

## Some Neotropical and Oriental Tenthredinoidea (Hym.)

By

RENÉ MALAISE (Stockholm 50)

### *Waldheimia tumida* n.sp.

Black are: head with palpi and antennae, abdomen, and most of the legs; thorax dark reddish yellow with the following parts black: Prosterna, propleura, the narrow anterior margin of pronotum in the middle, the triangular mesonotal middle lobe except possibly its more or less extreme lateral margins, mesosterna, the lower half of mesopleura, metathorax except more or less distinct lateral spots on metanotum. Postscutellum black, but the scutellar appendage reddish brown. The apex of the anterior femora and the anterior side of the front tibiae pale. Wings uniformly blackish infuscated with black venation and stigma. — Head not narrowing behind the eyes, in the ♀ rather distinctly enlarged, impunctate and strongly shining above. Face below ocelli with fine scattered punctures and more or less rugose. The strongly convex postocellar area not reaching a level touching all three ocelli; it is broader than long, the postocellar furrow wanting, and the long and sharp lateral furrows distinctly diverging backwards, faintly and more or less distinctly curved; they are not at all prolonged lateral of the ocelli. The circumocellar furrow complete, broad and deep. The subconvex clypeus more or less distinctly, sometimes rugosely punctured, its anterior margin with an irregular incision in the middle. Malar space of distinct length. The stout antennae as long as head and thorax combined, the four apical antennal joints shorter than joints 4 + 5. The radial part of the 3rd cubital cross-vein strongly bent, and the 3rd cubital cell much longer (on cubitus) than the 1st and 2nd cells combined. The hind metatarsus subequal in length to the following tarsal joints combined. Saw-sheath protruding, narrow, and acutely tapering in dorsal view (Fig. 1, B). Length ♂ 9; ♀ 12–13 mm. (2 ♂, 5 ♀ + 1 fragmentary.) (Type, allotype, and 2 paratype-♀ in Dept. de Zoologia, Sao Paulo.) Brazil, Est. Goyas (Leop. Bulhoes and Campinas).

In my monograph of the genus *Waldheimia* (Arkiv f. Zool. 42 A, nr. 9, 1949) this species would lead to *W. amazonica* (Kirby 1882) from which species the new one differs in a number of ways. In addition  
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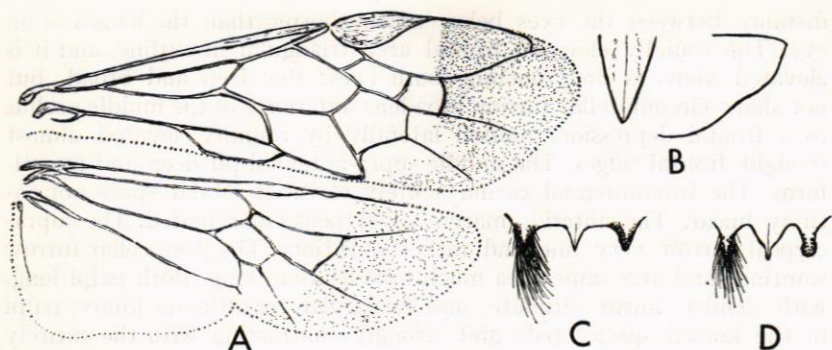


Fig. 1 A. Front and hind wings of *Oigodianeura plaumanni* n. gen., n. sp.  
 B. Saw-sheet of *Waldheimia tumida* n. sp.  
 C. Saw-sheet (in dorsal view) of *Oigodianeura plaumanni* n. sp.  
 D. Saw-sheet of *O. propleuralis* n. sp.

to the smaller size ( $\sigma^3$  6-7,  $\sigma^4$  7-8 mm) *amazonica* has the head strongly narrowing behind the eyes, the lateral furrows of the postocellar area are very short, and the anterior margin of the clypeus is roundly truncate. The colour pattern is almost the same.

#### Genus *Oigodianeura* n. gen.

Belongs to the *Sterictiphorinae* and is closely related to the genus *Hemidianeura* Kirby 1882, from which genus it differs only in the shape of the anellan cell in the hind wings. This cell is closed in *Hemidianeura*, but wanting (not closed) in the new genus (Fig. 1, A).

This character seems in itself rather insignificant, but occurs not only in three different, although mutually closely related species, but it has also previously been used in the generic key to separate eleven genera from the rest. In this key it has proved itself to be a reliable character.

Front wings with a closed and appendiculate radial cell and four distinct cubital cells; the 3rd of these latter cells, as in the genus *Hemidianeura*, shorter on radius than on cubitus. The intercostal cross-vein entirely wanting. Basalis almost straight (only very faintly evenly bent), subparallel to the 2nd recurrent vein, and shorter than the distance on subcosta from it to the base of cubitus. Anal cell broadly contracted, with a distinct basal cell. The hind wings with two closed middle cells, the radial cell becoming obliterate and open at the apex, but the usually closed part of the anellan cell also open at the apex. — Head strongly narrowing behind the eyes. The inner margins of these latter faintly submarginate and strongly converging downwards. The

distance between the eyes below much shorter than the length of an eye. The roundly elevated frontal area triangular in outline, and it is elevated above a line touching both eyes; the deep and broad, but not sharp circumocellar furrow broadens anteriorly of the middle ocellus to a frontal depression, limited laterally by roundly elevated, almost straight frontal ridges. The middle supra-antennal pit deep and punctiform. The interantennal carina acutely elevated. Malar space not entirely linear. The anterior margin of clypeus emarginated. The supra-clypeal furrow very fine and rather indistinct. The postocellar furrow wanting, and the same area much broader than long. Both palpi long, with slender, linear ultimate, and triangular preultimate joints; palpi in the known species pale and strongly contrasting with the entirely black head. The black, or almost black flagellum gradually tapering towards the apex, distinctly but not strongly compressed, and rolled forwards in the ♀. Saw-sheath with acute middle carina and, in dorsal view, the lateral parts subequally long as the middle carina, and somewhat diverging from it (Fig. 1, C and D). — Fulvous; with black markings. Pronotal angles, tegulae, and scutellum pale in the known species. Wings fulvous hyaline, with strongly infuscated apex, costa and stigma fulvous. ♂ unknown. Type of genus: *Hemidianeura coeliaca* Konow 1903.

