Cicadas spreading by island or by spreading the wings. Historic biogeography of the dundubiine cicadas of the Southeast Asian continent and archipelagos
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Platylomia spinosa group


REVISION OF THE CICADAS OF THE PLATYLOMIA SPINOSA GROUP (HOMOPTERA: CICADIDAE)

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ABSTRACT. The Platylomia spinosa group is recognized for a monophyletic group of nine species of cicadas from the Oriental Region. The group is revised and the genus Champaka is synonymized with the genus Platylomia. Champaka celebensis Distant, 1905, C. viridimaculata (Distant, 1888), and Dundubia aeroia Distant, 1888, are transferred to Platylomia. The other species belonging to the P. spinosa group are P. spinosa (Fabricius, 1787), P. abduUa (Distant, 1881), P. meyeri (Distant, 1883), P. nigra (Distant, 1885), P. virescens Distant, 1905, and P. wallecrei n.sp. All species are found in the Indo-Malayan Archipelago and the Philippines. Four species are synonymized: P. albomaculata (Distant, 1906) with P. nigra, P. distanti (Moulton, 1911) with P. abduUa, P. maculata Liu, 1940 with P. spinosa, and P. majuscula (Distant, 1888) with P. meyeri. Lectotypes are designated for the following species: Cosmopsaltria abduUa, C. nigra, Dundubia majuscula, Platylomia albomaculata, P. virescens, and Tettigonia spinosa. A key to the males and known females is presented and the distributions of the species are discussed.

Key words: Platylomia, spinosa group, phytogeny, taxonomy, new species, new synonyms, Oriental Region, Southeast Asia.

Introduction

The 'Platylomia spinosa group' is recognized as a monophyletic group of nine species of cicadas from the Oriental Region, including P. spinosa (Fabricius, 1787) and related species. In the present paper the group is revised and the relationships within the group are investigated. The group comprises five species that were already placed in Platylomia Stål, 1870, two species that are transferred from Champaka Distant, 1905, one that is transferred from Dundubia Amyot & Serville, 1843, and one that is described for the first time. The genus Champaka is synonymized with Platylomia.

The genus Platylomia was erected by Stål (1870) as a subgenus of Cosmopsaltria Stål, 1866, to accommodate the single species Cicada flavida Guérin-Méneville, 1834. Distant (1905) raised Platylomia to generic level, redefined it and gave a more detailed diagnosis: head as broad as or broader than anterior margin of mesonotum; head as long as or just shorter than distance between eyes; pronotum as long as distance between anterior margin of mesonotum and 'base' of cruciform elevation; lateral margin of pronotal collar always with a tooth that usually is pointed; abdomen much longer than length of head, pronotum and mesonotum; timbal organs completely covered; rostrum just reaching between to beyond posterior coxae; opercula curved to the lateral part of the abdomen, elongate with a proximal constriction and a
rounded or attenuate apex; and tegmina and wings hyaline but often infuscate on veins. As explained previously (Beuk, 1998) this diagnosis allowed a large variety of species to be placed in *Platylomia*. Moreover, several related species were placed in *Platylomia* even though they did not exactly fit this diagnosis.

The genus *Platylomia* is currently placed in the subtribe Dundubiaria of the tribe Dundubiini together with the genera *Orientopsaltria* Kato, 1944; *Dundubia* Amyot & Servile, 1843; *Macrosemia* Kato, 1925; *Meimuna* Distant, 1906; *Haphsa* Distant, 1905; *Ayesha* Distant, 1905; and *Khimbya* Distant, 1905 (Duffels & Van der Laan, 1985). Duffels & Van der Laan (1985) still placed the genus *Champaka* Distant, 1905, in the Leptopsaltriaria. Later Duffels (1991) implicitly suggested that *Champaka* might belong in the Dundubiaria by pointing out the similarity of the *Champaka* species with *Platylomia spinosa* and its relatives. Likewise, it may be possible that other genera currently placed in the Leptopsaltriaria do belong in the Dundubiaria (e.g., *Aola* Distant, 1905; *Sinosemia* Matsumura, 1927). *Platylomia* contains about 35 species (Metcalf, 1963b; Duffels & Van der Laan, 1985; Beuk, 1996, 1998) from the Southeast Asian mainland, the Greater Sunda Islands, Sulawesi, and the Philippines.

The genus as a whole has not yet been subject of a phylogenetic study and it is not clear whether it is monophyletic or not. Nevertheless, some monophyletic groups within *Platylomia* can be recognised, e.g., the *Platylomia radha* group (Beuk, 1998). In the present paper a second monophyletic group, the *P. spinosa* group, is revised. The group at present comprises nine species (including one new) distributed with certainty in the Malaysian Peninsula, the Greater Sunda Islands (Sumatra, Borneo, Java), the Philippines, Sulawesi and possibly in Indo-China. The labelling of a specimen from India is considered doubtful.

This paper is part of a study into the phylogeny and biogeography of *Platylomia* and the other genera of the Dundubiaria.

**Material and Methods**

References in the literature to species treated below were checked whenever possible. Older references were traced using Metcalf (1963a, b) and Duffels & Van der Laan (1985). References that could not be checked are marked with an asterisk (*).

The following abbreviations were used for collections mentioned in the text:

- BMNH: Natural History Museum, London (former British Museum Natural History), London, UK.
- BPBM: Bernice P. Bishop Museum, Honolulu, Hawaii, USA.
- DEI: Deutsches Entomologisches Institut, Eberswalde, Germany.
PAUP 3.1.1 was used to perform the cladistic analysis to study the relationships between the species of the *P. spinosa* group.

Descriptions were made from numerous specimens from collections. It should be noted that pale parts of some species when alive or freshly collected may be green rather than ochraceous or brownish.

Measurements were made using a sliding calliper. Most specimens measured were selected at random or all available specimens were measured but sometimes specimens were selected to include extremes of both ends of the range of variation.

**Phylogeny**

The *Platylomia spinosa* group

The *P. spinosa* group is created to accommodate *P. spinosa* and related species. The features shared by all or almost all species but not necessarily restricted to the group are: head considerably broader than mesonotum; male opercula broadly separated at their bases and their distal parts situated at the lateral part of the abdomen; male abdomen more than twice as long as maximum width of mesonotum; ventral part tergite 7 narrowed posteriorly and indistinctly separated from dorsal part; uncus with distinct ridge from one uncus lobe to the other, encircling the area where the uncus lobes meet medially.

The study of the *P. spinosa* group leads to the following list of species and synonyms: *P. spinosa* [= *T. bispinosa* Gmelin, 1790, and *P. maculata* Liu, 1940: syn. nov.], *P. abdulla* (Distant, 1881) sp. prop. [= *P. distanti* Moulton, 1911: syn. nov.], *P. nigra* (Walker, 1850) [= *P. albomaculata* Distant, 1905: syn. nov.], *P. virescens* Distant, 1905, *P. meyeri* (Distant, 1883) [= *Cosmopsaltria majuscula* Distant, 1889; syn. nov.]: already placed in *Platylomia*; *P. aerata* (Distant, 1888), comb. nov.: transferred from *Dundubia*; *P. celebensis* [= *Champaka maculipennis* Haupt, 1917], *P. viridimaculata* (Distant, 1889) [= *Champaka harveyi* Distant, 1912]: both transferred from *Champaka*; *P. wallacei*, sp. nov.

Within the *P. spinosa* group three clades can be distinguished. The first clade consists of the single species *P. aerata*. *P. aerata* is a rather atypical species of the *P. spinosa* group (virtual absence dark markings on body, absence of markings on tegmina, short rostrum, shape of uncus) but it shares the characteristic posterior narrowing of the ventral part of tergite 7 (character 8 below). Several other characters (positioning opercula, shape abdomen, etc.) are shared with the other species of the *P. spinosa* group but their phylogenetic importance is yet unknown.

The second clade that can be distinguished is the clade with *P. spinosa*, *P. abdulla* and *P. viridimaculata*. In all three species the katapemeral lobe is of intermediate length (character 7 below). *P. viridimaculata* differs from the other two species in several characters (length operculum, pattern of markings on tegmina, shape of uncus lobes) but again their phylogenetic importance is unknown. For example, the shortening of the operculum is a charac-
ter that can also be found in the related *P. celebensis* of the *P. spinosa* group and in more distant relatives like *Meimuna opalifera* (Walker, 1850) and *M. choui* Lei, 1994.

The third clade that can be distinguished comprises *P. nigra*, *P. virescens*, *P. meyeri*, *P. celebensis* and *P. wallacei*. The main characters uniting these species are the presence of lateral fasciae on the mesonotal disc (character 2 below) and the darkening along the lateral margin of the lateral lobes of the pronotal disc (character 5 below). Since these characters show quite a lot of variation within the Dundubiaria their phylogenetic importance must still be established.

**Phylogenetic analysis**

A preliminary phylogenetic analysis was carried out to investigate the relationships within the *P. spinosa* group. Four out-groups were used for this analysis: *Meimuna mongolica* (Distant, 1881), *Platylomia tonkiniana* (Jacobi, 1905), *Platylomia flavida* (Guérin Ménéville, 1834) and *Dundubia vaginata* (Fabricius, 1787). The characters used are discussed below and the matrix is given in Table 1.


The general condition in the Dundubiaria is that the female ovipositor is short, i.e., the ovipositor sheath at most reaches little further than the apex of the caudodorsal beak (as in Fig. 28). In some groups the ovipositor is considerably longer (as in Fig. 67), e.g., in some species of the *P. spinosa* group and some species of *Meimuna* (see, e.g., Hayashi, 1975: Figs. 5-8, 13-16)

2. *Lateral fasciae*. 0: present over full length; 1: absent; 2: present as spots on posterior margin mesonotal disc.

In the Dundubiini the basic pattern of dark markings on the mesonotum consists of a median fascia, a pair of paramedian fasciae and a pair of lateral fasciae. This pattern can be reduced by narrowing or shortening of each of these fasciae. The lateral fasciae can run from the anterior margin to the posterior margin of the mesonotal disc (state 0), although they can be narrowed or interrupted for a short distance near the anterior margin. This condition is found in many species of *Platylomia* and *Meimuna*. The lateral fasciae can be reduced to such an extent that only dark brown to black spots are present on the posterior margin of the disc (state 2; e.g. in *P. flavida* and the species of the *P. sodha* group) or the fasciae can be all together absent (state 1; e.g. in most species of *Dundubia*).


The structure of the uncus lobes in the Dundubiaria ranges from two more or less flat lobes to a rather complex three-dimensional structure. The medial area where the uncus lobes meet at their bases may be surrounded posteriorly by a ridge. This ridge can be high and form a cavity over the part where the aedeagus protrudes between the uncus lobes, the aedeagal opening
(e.g., Figs. 3, 72). In different species and species groups this ridge can be either thick (broad) or thin (narrow). Since it is possible these states are not homologous they are coded separately.

Table 1. Character matrix used in preliminary analysis. The groups named are mentioned in the text. See text for discussion of characters.

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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

4. Position ridge on unicus lobes. 0: absent or only on unicus lobes; 1: ridge extending posteriorly on to basal part unicus.

Generally when the ridge on the unicus is present it only occupies the unicus lobes themselves (as in Fig. 90). Occasionally the ridge extends posteriorly and forms a concavity in the anterior margin of the basal part of the unicus (e.g., Fig. 3).

5. Lateral lobes pronotal disc. 0: black laterally; 1: entirely pale to indistinctly darkened laterally.

The basic pattern of markings on the pronotal disc in the Dundubiini consists of a pair of central fasciae, fasciae across the oblique sutures and darkening on the lateral margin of the lateral lobes. Either of these markings can be reduced. The lateral margin of the lateral lobes usually is dark brown to black (state 0), the darkening occasionally occupies most of the lobe. Sometimes the darkening is strongly reduced to absent (state 1; e.g., in most species of the P. radha group and Dundubia).

6. Central fasciae. 0: two separate black fasciae; 1: absent; 2: fasciae merged to single dark castaneous fascia.

The basic pattern of markings on the pronotal disc in the Dundubiini is briefly discussed above. The central fasciae usually are well developed and black. In some species these fasciae are narrowed or interrupted for some dis-
Platylomia  

Platylomia spinosa group

In some groups (e.g., in many species of Dundubia) the fasciae are entirely absent (state 1). Alternatively, the fasciae can not be distinguished individually but they form a central dark brown fascia on the area that normally would be delimited by the central fasciae (state 2).


The katepimeral lobe is an extending lobe at the posterodorsal corner of the katepimeron and situated at a level between the base of the tegmen and the base of the wing. This lobe can either be long (extending posteriorly towards or even over the base of the operculum; state 0), short (hardly extending posteriorly; state 2) or intermediate (state 1). All states occur in different groups within the Dundubiini that are not necessarily closely related.

8. Tergite 7. 0: ventral part of tergite not narrowing to the posterior and distinctly separated from dorsal part; 1: ventral part of tergite narrowing to the posterior and usually indistinctly separated from dorsal part.

Tergites 3 to 7 are much broader than sternites 3 to 7 and each is curved to join with the corresponding sternite. Consequently, part of the tergite is situated ventrally. Generally this ventral part is equally broad anteriorly and posteriorly in all segments. In the members of the P. spinosa group the ventral part of tergite 7 is narrowed posteriorly. This narrowing is accompanied by the loss of a clear demarcation between the dorsal and ventral parts of this tergite, especially posteriorly. In the Dundubiini the demarcation between the dorsal and ventral parts is usually indicated by a distinct bend, especially on the posterior segments.

9. Posterolateral and posterior spots on pronotal collar. 0: present; 1: absent.

The basic pattern on the pronotal collar in the Dundubiini consists of several pairs of markings, usually an anterolateral pair, a posterolateral pair and a posterior pair (the latter at a level corresponding with the level of the lateral fasciae on the mesonotum). Relative positions and sizes can vary and often all three pairs are present though one may be less distinct. In a number of groups one or more spots are reduced or even absent, for example, in most species of Dundubia all spots are absent (see also Overmeer & Duffels, 1976; Beuk, 1996). The posterolateral and posterior spots are absent in several groups (e.g., P. amicta (Distant, 1889) and relatives, P. radha group, P. spinosa group and nearly all species of Dundubia).

10. Length of male operculum. 0: Operculum long, reaching well beyond posterior margin third abdominal segment; 1: Operculum short, reaching no further than posterior margin third abdominal segment.

