon Bakeri* sp. nov.

Rufo-testaceous, antennae, ocellar region, a longish large mark on the lateral lobes of the mesonotum, an irregular, much smaller mark on the base of the central, the lateral lines continued on to the scutellar region, two large marks converging towards the apex, the greater part of the mesosternum, the mark incised in the middle at the apex, and the backs of the third and following abdominal segments, black. Legs rufo-testaceous, the apical half of the hinder tibiae and the hind tarsi black. Wings hyaline, somewhat infuscated at the base, the nervures and stigma

black. Two basal abscissae of radius together nearly as long as the third; recurrent nervure received at nearly the length of first abscissa of radius from the first transverse cubital. Length nearly 3 mm., terebra 1 mm. Chinandega, Nicaragua.

Head smooth and shining; a large distinct fovea on the sides of the clypeus above. Mesonotum depressed at the apex laterally. Scutellum roundly convex; the furrow at its base crenulated. Metanotum with a shallow furrow in the middle. Abdomen smooth and shining; the area on the base of the second segment about twice longer than broad, its base obliquely narrowed, becoming gradually slightly narrowed from the widened part to the apex which does not reach to the suturiform articulation and has a depression on either side.

1456 *Bracon Caroli* sp. nov.

Black, a large squarish mark in the centre of the apical half of the mesonotum, scutellum, mesopleurae, mesosternum, the two basal segments of the abdomen and the sides of the third segment, rufo-testaceous; legs testaceous, the hind tibiae from near the middle and their tarsi except the two basal joints at their bases, black. Wings hyaline, highly iridescent, the stigma and nervures dark fuscous. Male. Length 2 mm. Champerico, Guatemala.

Abdomen smooth and shining; the second segment with a keel in the centre, dilated at the base; suturiform articulation straight, narrow, smooth. Two basal abscissae of the radius as long, united, as the third, the first as long as the second transverse cubital nervure, which is faint; recurrent nervure received near the apex of the first cubital cell.

1455 *Bracon longicaudis* sp. nov.

Rufo-testaceous, the antennae black, the scape testaceous below; wings hyaline, highly iridescent, the nervures and stigma fuscous; the first and second abscissae of radius are together slightly longer than the third; second abdominal segment aciculated, a keel down the centre. Female. Length nearly 2 mm. terebra 2 mm. Champerico, Guatemala.

Smooth and shining, antennae longer than the body, 21-jointed, the joints elongated, fuscous below, recurrent nervure received close to the transverse cubital; second transverse cubital faint. The keel on the second abdominal segment is indistinct and is not dilated at the base.

1460 *Forsteria? ruficollis* sp. nov.

Black, the prothorax, mesonotum, and scutellum rufous; the metanotum and base of mesopleurae piceous; antennal scape testaceous below, the base of flagellum fuscous; legs rufo-testaceous, the hind tibiae and tarsi fuscous; the apex of third abdominal segment pale testaceous; wings clear hyaline, the nervures fuscous, the stigma black. Female. Length 3 mm. terebra 2 mm. San Marcos, Nicaragua.

Head smooth and shining, thickly covered with long white pubescence; face closely distinctly punctured, less strongly so in the centre; clypeus rufous, punctured above; mandibles rufo-testaceous, broadly black at the apex. Thorax smooth, covered with white pubescence; the

middle lobe of mesonotum clearly separated, the parapsidal furrows deep and wide with some keels; in the centre is a fine longitudinal keel; the apex is irregularly striated. Scutellum with a fine keel down the center of the base, being continued from a stouter keel on the basal depression. Metanotum with a central area obliquely narrowed at the base and reaching to the apex; on either side of this, at the base, is an area bounded in front by a curved rounded keel; from the outer apical edge of this a keel runs down the sides to the apex. Metapleurae rugose, thickly covered with white pubescence. There is a keel roundly dilated in the middle, on the sides of the first abdominal segment and extended in the middle to the apex; the part enclosed by them is smooth and shining, the sides at the apex are strongly closely striated; the second segment is finely closely striated, except on the apical half in the centre. There is a large depression on the lower half of the base of the mesopleurae which bears stout keels; on the apex, in the centre, is a large deep fovea, pointed at the base. Antennae thickly covered with a microscopic pile. The head is fully wider than the thorax; the second abdominal segment is slightly but distinctly longer than the third. If it were not for the latter character I should have placed the species in *Sigalphus*.

1458 *Chelonus immaculatus* sp. nov.

Black, the antennal scape, tegulae and legs white, tinged with testaceous, the apex of the hind tibiae and of the metatarsus, black. Wings hyaline, the stigma and nervures black. Female. Length 3.5 mm. San Marcos, Nicaragua.

Head closely rugose, opaque, the face wrinkled; the clypeus clearly separated, more finely punctured than the face; mandibles rufo-testaceous. Central part of mesonotum closely, finely reticulated, the apical part coarsely reticulated, the furrows bounding it with stout transverse keels. Scutellum finely rugose, the transverse depression at its base deep, wide and with four keels.

1159 *Chelonus centralis* sp. nov.

Black, the antennal scape, underside of flagellum, four anterior legs, base of hind tibiae to shortly beyond the middle, the middle femora broadly above, black; the hind tarsi white; wings hyaline to the stigma, smoky beyond. Female. Length 2.5 mm. San Marcos, Nicaragua.

Face and clypeus finely rugose, thickly covered with long white pubescence; the front and vertex coarsely rugose. Mesonotum strongly reticulate. Scutellum closely rugose, almost reticulated; at its base are three areas. Metanotum coarsely irregularly rugose, the apical slope with some longitudinal keels, the two central uniting before reaching the apex; the sides near the top project into teeth. Abdomen closely reticulated, more closely at the base than at the apex. Pleurae closely, strongly reticulated.

1461 *Phaneratoma? nigroscutis* sp. nov.

Rufo-testaceous, the scutellum, the apical half of the second and the whole of the third abdominal segments, black. Legs testaceous, the hind

tibiae to shortly beyond the middle whitish, the rest of it and the hind tarsi fuscous. The antennae from the sixth joint fuscous, darker towards the apex. Wings hyaline, the nervures and stigma fuscous. Female. Length 4 mm. Chinandega, Nicaragua.

Head and thorax shagreened. Parapsidal furrows distinct on the basal half of mesonotum. Metanotum areolated. Basal two segments of abdomen clearly longitudinally striated, the third closely finely rugose; on the base of the second is a clearly defined area slightly longer than wide, rounded and slightly narrowed at the apex and pallid yellow in colour, the apex of the third segment margined and broadly rounded, the outer edges projecting.

1452 *Microdus trochanteratus* sp. nov.

Ferruginous, the antennae, a broad line on the fore femora behind, the four posterior trochanters and apices of the four posterior tibiae and the hind tarsi, black. Wings fuscous, the nervures black. Female. Length 6 mm., terebra 4 mm. San Marcos, Nicaragua.

Antennae densely covered with a black microscopic pile. A stout keel occurs in the center of the scutellar depression; the apex of the scutellum is depressed; the apical keel is less stout than the lateral. Metanotum with six areae, the lateral square, the basal central sharply pointed (lanceolate) at the base, the apical slightly narrowed at the apex, longer than broad. Abdomen as long as the thorax, smooth. Areolet triangular, the nervures almost uniting in front. Wings highly iridescent.

Kareba gen. nov.