*Key to the known species.*

1. Venation in the fulvous hyaline basal three fourths of the front wings also fulvous; the infuscation at the apex of the same wings sharply limited basally (Fig. 1, A). Abdomen fulvous with black apex. The hind tarsi entirely black. Saw-sheets (Fig. 1, C and D). 2
- Venation blackish, except for costa and stigma; the infuscation at the apex of the wings diffusely limited. Propleura, mesosternum, mesonotum, and most of mesopleura black; scutellum and a spot beneath the base of the wings pale. Abdomen black, the five basal tergites and sternites pale in the middle. Legs pale, all tarsal claw-joints, and the hind coxae blackish. Length ♀ 7 mm. (Holotype ♀.)  
Brazil, Rio Grande do Sul. *O. coeliaca* (Konow 1903).
2. Propleura entirely pale. Mesonotum with three black longitudinal spots, one on each lobe. Mesosterna with a broad black horizontal band in the upper part (towards mesopleura). The five apical abdominal segments black. Only the apical two fifths of the hind tibiae blackish; the four anterior tarsi infuscated towards the apex. Length ♀ 7 mm. (1 ♀.)  
Brazil, Sta Catharina (Nova Teutonia). *O. plaumanni* n. sp.<sup>1</sup>
- Propleura with black markings (in the shape of a reversed V); thorax otherwise entirely pale, but mesonotum with faint indications of pale fragments of three elongated spots. Only the 7th–9th abdominal segments black. The hind tibiae pale only at the extreme base, and the four anterior metatarsi brownish and the pale colour only indistinctly breaking through. Length ♀ nearly 8 mm. (1 ♀.)  
Brazil, Sao Paulo (Serra da Cantareicia). *O. propleuralis* n. sp.

<sup>1</sup> The name *plaumanni* is given in honour of the German-born naturalist and collector Fritz Plaumann of Nova Teutonia.

Genus *Hemidianeura* Kirby

*Hemidianeura* Kirby, List of Hymen. in the British Museum, Vol. I, London 1882.

The Neotropical genus *Hemidianeura* Kirby belongs to the *Sterictiphorinae* of the *Argidae*.

Wings venation as in Fig. 1, A, but the hind wings with a closed anellan cell. The front wings without intercostal cross-vein, the radial cell appendiculate, more or less distinctly (difference from the subgenus *Manaos* Rohwer 1912). The 3rd of the four cubital cells shorter on radius than on cubitus (The contrary is the rule and separate *Hemidianeura* from the closely related genus *Didymia* Le Peletier 1828). The anal cell broadly contracted. The radiellian cell of the hind wings open at the apex. The inner margins of the eyes converging downwards. The distance between the eyes (below) shorter than the length of an eye. The 3rd antennal joint gradually tapering towards the apex in the ♀, bifurcate in the ♂. Claws simple. Type of genus: *H. nigricornis* Kirby 1882.

Key to the known species:<sup>1</sup>

1. Front wings apically of stigma strikingly darker infuscated than the middle of the wing. At least the two basal tergites pale (fulvous). (Comp. also 7.) 2
- Front wings uniformly infuscated or hyaline, the apex only indistinctly paler. Most of head and abdomen black; thorax, if with pale markings, mostly rufous or fulvous. 5
2. Thorax entirely black; likewise black are: head with antennae, apex of abdomen, the hind tibiae and tarsi. Stigma and costa blackish; the front wings basally with a large, triangular, infuscated spot along the front margin, and covering the entire intercostal- and median cells. The interantennal carina very acute and as highly elevated as its basal width between the antennal sockets. The deep and sharp, behind almost angular circumocellar furrow completely separated from the two lateral parts of the broadly interrupted postocellar furrow. Length ♀ 6–9 mm; ♂ unknown. (5 ♀♀.)  
Brazil, Rio de Janeiro (Corcovado); Sta Catharina (Hansa Humbolt and Nova Bremen). *H. plumicornis* (Klug 1843).<sup>2</sup>
- Thorax pale, with or without black markings, and head black, at least above. In the front wings stigma and costa pale. Antennae more or less pale basally beneath; flagellum flattened and curved anteriorly in the ♀. The interantennal carina strongly elevated and more or less acute. 3
3. Fulvous; head proper entirely black. The broad apex of abdomen black. Apex of the fulvous hyaline wings strongly infuscated. Flagellum hardly tapering in the ♀. Thorax and legs fulvous without black markings; the hind tibiae and tarsi with very pale pubescens. Antennae yellowish brown with long, dense, black hairs. The 3 basal abdominal segments fulvous. Length ♀ 8 mm; ♂ unknown. (After Enderlein and short notes from the type in 1938.)  
Brazil, Espirito Santo. *H. flavicornis* Benson n. nov.

(*apicalis* Enderlein 1919, nec Mocsary 1909).

<sup>1</sup> *Hemidianeura fucata* Konow 1906 has the 3rd cubital cell longer on radius than on cubitus and belongs accordingly not to this genus.

<sup>2</sup> Very like *Didymia elegans* (Klug 1834), but, in this species, the 3rd cubital cell much longer on radius than on cubitus, a black spot also under the stigma, the circumocellar furrow indistinct, etc.