In general in the Dundubiaria the male operculum is elongate and clearly reaching beyond the third abdominal segment. Rarely the operculum is short and not reaching beyond the posterior margin of the third abdominal segment and this is the case in P. viridimaculata and P. celebensis.
Fig. 1. Result of a preliminary analysis of the species of the *P. spinosa* group with *M. mongolica*, *P. tonkiniana*, *P. flavida* and *D. vaginata* as out-groups using PAUP 3.1.1 (exhaustive search, ACCTRAN option). State changes are indicated, apomorphies are indicated by closed boxes, homoplasies by open boxes; see Table 1 for the matrix and text for discussion of characters. The tree is depicted with the out-groups at the base. Tree statistics: 2, CI = 0.636, RI = 0.771, RC = 0.491; a, tree 1 of two trees and also strict consensus tree; b, alternative topology of tree 2 for the *P. nigra* clade.
Some conclusions

The preliminary phylogenetic analysis resulted in two equally parsimonious trees (Figs. 1a, b), one of which is identical to the strict consensus tree (Fig. 1a). On the basis of this analysis a few remarks can be made. Within the \textit{P. spinosa} group the clade with \textit{P. aerata} from the Greater Sunda Islands and the Malaysian Peninsula is placed at the base.

The last two clades are sister groups and occurring in non-overlapping geographical areas. The clade with \textit{P. spinosa} is distributed throughout the Greater Sunda Islands, the Malaysian Peninsula, and is found to some extent in Indo-China, the clade with \textit{P. nigra} is distributed throughout the Philippines and Sulawesi.

Since the results are still preliminary and other groups of the subtribe Dundubiaia still need to be analyzed I will refrain from elaborating further on the biogeography.

\textbf{Taxonomy}

\textit{Platylomia} Stål, 1870

\textit{CosmoptaUria} (\textit{Platylomia}) Stål, 1870: 708 [note]. Type species by monotypy: \textit{Dundubia flavida} Guérin-Méneville [= Cicada flavida Guérin-Méneville, 1834: 498, pl. 3 (Fig. 1)].


\textit{Champaha} Distant, 1906: 70, syn. n. Type species by monotypy: \textit{Pomponia viridimaculata} Distant, 1889a: 421.


\textit{Synonymy}: As stated above, Duffels (1991) already pointed out the similarity between \textit{Platylomia spinosa} and related species. He specifically referred to the relatively long abdomen, the broad head, body colour and markings and the structure of the genitalia. The species are indeed very similar in most characters and in addition to this they share the apomorphy of the distally narrowed ventral part of tergite 7. Since the species of \textit{Champaha} and \textit{Platylomia spinosa} and its relatives are considered to be congeneric, \textit{Champaha} is herewith synonymized with \textit{Platylomia}, and the two species of \textit{Champaha} are herewith transferred to \textit{Platylomia}.

\textit{Diagnosis of the Platylomia spinosa group}: Postclypeus globular. Head considerably broader than mesonotum. Head about as long as wide between eyes. Lateral part pronotal collar broad, also anteriorly, and usually distinctly toothed on anterior half. Tegmina usually with markings on the basal veins of the apical cells and with marginal spots on the apices of the longitudinal veins, in some species this pattern is less extensive or absent. Male operculum short and triangular to considerably elongate, reaching from third abdominal segment to beyond apex of abdomen; distal parts opercula generally turned to the lateral part of the abdomen and generally hardly approaching each other beyond constriction; surface of distal part of operculum little convex. Male abdomen more than twice as long as maximum width
mesonotum. Ventral part tergite 7 narrowing posteriorly and there usually indistinctly separated from dorsal part. Uncus usually with distinct ridge from one uncus lobe to the other, encircling the area where the uncus lobes meet medially.

Key to the species of the *Platylomia spinosa* group

Using the key it should be kept in mind that parts coloured brownish or ochraceous to castaneous in dried specimens from collections may have been wholly or partly green when alive. The light-dark pattern should remain largely unaffected by killing and drying.

1. Body greenish to brownish, pronotal suture with dark median spot and posterior margin of pronotal collar black. Tegmina generally without markings, at most basal veins of second and third apical cells slightly infuscate. Female: Ovipositor sheath elongate.................. *aerata*
   -- Body dark or pale greenish to brownish with dark markings. Tegmina always with some dark markings. Female: Ovipositor sheath either elongate or not.................................2

2. Tegmina with dark brown to black markings on basal veins of second and third apical cells, apices of longitudinal veins often with small markings but these markings rapidly becoming less distinct on posterior part tegmina..................................................................................3
   -- Tegmina with more extensive markings, either with additional markings on basal veins of fifth and usually seventh apical cells, with markings on apices of apical cells, or both; in case of additional markings on apices on longitudinal veins these markings also distinct on posterior part tegmina.................................................................4

3. Head and dorsal part of thorax with distinct pattern of black markings on greenish to brownish background. Katepimeral lobe rather short and angular (Fig. 65). Male: Opercula long, extending well beyond posterior margin of fourth abdominal segment, apex usually rounded to angularly rounded. Uncus lobes as in Figs. 59-60, 62. Female: Ovipositor sheath elongate, extending well beyond caudodorsal beak (Fig. 67).............................................................................................................*meyeri*
   -- Head and dorsal part of thorax without distinct pattern of black markings on paler background or, occasionally, only central fasciae on pronotal disc darker, sometimes body completely darkened. Katepimeral lobe relatively long and rounded (Fig. 26). Male: Opercula short, not extending beyond posterior margin of third abdominal segment, apex angularly pointed. Uncus lobes as in Figs. 21-22. Female: Ovipositor sheath not or hardly extending beyond caudodorsal beak (Fig. 28)..................................................................................................................*viridimaculata*

4. Seventh marginal spot on tegmina extending along longitudinal vein towards and often connected with marking on basal vein of seventh apical cell.............................................................................................................5
   -- Seventh marginal spot on tegmina small and not extending along longitudinal vein, reduced or absent........................................................................................................6
5. Mesonotal disc without distinct black median fascia; paramedian fasciae narrow; lateral fasciae broad but usually confined to posterior half of mesonotal disc. Rostrum reaching well beyond posterior margin of hind coxae. Tegmina with markings on basal veins of second, third, fifth and seventh apical cells, that of seventh apical cell extending to margin along posterior longitudinal vein; sometimes only anterior marginal spots dark and distinct. Male: Opercula not reaching beyond posterior margin of third abdominal segment, narrowed distally and apex narrowly rounded. Tergites with median spots of white waxy coating. Uncus lobes as in Figs. 81-82, 84. Female: Unknown.

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**celebensis**

Mesonotal disc with median, paramedian, and lateral fasciae. Rostrum not reaching beyond posterior margin of hind coxae. Tegmina with markings on basal veins of second, third, fifth and seventh apical cells and marginal spots on apices of longitudinal veins, often all markings connected by narrow infuscation along other veins. Male: Opercula not reaching beyond posterior margin of third abdominal segment, broad distally and apex rounded. Tergites without median spots of white waxy coating. Uncus lobes as in Figs. 72-73, 75. Female: Tergites 8 and often 7 with median spot of white waxy coating. Ovipositor sheath not elongate ........................................... wallacei, sp. nov.

6. Male: Opercula usually largely pale ochraceous to greenish, strongly narrowed distally and elongate, apex never rounded and operculum often reaching beyond posterior margin of sixth abdominal segment. Uncus lobes as in Figs. 44-45, 47. Female: Ovipositor sheath reaching just to well beyond caudodorsal beak ........................................... virescens

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**wallacei**

Male: Opercula usually brownish to blackish, when partly ochraceous then rounded at apex; apex rounded to angularly rounded at apex and at most weakly narrowed, or opercula somewhat broadened distally and distal margin then often with narrow gully-shaped lobule at distal margin; operculum never reaching beyond posterior margin of sixth abdominal segment. Female: Ovipositor sheath reaching at most little beyond caudodorsal beak ........................................... 7

7. Dorsal parts of head, pronotum and mesonotum, when not completely darkened, with extensive pattern of dark brown to black markings. Katepimeral lobe usually long. Male: Tergites 1-7 (8) at anterior margins with paramedian spots of white waxy coating, when waxy coating is rubbed off these spots are still visible as dull grey spots on darker background; tergites 3-7 at anterior margin with lateral spots of white waxy coating. Opercula rounded at apex or broadened distally and then distal margin often with gully-shaped lobule. Female: Tergites 2-7 at anterior margins with small and often indistinct spots of white or grey waxy coating but spots may be indistinct, tergite 8 with large paramedian spots of white or grey waxy coating. ...........nigra

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**nigra**

Dorsal parts of head, pronotum and mesonotum, when not completely dark, at most with darkening of central fasciae on pronotal disc and of lateral margin of mesonotal disc, latter darkening may extend an-
teriorly on to pronotal collar. Tergites without spots of white or grey waxy coating but usually covered with greyish hairs. Katepimeral lobe usually shortened

8. Rostrum relatively long, usually reaching beyond posterior margin of hind coxae. Lateral margin of mesonotal disc darkened, this darkening usually extending anteriorly on to pronotal collar towards posterior margin of lateral lobe of pronotal disc; pronotal collar often with very narrow dark median fascia. Markings on basal vein of fifth and seventh apical cells nearly always well developed and occupying whole length of vein. Male: Operculum reaching from halfway fifth abdominal segment to just beyond halfway sixth abdominal segment, distally somewhat narrowed, apex slightly angularly rounded. Uncus lobes as in Figs. 3-4, 6. 

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Rostrum relatively short, usually not reaching further than posterior margin of hind coxae. Lateral part of mesonotal disc not darkened, pronotal collar unicolorous or slightly darkened laterally. Markings on basal vein of fifth and seventh apical cells small and usually not occupying whole length of vein, latter marking sometimes absent. Male: Operculum reaching from about halfway fourth abdominal segment to just beyond halfway fifth abdominal segment, distally hardly narrowed and apex usually smoothly rounded. Uncus lobes as in Figs. 13-14, 16. 

Descriptions of the species

**Platylomia spinosa** (Fabricius, 1787) (Figs. 2-12)


_Tettigonia bispinosa_ [sic!]: Gmelin, 1790: 2099; *Turton, 1802: 578.

_Cicada spinosa_ Olivier, 1790: 758 [748]; Germar, 1830: 1.


_Cosmopsaltria spinosa_; Stål, 1866: 171; Dallas, 1867: 557; Horváth, 1879: cx; Distant, 1883: 187, 193; Atkinson, 1884: 227; Atkinson, 1885a: 23; Atkinson, 1885b: 168; Atkinson, 1886: 168; Distant, 1889b: pl. IV (Figs. 7-7b); Distant, 1890: 62; Breddin, 1900: 176; Jacobi, 1906: 430; Kirkaldy, 1913: 9.

_Cosmopsaltria (Cosmopsisaltria) spinosa_; Stål, 1870: 610, 708.

**Platylomia spinosa**; Distant, 1905: 65; Distant, 1906: 58; Oshanin, 1908: 388; Moulton, 1911a: 142; Oshanin, 1912: 96; Distant, 1912: 48; Distant, 1913b: 42; Matsumura, 1917: 197, 210, 211; Moulton, 1925a: 8; Moulton, 1925b: 58, 68; Moulton, 1925: 434; Singh-Pruthi, 1925: 191, pl. XIX (Fig. 143); Moulton & China, 1926: 121; Kato, 1927: 28; *Kato, 1928: 188; Kato, 1929: 506; Moulton, 1929: 118; Kato, 1931: 58; Lallemand, 1931: 75; Kato, 1932: 166, 328, pl. XXI (Fig. 9); Kato, 1944a: 7, 8; Kato, 1944b: 9; Kato, 1954: 33; Metcalf, 1963b: 626; Duffels & Van der Leen, 1985: 122.

**Platylomia umbrata** nec Distant: Moulton, 1911a: 134, 142 (partim; Borneo); Moulton, 1911b: 184 (as misidentification of _P. spinosa_); Moulton, 1923: 99 (as misidentification of _P. spinosa_).

**Platylomia maculata** Liu, 1940: 115, syn. nov.; Metcalf, 1963b: 621.

Not:

_Dundubia spinosa_; Walker, 1850: 47; Dohrn, 1859: 72 (= _P. nigra_; see Distant, 1883).
Platylomia umbrata: Moulton, 1911a: 142 (partim; Burma, Assam, Sikkim) (= P. umbrata).

**General remarks:** It has been unclear for a long time whether the material under the name *P. spinosa* comprise one or two species. Distant (1883) first was of the opinion that there was only one species. He described *P. abdulla* (Distant, 1881) because he thought the species was undescribed but comparison of his *P. abdulla* with the type of *P. spinosa* in the BMNH led him to believe they belonged to a single species. Moulton (1911b) found specimens of a species close to *P. spinosa* which he described as *P. distanti* after Distant informed Moulton that the species was unknown to him. Later Moulton (1923) reconsidered and synonymized *P. distanti* with *P. spinosa* after examining more material and finding specimens that were intermediate for the characters he used to separate the two species. Closer examination now shows that indeed two species can be distinguished. Both species prove to be quite variable in some characters and the variation partly overlaps. The characters given by Moulton (1923) generally suffice to separate the species but, as Moulton already stated, intermediates for these characters exist. However, additional characters are available. For example, contrary to Moulton’s (1923: 100) statement that the genitalia do not differ, there are differences in the shape of the uncus lobes between the two species.

*P. spinosa* is a variable species that is widespread on the Malay Peninsula and the northwestern Indo-Malaysian Archipelago. This species much resembles *P. abdulla*, *P. viridimaculata*, and *P. celebensis*. The characters to distinguish *P. spinosa* from *P. abdulla* are given in Table 2. *P. spinosa* can easily be distinguished from *P. viridimaculata* by the more extensive markings on the tegmina, by the shape of the male opercula (much shorter and triangular in *P. viridimaculata*), and by the shape of the uncus lobes (narrower and irregularly two-tipped distally in *P. viridimaculata*). *P. spinosa* can most easily be distinguished from *P. celebensis* by the shape of the seventh marginal spot on the tegmina (extending along longitudinal vein in *P. celebensis*) and by the shape of the male operculum (shorter and triangular in *P. celebensis*).

**Type material and lectotype designation:** The type material of *T. spinosa* consists of a single male from ‘Sumatra’ in the Banks Collection at the BMNH. Since it is not clear from the original description whether more material was available this specimen is herewith designated as lectotype.

*T. bispinosa* was listed by Gmelin (1790) with direct reference to Fabricius’ *T. spinosa* and represents a wrong quotation and not a newly described species.

The holotype of *P. maculata* is a single male supposedly from India at the MCZ with the following labels: ‘Platylomia / maculata / sp.n.’ [handwritten in red double square], ‘Tumlong / Sikkim / F. Schneider’ [printed], ‘Collection o / Frederick / Allen Eddy’ [printed], ‘M.C.Z. / Type’ [printed on red label]. Liu (1940) mentioned two other specimens that may belong to his *P. maculata* (a male from Langkat, Sumatra, and a female from Baran River, Borneo). These
specimens were not present in the MCZ collection but there was a female of *P. spinosa* labelled as *Platylomia* near *maculata* from Langkat that also fits Liu's description. It is possible that Liu made a mistake in citing this specimen as a male.