Three cubital cellules; the recurrent nervure received in the second transverse median in praediscoidal cellule; radius issuing from shortly behind the middle of stigma; radius in hind wing obsolete. Occiput distinctly margined. Parapsidal furrows distinct, the middle lobe of mesonotum depressed at apex. A large not very deep, depression, of uniform width occurs at the base of scutellum, its sides with a round shallow fovea. Metanotum with two keels in the centre, at the base they unite, diverge obliquely to the top of the apical slope, then side. The first abdominal segment is slightly longer than its width at the apex; it and the following segment closely, strongly, longitudinally striated; the suturiform articulation obsolete, the other segments smooth, the last broadly rounded. Calcariae minute. Tarsi shorter than tibiae. Antennal joints elongate. The male I do not know, but the female should readily be separated from *Rhyssalus*, the only genus with which it could be confounded, by the radius originating behind the middle of the stigma and by the strongly striated two basal segments of the abdomen.

1453 *Kareba flavipes* sp. nov.

Rufous, suffused with black, the median segment and the middle of abdomen almost black, the apical four segments of the abdomen testaceous, tinged with yellow; antennae yellow, tinged with fulvous; legs pale yellow; wings hyaline, iridescent, the nervures and stigma pallid testaceous. Female. Length 5 mm., terebra 1 mm. Acapulco, México.

Front finely closely striated, except at the orbits which are raised. Hind ocelli in a hollow; they are smaller than the anterior. Face minutely punctured. Eyes coarsely faceted. Occiput transverse; there is a fine furrow in front of its bordering keel. Parapsidal furrows striated; the apex of the middle lobe, irregularly rugose. The metanotum coarsely aciculated at the base, the central area irregularly transversely striated; the sides on the apical slope irregularly longitudinally striated, the striae more regularly defined on the top. Prothorax above with a striated bordered furrow all around; the apex of the propleurae irregularly striated. Mesopleurae aciculated. Metapleurae coarsely, closely rugosely punctured and thickly covered with white pubescence.

1454 *Kareba testacea* sp. nov.

Rufo-testaceous, the antennae and legs pallid testaceous, the former darker towards the apex. wings hyaline, the nervures pale testaceous, the transverse cubitals very faint. Female. Length 2 mm., two-thirds the length of the abdomen. Champerico, Guatemala.

Head and thorax smooth, shining; the mesonotum aciculated; the furrows distinct, roundly curved, irregularly striated, the space between them at the apex irregularly longitudinally striated and transversely more finely, the whole forming irregular reticulations. Median segment finely closely punctate, the narrowed base of the middle area irregularly reticulated, the rest closely transversely striated. On the top of the propleurae is a curved band of distinct striae. Mesopleurae closely, finely punctured; an obliquely irregularly striated depression at the top above; the metapleurae finely, closely, obliquely, striated above, the rest finely rugose. First abdominal segment keeled down the middle, the sides finely striated, the second segment finely, closely, longitudinally striated.

1465 *Opius forticornis* sp. nov.

Black, the oral region, mandibles, palpi, legs and base of abdomen, rufo-testaceous; the wings hyaline; antennae stout, black, the scape testaceous in the middle below. Head smooth and shining, the face sparsely, covered with short pale pubescence. Thorax smooth, shining, parapsidal and mesopleural sutures obsolete, median segment impunctate except at stigma, the centre of the radius curved upwards; the third abscissa twice the length of the basal two united; the first transverse cubital nervure is roundly curved outwardly, the transverse median nervure is clearly received beyond the transverse basal; the basal abscissa of the cubitus is curved. Length 1 mm. Chinandega, Nicaragua.

Similar in size and coloration to *O. iridipennis*, but may be known from it by the absence of the pleural furrow, the curved first transverse cubital nervure, which is also received further from the base of the cubitus, and by the stouter antennae, not testaceous at the base.

1464 *Opius iridipennis* sp. nov.

Black, the bases of antennae, oral region, mandibles, palpi, legs, and the greater part of the second abdominal segment, rufo-testaceous; wings

hyaline, highly iridescent, tinged with violet, the stigma and nervures testaceous. Head smooth and shining, the face and clypeus thickly covered with white pubescence, the face with a smooth line down the centre; a stout keel on the front, and it and the vertex bare. Thorax smooth and shining; the parapsidal furrows indistinct. Mesopleurae with a deep, wide, oblique furrow, rounded and narrowed at the base and apex on the lower part. Median segment thickly covered with long pale hair. Abdomen smooth and shining, bluntly pointed at the apex. Ovipositor distinctly projecting. Antennae much longer than the body, 23-jointed. Stigma stout, lanceolate; the radius issues from the apex of the basal fourth of the stigma; it reaches to the apex of the wing and is slightly curved upwards; it is clearly longer than the basal two united; the second transverse cubital nervure is faint; the second cubital cellule at the apex is not half the length of the base; the recurrent nervure is received shortly beyond the transverse cubital; the transverse median nervure is almost interstitial; the transverse basal nervure is curved and dilated at the apex.

The male has the base of the antennae more broadly testaceous; the face is suffused with fuscous, which is also the case with the median segment, and it appears to be finely punctured; the basal half of the abdomen is testaceous. The ovipositor is as long as the basal two joints of the hind tarsi united. Length 1 mm. Chinandega, Nicaragua.

PROCTOTRUPIDAE.

1441 *Macroteleia rufipes* sp. nov.

Black, the antennal scape, the under side of the narrowed basal part of the flagellum and the legs, red; the apex of the hinder femora broadly infuscated; wings hyaline, the nervures black. Female. Length 3.5 mm. San Marcos, Nicaragua.

The pedicel of the antennae and the first funicular joint each as long as the following two joints united, the club joints clearly broader than long. Front and vertex minutely punctured. Thorax alutaceous; the parapsidal furrows deep, complete, a transverse impression between them at the apex. There is a row of foveae at the apex of the scutellum. Basal segments of abdomen closely, minutely punctured. Pleurae closely minutely punctured, except the depression on the apex of the mesopleurae which is large, deep, smooth and shining. Abdomen three times as long as the thorax, the basal segment not keeled in the middle. Wings hyaline, the nervures black, the stigmal branch with a small knob at the apex; it is about one third shorter than the marginal; the hair fringe around the apex is short, but distinct; the wings reach to the middle of the penultimate segment and are highly iridescent. Tegulae black.

Macroteleia testaceinerva sp. nov.

Black, the antennae to the club, and legs rufous. Wings almost hyaline, the nervures testaceous. Female. Length 4.5 mm. Panama (Coll.?).

Opaque, covered with a white microscopic pubescence. The pedicel and the first funicular joint of the antennae very long, of equal length, the latter as long as the following two joints united, these being subequal and longer than the succeeding joint; the club is stout, clearly separated, the joints, except the last, wider than long, the last conical, longer than wide. Thorax alutaceous, the parapsidal furrows distinct; the scutellum behind with a row of distinct foveae; down its centre is a smooth line, at its apex is a curved rufous keel, behind which are some indistinct depressions. On the metanotum is a central and three lateral keels, the central being the longer, the space between them depressed. Propleurae with a row of large foveae round the apex. Mesopleurae obscurely, irregularly striated, the apex with a large deep depression, deepest in the middle with the sides oblique. Metapleurae irregularly reticulated. The abdomen long, fully four times as long as the thorax, irregularly longitudinally striated, its basal segment keeled down the middle, the striae becoming gradually weaker and are absent from the apical two segments. The wings reach to the middle of the fourth segment; they are ciliated round the apex; the stigmal vein ends in a small knob and is about one-third shorter than the marginal. Tegulae testaceous.