- Face below antennae pale. Base of the wings with black spot. Abdomen fulvous, black are only the two apical segments including saw-sheath or genitalia. 4
4. Base of the wings broadly infuscated. All three mesonotal lobes with a black spot each. Metatarsi pale anteriorly, otherwise black as the apex of all tibiae. The pale supraclypeal area strongly inflated, carinated only in its upper half. The interantennal carina short, but rather high and acute. Malar space not quite linear. Saw-sheath tridentate at the apex in dorsal view, its lateral parts broadly truncate at the apex, each in the shape of an elongate, flat, gently curved slab on each side of the acute, somewhat less protruding middle carina. Length ♀ 7.5 mm. (Notes from holotype.)  
Amazonas (Fonteboa). *H. apicalis* Mocsary 1909.
- Only the extreme base of the wings blackish infuscated like the intercostal area; the infuscation of the apex more brownish. Tarsi entirely black; tibiae likewise, but the pale colour may break through at the extreme base. Mesonotum, or at least the lateral lobes without black spots. The pale supraclypeal area convex, not inflated; the supraclypeal furrow complete. The almost convex postocellar area broader than it is long, as 3:2; the short subparallel lateral furrows equally deep and sharp to their abrupt posterior end; the mutual angular lateral parts of the fine postocellar furrow separately connected with the deeper and broader circumocellar furrow. Saw-sheath rounded in dorsal view, a narrow middle furrow visible only from behind. Length ♂ 6.5-7; ♀ 7.5-9 mm. (Notes from holotype ♀.)  
Amazonas (Santarem); Peru (Changemajo). *H. nigricornis* Kirby 1882.  
Ssp. A triangular spot on the mesonotal middle lobe black. (3 ♀♀.)  
Lower and Upper Amazonas (Obidos and Taracua on Rio Waupés); Guiana.  
*H. nigricornis illisa* Konow 1906.
5. Abdomen entirely black. (Compare also no. 10) 6
- Abdomen more or less pale on the two basal tergites. Testaceous with reddish mesonotum; black are: head above, most of antennae, a spot on the mesonotal middle lobe, a large spot between each mesopleurum and mesosternum, all tarsi, and apex of tibiae. Whitish are: scutellum, labrum, clypeus, the supraclypeal area, scapus with pedicellus beneath, and most of the legs. — The inner margins of the eyes distinctly emarginated. Traces of the acute interantennal carina visible on the inflated supraclypeal area almost to its anterior margin. Supra-antennal pit minute and punctiform. Postocellar area convex, its short and rather sharp lateral furrows give the area an almost triangular general outline. Propodeum faintly chitinized. Saw-sheath very short in dorsal view, with strongly diverging lateral carinas. Length ♀ 6 mm. (Notes from the holotype in Budapest.)  
Peruan Amazonas (Pebas). *H. fuscipennis* Mocsary 1909.
6. The interantennal carina triangularly elevated and distinctly acute. The rather convex postocellar area without middle furrow. 8
- The interantennal carina only roundly elevated, not acute. The pale colour of the legs whitish. The postocellar furrow entirely wanting. Head strongly narrowing behind the eyes. The supra-antennal pit large and deep. 7
7. Only the tarsi somewhat infuscated towards the apex. Malar space linear. Frontal area convex without carinas or other sculpture, except for the complete circumocellar furrow. The postocellar area subconvex, all furrows wanting. Most of mesosternum above, and borders of metasternum black. Whitish are: mouth-parts, underface, scapus, and pedicellus. Length ♀ 3.8-4 mm; ♂ unknown. (From the type in the British Museum.)  
West Indies, Windward Islands, Grenada (Balthazar and Grand Etang, 1900 ft.). *H. thoracica* Ashmead 1900.
- All tarsi and the apex of all tibiae black. Malar space as long as half the diameter of an ocellus. The blunt interantennal carina prolonged into the

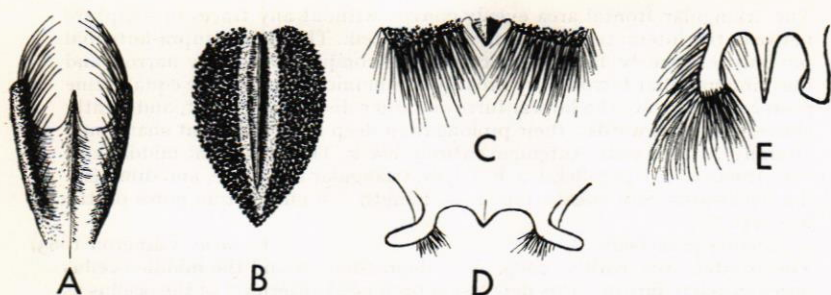


Fig. 2 Saw-sheaths of: A. *Hemidianeura ephippiata* (Klug) seen from below. (From type ♀ of *H. tenebrica* Konow.) B. *H. delta* n.sp. (seen from below) and C. (in dorsal view). D. Sketch of saw-sheath in dorsal view from type of *H. laeta* (Cameron). E. *H. kuscheli* n.sp. (dorsal view).

equally blunt frontal ridges and reaching in a straight line to the lateral ocelli; together they are producing either a capital delta (in the type) or a capital A (in the paratype); in the latter specimen the triangular frontal area has a cross-ridge separating the supra-antennal pit from the ocellar basin. The antennal furrows extremely deep and sharp, especially laterally of the ocelli. The postocellar area strongly slanting backwards, in the middle with a very shallow, but rather distinct longitudinal middle furrow; the lateral furrows not sharp and extremely short. Supraclypeal area subconvex, whitish; mouthparts brown to whitish. A brachiellian cross-vein distinct. — Black are on the reddish thorax: mesopleural episterna almost entirely, the mesonotal middle lobe except for its arrow-shaped posterior apex, a small dot on each mesonotal lateral lobe on the corner of its lateral face, and most of scutellum in the middle. Abdomen black; propodeum reddish and rather membranaceous. Saw-sheath, Fig. 2, B and C. Length ♀ 6 mm. (2 ♀♀.)

Brazil, Sta Catharina (Nova Teutonia).

*H. delta* n. sp.

8. Head at first enlarged behind the eyes, then narrowing. Mesonotum black; testaceous are: pronotum with tegulae, sides of clypeus, palpi, base of abdomen beneath, and legs. Wings hyaline, slightly clouded. — The very highly elevated interantennal carina may be traced to the base of clypeus, backwards it ends very abruptly and steeply towards the elongate middle supra-antennal pit. Further backwards it forks into two roundly elevated frontal carinas, each reaching to a lateral ocellus and together fencing in the triangular frontal area. The thus combined frontal depression and circumocellar furrow merges gradually into the postocellar area behind. This area broader than it is long, as 2:1 (in the ♂), its lateral furrows shallow and indistinct. The postocellar furrow distinct only behind each lateral ocellus, and its two lateral parts separated both mutually and from the frontal depression. — Black are on legs: coxae, trochanters partly, basal half of femora, tips of the hind tibiae and of the 4 anterior tarsi, the entire hind tarsi. Length ♂ 7 mm. (Notes from holotype ♂.)

Mexico (Oajaca).

*H. scapularis* Kirby 1882.

- Head strongly narrowing behind the eyes. Wings strongly infuscated, only faintly infumated towards the apex, if at all. Mesonotum reddish yellow, the middle lobe with or without a black triangular spot. The middle supra-antennal pit quite minute. The broad anterior margin of clypeus pale, at least laterally (*H. laeta*?).

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9. The triangular frontal area evenly convex without any traces of sculpture between the interantennal carina and the ocelli. The middle supra-antennal pit only extremely faintly indicated. The complete, but very narrow and fine circumocellar furrow very broadly communicating with the equally fine postocellar furrow; the lateral furrows rather distinct, straight, and faintly converging backwards; their prolongation deep anteriorly, but sharp only laterally of the ocelli. Antennae entirely black. The mesonotal middle lobe with traces of two parallel, black stripes, triangular in outline, and diminishing backwards. Saw-sheath Fig. 2, D. Length ♀ 6 mm. (From notes on the holotype ♀.)