Table 2. Characters for separating *P. spinosa* and *P. abdulla*

<table>
<thead>
<tr>
<th></th>
<th><em>Platylomia spinosa</em></th>
<th><em>Platylomia abdulla</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rostrum</strong></td>
<td>Reaching beyond posterior margin hind coxae</td>
<td>Not reaching beyond posterior margin hind coxae</td>
</tr>
<tr>
<td><strong>Markings thorax</strong></td>
<td>Pronotal collar frequently with very narrow darker median fascia. Lateral margin mesonotal disc generally with darker fascia that usually extends on to pronotal collar.</td>
<td>Pronotal collar rarely with very narrow darker median fascia. Lateral margin mesonotal disc without darker fascia.</td>
</tr>
<tr>
<td><strong>Length operculum</strong></td>
<td>Always reaching further than halfway fifth abdominal segment but generally reaching beyond posterior margin of fifth abdominal segment</td>
<td>Reaching no further than halfway fifth abdominal segment</td>
</tr>
<tr>
<td><strong>Shape apex operculum</strong></td>
<td>Somewhat narrowed and more angularly rounded</td>
<td>Hardly narrowed and more rounded</td>
</tr>
<tr>
<td><strong>Markings tegmina</strong></td>
<td>Basal veins of fifth and seventh apical cells generally with markings over total length</td>
<td>Basal veins of fifth and seventh apical cells generally with small markings or markings even absent</td>
</tr>
<tr>
<td><strong>Basal cell</strong></td>
<td>Usually yellowish to brownish infuscated, occasionally dark brown</td>
<td>Usually dark brown infuscated, occasionally yellowish to brownish</td>
</tr>
<tr>
<td><strong>Uncus lobes</strong></td>
<td>Laterodistal corners more or less directed laterad</td>
<td>Laterodistal corners more or less directed anteriorly</td>
</tr>
</tbody>
</table>
Synonymy: Examination of the lectotype of *P. spinosa* and the holotype of *P. maculata* showed that the specimens are conspecific and differ only in characters that fall within the specific variation of these characters. *P. maculata* is herewith synonymized with *P. spinosa*.

Description: Body brown to castaneous, head and thorax sometimes with greenish tinge, central fasciae on pronotal disc and paramedian fasciae on mesonotum usually brownish and often indistinct, pronotal collar usually with dark fasciae from lateral lobe of disc to posterior margin of collar, tegmina with markings on basal veins of second, third, fifth, and seventh apical cells, and on apices of longitudinal veins of apical cells. Male opercula somewhat narrowed towards apex, apex angularly rounded. Female ovipositor short.

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Fig. 2. *Platylomia spinosa*: male, dorsal view (Mt. Dempo).

Head: Postclypeus brown to castaneous, anteromedial spot and transverse band just below anteromedial spot paler; postclypeus little to distinctly swollen, in dorsal view just longer than distance between frontoclypeal suture and anterior margin of pronotum. Anteclypeus castaneous. Vertex brownish, area of ocelli more castaneous (Fig. 2). Genae brown with castaneous transverse band ventral of antennae and lori concolorous with adjoining parts of postclypeus: ventral part of head thus with paler transverse band across postclypeus and lori. Frontoclypeal suture rounded to trapezoid, median part narrower to broader than distance between lateral margins of lateral ocelli. Rostrum brown, dark castaneous at tip; reaching beyond posterior margin hind coxae but never further than ridge on sternite 2.

Thorax (Fig. 2): Pronotum slightly narrower to distinctly broader than head, broadest part either at lateral margin of pronotal collar or at lateral tooth. Pronotal disc brown to castaneous, when brown often with darker cen-
central fasciae that meet anteriorly and posteriorly, and occasionally partly with greenish tinge; lateral lobes of disc often with darker fasciae. Pronotal collar paler than pronotal disc and often medially with narrow dark fascia and dark broad fasciae between lateral lobes of disc and anterolateral corners of mesonotum; posterior margin of collar black except on posterolateral corners; anterolateral corner angular with distinct lateral tooth. Mesonotum brownish to castaneous; median fascia usually not distinct; mesonotal fissures and narrow fasciae from fissures to anterior arms of cruciform elevation paler; paramedian fasciae absent; lateral fasciae usually present and castaneous, connected with fasciae on posterior part of pronotal collar; cruciform elevation concolorous with mesonotal fissures. Mesonotal disc sometimes densely covered with short pale hairs, especially anterior of cruciform elevation; depressions between anterior and posterior arms of cruciform elevation occasionally with waxy coating. Katepimeral lobe (Figs. 10-11) short and slightly triangular to very short and rounded, when slightly triangular apex rounded. Surface of katepimeral lobe covered with short hairs and with dense fringe of long fine hairs at posterior margin. Apex never reaching base of operculum.

Tegmina and wings (Fig. 2): Tegmina hyaline but sometimes slightly brownish or greyish; distal margin and occasionally apical cells with dark reticulation; basal cell yellowish to brownish fumose on anterior half to three quarters, sometimes rather greenish; basal veins of second, third, fifth, and seventh apical cells with dark brown to blackish markings, those of second and third apical cells, and often also fifth, connected along longitudinal veins; apices of longitudinal veins of apical cells usually all with rounded markings, posterior markings occasionally faint. Veins of tegmen dark brown, either with or without paler parts on longitudinal veins; clavus black. Wings clear to slightly brownish or yellowish hyaline. Veins of wings brownish, medial vein and second cubital vein darkened; clavus pale but anterior part blackish.

Legs: Fore legs dark brown; apex of coxae and broad ring on basal half of femora paler brown. Mid legs dark brown; femora ventrally on basal half and narrowly at apex paler brown; tibiae paler brown on basal half except at joints with femora. Hind legs brown; femora dark brown dorsally and on apical half; tibiae with dark brown basal ring and slightly darkened near apex. Fore femur posteroventrally with middle spine broadened at base and thus somewhat triangular, more stout and usually longer than proximal spine, proximal spine occasionally also broadened at base; distal spine distinct and triangular, either blunt or pointed; gap between middle and distal spines deep and narrow.

Male. Operculum (Figs. 7-8): Operculum rather variable in shape; reaching from halfway fifth to just beyond halfway sixth abdominal segment, rarely shorter, 2.6-3.1 times as long as maximum width distal of constriction; pale to dark brown, occasionally with greenish tinge, lateroproximal corner broadly castaneous. Medial margin distal of constriction convex to apex but often almost straight for some distance close to apex. Apex rounded to angularly rounded, at or medial of midline. Lateral margin distal of constriction convex to apex. Constriction at 0.3-0.4 of length of operculum, lateral con-
cavity deeper and slightly longer than medial concavity, broadest part of operculum distal of constriction 1.4-1.6 times as wide as minimum width at constriction. Opercula divergent or slightly convergent, if convergent distance between opercula at constrictions 1.8-2.4 times as wide as minimum width at constriction and opercula at point of closest approximation separated for a distance of 0.9-1.0 times maximum width between opercula at constrictions. Operculum close to abdomen and turned towards lateral margin of abdomen so with slight twist at level of constriction; surface little convex in longitudinal direction, surface little more convex in transverse direction, lateral margin curved around abdomen.

**Abdomen (Fig. 2):** Abdomen about 1.1-1.4 times as long as head and thorax together. Dorsal part of tergites brown to castaneous and often densely covered with short hairs, hairs mostly whitish but castaneous on six longitudinal lines: one central pair, one paramedian pair and one lateral pair, paramedian and lateral lines merging on tergite 6; tergites 3-6 often with small dark spots near lateral margin but spots may be covered by hairs; sternites and ventral part of tergites slightly paler than dorsal part of tergites. Posterior margin of tergite 7 with many slender dark spinules along whole length, posterior margins of tergites 5-6 with spinules along whole length but very few medially. Sternite 7 with posteromedialemargination very shallow or absent. Timbal covering (Fig. 9) brown to castaneous, sometimes with greenish tinge, about 1.1-1.3 times as broad as long; medial margin short and convex; mediodistal corner and distal margin broadly rounded; laterodistal corner rounded; lateral margin weakly convex to straight.

**Genitalia (Figs. 3-6):** Brown to castaneous; ventral part of pygofer and distal part of uncus lobes paler. Basal pygofer lobes narrow and raised, rounded in lateral view (Figs. 3-4); hairs on anteroventral margin of pygofer erect, decreasing in length from medial part towards pygofer lobes; continuing on medial strip and along posterior margin of pygofer surface enclosed by anteroventral margin; pygofer surface anterior of medial part of anteroventral margin with scattered hairs and to posterior margin, close to posterior margin interspersed with long hairs. Dorsal part of pygofer as in Fig. 5. Basal part of uncus short and broad, formed as narrow strip along bases of uncus lobes and slightly undulating medially (Figs. 3-4); laterobasal part with scattered long hairs. Uncus lobes (Figs. 3, 6) broad; medial margin weakly concave and curved inwards; mediodistal corner rounded; distal margin straight to weakly concave; laterodistal corner rounded and almost directed laterad; lateral margin concave. Outer surface of each uncus lobes with ridge running posteriorly from close to medial margin halfway uncus lobe to posterior of aedeagal opening, ridge rapidly increasing in height posteriorly and forming concavity over aedeagal opening. Outer and inner surfaces of uncus lobes with scattered hairs, short on distal part, long near bases of uncus lobes; medioproximal corners with dense patch of short hairs.

**Female.** Operculum reaching beyond anterior margin of third abdominal segment but no further than one third of segment length, curved around abdomen laterally; brown, occasionally with greenish tinge, lateroproximal cor-
ner broadly castaneous. Lateral margin distal of lateroproximal lobe weakly convex; laterodistal corner rounded to angularly rounded; distal margin weakly convex; mediodistal corner and medial margin rounded.

Figs. 3-6. Platylomia spinosa male (Keningau-Kimanis): 3, genitalia, ventral view; 4, genitalia, lateroventral view; 5, genitalia, dorsal view; 6, uncus, anterior view.
Abdomen: Abdomen about 0.9-1.0 times as long as head and thorax together. Colour and hairs as in male. Posterior margins of tergites 4-7 with slender dark spinules, spinules decreasing in number both towards medial part of margins and on each more anterior tergite, so that spinules are absent from medial part of tergites 4-5 and sometimes from tergite 6; posterior margin of tergite 8 with few scattered short spinules medially. Sternite 7 with rounded posteromedial emargination.

Figs. 7-11. Platylomia spinosa male: 7, operculum, right, lateroventral view (Rampayoh R.); 8, operculum, right, lateroventral view (Brunei); 9, timbal covering, right (Mt Dempo); 10, katepimeral lobe, right (Tawau); 11, katepimeral lobe, right (Bindjey).

Genitalia: Pygofer brownish to castaneous, darker dorsally on anterior half except medially and darker along posterior margin and on caudodorsal beak; distal part of ovipositor sheath brown to dark castaneous. Dorsal length of pygofer about equal to length of tergites 7-8 together or longer, in lateral view weakly concave; ventral margin convex; ventrodistal corners angular. Ovipositor sheath reaching as far as apex of caudodorsal beak or slightly beyond; anal valve not reaching as far as apex of caudodorsal beak.

Measurements in mm (♂: n = 10; ♀: n = 9). Body length: ♂: 43.5-60.0 (49.7 ± 3.3), ♀: 43.0-53.0 (47.9 ± 3.1); head width: ♂: 14.8-17.8 (15.7 ± 0.8), ♀: 15.6-18.1 (16.8 ± 0.8); maximum pronotum width: ♂: 15.1-19.8 (16.8 ±
1.0), $Q$: 16.1-19.6 (17.9 ± 0.9); tegmen length: $\sigma^*$: 52.5-63.0 (56.8 ± 2.6), $Q$: 57.5-67.5 (62.4 ± 3.6).

**Specimens examined:** THAILAND: Ban Tong, 9.iv.1920, R.V. de Salvaza, 1$\sigma^*$, BMNH; Phu Khieo, Chaiyaphum [Chaiyaphum] District, N.E. Thailand, 800 m, 2-4.v.1986, M.G. Allen, 1$\sigma^*$, BMNH.

WEST MALAYSIA: Bukit Kutu, 3300 ft, A.R. Sanderson, 11$\sigma^*$, 1$Q^*$, BMNH; same data, 1920-1925, 2$\sigma^*$, BMNH; Bukit Kutu, 1920-1925, 1$Q^*$, BMNH; same data, iv.1929, A.R. Sanderson, 5$\sigma^*$, BMNH; Bukit Kutu, iii.1931, A. S. Corbet, 2$\sigma^*$, 1$Q^*$, BMNH; Bukit Kutu, Selangor, 3500 ft, 14.iii.1931, H.M. Pendlebury, 1$\sigma^*$, BMNH; same data, at light, 1$\sigma^*$, BMNH; same data, 21.iii.1931, at light, 1$\sigma^*$, BMNH; Cameron Highlands [Cameron Highlands], iii.1978, 1$\sigma^*$, 1$Q^*$, SUU; Cameron Highlands, 18-19.iii.1966, J. & M. Sedlacek, light trap, 1$\sigma^*$, BPBM; Cameron-Highlands [Cameron Highlands], 1970, 1$\sigma^*$, SUU; same data, 1976, K.C. Liew, 1$\sigma^*$, SUU; Cameron Highlands [Cameron Highlands], 1975, 5$\sigma^*$, SUU; Cameron Highlands [Cameron Highlands], 18.iv.1972, Chua, 1$Q^*$, BMNH; Cape Rachado [Tanjung Tuan] lighthouse, x.1920, S. Harding, 3$\sigma^*$, 1$Q^*$, BMNH; Fraser’s Hill [Bukit Fraser], 1300 m, 16.iii.1966, J. & M. Sedlacek, M.V. light trap, 1$\sigma^*$, BPBM; Fraser’s Hill [Bukit Fraser], 9.ii.1932, Prince Léopold, 2$\sigma^*$, ISNB; Frazer’s Hill [Bukit Fraser], Kuala Lumpur, 25.vi.1966 [25.iv.1966], R.H. Faniel, 1$\sigma^*$, ISNB; Gunung Angai [Gunung Angai], Negri Sembilan [Negeri Sembilan], 2000-2790 ft, iv.1918, 1$\sigma^*$, BMNH; G. Hangay, Kuala Tahan, Opp. N.P. Hq., 1$Q^*$, ZMAN; Jalem Raja, Kuala Lumpur, 17.xii.1924, A. Malek, 1$\sigma^*$, BMNH; Kedah Peak [Bukit Kedah], 3200 ft, xii.1915, 1$\sigma^*$, BMNH; same data, 3300 ft, 18.iii.1928, H.M. Pendlebury, at light, 1$\sigma^*$, BMNH; Kepong, rain forest, iii.1996, M.M.J. van Balgooy, 1$\sigma^*$, ZMAN; Kinta [Gunung Hijau], Perak, J. Henderson, 1$\sigma^*$, BMNH; Krau Wildlife Reserve, Kuala Lumpur, 3.iii.1999 [25.iv.1966], R.H. Faniel, 1$\sigma^*$, ISNB; Kuala Lumpur, 1950, v. Ooststroom, 1$\sigma^*$, ZMAN; Maxwell Hill [Bukit Maxwell], Perak, 1350 m, 17-20.iii.1958, T.C. Ma, 5$\sigma^*$, BPBM; same data, Malaysia (W), light trap, 3$\sigma^*$, BPBM; Pasoh Forest Reserve, 10 km W Ayer Itan, N. Sembrin, 0.3 km ESE station quarters, 350 m, buffer zone of regenerating forest (selectively logged), at light, 31.i.1997, M. Kos & S. Azman, 1$\sigma^*$, ZAMN; same data, 2.2 km NNE station quarters, 300 m, primary forest, old tree tower, W-side 50 ha plot, at light, 10.ii.1997, M. Kos, 1$\sigma^*$, ZAMN; same data, 10.iii.1997, M. Kos, 1$\sigma^*$, ZAMN; Petaing, 1900, M.Y. Ruslan & S. Azman, 1$\sigma^*$, ZAMN; Port Swettenham [Pelabuhan Kelang], 18.i.1950, v. Ooststroom, 1$\sigma^*$, ZMAN; Pulau Penang [Pulau Pinang], 1$\sigma^*$, BMNH; Rompin Mining Co. Railway Track, 31 M, SE Pahang, 4.iv.1961, K.J. Kuncheria, 1$\sigma^*$, BPBM; same data, 6.iv.1961, 1$\sigma^*$, BPBM; Seremban, Malacca, Prince Léopold, 1$\sigma^*$, ISNB; Taiping, iii.1978, 1$\sigma^*$, SUU; T. Rata [Tana h Rata], Cameron Highlands, Pahang, 4700 ft, 21.v.1939, H.M. Pendlebury, light, 1$\sigma^*$, BMNH; Tanah Rata, Pahang, 6000 ft, 20-21.xii.1967, E.W. Classey, 1$\sigma^*$, BMNH; same data, x.1980, A. Harman, 1$\sigma^*$, BMNH; same data, 4700 ft, xi.1980, 2$\sigma^*$, BMNH; Tanjong Hantu [Tanjung Hantu] lighthouse, ii.1923, 1$\sigma^*$, BMNH; région de Tekka [Campong Tekka], Perak, 1916, Giraud, 1$\sigma^*$, MNP.