CHALCIDIDAE.

1421 *Spilochalcis spilosoma* sp. nov.

Black, largely marked with red and yellow on the head, thorax and legs, the flagellum of the antennae fulvous, the third to eighth black above, the scape yellow; wings hyaline; the femora with about sixteen small black teeth. Female. Length 3 mm. San Marcos, Nicaragua.

Head rufous, the antennal depression and centre of face black, the outer edge of the antennal depression, the yellow extending to the eyes on the lower half, an oblique triangular mark below each antenna, the hinder edge of the vertex, the line interrupted by the ocelli and by the furrow in the centre, and a line on the upper half of the outer orbits, yellow; the occiput black. Mandibles rufous. Pronotum rufous; three yellow lines in the centre, the lateral longer than the central. Mesonotum rufous, a large transverse mark, with rounded sides, in the centre and a smaller, longer mark compared with its breadth, on the base of the lateral lobes, black. A small squarish mark in the centre at the base, the sides of the middle lobe, the lines broader at the apex and a transverse mark on the sides at the apex, yellow. Scutellum rufous, an interrupted line at its base, a mark on either side at the apex, an indistinct line between them, and the postscutellum, yellow. The notum at its sides black with a yellow mark on the inner side at the base and on the outer at the apex. Metanotum black, with two rufous marks in the center at the base. Pleurae black, a rufous spot under the tegulae and two yellow ones in front of this spot; and there is a large rufous mark in the centre of the mesopleurae. Metapleurae black. Head, pro- and mesonotum, scu-

tellum, and centre of mesopleurae strongly closely punctured. Metanotum reticulated; the base is bordered by a stout transverse keel, behind which in the centre; are three stout longitudinal keels close together; next to this are two large areas divided by a stout keel; they are widest on the outer side. Abdominal petiole short, not much more than twice longer than wide; its sides slightly hollowed, the upper edge broad. The four front tibiae and tarsi are pallid yellow, the femora rufous; hind coxae rufous, black above, the femora rufous, with a black mark in the apex above, bordered behind by a yellow line, basal half of tibiae black, yellow in the middle, the apical half rufous, hind tarsi white.

1419 *Spilochalcis Managuaensis* sp. nov.

Yellow, a line between the ocelli, the centre of occiput, a broad band round the base of the mesonotum, from the outer edge of this a broad line runs along the inner side of the outer lobe of the mesonotum, its apex being obliquely narrowed, from its center a broader band runs to the scutellum, this line being slightly narrowed at the base and apex, a broad line at the base of the scutellum, this line being obliquely narrowed at the sides, where it is united to a short longitudinal line, a broad, longish line, narrowed at base and apex in the centre of scutellum, a mark at the sides of postscutellum, the greater part of the metanotum, four transverse bands (the second much larger than the others) on the back of the abdomen, the apical segments almost entirely, a large somewhat-oval mark in the centre of the hind coxae, a line on the base of the hind tibiae, and a smaller mark opposite it on the tibiae, black. Femoral teeth small, sixteen in number. Wings hyaline. Flagellum of antennae black fuscous below. Abdominal petiole about four times longer than wide, about one third the length of the hind coxae. Metanotum raised in the centre, this part bounded by keels, the base depressed, the apex smooth, raised, flat, the sides depressed at the base, irregularly reticulated. Head smooth. Pro- and mesonotum, with scutellum, closely and strongly punctured, the middle of apex of scutellum transverse, the sides broadly rounded.

1423 *Spilochalcis denticoxis* sp. nov.

Yellow, tinged with rufous, flagellum of antennae, a broad band on the malar space, the depression at the base of mesopleurae, the central depression, metarsternum, a broad line on the underside of the hind coxae, black. Wings hyaline. Female. Length 4 mm. San Marcos, Nicaragua.

Head smooth, the upper half of front on the sides to the fore ocellus closely obliquely striated. Antennal scape dilated above, long, reaching distinctly above the vertex. Mesonotum obscurely, transversely, striated, thickly covered with black hair; scutellum punctured, thickly covered with long black hair, its apex depressed, bordered by a stout keel which curves down in the centre at the apex. Metanotum short, reticulated, the central area longer than broad; rounded behind, transverse at apex, the upper half of the sides depressed, the lower broadly rounded, keeled

on the outer and inner edges. Abdominal petiole hardly half the length of the hinder coxae, which are longer than usual, as long as the femora, and narrowed towards the apex. Femora with about sixteen small, round, black, closely packed teeth, except at the base where they are more widely separated; the basal is large and sharper than the others; on the upper side of the hind coxae at the apex are two teeth, the upper the larger.

1420 *Spilochalcis Segoviae* sp. nov.

Yellow, largely tinged with rufous, the abdomen largely blackish (perhaps discolored), flagellum of antennae and ovipositor sheath black; wings hyaline, a distinct cloud at the stigma; femoral teeth small, black, fourteen in number. Female. Length 5-6 mm. San Marcos, Nicaragua.

Antennal scape slender, reaching above the vertex. Sides of front and vertex shagreened, sparsely, shortly haired; the rest of the head smooth, shining. Mandibular teeth black. Mesonotum and scutellum sparsely covered with black hair, the middle lobe obscurely striated, the lateral striated on the inner side at the apex, the outer punctured. Metanotum reticulated, the basal central area is of equal width throughout and has a strong keel down the centre, the apical is horse-shoe shaped. Abdominal petiole short, about three times longer than broad, about one third the length of the hind coxae, which have a sharp, short tooth on the apex above, followed by two slight tubercles. The antennae are long and slender.

1424 *Spilochalcis Belti* sp. nov.

Pale yellow, the flagellum of antennae brownish, black on top, femoral teeth minute, black, sixteen in number, apex of scutellum rounded, the bordering keel stout, thickened in the middle; abdominal petiole short, about twice longer than broad, about one sixth of the length of the hind coxae, which are distinctly longer than the femora. Metanotum with a central basal keel which bifurcates round the top of the apical slope, the other keels are indistinct. Middle lobe of mesonotum obscurely transversely striated, the scutellum shagreened; both are covered with short white pubescence. Scape of antennae long compared with the flagellum, projecting considerably above the top of the vertex. Ovipositor largely projecting. Length 4 mm. Chinandega, Nicaragua.

1422 *Spilochalcis Marcosensis* sp. nov.

Yellow, rufous above, the flagellum of antennae fuscous, black above; wings hyaline, the nervures fuscous, a small cloud at the stigmal branch; the head and thorax above thickly covered with short fuscous pubescence; abdominal petiole longish, fully half the length of the hind coxae, slender; femoral teeth small, there are eleven clearly separated teeth and three or four united more or less, at the base. Antennal scape slightly curved, the apex almost reaching to the hind ocelli. Pleural sutures marked with black. Mesonotum shagreened; the scutellum finely striated, its apex broadly rounded. Metanotum shagreened; on the apical half is an area in the centre which is somewhat obliquely narrowed above,

where it is united to the base by an indistinct keel; there is a curved indistinct keel on the sides. Male. Length 3 mm. San Marcos, Nicaragua.