Panama (San Felix).

*H. laeta* (Cameron 1883)

- The frontal area with a deep, oval depression around the middle ocellus (circumocellar furrow); this depression prolonged anteriorly of the ocellus as far as the diameter of that ocellus. Palpi pale, more or less. Saw-sheath, compare Fig. 2, A.

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10. The postocellar furrow (quite close along the posterior brim of the lateral ocelli) communicating with the frontal depression (circumocellar furrow). The distance between the supra-clypeal furrow and the brim of the antennal sockets distinctly longer than the distance to the anterior margin of clypeus (almost as 2:1). The frontal area just behind the middle supra-antennal pit elevated a little above the tangent touching both eyes. Thorax and abdomen black; reddish yellow are: the broad pronotal angles, tegulae, the triangular parapterum below them, mesonotum, except for a large triangular black spot on the middle lobe. Scutellum black with two lateral reddish spots above. Legs black; a pale fulvous to whitish colour breaking through the black on all knees, trochanters, and the anterior side of tibiae basally. Antennae blackish brown. Length ♀ 7.5 mm. (1 ♀.)

Bolivia (Irupana, Siquiljara 4100-4200 m).

*H. kuscheli* n. sp.<sup>1</sup>

- The ridges around the frontal depression merging evenly into the postocellar area, the postocellar furrow accordingly interrupted in the middle (between the lateral ocelli). The distance between the supra-clypeal furrow and the antennal sockets subequal in length to, or inconsiderably longer than clypeus. The lateral postocellar furrows sharp and subparallel.

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11. Legs white, only tarsi and the apex of the hind tibiae black. Pro- and mesonotum including tegulae, scutellum with appendage, and postscutellum reddish, and likewise most of mesopleura above. The mesonotal middle lobe with a triangular black spot in the type specimen, but wanting in the paratype. The triangular frontal area, behind the furrow-like supra-antennal pit, not elevated enough to reach the tangent touching both eyes. The postocellar lateral furrows distinctly longer than the diameter of an ocellus. Length ♀ 7 mm. (Paratype ♀, compared with type.)

Panama (Volcan Chiriqui, Bugaba, 2-3000 feet).

*H. leucopoda* (Cameron 1883).

- Legs black; the knees and the anterior side of the front tibiae indistinctly whitish. Only mesonotum with tegulae and scutellum reddish; the mesonotal middle lobe with a triangular black spot. The triangular frontal area nowhere below a tangent touching both eyes. The postocellar lateral furrows distinctly shorter than the diameter of an ocellus. Length ♂ 5.5; ♀ 6-7 mm. (Holotype ♂ and ♀ of Klug and Konow respectively; 1 ♀ discoloured, but compared with Kirby's type.)

Surinam; Lower Amazonas (Villa Nova); Fr. Cayenne (St. Laurens du Maroni).

*H. ephippiata* (Klug 1834).

[*bicolor* (Kirby 1882); *tenebrica* Konow 1906].

<sup>1</sup> Named in honour of Dr. G. Kuschel of Santiago, the collector in 1949.

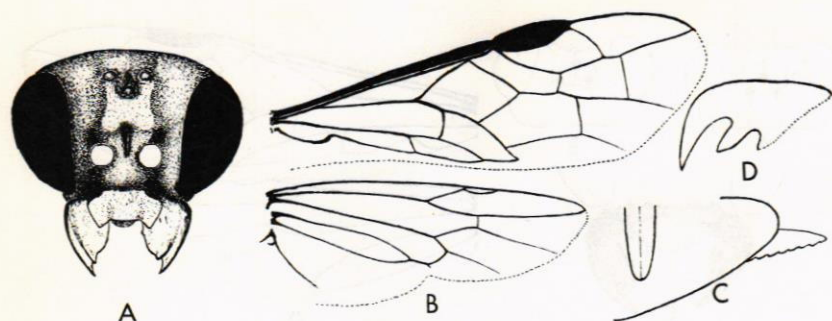


Fig. 3. *Ocla albinigripes* n. gen., n. sp. A. Head with mouth-parts (in frontal view). B. Wing venation. C. Saw-sheath (in dorsal and lateral view). D. Tarsal claw.

### Genus *Ocla* n. gen.

Belongs to the *Selandriinae* and somewhat related to the genera *Parataxonus* Macgillivray and *Mallachiella* m. (1934), but not closely to either of them.

Front wings (Fig. 3, B) with 2 closed radial and 3 cubital cells, the 1st cubital cross-vein wanting. Basalis subparallel to the 1st recurrent vein and meets subcosta immediately before the origin of cubitus. Nervulus only little basad of the middle of the discoidal cell. The anal cell with an oblique cross-vein. The hind wings without closed middle cells and the anellan cell petiolate. Nervellus curved towards the anellan petiole, but almost perpendicular to the brachiellan vein. Head and thorax, except for the clypeus, impunctate and strongly shining, the former roundly, and rather strongly narrowing behind the eyes. The inner margins of the eyes converging downwards. The hind orbits carinate in the lower part. The postocellar area distinctly broader than it is long, almost tectiform, with very fine, not always distinct, roundly curved lateral furrows. Frontal area flattened without lateral ridges. The middle supra-antennal pit punctiform and very deep, more or less distinctly prolonged as a furrow. Clypeus flat, finely punctate, semiopaque, the acute anterior margin with triangular, acute lateral teeth, and is more or less truncate in the middle (Fig. 3, A). Mandibles symmetrical. Malar space almost as long as the diameter of an ocellus in the ♀, somewhat shorter in the ♂. Antennae stout, as long as abdomen, tapering towards the apex and there with sensory organs on the under side; pedicellus as long as it is broad, scapus broader and twice as long as it is broad; the length of the 3rd and 4th antennal joints as 3:2. Thorax normal, mesopleura without praesterna. Propodeum triangularly divided to the basal cross-furrow. Legs normal; the hind metatarsus subequal in length



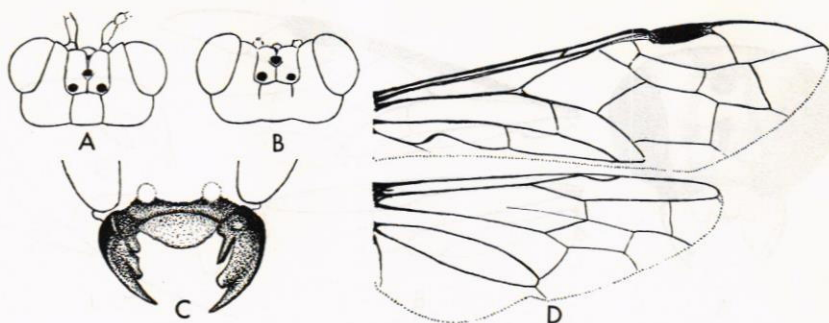


Fig. 4. Head in dorsal view of: A. *Allantidea fumipennis* n. sp. ♂; B. *A. bengalensis* (Cam.) ♂. C. Mouth-parts, and D. wings of *Xenapatidea* n. gen.

to the following tarsal joints combined. Claws (Fig. 3, D) with a subapical tooth. Type: *O. albinigripes* n. sp.