EAST MALAYSIA: BORNEO, SABAH: Bangleu [Pulau Banggi], 1$\sigma^*$, NHMS; Brumas Camp, Tawau, N. Borneo. xi.1974, C. Pruett, 7$\sigma^*$, 1$\sigma^*$, BMNH; Danum

Chapter 3
Platylomia Platylomia spinosa group

Valley, 5°01'N 117°47'E, 220 m, roadside, secondary forest, 10.ix.1987, A.H. Kirk-Spriggs, light trap, 3¢, NMWC; same data, 26.ix.1987, 150 m, 1¢, NMWC; same data, 17.x.1987, 120 ¢, 1¢, NMWC; Danum Valley Field Centre, 60 km W of Lahud Datu, E. Sabah, at junction of Sg Segama and Sg Palum Tambun, 4°58'N 117°48'E, 150 m, clearing nr E trail, edge of untouched evergr. low rainforest, 21.iii.1987, van Tol & Huisman, at light, 18.30-20.30, 1¢, RMNH; same data, brooklet above lotus pond, untouched evergr. lowl. rainforest, 25.iii.1987, van Tol & Huisman, at light, 18.30-21.00, 2¢, RMNH; same data, edge of untouched evergr. low tropical rainforest, 29.iv-2.v.1987, J. van Tol, at light, 1¢, RMNH; Danum Valley Field Centre, 70 km W Lahud Datu, Sabah, 29.xi-5.xii.1989, M.J. & J.P. Duffels, at light, 1¢, ZMAN; road DVFC-Kg Silam nr km 68.5, Danum Valley Field Centre, 60 km W of Lahud Datu, E. Sabah, at junction of Sg Segama and Sg Palum Tambun, 4°58'N 117°48'E, 150 m, disturb. evergr. lowland rainforest, 24.iii.1987, van Tol & Huisman, at light, 18.30-21.00, 1¢, RMNH; Jesselton [Kota Kinabalu], 4.viii.1965, J.K. Mehta, 1¢, BMNH; same data, viii.1965, P. Roche, 1¢, BMNH; same data, 6.i.1968, P. Roche, 1¢, BMNH; Kalabakan, North Borneo, forest camp, 31.x.1962, Y. Hirashima, Malaise trap, 1¢, BPBM; Kalabakan, Tawau Residency, North Borneo, 14-15.xi.1962, K.J. Kuncheria, 6¢, BPBM; Kalabakan, North Borneo, 10-19.xi.1962, L.W. Quate, light trap, 1¢, BPBM; forest camp 12 M north of Kalabakan, Tawau, N.B. [North Borneo], 200 ft, 28.x.1962, K.J. Kuncheria, 2¢, BPBM; Kg. Pamumtaria, 12.5 km S Nabawan, Sabah, 116°27'E 5°02'N, nr river, 400 m, 16.xi.1987, J. Huisman & R. de Jong, at light, 1¢, RMNH; 24 km on road Ki- ningau-Kimanis (N. side), Sabah, 116°03'E 5°27'N, 1360 m, 19.xi.1987, J. Huisman & R. de Jong, at ML-light, 5¢, RMNH; same data, 1¢, ZMAN; Kinabalu Park HQ, Sabah, 116°32'E 6°00'N, roadside, 1500 m, 15.x.1987, J. Huisman, ML-light, 2¢, RMNH; same data, 11.x.1987, J. Huisman & R. de Jong, 1¢, RMNH; Kinabalu Park H.Q., Sabah, c. 1600 m, 7-10.iii.1987, C. Achterberg & C. Lepelaar, at light, 1¢, RMNH; Kina-Balu, N. Borneo, 1¢, NMWC; Kinantong [Kampong Kinantungan], R. Karamuak, 200 ft, 3.ix.1977, M.E. Bacchus, 1¢, BMNH; Kretam [Bukit Kretam], B.N. Borneo [British North Borneo], 21.xi.1960-1.1961, J.D.H. Hedley, 1¢, BMNH; Mt Kinabalu, Waterstradt, 1¢, BMNH; same data, 6000 ft, M.J. Bankes, at light, 1¢, BMNH; Mt Kinabalu Headquarters, 1500-1700 m, 31.iii.1976, N. Yashiro, 1¢, SUU; same data, S. Negai, at light, 1¢, SUU; Mt Kinabalu, Tenom Keningau, 4-8.iii.1964, J. Smart, 1¢, BMNH; bridge of Palum Tambun, Danum Valley Field Centre, 60 km W of Lahud Datu, E. Sabah, at junction of Sg Segama and Sg Palum Tambun, 4°58'N 117°48'E, 150 m, disturb. evergr. lowland rainforest, 14.iii.1987, van Tol & Huisman, at light, 18.30-22.30, 1¢, RMNH; same data, 23.iii.1987, at light, 18.30-21.00, 3¢, RMNH; Poring [Kampong Paring], 9 mi N. of Ranau, 1600 ft, 26-29.iv.1970, T.W. & M.C. Davies, 2¢, 3¢, CAS; Quoin Hill, Tawau, Cocoa Res. Sta., North Borneo (N. side), Sabah, 16.iii.1962, Y. Hirashima, light trap, 1¢, BPBM; Quoin Hill, Tawau, North Borneo (SE), Cocoa Res. Station, 1.viii.1962, Y. Hirashima, light trap, 2¢, 2¢, BPBM; Quoin Hill, SE Tawau, North Borneo, Cocoa Res. Station, 16-19.viii.1962, Y. Hirashima, 1¢, BPBM; Quoin Hill, Tawau, N. Borneo, Cocoa Res. Station, 24.viii.1962, Y. Hirashima, light trap, 2¢, BPBM; same data, 26.viii.1962, 1¢, BPBM; Ranau, British N. Borneo, 6.x.1958, T.C. Maa, 1¢, BPBM; Rumidi, R, Labuk, Sandakan Dist., 16-30.ix.1973, 1¢, BMNH; same data, C. Pruett, 6¢, 1¢, BMNH; Tawau, No. East Borneo, 10.vi.1970, Rcvd St. E. Mendenhall, 1¢, CAS; bridge of Segama, Danum Valley Field Centre, 60 km W of Lahud Datu, E. Sabah, at junction of Sg Segama and Sg Palum Tambun, 4°58'N 117°48'E, 150 m, clearing, edge of untouched evergr. lowl. rainforest, 19.iii.1987, van Tol & Huisman, at light, 18.30-21.30, 2¢, RMNH; same data, 20.iii.1987, at light, 1¢, 18.20-21.00, RMNH;

EAST MALAYSIA: BORNEO, SARAWAK: Batu Niah, xii.1980, A. Harman, 4♂, BMNH; Bau, ii.1911, J.M. Bryan, 1♂, BMNH; Bau, vii.1911, J.M. Bryan, 1♂, BMNH; Bau, 1.1912, J.M. Bryan, 1♂, BMNH; same data, x.1912, 1♂, BMNH; Bidi, Sarawak, 1907-1908, C.J. Brooks, 1♂, BMNH; Gunung Mulu Nat. Park, Site 7, Long Pala (Base), alluvial secondary forest, Ad. - understorey, 50 m, i.1978, J.D. Holloway, 1♀, BMNH; Gunung Mulu Nat. Park, Site 16, Long Pala (Base), alluvial. second. for., MV - on batu-canopy, 70 m, iii.1978, J.D. Holloway, 1♂, 1♀, BMNH; Gunung Mulu Nat. Park, Site 20, W. Melinau Gorge, FEG 3, kerangas, MV - understorey, 180 m, iii-iv.1978, J.D. Holloway, 1♀, BMNH; Gunung Mulu Nat. Park, Site 23, W. Melinau Gorge, FEG 4, limestone forest, MV - canopy/understorey, 250 m, iv.1978, J.D. Holloway, 1♂, BMNH; Gunung Mulu Nat. Park, Site 1, Mulu, Camp 4, lower montane (moes) forest, MV - canopy, 1790 m, i.1978, J.D. Holloway, 3♂, BMNH; Gunung Mulu Nat. Park, Site 8, Mulu, Camp 1, mixed dipt. for., MV - mainly canopy, 150 m, ii.1978, J.D. Holloway, 1♂, BMNH; Kedurong [Tanjug Kidurong] light house, 1910, 1♂, BMNH; same data, 1♂, MNP; same data, Sarawak, iii.1911, J.C. Moulton, 1♂, BMNH; same data, Sarawak, 1910-1911, 2♂, USNM; Kedurong [Tanjug Kidurong], 1911, J. Moulton, 1♂, MNP; Kuching, xii.1911, J.M. Bryan, 2♂, BMNH; Matang, Sarawak, 450-894 m, 15.ix.1958, J.L. Greasit & T.C. Maa, 1♂, BPBM; same data, Kuching, M.V. light trap, 1♂, 1♀, BPBM; Miri, 11.xii.1968, M. Satô, 1♂, SUU; Miri, 16.iii.1989, J.H. Martin, 1♂, BMNH; Mt Dulit, Sarawak, 4000 ft, 2.i.1982, T.H. Harrison, at light in house, 8.00-9.30 pm, rainy and cold, 2♂, BMNH; foot of Mt Dulit, junction of rivers Tinjar and Lejok, 4000 ft, 28.viii.1932, B.M. Hobby & A.W. Moore, native forest, 1♀, BMNH; same locality, 3.i.1932, light trap, 1♀, BMNH; same data, 30.i.1932, 1♂, BMNH; Sarawak, 1907-1909, C.J. Brooks, 1♂, BMNH; Sarawak, 1921, J. Moulton, 1♂, MNP; Tanjong, ix.1959, D.H. Elliott, 1♂, BMNH.

BRUNEI: Badas [Sungai Badas], 50-100 ft, Agathia / swamp for. / secondary vegetation, 27.ii.1982, G.S. Robinson, 1♂, BMNH; Brunei, Borneo, 1♂, NHMS; Brunei, on drilling platform for the coast, 1969, C. Kraneburg, 1♂, ZMAN; Bukit Pagon, 5520 ft, upper montane forest, 15-20.ii.1982, G.S. Robinson, 2♂, BMNH; ridge N.E. of Kuala Belalong, Temburong District, ± 300 m, x.1992, 125 W m.v. light, 2♀, BMNH; same data, J.H. Martin, 5♂, 5♀, BMNH; same data, xi.1992, J.H. Martin, 4♀, BMNH; Penanjong [Kampong Penanjong], coast, iii.1989, J.H. Martin, at light, 1♂, BMNH; Rampayoh R. (north) [Sungai Rampayoh], 400 ft, lowland for., 1-3.iii.1982, G.S. Robinson, 3♂, BMNH; Salirong [Tanjong Selirong], hut. Simp., 0 m, mangrove, 5-6.iii.1984, T.P.G. Helps, 1♂, BMNH; Seria, 21.x.1978, 1♂, ZMAN; same data, 30.ix.1978, T.W. Harman, 1♂, ZMAN; Sg. [Sungai] Liang, 70 km along road from Bandar Seri → Seria, 200 m, cultivated grasslands, some dis-
turbed mixed dipterocarp forest, 2-i.1990, J. Huisman, 1♂, ZMAN; Ulu Temburon, 1000 ft, lowland forest, 19-22.ii.1982, G.S. Robinson, 1♂, 1♀, BMNH.

INDONESIA: BORNEO, KALIMANTAN: Balik Papan [Balikpapan], 1♂, ZMAN; Barabei [Barabei], 1883, A. Pool, 1♂, BMNH; Doesonlanden, Wahnes, 1♂, BMNH; Kota Bangun [Kotabangun], S. Mahakan, Kalimantan Timur, 14.9.1996, R. Sözer, 1♂, ZMAN; Long Bagan [Longbangun], 25 km SE of Longbog, S. Mahakan, Kalimantan Timur, 7.iv.1996, R. Sözer, 1♂, ZMAN; Nangga Pimuh [Nanggapimoh], 1♂, RMNH; Pontianak, M. Muir, 1♂, BMNH; Samarinda, 8.ii.1929, Price Léopold, 1♂, ZFMK; same data, 9.ii.1929, 1♂, ISNB; same data, 23.iii.1996, R. Sözer, 1♂, ZMAN; Sotel near Balikpapan, 7.iii.1975, Y. Wada, 1♂, SUU.