1418 *Tetrasmicra Bakeriana* sp. nov.

Yellow, the flagellum rufous, black above, the greater part of the occiput, a broad curved line on the base of the mesonotum, not reaching to the sides, from its centre runs a thick line which becomes gradually, roundly dilated and continued to the scutellum as a thin line; on the sides is a broad line reaching from the base to the apex, straight on the inner side, roundly dilated on the outer side and united to a transverse band on the apex, this being dilated beyond it on the outer side; from it a stout line runs down the scutellum, it becoming roundly dilated at the apex. The sides of the scutellum below, at the tegulae, are black. Legs colored like the body, the hind trochanters, a large mark on the outer side of the hind femora at the apex, a slightly smaller one between the two apical teeth, the teeth, the base of the third abdominal segment broadly, and its sides more narrowly, black. Wings hyaline, the nervures black. Male. Length 6 mm. San Marcos, Nicaragua.

Face and clypeus smooth and shining, sparsely haired, the front and vertex coarsely punctured. Pro- and mesonotum more strongly punctured as also the scutellum; there is a thin plate-like projection on the apex of the latter, with the sides broadly roundly dilated. Metanotum stoutly reticulated. The central two teeth of the hind femora are longer, sharper and thinner than the others, the apical is stouter and much broader at the base; the apical is widely separated from the third and becomes sharper towards the apex. Abdominal petiole two-thirds the length of the hind coxae.

Plagiosmicra gen. nov.

Hind femora armed with four long, sharp-pointed oblique teeth in the centre, two short, stumpy ones at the apex close together and two small, sharp, clearly separated ones at the base. Apex of the scutellum broadly transverse. Antennae 12-jointed, short and thick. Metanotum short, the sides broadly rounded. Abdomen short, bluntly rounded; ovipositor short. Parapsidal furrows complete, clearly defined.

Allied to *Octosmicra* and *Protoceras*, from both of which it may be known by the short bluntly pointed abdomen; from the latter it may further be separated by the complete parapsidal furrows; the former has the apex of the scutellum ending in "an emarginate bidentate plate", cf. Ashmead, Mem. Carnegie Museum, I, 252.

1417 *Plagiosmicra Ashmeadi* sp. nov.

Yellow, the greater part of occiput, a black line in the centre of the mesonotum at the base, prolonged from the outer edge in a curved line to the centre, where the two unite in the centre, and from there are continued as a single line to the outer edges, of similar thickness; there is a short line on the base of the lateral lobes, from which runs to beyond the middle a stout line, which is straight on the innerside; on the outer

side it becomes gradually wider to beyond the middle, then roundly narrowed to the apex, a line on the depression at the base of the scutellum in the middle, a line in the centre of the latter, which becomes gradually wider to the rounded apex, a line in the centre of the basal mesopleural suture, a large broader one in the central, the apex of the hind coxae, their trochanters, a streak in the centre of the hind femora, the femoral teeth and the hinder side of the hind tibiae, black; there is a large brown mark on the femora at the base and apex of the femoral teeth. Flagellum of antennae brown, black above, the scape yellow. Wings hyaline, the nervures black. Female. Length 5 mm. Chinandega, Nicaragua.

Head shining, above covered with black hair. Mesonotum and scutellum strongly closely punctured; the apex of the scutellum depressed behind the keel, marked sparsely with short keels. Metanotum with two regular rows of area, the basal areae broader compared with their length than the apical; the apical slope smooth. Abdominal petiole three times longer than wide, about one third of the length of the hind coxae which are more dilated, broader compared with their length, than usual; they are about half the length of the hind coxae. The third to sixth dorsal segments of the abdomen on the sides bear interrupted black bands, these becoming gradually smaller. Pleurae strongly, but not closely punctured, the mesopleurae end in a sharp point in the centre, the base and apex, from this, have oblique slopes.

Platychalcis gen. nov.

Mesonotum and scutellum flat, on one level; the apex of scutellum rounded, bordered by a row of large foveae, the base separated from the mesonotum by a transverse furrow. Metanotum shorter than the scutellum, with an oblique slope; in its centre is a stout keel which bifurcates shortly beyond the middle. Antennae stout, 13-jointed. Abdomen with a petiole fully four times longer than wide. Four front femora narrowed on the basal half; the hinder greatly thickened, with at least eight small blunt teeth.

The second abdominal segment is as long as the petiole and about half the length of the following segments united. Antennal scape stout, not reaching to the ocelli. Occiput transverse, temples very short, almost obsolete, the eyes reaching very far back. Ocelli large, placed in a curve on the outer edge of the vertex. Eyes large, slightly converging above. Front very little hollowed. The head has not an oblique slope from the vertex to the antennae, being formed more as in *Chalcis*. Parapsidal furrows, narrow, shallow.

In Ashmead's arrangement this genus would come in near *Halticella*. cf. Mem. Carnegie Museum, 255.

1425 **Platychalcis flavicollis** sp. nov.

Black, shining, the inner eye orbits to near the top, the hinder part of the pronotum broadly, two triangular marks on the scutellum, the narrow end at the base, yellow; legs yellow, all the coxae black, the

femora suffused with dark fulvous, the hinder femora black to shortly beyond the middle; hind tibiae dark rufo-testaceous, black below; hind tarsi yellowish. Female. Length nearly 5 mm. Chinandega, Nicaragua.

Face smooth, shining, and projecting in the centre, dilated above and below and with a wide depression on either side of its middle. The apex of the pro- and of the mesonotum with large, scattered punctures, the base of the mesonotum with smaller ones. Scutellum more sparsely and less strongly punctured. Side of metanotum bordered with a stout keel, forming with the central keel a large area narrowed behind. The apical area has a central keel and a shorter keel on either side. The mesopleural depression strongly closely striated; the rest rugosely punctured. Metapleurae bearing closely set large deep round punctures, which are smaller above. The pleurae sparsely covered with white hair.

Flagellum of antennae brownish below, thickly covered with stiff pubescence.

1434 *Megastigmus fulvus* sp. nov.

Fulvous, tinged with yellow; the head metallic green tinged with golden, the face and clypeus, except along the sides golden; legs pale yellow, the hind tibiae blackish, except at the apex; the antennae with the scape yellow, the flagellum blackish, fuscous below; wings clear hyaline, the nervures fuscous. Female. Length slightly over 2 mm.; the ovipositor 2 mm. San Marcos, Nicaragua.

Head closely and strongly punctured, the outer orbits sparsely, indistinctly punctured, sparsely covered with short white glistening pubescence. Thorax smooth and shining; the pleurae more yellowish in tint than the mesonotum; the sternum metallic green as is also the base of the metanotum. The second abdominal segment has two large black marks on the back.

1446 *Syntomaspis purpureomaculata* sp. nov.

Metallic green, largely marked with blue and to a less extent with brassy tints; the antennal scape, the four front tibiae and tarsi testaceous; the hind tibiae dark fuscous except at the base, the outerside dark blue; the hind tibiae white; wings clear hyaline, the nervures fuscous. Female. Length 2 mm., terebra 2.5 mm. Chinandega, Nicaragua.