*O. albinigripes* n. sp. Black; legs whitish, black are: all coxae except for the apices; the entire tarsi; all tibiae except for the basal third and a stripe along the outer side of the anterior pair; a broad stripe above along the anterior femora, leaving both ends pale. Saw-sheath (Fig. 3, C). Length ♂♂ 5-6, ♀♀ 6-6.5 mm. (17 ♂♂, 5 ♀♀.)

Burmese Southern Shan States (Taunggyi, 1500 m, and Road 37-40 km East of Taunggyi [Tamsang]).

#### Key to certain Oriental Selandriinae (Allantinae).

Front wings with two radial and four cubital cells (Fig. 4, D). Basal vein subparallel with the first recurrent vein. Anal cell with a long, oblique cross-vein. Radial cell not appendiculate in the front wings, but the radiellian cell sometimes with a distinct appendiculate cell in the hind wings. The hind wings with two closed middle cells. Anellian cell mostly sessile. The left mandible with a free basal tooth (Fig. 4, C). Head strikingly elongate behind the eyes, and the postocellar area longer than it is broad. Malar space linear. Eyes large, the inner margins not, or only faintly converging downwards. Clypeus broadly emarginated.

1. Claws with a subapical tooth lateral of the apical one and in addition to the broad triangular basal lobe. The anal cell of the front wings not constricted towards the base, and its long cross-vein strongly oblique. Scutellum not acute. The hind orbits not carinated. 2
- Claws only with apical tooth and basal lobe. The anellian cell in the hind wings with an appendiculate cell at the apex. 3
2. Propodeum (the first tergite) divided along the middle by a long and narrow seam. The radiellian cell with a distinct appendiculate cell at the apex. (*Monophadnus bengalensis* Cam.)

Bengal; Burma.

Genus *Allantidea* Rohwer 1912.

- Propodeum divided above by a broad, triangular, membranaceous "blotch" to its very base. The radial and the radiellan cells both without appendiculate cell. (*Xenapates affinis* Forsius 1927.)  
Portug. East Africa; Peninsular and Further India; South China.  
Genus *Neoxenapates* Forsius 1934.
3. The hind orbits not carinated. Propodeum without medial seam, as the triangular, membranaceous "blotch" reaching to the very base of the segment. Scutellum subconvex, not acute. The long cross-vein of the anal cell strongly oblique; the constriction of the cell itself variable, from wanting to distinct. (*Dineura africana* Cameron 1876.)  
Africa.  
Genus *Xenapates* Kirby 1882.  
(*Anataxates* Benson 1939.)
- The hind orbits distinctly carinated behind. The triangular, membranaceous "blotch" reaching only half-way to the base of the tergite, then continued by a narrow, longitudinal seam. Scutellum pyramidal, with an acute, longitudinal carina. The anal cell of the front wings distinctly constricted near the base; its cross-vein not strongly oblique, almost perpendicular (Fig. 4, D). (*X. tricolor* n.sp.)  
Tenasserim (Malvedaung 80 km South of Ye), and Burmese Shan States.  
Genus *Xenapatidea* n.sp.

### Genus *Allantidea* Rohwer

Rohwer, S. A., Proc. U. S. Nat. Mus., Vol. 43, p. 208, 1912.

In addition to the characters given in the above key, the following points may be useful in recognizing this genus:

The inner margins of the eyes rather distinctly converging downwards. Pedicellus hardly longer than it is broad at the apex. The anal cell without any trace of contraction before the base. The front wings without any appendiculate cell and the hind wings with a rather large such cell. The horizontal constriction or shallow furrow in the middle of the mesopleura distinct. Colour shining blue-black. Legs whitish; black are: base of all coxae, the apical third of the hind femora and a broad stripe on the inner side of the apex of the remaining four femora, an apical stripe along all tibiae on the inner side, broadening into the entire apical fourth on the hind ones, all tarsi except for a pale stripe on the anterior ones. Type of genus: *Monophadnus bengalensis* Cameron 1876.

Only two closely related species are known. They may be separated with the help of the following key:

1. The hind orbits, when seen from above, at first subparallel immediately behind the eyes in the ♂, almost enlarged in the ♀, then roundly narrowing (Fig. 4, A). Wings uniformly infumated to the base. The lateral furrows of the postocellar area uniformly sharp to the posterior side of the head. Length: ♂ 8.5, ♀ 10 mm. (1 ♂, 1 ♀.)  
Burmese Southern Shan States (Taungdo at the Inle Lake, 900 m).  
*A. junipennis* n.sp.
- The hind orbits, when seen from above, immediately strongly narrowing  
*Entomol. Ts. Arg.* 78. H. 1, 1957

behind the eyes, at least in the ♂ (Fig. 4, B). The apical half of the wings infumated, the basal half clear. The laterel furrows of the postocellar area distinct only half-way to the hind margin of the head. Length: ♂ 8-9, ♀ 14.8 mm.) (2 ♂♂, and notes from type ♀.)

Bengal; Burmese Southern Shan States (Mong Pawn, 1000 m), Northern Shan St. (Maymyo, 1500 m). *A. bengalensis* (Cameron 1876).

### Genus *Neoxenapates* Forsius

*Neoxenapates* Forsius, R., Rev. Zool. Bot. Afric. XXV, 4, p. 403, 1934.

This African genus has hitherto two known species in Asia. In addition to the characters given in the above generic key the following points refer to the two Asiatic species.