INDONESIA: SUMATRA: Aek Tarum, Asahan, 180 m, 10.vi.1994, H. Inuoe, 1♂, SUU; Balelitu, Alas Valley, 3°45'N 97°33'E, cult. space in lowland multistratal evergreen forest, 320m, 3-8.vii.1972, J. Krikken, at light, 1♂, 2♀, RMNH; Benkoelen [Bengkulu] Dist., 1912-1919, C.J. Brooks, 1♂, SEM; Bindjey [Bijauj], 27.iii.1911, ... [illegible], 1♂, ZMAN; Deli [Labuhandeli], L.P. de Bussy, 28♂, 4♀, ZMAN; Djambo [Jambi], Sumatra, 1914, E. Douglas, 1♂, ZMAN; Dolok Baros, Sumatra, J.J. de Vos tot Nederveen Cappelle, 1♂, RMNH; Indragiri, Sumatra, A. v. Michel, 1♂, ISNB; Kuala Simpang [Kualasimpang], NE Sumatra, cultivated area, lowland, xi.1953, A. Sollaart, on light, 1♂, RMNH; same data, ii.1954, 1♂, 4♀, RMNH; Kuantjane [Kutacane], Atjeh, 20.iii.1954, A.H.G. Alston, 1♂, BMNH; Labuhan Bilik [Labuhanbilik], 1922-1923, Palm, 1♂, MZH; Langkat, Balsei Gadjah, v, Le Moul, 1♂, ISNB; same data, vii, 1♂, 2♂, ISNB; Medan, Sumatra, de Bussy, 1♂, ZMAN; Medan, Sumatra, Mjöberg, 3♂, NHMS; Medan, 17.iii.1931, 1♂, ZMAN; Medan, Sumatra's O.K. [East coast], 20 m, 3.i.1921, J.B. Corporaal, 1♂, ZMAN; Mt Bandahara [Gunung Bandahara], 3°43'N 97°41'E, ca 820 m, 25.vi-5.vii.1972, J. Krikken, 2♀, RMNH; Mt. Dempo [Gunung Dempo], South Sumatra, 23.ix.1987, J.D. Weintraub, 1♂, ZMAN; same data, 27.ix.1987, 1♂, ZMAN; Namoe Dengas Est., Langkat, E. coast Sumatra, 27.iii.1972, Jourin, 1♂, MCZ; Lebong Tandai [Lebongtandai], W. Sumatra, viii.1913, C.J. Brooks, 1♂, BMNH; same data, 20-25.i.1922, 1♀, BMNH; Padang, 27.ii.1899, Schild, 1♂, NHMW; Png Pandjang [Padangpanjang], Pad. [Padangse], Bovenlanden, ± 2000 ft, 1897, I.Z. Kannegieter, 1♂, BMNH; Pager- alang [Pagaram], Sumatra, J.J. de Vos tot Nederveen Cappelle, 1♂, RMNH; Radjjang Lebong [Rejang Lebong], ii.1923, C.J. Brooks, 1♂, 1♀, BMNH; Sumatra, ♂ lectotype Tettigonia spinosa Fabricius, BMNH; Sumatra, Lebrun, 1♂, ISNB; Sumatra, 1902, Wijesman, 1♂, ZMAN; Sumatra, iv-v.1929, Prince Léopold, 1♂, ISNB; Tanah-Merak, Kuantjane [Kutacane], Allas [Alas] Valley, 3°31'N 97°47'E, 9.vii.1972, J.Krikken, 1♂, RMNH.

INDONESIA: JAVA: Java, Pfeiffer, 2♂, NHMW.

LOCATION UNKNOWN OR NOT LOCATED: without locality labels, 2♂, BMNH; without labels, 1♂, SUU; without locality labels, 1♂, ZFMK; Borneo, 1881, Steindacher [?], 1♂, NHMW; Borneo, 1886, F. Baczew, 1♂, NHMW; Brunei, Waterstraat [Waterstrad], 2♂, BMNH; O.I. Archipel [East Indian Archipelago], i.1923, H.G. Volmuller, 1♂, ZMAN; S. Tengah, iv.1912, 1♂, BMNH.

LOCATION DOUBTFUL: Australia, 1♂, BMNH; [INDIA]: Tumlong, Sikkim, F. Schneider, ♂ holotype P. maculata Liu, MCZ; [VIETNAM]: Thanh-moi, Tonkin, 1♂, ISNB.
Additional information: Roepat: ‘Aan boord komen vliegen des morgens op / den 1ste Februari 1894 / Noordkust van Roepat / 8 Eng. mijls uit de wal’
[Landed aboard in the morning of February 1st 1894. North coast of Roepat, 8 English miles from shore.]

Fig. 12. Localities of Platylomia spinosa.

Distribution: The distribution is given in Fig. 12. P. spinosa is common in West Malaysia, Borneo (Sabah, Sarawak, Brunei, Kalimantan), and Sumatra. There are several specimens as well as scattered records in the literature from localities outside this area. The occurrence on Java may well be the result of occasional dispersal. That dispersal does occur is clear from the labelling of the specimen from Roepat (Sumatra, Indonesia) at RMNH that was collected on board of a ship eight miles from the north coast. The occurrence in Australia (one specimen at BMNH), northern Thailand (one specimen from Ban Thong and Phu Khieo each at BMNH), and India (holotype of P. maculata at MCZ) cannot be explained by such short range dispersal and is more problematic. Its raises the question whether the labelling is correct.

Walker’s (1850) record of P. spinosa in fact refers to P. nigra and it is possible that this is the case with several other old records (e.g., Dohrn, 1859). The material recorded as P. spinosa collected by Semper in the Philippines (Stål, 1870) does not belong to that species but to P. nigra, P. virescens, and P. abdulla (see below). All records from the Philippines later than Stål’s (Breddin, 1900; Distant, 1890, 1892, 1906, 1912, 1913b; Kato, 1925, 1927,
1928, 1932; Matsumura, 1917; Moulton, 1911a, 1923, 1925; Oshanin, 1908) apparently are repetitions of Stål's records since no additional information is given.

The sole record from Japan (Kyushu) was by Horváth (1879), and this record was later repeated by Oshanin (1908, 1912) with the note that it was not recorded from Japan by Matsumura (1907). Matsumura (1917) considers Horváth's record to be a 'mistake' and Kato (e.g., 1932) does not record *P. spinosa* from Japan either.

The record from Coromandel (Madras, India; see Germar, 1830) must be considered doubtful. The material for this record could not be traced. Atkinson (1884) also listed *P. spinosa* as 'reported from India' but without indicating from which of his references this record was taken.

The record from New Guinea (Moulton, 1923, 1925) should be considered doubtful. The material, purported to be at the MBBJ could not be examined.

The records of *P. spinosa* from Assam, Burma, Ténasserim, and India (Sikkim) as ascribed to Moulton (1911a) by Metcalf (1963b) refer to *P. umbbrata* and not to *P. umbbrata* nec Distant. Only the new material mentioned from Borneo belonged to *P. spinosa*. The record from India ascribed to Moulton (1923) by Metcalf (1963b) is an unjustified simplification of 'India Orientalis' [= East Indies].

**Platylomia abdulla** (Distant, 1881), sp. prop. (Figs. 13-20)

*Cosmopsaltria abdulla* Distant, 1881: 638, 641; Atkinson, 1884: 226, 227.

*Cosmopsaltria abdulla* (as synonym of *C. spinosa*); Distant, 1888: 193; Atkinson, 1885a: 23; Atkinson, 1885b: 158; Distant, 1890: 52; Distant, 1906: 58; Oshanin, 1908: 388; Moulton, 1911a: 142; Oshanin, 1912: 96; Distant, 1912: 48; Matsumura, 1917: 197; Moulton, 1923: 99.


*Platylomia distanti* (as synonym of *P. spinosa*); Moulton, 1923: 99 Moulton, 1925: 435.

*Platylomia spinosa* var. *distanti*; Moulton & China, 1926: 121; Metcalf, 1963b: 628.

*Platylomia abdulla*; Pringle, 1956: Fig. 2.

**General remarks:** *P. abdulla* is a variable species that is widespread on the Malay Peninsula and the northwestern Indo-Malaysian Archipelago. See under *P. spinosa* for a general discussion of the taxonomy of *P. abdulla* and the separation of *P. abdulla* from *P. spinosa*, *P. viridimaculata*, and *P. celebensis*. The characters to separate *P. abdulla* from *P. viridimaculata*, and *P. celebensis* are identical to those for *P. spinosa*.

**Type material and lectotype designation:** Distant described *P. abdulla* from Singapore and Perak. He had four specimens available to him but no type was designated. Three males belonging to the type series of *P. abdulla* are still at the BMNH. One male is labelled as follows: 'Type' [printed in red circle], 'Singapore' [Distant's handwriting], 'abdulla / Dist.' [Distant's handwriting], 'Distant Coll. / 1911-383.' [printed]. The two other males are labelled 'Penang' [Distant's handwriting], one of them with an additional label 'Distant Coll. / 1911-383.' [printed]. The male from Singapore is herewith
designated as lectotype and labelled accordingly. The other two males are labelled as paralectotypes.

Figs. 13-16. *Platylomia abdulla* male (lectotype): 13, genitalia, ventral view; 14, genitalia, lateroventral view; 15, genitalia, dorsal view; 16, uncus, anterior view.
The type material of *P. distanti* from Kuching (Sarawak) was deposited at the Sarawak Museum at Kuching and could not be examined.

**Synonymy:** Examination of the lectotype of *P. abdulla* and comparison with the description of *P. distanti* and further remarks on its morphology leaves no doubt that these two species are conspecific and *P. distanti* is here-with synonymized with *P. abdulla*.

**Description:** Body brown to castaneous, head and thorax sometimes with greenish tinge, central fasciae on pronotal disc indistinct and brownish to absent, paramedian fasciae on mesonotum narrow and brownish to absent, pronotal collar without distinct markings or fasciae, tegmina with markings on basal veins of second, third, fifth, and often seventh apical cells, and on apices of longitudinal veins of apical cells. Male opercula narrowed, apex rounded. Female ovipositor short. Closely resembling *P. spinosa* but differing as described below.

**Head:** Head brown to castaneous but transverse band formed by paler areas on postclypeus and lori usually less pronounced. Frontoclypeal suture rounded to trapezoid but median part nearly always broader than distance between lateral margin of lateral ocelli. Rostrum generally not reaching beyond posterior margin hind coxae but occasionally extending little beyond posterior margin.

**Thorax:** Pronotal disc brown to castaneous and occasionally partly with greenish tinge; central fasciae nearly always indistinct; lateral lobes of disc without darker fasciae. Pronotal collar without markings, only posterior margin black except posterolateral corners. Mesonotum brownish to castaneous and without distinct pattern of dark and pale fasciae. Mesonotal disc only with short pale hairs along lateral and posterior margins. Katepimeral lobe (Fig. 19) short to very short and rounded.

**Tegmina and wings:** Markings on tegmina somewhat less extensive than in *P. spinosa*: markings on basal veins of second, third, and fifth apical cells usually not connected and markings on basal veins of fifth and seventh apical cells usually much smaller, latter marking often very indistinct or absent; basal cell yellowish brown to dark brown fumose on anterior half to three quarters.

**Legs:** Legs as in *P. spinosa* but often paler parts less pronounced.

**Male.** Operculum (Fig. 17): Operculum rather variable in shape; reaching from halfway fourth to halfway fifth abdominal segment, 2.6-3.0 times as long as maximum width distal of constriction. Medial margin distal of constriction weakly convex or almost straight to apex. Apex rounded, rarely angularly rounded, at or medial of midline, occasionally lateral of midline. Lateral margin distal of constriction convex to apex but somewhat stronger convex than medial margin. Constriction at about 0.4 of length of operculum, lateral concavity deeper and longer than medial concavity. Opercula divergent or virtually parallel. Operculum surface less convex in transverse direction than in *P. spinosa*.
Figs. 17-19. *Platylomia abdulla* male: 17, operculum, right, lateroventral view (lectotype); 18, timbal covering, right (lectotype); 19, katepimeral lobe, right (Pontianak).

Abdomen: Abdomen about 1.2-1.4 times as long as head and thorax together. Colour of abdomen as in *P. spinosa*, dorsal part of tergites with short whitish hairs and sometimes remnants of similar pattern as in *P. spinosa*. Timbal covering (Fig. 18) about 1.2-1.5 times as broad as long.

Genitalia (Figs. 13-16): As in *P. spinosa* but basal pygofer lobes higher (Fig. 14) and pygofer surface enclosed by anteroventral margin with very few hairs along posterior margin. Lateroproximal corners of uncus lobes directed more in anteriorly (Fig. 13), often angularly rounded or somewhat pointed. Ridge on outer surface of uncus lobes less high posteriorly.

**Female.** Operculum reaching little beyond anterior margin of third abdominal segment; brown, occasionally with greenish tinge, lateroproximal corner broadly castaneous but slightly less extensive than in *P. spinosa*.

Abdomen: Abdomen about 0.9-1.1 times as long as head and thorax together. Colour and dusting basically as in male but often with some remains of a pattern of castaneous dusting. Posterior margin of tergite 8 with few scattered short spinules medially or spinules absent.

Genitalia: Colour of pygofer as in *P. spinosa*, dorsal length of pygofer about equal to length of tergites 6-8 or shorter.

*Measurements in mm* (*♂*: *n* = 10; ♀: *n* = 8). Body length: *♂*: 41.5-50.5 (46.8 ± 2.8), ♀: 43.0-53.0 (47.9 ± 3.1); head width: *♂*: 13.0-16.0 (15.3 ± 0.7), ♀: 14.6-17.4 (16.1 ± 0.9); maximum pronotum width: *♂*: 13.0-17.0 (15.4 ± 0.9), ♀: 14.3-18.5 (16.4 ± 1.3); tegmen length: *♂*: 48.0-61.0 (56.4 ± 3.3), ♀: 53.0-63.5 (69.1 ± 2.8).