The head in front and the upper part of the thorax covered with deep, round, clearly separated punctures, as is also the basal division of the scutellum; its hinder part closely punctured. The central part of the pronotum is dark coppery, finely, closely, minutely, transversely striated. The centre of mesopleurae finely, closely striated and with a dark purple stripe down its apex. Metapleurae smooth and shining, dark purple below; the upper part of the propleurae punctured, but less strongly, like the mesonotum; the lower part finely, closely striated. The base of abdomen brown as are also the eyes. Tegulae fuscous.

1451 *Torymus Bakeri* sp. nov.

Dark green, variegated with blue and brassy tints; scape of an-

tennae rufo-testaceous, the tibiae rufo-testaceous, the tarsi white, the hind coxae violaceous, closely punctured; wings clear hyaline, the nervures testaceous. Tegulae dark green. Female. Length 2.5 mm., terebra nearly 2 mm. San Marcos, Nicaragua. But also at Managua, Chinandega, and at Champerico, Guatemala.

Head sparsely covered with longish white hairs each issuing from a puncture. Mandibles dark testaceous, darker at the apex. Mesonotum and scutellum closely minutely punctured; the pro- and meso-pleurae closely but not quite so strongly punctured; the metapleurae smooth. Abdomen smooth, largely marked with green and brassy tints, the apical segments bearing longish white hairs. The Chinandega example is smaller and darker coloured than the others.

Torymus aztecus sp. nov.

Greenish blue, the abdomen for the most part blue, the pleurae largely blue and violaceous, the coxae and femora blue, tinged with green, the tibiae black, the tarsi white; wings hyaline, the nervures black; antennae black, the scape testaceous. Female. Length hardly 2 mm., ovipositor as long as the body. México (Coll?)

Head and upper part of thorax with thimble-like punctures, the thorax more strongly than the head. Pleurae smooth, largely violaceous. Eyes brown. Abdominal segments narrowly banded with black. Tegulae fuscous.

1429 *Perilampus reticulatus* sp. nov.

Head and upper part of the thorax dark brassy, the head and lateral lobes of mesonotum bright fiery red; the pleurae blue, abdomen brassy, tinged with green; legs for the most part green, the tibiae dark green, their base and apex and the tarsi white; wings hyaline, the nervures testaceous; flagellum of antennae black, brownish at the apex. Female. Length 3 mm. Chinandega, Nicaragua.

Face and clypeus dark brassy, the apex of the latter depressed; the lower part of the face with thin oblique striae, extending from the eyes to the clypeus. Frontal depression sharply margined round the edges; the vertex on the sides obliquely striated, the striae somewhat irregular and clearly separated. Pronotum stoutly keeled before and behind, the space between irregularly reticulated, with a central transverse keel. Mesonotum and scutellum closely, regularly reticulated, except the inner side of the lateral lobe of the former which is smooth and fiery red. Scutellum gradually, roundly narrowed to the apex, the lower edge of the latter with a distinct projecting border, and with a shallow, but distinct incision in the middle. Top of metanotum hollowed, bordered above and below and with longitudinal keels, below this is a curved keel forming an area. Pleurae smooth and shining, the meso- with an irregular, curved, crenulated furrow, the metapleurae irregularly rugose. Pubescence dense and white.

1428 *Perilampus laeviceps* sp. nov.

Black, the thorax dark brassy, the pleurae dark blue, the legs dark

green, the knees, tibiae and tarsi testaceous; wings hyaline, the nervures testaceous; antennal scape dark blue, flagellum blackish, fuscous below. Female. Length 2.5 mm. San Marcos, Nicaragua.

Head smooth and shining. Pronotum depressed at the base, the raised apex with numerous longitudinal furrows in the central part, the lateral parts rugosely punctured. Mesonotum and scutellum closely, regularly, rugosely reticulated, the latter more widely than the former. On the upper part of the apex of the propleurae is a fovea, hardly separated from a much larger, deeper pyriform one; on the base of the mesopleurae is a large, deep depression, longer than wide, followed below by two much smaller oval ones; behind is an elongated fovea, followed by three round ones, with another in front. Metanotum stoutly, irregularly reticulated.

1427 *Perilampus albitarsis* sp. nov.

Dark blue, the upper part of the thorax dark brassy; the tibiae black, the tarsi pale testaceous; flagellum of antennae black, wings clear hyaline. Female. Length 3 mm. San Marcos, Nicaragua.

Head smooth, the vertex with a few fine curved striae; the face and orbits covered with white pubescence. Thorax above closely reticulated, except the inner side of the lateral lobe of the mesonotum; scutellum gradually roundly narrowed to the apex, which has, in the middle, a small blue depression. Metanotum smooth, surrounded by a rugose border. Base of propleurae rugose, the hinder part smooth, blue; the apex broadly, deeply depressed and crenulated and with a fovea, rounded at the base, open and slightly narrowed at the apex. Base of mesopleurae with a larger upper, an elongated middle and a smaller round fovea, the middle one being placed behind the others; the hinder region with a curve of deep foveae. Metapleurae bearing large, deep irregular foveae. Legs thickly covered with white hair. Tegulae dark blue. Back of abdomen sparsely covered with erect hairs; the sides and apex are blue.

1430 *Lirata iridicolor* sp. nov.

Black, the thorax bronzy, the abdomen except the petiole and the base of second segment rufo-testaceous; scape of antennae yellow, the flagellum black, fuscous towards the apex; legs testaceous, the coxae and trochanters black; wings hyaline, the stigma black. Female. Length nearly 4 mm. Chinandega, Nicaragua.

Head smooth, shining, the mandibles testaceous. Middle lobe of mesonotum finely transversely striated, the striae widely separated; the apical broken in the middle by a longitudinal furrow; sides of scutellum bordered by a distinct keel, the centre with some fine longitudinal furrows. Scutellar spines reaching almost to the middle of the abdomen, stoutly longitudinally striated, slightly twisted, the apices slightly approximating. Pleurae smooth, the meta- thickly covered with longish white pubescence; the furrow below the tegulae wide, the sides obliquely sloped, the centre furrowed, closely, finely striated. The thorax has a

distinct violet and purple iridescence. Abdominal petiole not much longer than the hind coxae.

1432 *Lirata fulvicornis* sp. nov.

Black, antennae rufo-fulvous, darker towards the apex; the legs yellow, their coxae black; wings hyaline, the nervures black; the apex of abdomen broadly rufous, the petiole somewhat more than twice the length of the hind coxae and longer than the rest of the abdomen. Mandibles dark testaceous, black at the base. Clypeus bronzy, the spines reach to the apex of the abdomen. Male. Length 4 mm. Managua, Nicaragua.

Vertex longitudinally striated, the striae clearly separated; the front less distinctly obliquely striated, as is also the side of the face, its centre more closely and finely striated. The malar space transversely striated, the striae more curved in front than behind; scutellum and metanotum stoutly longitudinally striated. Propleurae densely covered with longish white pubescence; mesopleurae with a long deep depression, extending from the top to the bottom, smooth, the rest irregularly striated; the striae behind the depression united in pairs at the apex, the lower part of metapleurae with two or three large foveae below at the base. Scutellar spines reaching to the apex of the abdomen, stout, striated.

1431 *Lirata sulcifacies* sp. nov.

Black, with a slight violaceous iridescence, the thorax tinged with brassy; scape of antennae fulvous yellow; the legs pale yellow; wings hyaline, the stigma black; scutellar spines curved, their apices slightly turned outwards, stoutly striated; the face with a wide deep furrow down the centre, the sides roundly curved outwardly. Male. Length 2.5 mm. Chinandega, Nicaragua.