Venation as in the genus *Xenapates* Kirby, but in the Asiatic species the radiellian cell (in the hind wings) without appendiculate cell. Head narrowing behind the eyes, like thorax impunctate except for a few very fine and scattered punctures between the eyes above the antennal basis. Frontal area rather flat, laterally limited by the broad, curved antennal furrows, which are interrupted by a blunt cross-ridge above the antennal basis. The curved, and backwards diverging lateral furrows of the postocellar area fine, sharp, and reaching almost to the posterior margin of the head; the postocellar furrow less distinct. The entire head above the antennae resembling that of a *Neostromboceros* Rohwer. Malar space linear. Scutellum subconvex. Mesopleura faintly and very bluntly elevated below. The hind metatarsus longer than the following tarsal joints combined. The front wings with a large blackish spot beneath stigma, darker than the infuscated apex; base of wings from base of stigma clear or hyaline. General colour bluish black; head with antennae entirely so. Type of genus: *Xenapates affinis* Forsius 1927.

The two species from Further India may be separated with the help of the following key:

1. Thorax reddish above; black are: propleura, prosterna, mesosterna, metapleura, and metasterna. Abdomen black; the 2nd and 3rd segments yellowish white. Legs whitish; black are: coxae, the posterior ones towards the base; most of femora, the hind ones sometimes only in the apical half; at least apex of the hind tibiae; tarsi, mostly the front ones pale at the base. Wings clear basally of stigma. Pedicellus longer than it is broad at the apex, as 3:2. The inter- and circumocellar furrows fine and subequally shaped. The postocellar area longer than it is wide at the end of the lateral furrows. Length ♂ 8-9, ♀ 9-11 mm. (Several ♂♂ and ♀♀.)  
Burma, Southern Shan States, Tonkin, S. China. *N. incerta* (Cameron 1876).
- Thorax black; tegulae whitish, only partly infuscated; the depressed parts of meso- and metanotum reddish. Abdomen pale reddish brown, only the three apical segments including the saw-sheath black. Legs black; trochanters; knees; tibiae, except for the apex of the hind ones whitish. Labrum and part of palpi whitish. Base of wings yellowish hyaline. — The postocellar area longer than it is broad, as 5:4. Pedicellus only little longer than it is broad at the apex. (Flagellum missing.) The circumocellar furrow almost wanting behind, but enlarged to a deep pit anteriorly of the ocellus,

larger than the ocellus; the interocellar furrow broad and deep, triangular in cross-section. Length ♀ 12 mm. (1 ♀.)

Cochin China (Mt. de Chaudoc).

*N. cochinsinensis* n. sp.

### Genus *Xenapatidea* n. gen.

Venation of wings (Fig. 4, D) normal for the group, except for the cross-vein of the anal cell that is strikingly less oblique than in related genera. The constriction of the anal cell in the basal fourth may be a variable character? Head large, not narrowing behind the eyes in the ♀, the hind orbits strongly carinated behind, as long as the length of the simultaneously seen eyes in dorsal view. The postocellar area distinctly longer than broad to the end of the sharp and subparallel lateral furrows, much longer, as 3:2, to the posterior end of the head; the area itself with fine and acute longitudinal middle carina in the anterior half. The sharp postocellar furrow straight between the lateral ocelli, then closely following the margin of each ocellus. The inner margins of the eyes subparallel. Frontal area oval in outline, rather flat; the antennal furrows interrupted by a short ridge between the frontal area and the inner orbits. Malar space linear, but distinct. Mouth-parts as in Fig. 4, C. Antennae stout, as long as head and thorax combined; scapus and pedicellus both almost twice as long as they are broad near their respective apex; the length of the 3rd and 4th antennal joints, as 3:2; the gradually tapering four ultimate joints with antennal organs. The mesopleural episterna bluntly pyramidally elevated below. The hind metatarsus distinctly longer than the following tarsal joints combined. Saw-sheath very long, narrow, and gradually tapering towards the apex in dorsal view. Type of genus: *X. tricolor* n. sp.

*X. tricolor* n. sp. Colour black, reddish, and white; black are: head with antennae; metapleura and metasterna; abdomen, except for the 2nd segment entirely and more or less of the 3rd one; all coxae, except for the apex; the base or most of the four anterior femora; more or less the hind femora; the extreme apex of the hind tibiae; more or less of the tarsi towards the apex. In the type specimen scapus, pedicellus, and most of the hind legs fulvous; in the paratype specimen propleura and legs largely infuscated, but the 3rd abdominal segment entirely whitish, as the 2nd one in both specimens. Thorax reddish. Apex of the front wings strongly infuscated, the base is clear; the clear part includes most of the 1st cubital cell, the anterior half of the discoidal cell from the meeting point of cubitus and the 1st cubital cross-vein, and that of basalis with medius. Face between the eyes, including the anterior part of the postocellar area, strongly and rather densely, rugosely punctured with semiopaque lustre; scutellum likewise, but the punctures there larger and less dense, rest of head

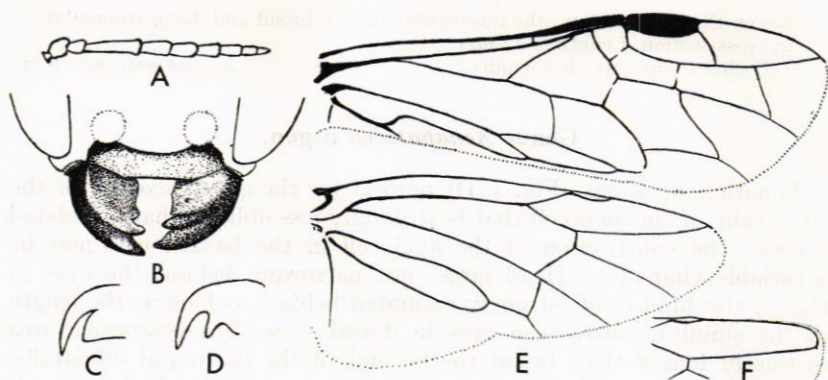


Fig. 5. *Arla carbonaria* n.gen. n.sp. A. Antenna. B. Mouth-parts. C. Tarsal claw. E. Venation of wings. D. Claw of *Endelomyia aethiops* (Fabricius). F. Radiellian cell of *E. aethiops* (Fabr.).

and thorax minutely and indistinctly punctured. In front of the anterior ocellus a large shining spot. Length ♀ 11–12 mm. (2 ♀♀.)

Tenasserim (Malvedaung, 80 km South of Ye); Burmese Southern Shan States.