*Specimens examined*: SINGAPORE: Singapore, *♂* lectotype *P. abdulla* Distant, BMNH.
WEST MALAYSIA: Batu Feringghi [Batu Feringgi], Penang, 11-24.i.1984, R.T. Simon Thomas, on black light, 1♂, ZMAN; Bukit Kutu, 3300 ft, A.R. Sanderson, 2♂, BMNH; same data, vii.1928, 1♂, BMNH; Bukit Kutu, Selangor, iv.1915, 2♂, BMNH; same data, 3500 ft, 10.iii.1931, H.M. Pendlebury, 1♂, BMNH; same data, 17.iii.1931, 1♂, BMNH; same data, 24.iii.1931, 1♂, BMNH; Cameron Highland [Cameron Highland], i.1978, 2♂, SUU; same data, iii.1978, 1♂, SUU; Cameron-Highland [Cameron Highland], 1973, 2♂, SUU; Cape Rachado [Tanjung Tuan] lighthouse, x.1920, S. Harding, 5♂, BMNH; same data, W. coast Malay Peninsula, xii.1920, S. Harding, 1♂, BMNH; 7th mile Cheras Rd, Selangor, 25.ii.1924, at light, 1♂, BMNH; Frasers Hill [Bukit Fraser], Kuala Lumpur, Pahang, 3000 ft, i-iii.1961, I. Clausen, 1♂, UZMK; Frazer's Hill [Bukit Fraser], ii.1932, Prince Léopold, 2♂, ISNB; Jaggar Hill, l.iii.1931, A.S. Corbet, 1♂, BMNH; Kadah Peak [Bukit Kadah], 3300-3978 ft, 28.iv.1962, E.S. Ross & D. Cavagnaro, 1♂, CAS; Kepong, Selangor, 5.i.1963, M. Kubota, 1♂, SUU; King George V Nat. Park [Taman Negara], Tahan Kuala, at lab., 24.i.1958, at night, C.W.H., 1♂, BPBM; Krau Wildlife Reserve, Kuala Lumpur sector, 8 km W Kuala Krau, 0.25 km NW Rangers post, edge primary forest disturbed by excessive flooding and treefall, at light, 17.xii.1996, M. Kos & S. Azzman, 1♂, ZMAN; same data, 6.i.1997, 1♂, ZMAN; same data, 12.iii.1997, M.Y. Rualan & M. Kos, 1♂, ZMAN; same data, 13.iii.1997, 1♂, ZMAN; same data, 14.iii.1997, 1♂, ZMAN; same data, 17.iii.1997, 1♂, ZMAN; same data, 1.25 km NW Rangers post, Secondary forest river bank, old Orang Asli settlement, at light, 1.i.1997, M. Kos, 1♂, ZMAN; same data, Rangers post, edge primary forest disturbed by excessive flooding and treefall, at light, 5.iii.1997, M. Kos, 3♂, ZMAN; same data, 6.iii.1997, 2♂, ZMAN; Kuala Lumpur, 27.i.1922, H.M. Pendlebury, 1♂, BMNH; same data, i.1929, N.C.E. Miller, 2♂, BMNH; same data, 19.ii.1930, A.S. Corbet, 1♂, BMNH; Kuala Lumpur, l.ii.1926, H.M. Pendlebury, at light, 1♂, BMNH; same data, 25.ii.1926, 1♂, BMNH; same data, 2.ii.1982, 1♂, BMNH; Kuala Lumpur, 3.iii.1936, 1♂, BPBM; same data, gardens, 6.iii.1938, H.M. Pendlebury, 1♂, BMNH; Kuala Kangsar [Kuala Kangsar], Perak, 1902, Grubauer, 3♂, NHMW; Larut Hills [Bukit Larut], Perak, 3700 ft, 5.i.1932, H.M. Pendlebury, 1♂, BMNH; Malacca, Fry, 1♂, BMNH; Malacca, 1♂, NHMS; Malaya, N.C.E. Miller, 1♂, BMNH; Malacca, 1890, Plason, 6♂, NHMW; Maxwell Hill [Bukit Maxwell], Perak, 1350 m, 17-20.iii.1958, T.C. Maa, 5♂, BPBM; same data, Malaysia (W), light trap, 4♂, BPBM; Pasoh Forest Reserve, 10 km W Ayer Hitan, N. Semblan, 0.3 km ESE station quarters, 350 m, buffer zone of regenerating forest (selectively logged), at light, 12.ii.1997, M. Kos, 2♂, ZAMN; same data, 9.iii.1997, M. Kos & S. Azzman, 2♂, ZAMN; same data, 11.iii.1997, 1♂, ZAMN; same data, 0.9 km NNE station quarters, trail between primary forest and buffer zone, 6.iii.1997, M. Kos & M.Y. Rualan, 1♂, ZAMN; same data, 2.2 km NNE station quarters, 300 m, primary forest, old tree tower, W-side 50 ha plot, at light, 10.iii.1997, M.Y. Rualan & S. Azzman, 1♂, ZAMN; Pasoh Forest Res., Negeri Semblan, 8.ii.1983, M. Kubota, 1♂, SUU; Penang [Pulau Pinang], 2♂ paralectotypes P. abdulla Distant, BMNH; Perak, 1♂, BMNH; Perak, 1♂, ISNB; Petaling, ix.1919, 1♂, BMNH; Presqu'éle de Malacca, 1899, Errington de la Croix & P. Chapé, 2♂, 1♀, MNP; Pulu Pisang [Pulau Pisang], 1.iv.1921, 1♂, BMNH; Rompin Mining Co. Railway Track, SE Pahang, 50 km, 3.iv.1961, T.C. Maa, 1♂, BPBM; Selabu [Kampung Tandong Selabu], 2♂, BMNH; Seremban, Malacca, Prince Léopold, 4♂, ISNB; Taiping, 1.1924, J.W. Saunt, 1♂, BMNH; Taiping, Perak, 4.ii.1924, M.R. Henderson, 1♂, BMNH; Taiping, Perak, iii.1976, K.C. Liew, 1♂, SUU; Taiping, ii.1978, 2♂, SUU; same data, iii.1978, 2♂, SUU; same data, iv.1978, 2♂, SUU; Tanah Rata, Pahang, 5000 ft, 20-21.xii.1967, E.W. Classey, 1♂; BMNH; région de Tekka [Kampong
Tekka], Perak, 1916, Giraud, 20°, MNP; Verdun Estate, Batu Kurau, Selangor, 24.i.1922, at light, 10°, BMNH.


EAST MALAYSIA: BORNEO, SARAWAK: Bau, vii.1911, J.M. Bryan, 10°, BMNH; Bau, iii.1914, 10°, BMNH; Gunong Mulu N. Park, Long Pala, iii.1989, J.H. Martin, at light, 10°, BMNH; Gunong Mulu Nat. Park, Site 7, Long Pala (Base), alluvial secondary forest, Ad. - understorey, 50 m, i.1978, J.D. Holloway, 20°, 10°, BMNH; Gunong Mulu Nat. Park, Site 16, Long Pala (Base), alluv. second. for., MV - on batu-canopy, 70 m, iii.1973, J.D. Holloway, 10°, BMNH; Pa Lungan, 10 km N of Bario [Bareo], 115°34 E 08°40'N, 110 0 m, pond, 23.i.1987, J. Huisman, 10°, ZMAN.

BRUNEI :: Badas, 50-100 ft, Agathia / swamp for. / secondary vegetation, 27.ii.1982, G.S. Robinson, 10°, BMNH; Rampayoh R. (north) [Sungai Rampayoh], 400 ft, lowland for., 1-3.iii.1982, G.S. Robinson, 30°, BMNH; Tembrong [Temburong, = Bangar], 25.i.1982, G. Imadate, 10°, SUU.


INDONESIA :: SUMATRA: Balelutu, Alas Valley, 3°43'N 97°33'E, cult. space in lowland multistratal evergreen forest, 320m, 3-8.viii.1972, J. Krikken, at light, 20°, RMNH; Benkoelen [Bengkulu], 1912-1919, C.J. Brooks, 10°, BMNH; Deli [Labuhanhandeli], L.P. de Bussy, 70°, ZMAN; Deli [Labuhanhandeli], Sumatra, 1912, ... [illegible], 10°, ZMAN; Djambi [Jambi], Sumatra, 1908, F. Molenburg, 10°, ZMAN; Fort de Kock [Bukittinggi], W. Sumatra, 920 m., E. Jacobson, 10°, BMNH; Indragiri, 10°, ISNB; Kuala Simpang [Kualasimpang], NE Sumatra, cultivated area, lowland, xii.1953, A. Sollaart, on light, 10°, RMNH; same data, ii.1954, 10°, RMNH:
Labuan Bilik [Labuhanbilik], 1922-1923, Palm, 1σ*, MZHF; Langkat, Balei Gadjah, Le Moul, 1σ*, MNP; Lebong Tandai [Lebongtandai], W. Sumatra, 1920-1923, C.J. Brooks, 2σ*, BMNH; same data, 8-9.xii.1921, 1σ*, BMNH; same data, iii.1923, 1σ*, BMNH; Medan, Sumatra, Mjöberg, 1σ*, NHMS; Medan, Sumatra, Schoutenden, 1σ*, ISNB; Merapi, Sumatra, 1600 m, vi.1931, J. Kool, 1σ*, ZMAN; Riouw [Riau], 1901, Kluetdon, 2σ*, ZMAN; 8 miles North of Roepat [Pulau Rupat], 1.i.1894, G.[?].J. v.d. Sande, 1σ*, BMNH; Tandj. Rede [Tanjungredepr], Sumatra, E. Mjöberg, 1σ*, ZMAN; Sumatra, 1σ*, NHMW; Sumatra, i.1884, . . . [illegible], 1σ*, NHMW.

INDONESIA: JAVA: Bumiredjo, E. Java, ± 400 m, iii.1955, A. Sollaart, 1σ*, RMNH; Java, Pfeiffer, 1σ*, NHMW; Java, Muller, 1σ*, RMNH.

EXACT LOCATION UNKNOWN OR NOT LOCATED: without locality labels, 7σ*, BMNH; without locality labels, 1σ*, ISNB; without labels, 1σ*, SUU; Borneo, 744, 1σ*, ISNB; Borneo, 1875, Plason, 1σ*, NHMW; Malaysische Gebiet [Malaysian region], 1σ*, NHMW.

LOCATION DOUBTFUL: [PHILIPPINES:] Ins. Philipp., Semper, 1σ*, NHMS; [VIETNAM:] Thanh-moi, Tonkin, 46σ*, ISNB.

Distribution: The distribution is given in Fig. 20. P. abdulla is common in West Malaysia, Borneo (Sabah, Sarawak, Brunei, Kalimantan), and Sumatra but over all less numerous than P. spinosa. Most likely some of the records of P. spinosa in the literature refer to P. abdulla.

The occurrence on Java may well be the result of occasional dispersal (see also under P. spinosa) although it must be noted that one of the specimens (a male from Bumirejo at RMNH) was from East Java and less likely to be the result of short range dispersal. Likewise, the occurrence on the Philippines
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(specimen at NHRS) may be the result of occasional dispersal but since this specimen was collected during one of Semper's trips in the East Indies last century incorrect labelling cannot be ruled out.

*Platylomia viridimaculata* (Distant, 1889), comb. nov. (Figs. 21-29)

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**Pomponia viridimaculata** Distant, 1889a: 421; Distant, 1891: 73; Distant, 1892a: pl. X (Figs. 9-9b); Distant, 1892b: xii; Bredin, 1900: 180.  
**Champaka harveyi** Distant, 1912: 57 [note]; Moulton, 1923: 116, 168.  

**Type material**: The type material of *Pomponia viridimaculata* is still at the BMNH and consists of a lectotype and a paralectotype, both males. The lectotype is labelled as follows: 'Type' [printed in red circle], 'Kina Balu / (Whitehead)' [hand-written], 'viridi- / maculata / Dist.' [Distant's handwriting], 'Distant Coll. / 1911-383.' [printed], 'Lectotype / Pomponia / viridimacula / Distant, 1889 / des. Duffels, 1991' [Beuk's handwriting]. The paralectotype is labelled as paralectotype and bears the same locality and collection labels as the lectotype but lacks the type label and Distant's identification label.

The holotype of *Champaka harveyi* is a male at the BMNH labelled as follows: 'Type' [printed in red circle], 'Dutch Borneo / (Balakpappan) / Henry Harvey / 1912-324.' [handwritten], 'Champaka / harveyi / type Dist.' [Distant's handwriting], 'Champaka viridimaculata/ Distant / det. J.P. Duffels, 1991' [printed].

**Synonymy**: *P. viridimaculata* and *P. harveyi* were synonymized by Duffels (1991) after examination of their respective lectotype and holotype.

**Description**: Body brown to castaneous, head and thorax sometimes with greenish tinge, central fasciae on pronotal disc indistinct and brownish to absent, paramedian fasciae on mesonotum absent, tegmina with markings on basal veins of second and third apical cells, and on apices of anterior longitudinal veins of apical cells. Male opercula narrowed towards apex and short, not reaching posterior margin third abdominal segment. Female ovipositor short. Closely resembling *P. spinosa* but differing as described below.

**Head**: Head almost unicolorous brown to castaneous, ventral part of genae and dorsal part of lori paler and with dense pale hairs. Rostrum reaching between hind coxae but not beyond posterior margin.

**Thorax**: Pronotum as broad as to distinctly broader than head, broadest part usually at lateral margin of pronotal collar, rarely at lateral tooth. Pronotal disc brown to castaneous and sometimes with greenish tinge, occasionally with darker central fasciae that broaden posteriorly; lateral margins of lateral lobes of disc often darkened. Pronotal collar paler than pronotal disc and with ill-defined dark markings in posterolateral corner; posterior margin
of collar excluding posterolateral corners black. Mesonotum brownish to castaneous and without distinct pattern of dark and pale fasciae, sometimes with greenish tinge. Mesonotal disc only with short pale hairs along lateral and posterior margins. Katepimeral lobe (Fig. 26) shorter than broad at base and rounded to slightly triangular with rounded apex. Surface and posterior margin of katepimeral lobe with short hairs. Apex just extending over base of operculum.

Tegmina and wings: Tegmina hyaline with dark reticulation along distal margin; basal cell greenish to yellowish fumose on anterior three quarters; basal veins of second and third apical cells with dark brown to blackish markings that are sometimes merged, former marking extending to base of first apical cell; apices of longitudinal vein of first and often those second and third apical cells with markings. Veins of tegmen as in *P. spinosa* but clavus greenish or ochraceous. Veins of wings as in *P. spinosa* but clavus greenish to ochraceous on proximal half and largely blackish on distal half.

Legs: Colour of legs as in *P. spinosa* but paler parts can be either more or less extensive. Spines on fore femur as in *P. spinosa* but gap between middle and distal spines deep to very deep and narrow.

**Male.** Operculum (Fig. 24): Operculum short and triangular; just reaching beyond anterior margin of third abdominal segment; brown to dark brown, lateroproximal corner castaneous. Medial margins almost straight and divergent. Apex angularly rounded, rarely rounded; apex medial to lateral of midline. Lateral margin weakly convex to apex. Surface of operculum weakly convex.

Abdomen: Abdomen about 1.4 times as long as head and thorax together. Colour of abdomen as in *P. spinosa*, dorsal part of tergites brown to castaneous and often densely covered with short hairs, hairs mostly whitish but often castaneous on ill-defined median and paramedian lines; tergites 3-7 with small dark spots near lateral margin. Posterior margin of tergite 7 with many slender dark spinules along whole length but fewer medially, posterior margin of tergite 6 with spinules along whole length and very few medially or with spinules laterally only. Timbal covering (Fig. 25) brown to castaneous, sometimes with greenish tinge, about 1.2-1.4 times as broad as long; medial margin short and convex; mediiodistal corner broadly rounded, distal margin almost straight; laterodistal corner rounded; lateral margin weakly convex to straight.