Front and vertex finely striated, the striae curved; the face more finely striated on the sides; the malar space sharply obliquely striated. Middle lobe of mesonotum stoutly, widely striated; the lateral smooth; the scutellum similarly, but longitudinally striated, the striae on the latter more curved. Apex of propleurae striated; mesopleurae with an irregular fovea at the base below, the apex not deeply depressed; metapleurae covered with white pubescence. Abdominal petiole more than twice the length of the hind coxae and longer than the rest of the abdomen. A species easily known by having on the face a wide deep furrow, dilated at the apex.

1431 *Lirata nigriventris* sp. nov.

Dark bronzy, the head darker coloured, the abdomen black, slightly violaceous at the base, scape of antennae testaceous; the legs pale yellow; thoracic spines reaching slightly beyond the middle of abdomen; face and clypeus with a broad keel, contracted greatly in the middle, clypeus distinctly margined, the apex transverse in the middle, its sides broadly rounded, the sides slightly bent inward and with a large, longish depression at the top. Mandibles testaceous. Wings hyaline, nervures black. Female. Length nearly 4 mm. Chinandega, Nicaragua.

Head smooth and shining. Middle lobe of mesonotum transversely striated, the striae on the apical half being stronger and more widely separated than those on the basal. Scutellum longitudinally striated, widely and strongly in the centre, more closely and finely on the sides. Metanotum on the centre with two keels which unite beyond the middle, on either side are some keels which converge towards it, and there are a few longitudinal ones on the sides. Pleurae smooth, the base of the mesopleurae indistinctly longitudinally striated; on the lower part of the base of the mesopleurae is a deep vertical fovea followed by a shallow furrow; on either side of this is a fine curved keel, running to its apex. Thoracic spines stout, curved, stoutly keeled, the central keel being the stouter. The apex of the abdomen is broadly testaceous. The front of the thorax, seen from the front, is broadly rounded; abdominal petiole not much longer than the hind coxae. There is a row of foveae in the centre of the mesopleurae above. The third and fourth antennal joints are distinctly longer than the fifth, the third clearly narrowed at the base.

Allied to *L. furcata* and *L. iridicolor*. The former may be known from it by the mesonotum being more distinctly depressed below the pronotum and scutellum and by the latter being clearly bordered on the apex, the latter by the testaceous abdomen, and by the shorter and thicker third and fourth antennal joints.

1435 *Eudecatoma fulva* sp. nov.

Fulvous, the legs and pleurae paler, more yellowish in tint; the wings hyaline, the nervures dark testaceous, the stigmal spot longer than wide and rounded behind. Female. Length 2 mm. Managua, Nicaragua.

Smooth and shining, the flagellum of antennae fuscous. Eyes brown. Antennae short and thick, the pedicel clearly separated, narrowed at the base, twice longer than thick at the apex. The parapsidal furrows narrow. The body is much smoother, almost impunctate as compared with *Decatoma*.

1437 *Eurytoma erythroaspis* sp. nov.

Black, the antennal scape below, face, clypeus, oral region, orbits broadly, narrowly above, and mandibles, except at the apex, yellowish tinged with rufous, propleurae, the apical two-thirds of the mesonotum broadly in the middle and the scutellum except on the apical slope, rufous. Legs pallid yellow. Wings clear hyaline, the nervures pallid testaceous. Male. Length 3 mm. Chinandega, Nicaragua.

Head sparsely covered with longish white hairs; the face and oral region smooth; the front and vertex coarsely shagreened and punctured. Thorax above coarsely and closely punctured, the punctures round and clearly separated, especially in front; on the metanotum they are transverse. Mesopleurae coarsely shagreened, the apex punctured, smooth in front of this and with an elongated, large fovea, narrow in front, becoming widened behind. Metapleurae rugose, thickly covered with white

hair. Antennal hairs longer than usual, nearly as long as the antennal scape, fuscous, the middle joints are irregularly dilated, the last joint conical, not much shorter than the penultimate, which is cylindrical, not dilated and twice the length of the preceding; the latter is not dilated like those behind it.

1450 *Eurytoma xanthopus* sp. nov.

Black, the legs except at the base pale yellow, the hind femora infuscated; scape of antennae pale yellow, the flagellum fuscous, thickly covered with white pubescence; wings clear hyaline, highly iridescent, the nervures pale. Female. Length 2 mm. Champerico, Guatemala.

Head covered with stiff silvery hairs, closely punctured. Basal joints of scutellum shining, bare, longer by one-half than wide, narrowed at base and apex. Pro- and mesonotum closely and strongly punctured; the scutellum is more widely punctured, the punctures almost forming reticulations. Metapleurae thickly covered with long silvery pubescence. Abdomen smooth, shining, the sheaths of the ovipositor largely projecting, clearly projecting beyond the last segment, which is sharply produced and more sharply pointed than usual. Tegulae testaceous. The tarsi are whiter than the rest of the legs.

1443 *Eurytoma pilicornis* sp. nov.

Black, the antennal scape and apex of femora and tibiae rufo-testaceous, the tarsi white. Wings hyaline, the nervures pale testaceous. Flagellum of antennae thickly covered with silvery hairs. Head and thorax closely and strongly punctured, the punctures mostly round and clearly separated. Metanotum strongly aciculated, an impressed line, smooth and shining above, in the middle. Mesopleurae finely, closely, longitudinally striated, smooth above. Female. Length 2 mm. Chinandega, Nicaragua.

Metanotum with an oblique slope. Antennal scape slender, not dilated, flagellum stout, slightly but distinctly dilated towards the apex, the first joint narrowed at the base, distinctly longer than broad, the following as broad as long. Head wider than the thorax. Cubitus curved slightly dilated on the upper part at the apex. Abdomen sharply pointed at the apex, shorter than the thorax, smooth and shining. Tegulae fuscous.

1436 *Tetrastichus basimacula* sp. nov.

Head and thorax rufo-testaceous, the mesonotum in the centre broadly blackish, the pronotum more yellowish in tint; abdomen black, slightly suffused with brownish, the basal segment orange yellow; the third and following joints of the antennae black; legs testaceous; wings hyaline, the nervures testaceous. Female. Length 4 mm. San Marcos, Nicaragua.

Head shining, the ocellar region with a black transverse stripe; the outer ocelli joined to the eyes by a furrow; occiput, except round the edges, and apex of mandibles, black. Along the outer border of the middle lobe of the mesonotum is a crenulated furrow, its central furrow

narrow; parapsidal furrows deep. Scutellar furrows blackish, the lateral narrower but more clearly defined than the central pair. Postcutellum pale orange yellow. Abdomen longer than the head and thorax united, its apex sharply produced. Apex of mesopleurae with a black stripe, the metapleurae with a broader one. The pleurae aciculated, except on the centre of the mesopleurae. The testaceous colour of the head and thorax is tinged with orange.

1444 *Tetrastichus Nicaraguaensis* sp. nov.

Dark green, largely marked with brassy tints; legs testaceous, the coxae and bases of femora broadly dark green; scape of antennae testaceous, the flagellum blackish fuscous; the nervures testaceous. Female. Length nearly 2 mm. Chinandega, Nicaragua.