### Genus *Arla* n.gen.

Belongs to the *Selandriinae* (*Phyllotominae*) and is closely related to the genera *Caliroa* A. Costa and *Endelomyia* Ashmead. These three genera may be separated with the help of the following key:

1. Mesopleura with narrow but distinct praesterna. Pedicellus longer than scapus. Malar space linear. The 2nd recurrent vein straight. The hind wings with one, two, or no closed middle cell in the ♀; sometimes with marginal vein in the ♂. (*C. sebetia* A. Costa = *Tethredo* (*Alantus*) *cinxia* Klug 1814–18.)  
Cosmopolitan (originally from Europe?).  
Genus *Caliroa* A. Costa 1859.  
(*Eriocampoides* Konow 1890; *Periclistoptera* Ashmead 1898.)
- Mesopleura without praesterna. Pedicellus shorter than scapus. Malar space nearly as long as the diameter of an ocellus. Clypeus truncate. The 2nd recurrent vein S-shaped.
2. Claws with a subapical tooth (Fig. 5, D). Head narrowing behind the eyes. The radiellian cell rounded at the apex and with a faint indication of an appendiculate cell (Fig. 5, F). The hind wings with one closed middle cell in both sexes. (*Selandria rosae* Harris 1841 = *Tenthredo aethiops* Fabricius 1781.)  
Holarctic.  
Genus *Endelomyia* Ashmead 1898.
- Claws with a broad triangular basal lobe (Fig. 5, C). Head somewhat enlarged behind the eyes. The hind wings without closed middle cell (Fig. 5, E); the apex of the radiellian cell acute. (*A. carbonaria* n.sp.)  
Tonkin.  
Genus *Arla* n.gen.

*A. carbonaria* n.sp. Entirely black with uniformly infuscated wings. Sturdy built insect. Venation (Fig. 5, E). Antennae stout, shorter than head and thorax combined (Fig. 5, A). Head faintly enlarged behind the eyes in the ♀ (♂ unknown); the hind orbits not carinated. The hardy, and only very minutely punctured postocellar area subconvex, more than twice as broad as it is long, in the anterior half with a broad and rather shallow middle furrow; the sharp and rather deep postocellar furrow evenly roundly curved, the still deeper lateral furrows distinctly diverging backwards. The interocellar furrow broad and deep. The circumocellar furrow triangular in outline. The lateral furrows continue at an angle of about  $120^\circ$  by equally deep, but somewhat less broad antennal furrows on the outer side of each lateral ocellus, and they end abruptly immediately the ocellus is passed, and each becomes then extremely shallow until it reaches the punctiform and rather deep lateral supra-antennal pit. The middle supra-antennal pit broad, large, and irregular in outline. Frontal area roundly elevated, above rather flat, roundly U-shaped in outline, minutely punctured. The supra-clypeal furrow sharp and very deep. Mouth-parts (Fig. 5, B). Scutellum strongly shining, almost flat; with some minute, scattered punctures on the hind apex; thorax otherwise impunctate. Hind legs normal; the hind basitarsus shorter than the following tarsal joints combined. Saw-sheath narrow, and somewhat tapering towards the rounded apex in dorsal view. Length ♀ 8 mm. (1 ♀.)

Tonkin (Chapa).

### Genus *Indotaxonus* n.gen.

Belongs to the *Selandriinae* (*Allantinae*) and is closely related to the Palearctic genus *Taxonus* Hartig 1837, and *Indostegia* Malaise 1934. From *Taxonus* it differs in the long and strongly compressed antennae. In the genus *Indostegia* the apical tooth of the left mandible with a distinct subapical tooth in addition to the large basal one (where it is only broadened in Fig. 6, A), and pedicellus is as long as it is broad at the apex.

Rather slender insects. Front wings with 2 radial, 4 cubital cells, and the anal cell with oblique cross-vein (Fig. 6, C). The hind wings with closed radiellal and anellal cells, the latter not petiolate at the apex. In the ♀ with two closed middle cells (Fig. 6, D); in the ♂ without closed middle cells, but with or without marginal vein, the latter may be more or less complete (Fig. 6, E or F). Antennae long and slender, longer than head and thorax combined, the 4 or 5 apical joints strongly compressed; scapus and pedicellus longer than wide; the 3rd and 4th joints mostly subequal in length (Fig. 6, B). The inner margins of the eyes subparallel. Malar space as long as the diameter of a lateral ocellus. Clypeus with a horizontal convexion; the anterior margin semicircu-

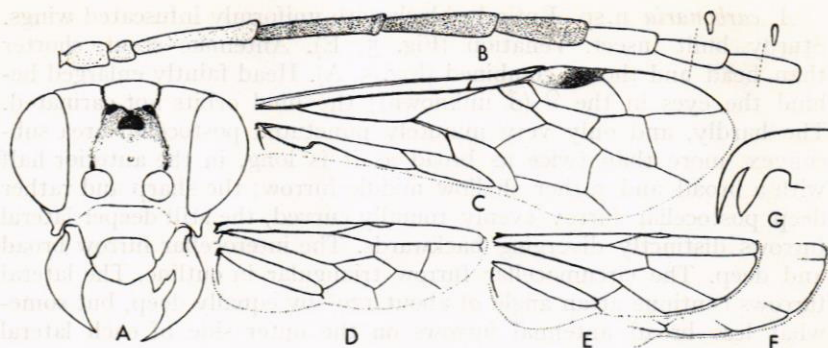


Fig. 6. *Indotaxonus* n.gen. *tricoloricornis* (Konow). A. Head in frontal view. B. Antenna. C. Front wing (♂ or ♀). D. Hind wing of ♀. E. Hind wing of ♂. G. Tarsal claw. F. Marginal vein of hind wing of *Indotaxonus unicolor* n.sp.

larly incised, with blunt and somewhat depressed lateral teeth. Labrum flat, pentagonal in outline. Mandibles strong, the right one simple, the left one with a broad basal tooth. The hind orbits rather long behind the eyes, and there sharply carinated to, but not on the mostly longer than broad postocellar area. The lateral furrows of this area deep and sharp, the postocellar furrow angular, but less pronounced; the interantennal furrow very deep and sharp, anteriorly continued in the also sharp, angularly forking posterior part of the circumocellar furrow. The middle supra-antennal pit deep, almost infundibuliform if not otherwise stated. Scutellum roundly, or more or less distinctly pyramidally elevated, but never really acute. Mesopleural episterna bluntly elevated below, along the middle in the general oblique direction of the episterna a broad band of coarse punctures. Legs normal; the hind basitarsus longer than the following tarsal joints combined. Claws (Fig. 6, G) with a large subapical tooth, broader and shorter than the apical one; a minute basal lobe, concealed and difficult to notice without special preparation. — General colour fulvous with few black and pale yellow markings. Wings yellowish hyaline, hardly infumated towards the apex, venation blackish, except for costa and stigma that are fulvous, the latter sometimes blackish at the apex. Type of genus: *Taxonus tricoloricornis* Konow 1898.