Genitalia (Figs. 21-23): Brown to castaneous; ventral part of pygofer paler. Basal pygofer lobes (Figs. 21-22) narrow and raised, rounded in lateral view and concave laterally; hairs on anteroventral margin of pygofer erect as in *P. spinosa*; pygofer surface with few scattered hairs anterior and posterior of medial part of anteroventral margin and along posterior margin with scattered hairs along posterior margin. Dorsal part of pygofer as in Fig. 23. Basal part of uncus (Figs. 21-22) longer than in *P. spinosa*; laterobasal part as narrow strip along bases of uncus lobes and with scattered long hairs. Uncus lobes (Figs. 21 - 22) narrowed distally and apex two-tipped; medial margin...
Figs. 21-23. *Platylomia viridimaculata* male (Semongok For. Res.): 21, genitalia, ventral view; 22, genitalia, lateroventral view; 23, genitalia, dorsal view.
Figs. 24-28. *Platylomia viridimaculata*: 24, male, operculum, right, lateroventral view (Brunei); 25, male, timbal covering, right (Brunei); 26, male, katepimeral lobe, right (Rampayoh R.); 27, female, operculum, lateroventral (bridge of Segama); 28, female, genitalia, lateral (bridge of Segama).

Fig. 29. Localities of *Platylomia viridimaculata*. All records from examined material except for record from Penang (open circle).
straight and curved inwards except distally; mediodistal and laterodistal corners produced to form two tips, lateral tip shorter, broader and occasionally with small spine-like outgrowth on its lateral margin; lateral margin concave. Outer surface of uncus lobes (Fig. 21) with broad low ridge running posterior of aedeagal opening and laterally extending on to lobes for short distance between lateral and medial margins of lobes. Outer and inner surfaces of uncus lobes mainly with scattered short hairs but with longer hairs laterally at bases of uncus lobes, hairs at medioproximal corners of lobes more dense and slightly longer.

**Female.** Operculum (Fig. 27): Operculum just reaching anterior margin of sternite 3; brown, occasionally with greenish tinge, lateroproximal corner often castaneous but less extensive than in *P. spinosa*. Lateral margin distal of lateroproximal lobe weakly convex; laterodistal corner angularly rounded to angular; distal margin almost straight; mediodistal corner and medial margin rounded.

Abdomen: Abdomen about 0.9-1.0 times as long as head and thorax together. Colour and hairs as in male. Posterior margins of tergites 3-7 with slender dark spinules, spinules decreasing in number and thickness both towards medial part of margins and on each more anterior tergite, such that spinules are absent from medial part of tergites 3-4 and sometimes also on tergite 5; posterior margin of tergite 8 with few scattered short spinules medially.

Genitalia (Fig. 28): Pygofer brownish to castaneous, ventral parts paler. Dorsal length of pygofer exceeding length of tergites 7-8 together. Ovipositor sheath reaching slightly beyond apex of caudodorsal beak; anal valve not reaching as far as apex of caudodorsal beak.

**Measurements in mm** (*c*: n = 7; Q: n = 5). Body length: *c*: 48.0-56.0 (51.6 ± 2.3), Q: 36.5-51.0 (43.8 ± 5.0); head width: *c*: 14.6-16.2 (15.2 ± 0.4), Q: 12.9-17.1 (15.1 ± 1.5); maximum pronotum width: *c*: 15.3-16.8 (15.9 ± 0.3), Q: 12.8-17.4 (15.4 ± 1.8); tegmen length: *c*: 56.5-64.5 (60.6 ± 2.7), Q: 51.0-68.5 (57.8 ± 5.4).

**Specimens examined:** WEST MALAYSIA: Subang, Genting Highlands, Selangor, Hiahhamuddin, 1♂*, PSS.

EAST MALAYSIA: BORNEO, SABAH: Brumas Camp, Tawau, N. Borneo, xi.1974, C. Pruett, 1♂*, 2♀, BMNH; Bukit Padang, Kota Kinabalu, 50 m, 5.iii.1985, Kamarudin, 1♂*, PSS; Danum Valley Field Centre, 60 km W of Lahud Datu, E. Sabah, at junction of Sg Segama and Sg Palum Tambun, 4°58′N 117°48′E, 150 m, clearing nr E trail, edge of untouched evergr. low. rainforest, 21.iii.1987, van Tbl & Huisman, at light, 18.30-20.30, 6♂*, RMNH; same data, 1♂, ZMAN; Danum Valley Fld Centre, 100-200 m, multiatr evergr forest along river, 18-29.x.1987, Krikken & Rombaut, at light, 1♂*, RMNH; Keningau, N. Borneo, 27.ii.1982, H. Kitahara, 1♂*, NSMT; Kina Balu (Kinabalu), Whitehead, Joe lectotype and 1♂ paralecotype *Pomponia viridimaculata* Distant, BMNH; Kinabalu-Kian, ca 1000 m, 9.iii.1970, H.P. Nooteboom, 1♂*, RMNH; Mamut Copper Mine, Mt. Kinabalu, Sabah, 900-1200 m, 26.iii.1976, S. Nagai, at light, 1♂*, SUU; same data, 27.iii.1976, 1♂, SUU; same data, 6.iv.1976, 1♀, SUU; Mt. Kinabalu Headquarters, 11.iii.1978, S. Nagai, at
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light, 1♂, SUU; same data, 26.iii.1979, 1♀, SUU; same data, 27.iii.1979, 3♂, SUU; same data, 28.iii.1979, 3♂, SUU; same data, 9.iii.1979, 1♂, SUU; same data, 16.iii.1979, 1♀, SUU; same data, 17.iii.1979, 1♀, SUU, same data, 21.iii.1979, 1♀, SUU; Mt Kinabalu, Tenom Keningau, 4-8.iii.1964, J. Smart, 3♂, BMNH; Labuan, B.N. Borneo [British North Borneo], 1♂, BMNH; Palum Tambun, Danum Valley Field Centre, 60 km W of Lahud Datu, E. Sabah, at junction of Sg Segama and Sg Palum Tambun, 4°58′N 117°48′E, 150 m, edge of untouched evergr. lowl. rainforest, 17-18.iii.1987, van Tol & Huisman, at light, 18.30-21.00, 2♂, 1♀, RMNH; bridge of Palum Tambun, Danum Valley Field Centre, 60 km W of Lahud Datu, E. Sabah, at junction of Sg Segama and Sg Palum Tambun, 4°58′N 117°48′E, 150 m, disturb. evgr. lowland rainforest, 23.iii.1987, van Tol & Huisman, at light, 18.30-21.00, 1♂, RMNH; Poring [Kampong Paring], 9 mi N of Ranau, 1600 ft, 26-29.iv.1970, T.W. & M.C. Davies, 5♂, CAS; Quoin Hill, Tawau, British N. Borneo, Cocoas Res. Sta., 17.ix.1962, K.J. Kuncheria, at light, 1♂, BPBM; Quoin Hill, Tawau, British N. Borneo, Cocoas Res. Sta., jungle around riverside, 25.ix.1962, K.J. Kuncheria, 1♀, BPBM; Rumidi, R. Labuk, Sandakan Dist., 16-30.ix.1973, C. Pruett, 1♂, 5♀, BMNH; Sabah, 12.iii.1972, E. Hamano, 1♂, NSMT; same data, 16.iii.1972, 1♂, NSMT; bridge of Segama, Danum Valley Field Centre, 60 km W of Lahud Datu, E. Sabah, at junction of Sg Segama and Sg Palum Tambun, 4°58′N 117°48′E, 150 m, clearing, edge of untouched evergr. lowl. rainforest, 19.iii.1987, van Tol & Huisman, at light, 18.30-21.30, 1♂, 1♀, RMNH; same data, 1♂, ZMAN; same data, 20.iii.1987, at light, 18.20-21.00, 4♂, RMNH; same data, 20.iii.1987, at light, 18.20-21.00, 1♀, ZMAN; Tawau, No. East Borneo, 10.vi.1970, Rcvd.fr. E. Mendenhall, 1♂, CAS.

EAST MALAYSIA: BORNEO, SARAWAK: Bau, ix.1911, J.M. Bryan, 1♂, BMNH; Bidi, Sarawak, 1907-1908, C.J. Brooks, 1♂, BMNH; Gunong Mulu Nat. Park, Site 17, Nr Long Melinau, low seond. f., MV on river bank, 50 m, v.1978, J.D. Holloway, 1♂, BMNH; Gunong Mulu N. Park, Long Pala, i.1989, J.H. Martin, at light, 3♂, BMNH; Gunong Mulu Nat. Park, Site 20, W. Melinau Gorge, FEG 3, kerangas, MV - understorey, 150 m, iii-iv.1978, J.D. Holloway, 1♀, BMNH; Gunong Mulu Nat. Park, Site 23, W. Melinau Gorge, FEG 4, limestone forest, MV - canopy / understorey, 250 m, iv.1978, J.D. Holloway, 2♂, 1♀, BMNH; Gunong Mulu Nat. Park, Site 14, Mulu, Camp 2.5, lower 1. montanner for., MV - canopy / understorey, 1000 m, ii.1978, J.D. Holloway, 1♂, BMNH; Gunong Mulu Nat. Park, Site 1, Mulu, Camp 4, lower montane (moes) forest, MV - canopy, 1790 m, i.1978, J.D. Holloway, 1♂, BMNH; Kedurong [Tanjung Kidurong], Sarawak, J.C. Moulton, 2♂, BMNH; same data, 1911, J.C. Moulton, 4♂, BMNH; Lubok Antu, 12.ii.1993, 2♂, SUU; Marudi, Sarawak, 10.iii.1969, T. Kunou & Y. Arita, 2♂, SUU; Miri, Sarawak, iii-1969, T. Kunou & Y. Arita, 1♂, SUU; Sarawak, xii.1912, 1♂, MZSF; Semonggok Forest Res. [Semonggok Forest Reserve], 24 km south of Kuching, wet primary forest, 15-20.iii.1968, D.E. Hardy, 1♂, BPBM.

BRUNEI: Badas, 50-100 ft, Agathis / swamp for. / secondary vegetation, 27.ii.1982, G.S. Robinson, 1♂, BMNH; Tutong Benutan Reservoir, mix. dipterocarp f., 11.iii.1993, E. Heiss, 1♂, ZMAN; Brunei, Borneo, 1♂, NHMS; Brunei, Borneo, op booreiland voor de kust [on drilling platform for the coast], 1969?, C. Kranenburg, 1♂, ZMAN; Brunei, N. Borneo, Waterstradt, 1♂, ZMAN; Penanjong [Kampong Penanjong], coast, iii.1989, J.H. Martin, at light, 2♂, BMNH; Rampayoh R. (north) [Sungai Rampayoh], 400 ft, lowland for., 1-3.iii.1982, G.S. Robinson, 1♂, ZMAN; S. Selanjuk, 0 m, mangrove, 8-9.iii.1984, T.P.G. Helpa, 1♂, BMNH.
INDONESIA: BORNEO, KALIMANTAN: Balakpapan [Bilikpapan], 1912(?), H. Harvey, ♂ holotype Champaka harveyi Distant BMNH; Bilik Papan, 30.iii.1930, A. Jison, 1♂, BMNH; Kalimantan, xii.1981, 2♂, SUU; Long Bagun [Longbangun], 25 km SE of Longboh, S. Mahakan, Kalimantan Timur, 7.iv.1996, R. Sözer, 1♂, ZMAN; Malinau, Kalimantan Timur [Kalimantan Timur], E. Borneo, 1971, 4♂, 1♀; NSMT; same data, 1♂, SUU; Nanga Pinah [Nangapinoh], 2♂, RMNH; Pontianak, M. Weber, 2♂, RMNH; Samarinda, 8.ii.1929, Prince Léopold, 1♂, ISNB; Sambar, [1917], J. Bosschoo, 1♂, RMNH; Sanga Sanga [Sungai Sangasanga], E. Borneo, 30.iii.1930, M.D. Jensen, 1♂, BMNH; Tiong Buu (= Nahabuan), 18 km NW of Longkay [Long Kay], S. Mahakan, Kalimantan Timur, 15.iv.1996, R. Sözer, 3♂, ZMAN.

EXACT LOCATION UNKNOWN OR NOT LOCATED: Borneo, 728, 1♂, ISNB; Borneo, 7.iv.1931, P.W. van Thiel, 1♂, RMNH; without locality labels, 4♂, BMNH; Indië [East Indies], i.1912, Ouwehand, 1♂, ZMAN; Patria incognita, [1943?], Eberhardt, 1♂, ZMAN; S. Tengah, iv.1912, 1♂, BMNH.

LOCATION DOUBTFUL: Philippines, C.S. Banks, 1♂, MCZ.

Distribution: The distribution is given in Fig. 29. P. viridimaculata is widespread in Borneo (Sabah, Sarawak, Brunei, Kalimantan). There are only few specimens from localities outside Borneo. Two males from West Malaysia (one from Penang at MNKM [pers. com. Zaidi Mohd. Isa] and one from Genting Highlands, Selangor at the PSS) represent the first records from that area. One male at the MCZ was labelled as coming from the Philippines, but this is likely to be erroneous.

Platylomia nigra (Distant, 1888) (Figs. 30-42)

Dundubia spinosa [nec Fabricius]; Walker, 1850: 47; Dohrn, 1859: 72.
Dundubia spinosa Walker nec Fabricius; Distant, 1890: 52; Distant, 1906: 62; Distant, 1912: 49.
Cosmopsatiria nigra Distant, 1888a: 292; Distant, 1890: 51, pl. VI (Figs. 9-9b); Distant, 1892: xii.
Platylomia albomaculata Distant, 1906: 66, syn. nov.; Distant, 1906: 62; Distant, 1912: 49, pl. 6 (Figs. 41a-c); Metcalfe, 1963b: 614.

Type material and lectotype designations: When Distant (1888) described P. nigra he had several specimens available to him. It is unclear which of the specimens at the BMNH did belong to the type series except for a single male with the following labels: 'Type' [printed in red circle], 'nigra / Dist.' [Distant's handwriting], 'Distant Coll. / 1911-383.' [printed]. This specimen is damaged and the genitalia are missing but it is nevertheless clear that it is conspecific with the other material listed in the appendix. This male is herewith designated as lectotype and labelled accordingly.

Distant (1905) described P. albomaculata on the basis of material from the Philippines at the BMNH but no type was designated and no number of specimens was indicated. One male at the BMNH is labelled as follows: 'Type' [printed in red circle], 'Platylomia / albomaculata / type Dist.' [Distant's handwriting], 'Philippines' [hand-written], 'Tring Museum.' / 1908-
62.' [printed]. This specimen is herewith designated as lectotype and labelled accordingly.

**Fig. 30. Phytolomia nigra:** male, dorsal view (Mt. Isarog)

**Synonymy:** Examination of the lectotypes of *P. nigra* and *P. albomaculata* shows that they are conspecific and differ in details only. *P. albomaculata* is herewith synonymized with *P. nigra*.