Antennae stout, thickly covered with white pubescence. There is a distinct curved furrow in front of the ocelli. Inner orbits distinctly margined, punctured, the sides of the face with a deep wide furrow, which curves inwardly below. Oral region fiery red. Thorax closely punctured. Parapsidal furrows wide, deep, bordered on the inner side by some short, transverse furrows; the central furrow narrow; the scutellar furrows bordered outwardly by some transverse ones; the lateral furrows distinct. Metanotum with a stout keel in the centre, a thinner less distinct one either side and two short oblique ones on the outer side in the middle. Pleurae strongly punctured. Abdomen stout, not much longer than the thorax; it is thickly covered with short, white hair.

1439 *Macreupelmus pulchriceps* sp. nov.

Blue, largely marked with coppery and brassy tints on the head and upper part of the thorax; the head more brilliantly coloured than the thorax and having also violaceous tints; the four front legs rufo-testaceous, their coxae brassy blue as are also the hinder pair, the hind femora blue, testaceous at base and apex, the tibiae black, pale testaceous at base, white at the apex; the basal two joints of the hind tarsi white, the others black; the ovipositor as long as the middle tarsi, the extreme apex black, followed by a large white band, which extends slightly beyond the middle, the rest being black; the middle tarsi blackish below, the basal joint closely covered with stiff stout hairs; antennal scape rufo-testaceous, the flagellum black; clypeus with the apex slightly, roundly incised. Female. Length 3.5 mm., terebra 1 mm. San Marcos, Nicaragua.

Antennae longer than the head and thorax united, slender, slightly dilated at the apex; the basal joints of the flagellum metallic blue and dark brassy. Head closely and strongly punctured; the front depressed, roundly but not deeply in the centre; the malar space with a distinct furrow reaching from the eyes to near the apex. Mandibles black, red at the base. The middle lobe of the mesonotum is rounded at the base and becomes gradually narrowed to the apex; the apex of the mesonotum has the sides clearly raised, transverse. Scutellum fiery red, obliquely

narrowed towards the base. Body and legs sparsely covered with white hairs. Wings hyaline, the nervures testaceous.

1440 *Brasema maculipennis* sp. nov.

Dark violaceous, largely marked with brassy, green, and blue tints; the second abdominal segments for the greater part pale yellow; legs black and fuscous, with metallic tints, the fore tibiae and tarsi testaceous, the antennae black, the scape fiery red; wings fuscous, a curved hyaline cloud, narrowed in the middle, behind the stigma, the apical third being also hyaline. Male. Length 3 mm. Managua, Nicaragua.

Head and thorax densely covered with white pubescence and closely punctured, the face with a narrow keel in the centre, the upper half of the malar space furrowed. Lateral lobes of the mesonotum with a broad blue stripe on the inner side. Scutellum dark emerald green, closely, distinctly punctured. Sides of metanotum smooth, shining, blue and green, the centre bronzy. Pleurae smooth and shining. The apical segments of abdomen green. Probably the metallic tints, blue green, violet etc., vary considerably.

1447 *Brasema maculicornis* sp. nov.

Dark violaceous, largely marked with blue, green and brassy tints, the second abdominal segment with a narrow pale yellow band; the antennal scape and the four and fifth joints of the flagellum rufo-testaceous; wings smoky, highly iridescent, the base and an oblique cloud narrowed below at the base of the stigma and another hyaline cloud opposite it. Legs blackish, the knees broadly and the fore tibiae and tarsi testaceous. Female. Length 2.5 mm. Champerico, Guatemala.

Head closely punctured, the eye orbits less strongly punctured than the rest, the malar furrow indistinct; the face with a short smooth keel in the centre. Lateral lobes of mesonotum blue. Scutellum closely punctured, dark emerald green. Pleurae and abdomen smooth and shining. The white abdominal band is broader and more conspicuous on the ventral than on the dorsal surface. Ovipositor testaceous.

Rekabia gen. nov.

Metanotum smooth and shining, a stout middle keel dilated at the base, a narrowed smooth one bordering the sides and a stout, opaque, transverse one on the apex. Antennae apparently 7-jointed, the scape long and slender, the pedicel about three times longer than it is wide at the apex; the joints of the funicle elongate, narrowed at base and apex; the club fully one-half longer than the preceding joint, sharply narrowed at the apex. Mesonotum trilobate, the middle lobe keeled down the centre; at its apex is a transverse keel separating it from the scutellum. Scutellum large, bounded in front by two oblique deep furrows, the sides below by a narrow furrow. Abdominal petiole stout, about twice longer than broad, the second segment is longer than it, the third nearly as long as both united. Occiput transverse, temples almost obsolete, eyes large, the head triangularly produced below them; the apex

of the clypeus rounded; malar space two-thirds the length of the eyes. Wings ample; nervures as in *Entedon*.

Allied to *Pleurotropis*. Except on the mesonotum, which is striated, the whole body is smooth and shining. There is a curved fovea in front of the ocelli, and on either side, close to the eyes, is another fovea from which issues a long hair.

1438 *Rekabia testaceipes* sp. nov.

Black, shining, the antennae, tegulae, and legs rufo-testaceous, the second abdominal segment pale testaceous; the clypeus and mandibles testaceous, more rufous in tint; wings hyaline, the nervures testaceous. Male. Length 2 mm. San Marcos, Nicaragua.

Smooth and shining, except the mesonotum, which is transversely striated on either side of the central furrow. Scutellum closely, minutely, but distinctly punctured. Eyes brown. Abdominal petiole finely, closely rugose.

FOSSORES.

3059 *Rhopalum Nicaraguaense* sp. nov.

Black, scape of antennae, four anterior legs, hind trochanters, base of tibiae, narrowly behind, more broadly in front and the apex of the tibiae narrowly in front, the mandibles, except at the apex, tubercles and tegulae, yellow; wings clear hyaline, the nervures black. Female. Length 4.5 mm. San Marcos, Nicaragua.

Opaque, smooth. Face, clypeus, and outer orbits below thickly covered with silvery pubescence. Eyes very large. Flagellum testaceous below. Pleurae and metanotum thickly covered with silvery pubescence. Metanotal area clearly defined all over by furrows; the metanotum aciculated; the central furrow wide on the apex, the sides clearly margined by a keel. Abdominal petiole as long as the following two segments united; the apical segments testaceous laterally.

This is the smallest known species of *Rhopalum* or *Cnubro*, from Central America. The hind tibiae are greatly dilated and narrowed at the base; they are flattened on the inner side and have there a distinct margin behind; radial cellule wide; the apical abscissa of the radius with a straight, oblique slope.

3054 *Cerceris Chinandagaensis* sp. nov.

Black, the clypeus, lower two-thirds of the inner orbits, antennal keel, antennal scape below, two lines on the pronotum, apical half of scutellum, post-scutellum, outer part of tegulae, a broad band on the apices of the first and second abdominal segments, a narrow line on the sides of the third and a narrow complete one on the apices of the fourth, fifth, and sixth, yellow; the apices of the four front femora, their tibiae and tarsi, the basal half of the hind tibiae and the basal joint of the hind tarsi, yellow. Scape of antennae yellow, of flagellum brownish,

below. Wings hyaline, highly iridescent, tinged with fuscous; the nervures and stigma black. Male. Length 7 mm. Chinandega, Nicaragua.