#### Key to the known species.

1. Antennae 3-coloured, viz. the basal joints fulvous, the middle ones black, and the 3 apical ones whitish (Fig. 6, B). All abdominal tergites, except propodeum, with paired blackish spots in the ♀; in the ♂ remains, as a rule, only traces of these spots on the 2nd tergite. Black are: the lower sides of pronotum more or less, a broad stripe on the posterior part of me-

sopleura, and most of metapleura. Scutellum with an oily general lustre owing to rather dense, ill defined punctures. The postocellar area much longer than it is broad; the lateral furrows very deep and sharp in the anterior 3/5ths of their length. Saw-sheath very long and narrow in dorsal view; much longer than its cross-section in lateral view, at the apex rounded with only a faint indication of a corner above.

- Antennae two-coloured; apex black, base fulvous. 2  
4
2. Mesosternum entirely fulvous, and the black spots on the mesonotal lateral lobes only faintly indicated. The basal half of the 4th antennal joint fulvous. The black ocellar spot minute. Only mouth-parts yellow. Mesopleura distinctly shining between the scattered punctures, the distance between these punctures not less than half the diameter of each puncture, but mostly larger. Scutellum roundly elevated, the punctures on the apex distinct and scattered. Large insect, length of ♀ 15 mm; ♂ unknown. (1 ♀.)  
South China. *I. sinensis* n.sp.

- Mesosternum entirely black, the mesonotal lateral lobes each with an elongate black spot, and the 4th antennal joint entirely black. Length maximum 12 mm. Pale yellow are: mouth-parts, the upper margin of pronotum, tegulae, the arrow-shaped hind apex of the mesonotal middle lobe, scutellum, the uppermost corner, the hind margin, and a large spot below on mesopleura, coxae and trochanters partly, anus, abdominal ventrites; all these yellow markings may disappear more or less completely and turn fulvous. The marginal vein of the hind wings in the ♂ incomplete (Fig. 6, E). 3

3. The extremely coarse punctures in the middle of the mesopleura touching one another, i.e. the distance between the single punctures constitute acute ridges. Scutellum only indistinctly pyramidally elevated, the apex extremely blunt, but a blunt transversally curved ridge along the posterior face of scutellum mostly noticeable. Antennae without white in the ♂ and the 6 apical joints accordingly black. Length ♂ 9, ♀ 12 mm. (9 ♂♂, 23 ♀♀.)

Burmese Southern Shan States, Taunggyi, and road 37 km East of it (September–October). *I. shanicus* n.sp.

- The coarse punctures of mesopleura removed from one another a distance of at least half the diameter of the punctures; the ground between the large punctures mostly shining. Scutellum more or less distinctly pyramidal with a faint indication of a blunt apex and a longitudinal ridge. Length ♂ 7.5–8.5; ♀ 10–11.5 mm. (16 ♂♂, 11 ♀♀.)

Himalaya (Simla and Darjeeling), Kahsi Hills (Shillong), Burma (Shan Yoma and Kambait); (all about 2000 m altitude).

*I. tricoloricornis* (Konow 1898).

(*Allomorpha varicornis* Cameron 1899.)

4. ♀♀. Only the 4 apical antennal joints black. 5  
— ♂♂. 7

5. The postocellar area subquadrate or inconsiderably longer than it is broad. The large punctures of mesopleura almost touching one another where they are most dense. Saw-sheath very long, rounded at the apex in lateral view. Black are: the 4 apical antennal joints; an ocellar spot extending anteriorly along the antennal furrows to the antennal sockets, and posteriorly along the postocellar lateral furrows; stripes along the middle of pronotum laterally, along the medial margin of propleura, prosterna, sides of the lateral lobes, stripes along the mesopleural epimaera, mesosterna except for a pale spot in the middle of each, metanotum behind postscutellum, metapleura, sides of hind coxae, paired transverse spots diminishing backwards on at least the 3rd tergite (the 2nd tergite entirely pale). All these markings may be rather insignificant in both sexes and always less noticeable in the ♂. Apex of stigma infuscated in the ♀; almost entirely dark in the ♂. The hind wings



in the ♂ without marginal vein, nor with closed middle cells. Length ♂ 8-9, ♀ 10.5-11 mm. (12 ♂♂, 9 ♀♀.)

Burma (Kambaiti at 2000 m).

*I. immarginervis* n. sp.

- The postocellar area much longer than it is broad, as 3:2. Almost unicoloured fulvous. The mesopleura with distinct shining ground between the punctures. Saw-sheath rather short, triangular in lateral view, with the acute apex terminating the horizontal upper margin. Stigma unicoloured fulvous like costa. 6
- 6. Smaller insect, ♂ 9, ♀ 12 mm. Punctures of mesopleura rather uniform, few and ill defined. Scutellum with a faint indication of a roundly elevated apex. Head and body without any traces of black markings in the ♀. Head distinctly narrowing behind the eyes in the ♂, hardly so in the ♀. Hind wings with complete marginal vein in the ♂ (Fig. 6, F). (1 ♂, 2 ♀♀.)  
Burma (Kambaiti at 2000 m). *I. unicolor* n. sp.
- Large species, ♀ 18 mm; ♂ unknown. Mesopleura with distinct small punctures between the larger ones. Scutellum roundly elevated. Head strongly enlarged behind the eyes in the ♀. The middle supra-antennal pit minute and shallow. Head and thorax with scutellum with fine, uniformly scattered punctures. Black are: an ocellar spot, sides of the lateral mesonotal lobes, a spot along the anterior margin of the mesonotal middle lobe, elongated and ill defined spots on mesopleura in front and behind, metapleura partly, metasterna above, the extreme lateral corners of propodeum anteriorly, and apex of saw-sheath. Wings strongly yellowish hyaline. (1 ♀.)  
South China? *I. major* n. sp.
- 7. The hind wings with marginal vein. 8
- The hind wings without marginal vein. 5
- 8. The marginal vein complete (Fig. 6, F). 6
- The marginal vein incomplete (Fig. 6, E). Not only the 4 apical antennal joints black, but likewise the 6th joint, and more or less of the 5th one. 3