Head strongly rugosely punctured, almost reticulated on the vertex. Apex of clypeus black, transverse in the middle, the sides rounded. Mandibles with a yellow streak on the basal half above. Metanotal area smooth and shining, a narrow furrow down the centre. Pygidial area aciculated, sparsely punctured, not much narrowed towards the apex; epipygidium with a shallow incision at the apex. Comes near to *C. obsoleta*.

3055 *Cerceris Bakeri* sp. nov.

Black, the clypeus except at the sides and apex, a large mark, rounded on the outside, on the upper inner orbits, touching the eyes, the antennal scape below, two broad lines on the pronotum, the scutellums, the metanotal area, the metanotum except on the furrow, the first abdominal segment, a broad oblique mark extending almost to the apex, the apex of the third segment narrowly, of the fourth more broadly, and of the fifth still more broadly, yellow. The basal five and the apical two joints of the flagellum, brownish rufous below; wings hyaline, the apex broadly smoky, tinged with violaceous, the nervures and stigma black. Legs black; the four anterior tibiae and tarsi in front and the posterior tibiae all round to shortly beyond the middle, yellow. Female. Length 8 mm. Chinandega, Nicaragua.

Clypeus flat, its apex transverse, the sides almost straight. Metanotal area smooth, furrowed down the middle. Head and thorax closely and strongly punctured. Cheeks thickly covered with long pale golden hair. Pleural spine moderately large, black, pale in the centre. Pygidial area irregularly, transversely reticulated in the middle, roundly narrowed at the base and still more narrowed at the apex, the sides curved; epipygial incision fully three times longer than wide, not extending back to the middle. Allied to *C. truncatus* Cam.

3056 *Cerceris cosmiocephala* sp. nov.

Black, face, clypeus, lower half of inner orbits broadly, mandibles except at the apex, two irregular transverse marks behind the ocelli, a mark dilated backwards above on the upper outer orbits, two lines on the pronotum, two irregular marks on the base of the scutellum, two smaller marks on the sides of the post-scutellum, a broad line on the apex of the first abdominal segment, and the following segments except narrowly at the base, lemon-yellow. Scape of antennae yellow below; the basal joints of antennae entirely and the others below, rufous. Four front tibiae and tarsi almost entirely, their femora broadly below and the hind tibiae below, yellow, the hind tarsi rufous, the black on the hind tibiae being also tinged with rufous. Wings hyaline, strongly tinged with smoky fulvous, the stigma and nervures fulvous. Metanotal area smooth, shining, deeply furrowed down the middle, the sides with a narrow border of stout oblique striae. Male. Length 9 mm. San Marcos, Nicaragua.

Clypeus roundly convex, clearly separated laterally, its apex broadly rounded, the sides being also rounded. Thorax strongly and closely punctured. Upper part of mesopleurae roundly dilated and clearly separated from the lower; there is no spine on the lower part. Pygidium broad compared with the length, sparsely and strongly punctured, the apex transverse; the incision shallow, broad, the sides forming stout rufous teeth; the part behind it is flat and separated from the larger basal part. Allied to *C. tepaneca*.

1521 *Polybia spilonota* sp. nov.

Black, the sides of the clypeus broadly, its apex more narrowly, a mark, dilated in the middle, below the middle of the inner orbits, a small mark on the base of the mandibles above, a narrow line around the apex of the pronotum, a mark on the upper half of the mesonotum at the base, longish, irregular, narrowed below and curved backwards at the apex, following the curve of the suture, a mark, wider than long, on the apical half of the mesonotum, its sides at the base prolonged into narrow lines, as long as the mark itself, the scutellum, the greater part of the metanotum, the mark roundly narrowed, laterally at the base, the sides broadly rounded, a broad line on the apex of the first abdominal segments and narrower lines on the apices of the other segments, yellow; the marks on the mesonotum and scutellum with a distinct orange tinge; tarsi brownish beneath; wings hyaline, the costal cellule slightly, the radial distinctly, fuscous violaceous, the stigma dark testaceous. Worker. Length 10 mm. San Marcos, Nicaragua.

Apex of clypeus broadly rounded, the centre slightly projecting into a short, blunt tooth, transverse in the centre, the sides obliquely narrowed. Mandibular teeth rufous. Eyes almost touching the base of the mandibles. A narrow furrow on the front below the ocelli; another above the antennae. A short, distinct furrow on the sides of the mesonotum opposite the tegulae, an indistinct one on the centre at the base and a much more distinct one down the centre of the scutellum. Abdominal petiole longish, fully as long as the second segment, its apex distinctly dilated. Second cubital cellule much narrowed above, as wide there as the space bounded by the two recurrent nervures.

3047 *Paratiphia iridipennis* sp. nov.

Black, densely covered with white hair, the hair on the abdomen tinged with fulvous; labrum and clypeus white; legs thickly covered with white hair; tarsal spines white; wings almost hyaline to the transverse median nervure, beyond that fuscous violaceous, highly iridescent. Male. Length 7 mm. San Marcos, Nicaragua.

Clypeus strongly, but not closely punctured and covered with long white hair. Head strongly and closely punctured, except at the ocelli, thickly covered with long white hair. Mandibles rugose at the base. Basal slope of prothorax smooth, sharply keeled above, behind the keel is a furrow which bears some stout keels; the apex is smooth, the middle closely punctured. Mesonotum shining, closely punctured, the scutellum

more closely and the postscutellum still more closely and finely punctured. In the centre of the base of the metanotum are two areae, longer than wide, divided by a stout keel, the outer edges at the apex rounded and with two irregular oblique keels near the base; next to this is a larger area, which, at the outer basal part, is continuous with a longer, narrower, bounding area, with two stout keels at the spiracles, above the apical slope is a row of deep areae, longer than broad. Propleurae punctured, but not strongly or closely, the apex smooth. Metapleurae smooth at the base, the rest stoutly obliquely striated. Abdomen closely punctured, the segments fringed with pale golden hair. Pygidium strongly punctured, smooth down the centre; epipygium brownish, raised above over the pygidium. The oblique depression on the second ventral segment is bordered above by two curved furrows which unite in the centre. The apical abscissa of the radius is acutely angled below the middle; the second abscissa of the cubitus distinctly shorter than the basal; both the recurrent nervures are received shortly beyond the middle; nervures and stigma black.

3048 *Tiphia testaceipalpis* sp. nov.

Black, the underside and apex of flagellum of antennae rufo-testaceous; mandibles broadly rufous at the apex; palpi testaceous; fore tarsi and tibiae in front rufous; metanotum with two keels; wings hyaline, the nervures black. Male. Length 6.5 mm. San Marcos, Nicaragua.

Head closely punctured, densely covered with silvery hair, the cheeks, face, and clypeus much more densely with long white hair and white pubescence. Pronotum sharply keeled at the base, the apex smooth, the middle closely punctured. Mesonotum with large scattered punctures, the sides bordered by a curved foveate furrow. Scutellum punctured, except in the middle at the base. The centre of the metanotum between the keels smooth, bare, shining, the top and apex of the meta-pleurae strongly, irregularly striated, the striae clearly separated. First segment of abdomen smooth, except for a band of large irregular punctures on the base of the dilated apex; the apex near the end has a transverse, deep, crenulated furrow; there is a broader, more curved, similar furrow on the base of the second. The apical half of the abdomen, as usual, is more thickly haired and more closely and strongly punctured. Comes near to *T. carinata* Cam. and *T. rugosa* Cam. but is much smaller and has only two keels on the metanotum. It is the smallest species known from Central America.