**Description:** Rather variable in size and coloration. Body black or brown and castaneous with black central fasciae on pronotal disc and with black median, paramedian, and lateral fasciae on mesonotum; tegmina with markings on basal veins of second and third, and usually fifth and seventh apical cells, and on apices of longitudinal veins of apical cells. Male opercula variable, ranging from narrow and rounded at apex to broadened at apex with distal projection. Female ovipositor short to slightly elongate.

Head: Postclypeus either uniformly black or brown with narrow dark median line on dorsal part, dark on ridges on ventral part and broadly darkened along clypeal suture; postclypeus little to distinctly swollen, in dorsal view just shorter to just longer than distance between frontoclypeal suture and anterior margin of pronotum. Anteclypeus either uniformly blackish or castaneous with brownish median line. Vertex either uniformly blackish or brownish with suture between supra-antennal plates and vertex lobes, and area of ocelli largely black, area lateral of lateral ocelli with small black markings, latter markings in darker specimens larger and almost reaching eyes. Genae either uniformly blackish or brownish with castaneous transverse band ventral of antennae; lori blackish to castaneous. Frontoclypeal trapezoid, median part broader than distance between lateral margins of lateral ocelli. Rostrum either uniformly blackish or brown with dark castaneous tip; reaching to or slightly beyond posterior margin hind coxae.
Figs. 31-34. *Platylomia nigra* male: 31, genitalia, ventral view (lectotype *P. albomaculata*); 32, genitalia, lateroventral view (lectotype *P. albomaculata*); 33, genitalia, dorsal view (Mt Montalban); 34, uncus, anterior view (lectotype *P. albomaculata*).
Figs. 35-39. *Platylomia nigra* male: 35, operculum, right, lateroventral view (lectotype *P. nigra*); 36, operculum, right, lateroventral view (Manilla); 37, operculum, right, lateroventral view (Mt Isarog); 38, operculum, right, apex, lateral view (Mt Isarog); 39, operculum, right, apex, ventral view (Mt Isarog).
Chapter 3

Thorax (Fig. 30): Pronotum usually slightly to distinctly narrower than head, occasionally broader than head; broadest part at lateral margin of pronotal collar. Pronotal disc either uniformly blackish or brown to castaneous with pattern of black fasciae and markings; pattern consisting of central fasciae that meet posteriorly, dark longitudinal fasciae on median lobes of disc that run from anterior to or almost to posterior oblique fissures, dark area along lateral and posterior margin of lateral lobes of disc, and dark longitudinal fasciae that run along posterior oblique fissure to posterior margin of pronotal disc. Pronotal collar concolorous with pronotal disc, when brown then with black posterior margin and with indistinct darkening at lateral margin; anterolateral corner angular with distinct lateral tooth. Mesonotum either uniformly blackish or brownish with pattern of black markings and fasciae that may be partly confluent; pattern consisting of median fascia that is broad on posterior half of disc and narrow or indistinct on anterior half, paramedian fasciae just medial of mesonotal fissures on anterior part of disc and on posterior half of disc as black markings anterior of and extending on to cruciform elevation, and broad posteriorly converging lateral fasciae that may be narrowed and sometimes even interrupted on anterior half of disc. Cruciform elevation concolorous with mesonotal disc, when brownish anterior arms partly black; depressions between anterior and posterior arms of cruciform elevation occasionally with waxy coating. Katepimal lobe (Fig. 41) shorter than broad and slightly triangular, dorsal margin parallel with longitudinal axis of body; apex angularly rounded to rounded. Surface of katepimal lobe covered with short hairs and with some of long fine hairs along posterior margin. Apex just or just not reaching base of operculum.

Tegmina and wings (Fig. 30): Tegmina clear to slightly brownish grey hyaline; distal margin occasionally with darker reticulation; basal cell yellowish to brownish fumose on anterior half to three quarters, sometimes greenish; basal veins of second and third apical cells with dark brown to blackish markings, usually basal veins of fifth and seventh apical cells with small black markings but especially latter marking may be very indistinct or absent; apices of longitudinal veins of apical cells all with rounded markings but posterior markings occasionally faint. Veins of tegmen brownish to castaneous; clavus pale green to white or greyish. Wings clear to slightly brownish grey hyaline. Veins of wings brownish; clavus pale green to white or greyish.

Legs: All legs wholly blackish to brownish with castaneous to black markings; joints between femora and tibiae always paler. If not wholly blackish fore legs castaneous with narrow to broad brown basal ring. If not wholly blackish mid legs castaneous with broad brown median band to femora and tibiae. If not wholly blackish hind legs brown with castaneous posterior surface to femora and castaneous ring near base and at apex of tibiae. Fore femur posteroventrally with proximal spine slender; middle spine broadened at base and thus somewhat triangular, as long as proximal spine; distal spine distinct and triangular; gap between middle and distal spines deep and narrow.

Male. Operculum (Figs. 36-39): Operculum rather variable in shape; reaching from one third of length of fifth to almost posterior margin of sixth.
abdominal segment, 2.7-3.7 times as long as maximum width distal of constriction; usually uniformly blackish but sometimes brownish with darkening in lateroproximal corner and extensive darkening along margins in distal part. Medial margin distal of constriction weakly convex to apex, or straightening near apex when distal part somewhat broadened, or concave just before apex when apex gully-shaped. Apex broadly rounded (Fig. 35), or broadened with almost straight distal margin (Fig. 36), or narrowed and gully-shaped (Figs. 37-39); apex at or lateral of midline of operculum. Lateral margin distal of constriction weakly convex to apex and often straightening about halfway, or convex almost to apex but slightly concave at apex. Constriction at 0.3-0.4 of length of operculum, lateral and medial concavities equally deep or lateral concavity slightly deeper than medial concavity, broadest part of operculum distal of constriction 1.2-1.5 times as wide as minimum width at constriction. Distance between opercula at constrictions 1.2-1.7 times as wide as minimum width at constriction and opercula at point of closest approximation separated for a distance of 0.7-1.0 times maximum width between opercula at constrictions. Opercula close to abdomen but apices divergent when gully-shaped; surface weakly convex in longitudinal direction but more distinctly convex in transverse direction, especially distally when apex gully-shaped.

Abdomen (Fig. 30): Abdomen about 1.3-1.4 times as long as head and thorax together. Dorsal part of tergites uniformly blackish to brown on anterior half and more castaneous on posterior half, when not blackish often paler on anterolateral corners of tergites 3-6 and with darker spots just medial of these areas; tergites often covered with short hairs but without distinct pattern; sternites and ventral part of tergites uniformly blackish or dark castaneous to dark brownish. Tergites 1-7 with paramedian spots of white waxy coating at anterior margins; tergite 8 with large paramedian spots of white waxy coating across whole length; tergites 3-7 often with areas of white waxy coating in anterolateral corners; wherever waxy coating is rubbed off remnants of these spots still distinguishable as dull grey areas. Posterior margin of tergite 5-7 with slender dark spinules along whole length but spinules decreasing in number on anterior segments. Sternite 7 with shallow postero medial emargination. Timbal covering (Fig. 40) blackish to castaneous, about 1.0-1.3 times as broad as long; medial margin short and straight; mediodistal corner broadly rounded; distal margin almost straight; laterodistal corner rounded; lateral margin weakly convex to straight.

Genitalia (Figs. 31-34): Blackish to brownish with ventral part of pygofer and distal part of uncus lobes paler. Basal pygofer (Figs. 31-32) lobes narrow and raised, rounded in lateral view; hairs on anteroventral margin of pygofer erect, decreasing in length from medial part towards pygofer lobes; pygofer surface enclosed by anteroventral margin with hairs except on medial area; pygofer surface anterior of medial part of anteroventral margin with scattered hairs; lateral pygofer surface with scattered hairs posteriorly and interspersed with some longer hairs close to posterior margin. Dorsal part of pygofer as in Fig. 33. Basal part of uncus (Figs. 31-32) rather short, broad and angularly rounded posteriorly; laterobasal part with scattered long hairs. Uncus
Figs. 40-41. *Platylomia nigra* male: 40, Timbal covering, right (lectotype *P. nigra*); 41, Katepimeral lobe, right (Mt Isarog).

Fig. 42. Localities of *Platylomia nigra*. 
lobes (Figs. 31-32) raised compared to basal part of uncus; medial margin weakly convex to straight and curved inwards; mediiodistal corner rounded and curved inwards; distal margin weakly concave to straight; laterodistal corner rounded and extending slightly more anterior than mediiodistal corner; lateral margin virtually straight with shallow concavity near base. Outer surface of uncus lobes with ridge posterior of aedeagal opening that extends on to uncus lobes as low ridge more than halfway to distal margin just lateral of medial margin. Surface of uncus lobes with scattered short hairs but hairs densely set on medioproximal corners, bases of uncus lobes with strong erect hairs along margin both ventrally and dorsally.

**Female.** Operculum reaching beyond anterior margin of third abdominal segment but no further than one third of segment length, curved around abdomen laterally; blackish to brown with darkening on distal part and at lateroproximal corner. Lateral margin distal of lateroproximal lobe weakly convex and straightening close to laterodistal corner; laterodistal corner angularly rounded to angular; distal margin weakly convex to straight; mediiodistal corner and medial margin rounded.

Abdomen: Abdomen about as long as head and thorax together. Colour and hairs as in male; paramedian spots of white waxy coatings as in male, lateral patches absent. Posterior margin of tergites (4) 5-7 with slender dark spinules, spinules decreasing in number both towards medial part of margins and on each more anterior tergite, such that spinules are often absent from medial part of tergite 5 and sometimes completely absent from tergite 4; posterior margin of tergite 8 with spinules along whole length but few medially. Sternite 7 with rounded to angularly rounded postero medial emargination.

Genitalia: Pygofer blackish to brownish with darkened ventral margins; ovipositor sheath blackish to brownish with distal part castaneous. Dorsal length of pygofer about equal to length of tegrites 6-8 together, dorsal margin in lateral view weakly concave, ventral margin convex; ventrodistal corners angular. Ovipositor sheath reaching little to distinctly beyond apex caudodorsal beak; anal valve not reaching as far as apex of caudodorsal beak.

**Measurements in mm** (♂: n = 10; ♀: n = 7). Body length: ♂: 39.5-52.5 (47.2 ± 3.4), ♀: 37.5-46.5 (40.4 ± 2.4) [including ovipositor sheath: 38.5-47.5 (41.5 ± 2.4)]; head width: ♂: 12.6-16.0 (14.6 ± 1.1), ♀: 13.5-16.9 (14.6 ± 0.8); maximum pronotum width: ♂: 11.7-17.0 (14.1 ± 1.4), ♀: 13.0-16.5 (14.2 ± 1.0); tegmen length: ♂: 44.5-60.5 (54.0 ± 4.7), ♀: 50.0-59.5 (53.7 ± 3.0).

**Specimens examined:** PHILIPPINES: Angat, Bulacan, 25.v.1987, J.H. Lourens, 1♂, ZMAN; Asin, 13.vi.1977, S. Aes, 1♂, SUU; Asin Spa, Mt. Pr. [Mountain Province], C. Luzon, 13.vi.1977, S. Aes, 1♂, NSMT; Asin Spa, N. Luzon, vi.1977, 2♂, NSMT; Bicol Nat. Park, Luzon, 14.iv.1975, S. Yamaguchi & T. Aoki, 1♂, SUU; Catbagan, Philippin., 1♀, BMNH; Imugan, Luzon, 1♂, 1♀, BMNH; same data, 1♂, ZMAN; Ins. Philipp., Semper, 3♂, 2♀, NHMS; Liwo, 8 km E Mayoyao, Ifugao Prov., 1000-1300 m, 30.v.1967, L.M. Torvillas, 1♂, BPBM; Los Banos, Luzon, 1♂, BMNH; Los Banos, Philippines Ids., iv.1917, F.X. Williams, 1♂, 1♀, collected in cop., BPBM; Luzon, 1880, Marche, 2♂, MNP; same data, 1229 80, 1♂, ZMAN; S.O. [Southeast] Luzon, 1♀, BMNH; Luzon, 1880, Marche, 2♂, MNP; same data, 1230 80, 1♂, MNP.
Manilla [Manila], 1♀, NHMS; Manilla [Manila], 1908, Raszlag, 1♂, NHMW; Manilla [Manila], 1839, Barot, 289 36, 1♀, MNP; Manilla [Manila], 1861, Dorquin, 246 61, 2♂, MNP; Maribella, Cavite, Luzon, 300 m, 11.03.1990, J.H. Lourenco, 2♂, 3♀, ZMAN; Mt. Apo, Mindanao, 2♂, SUU; Mt Banahao, Luzon, 1♂, 1♀, BMNH; Mt Isarog, Camarines Sur, 1600 m, 21-22.06.1963, H.M. Torvillas, 2♂, BPBM; Mt Isarog, Pili, Camarines Sur, Luzon, 800-900 m, 20.04.1965, H.M. Torvillas, light trap, 1♂, BPBM; same data, 800 m, 28.04.1965, 3♂, BPBM; same data, 800-900 m, 3.V.1965, 5♂, BPBM; same data, 800 m, 8-16.V.1965, 1♂, BPBM; Mount Makiling [Mount Maquilin], Luzon, Baker, 11♂, 2♀, USNM; same data, 1925, 1♀, USNM; P.I. [Philippines Islands], 1♀, BMNH; Philippines, 1♂, NHMS; Philippines, 1♂ lectotype Platylomia albomaculata, BMNH; Philippines, C.S. Banks, 1♂, BMNH; Sitio Punong, Barrio España, Romblon Prov., Sibuyan Is., iv-vi.1981, native collector, 1♂, SUU; Wa-wa Dam, Montalban, Rizal Province, Luzon, 150 m, 13.03.1965, H.M. Torvillas, light trap, 1♂, BPBM.

LOCATION UNKNOWN: no locality labels, ♂ lectotype Cosmopalastra nigra Distant, BMNH; no locality labels, 1♂, BMNH.

Distribution: The distribution is given in Fig. 42. P. nigra is widespread and not uncommon in the Philippines (Luzon, Samar, Sibujan and Mindanao).

Platylomia virescens Distant, 1905 (Figs. 43-56)

Platylomia virescens Distant, 1905: 66; Distant, 1906: 61; Moulton, 1911a: 142, 155; Distant, 1912: 49; Moulton, 1923: 103; Kato, 1932: 166, pl. XXV (Fig. 7); Kato, 1944b: 9; Metcalf, 1933b: 390.

Type material and lectotype designation: Distant (1905) described both sexes of P. virescens on the basis of specimens from Borneo (Sarawak; leg. A. Everitt) at the BMNH and from the Philippines at the MNP and BMNH but no type was designated. Two specimens belonging to the type material were examined. The first is a female at the BMNH with the following labels: 'Type' [printed in red circle], 'Platylomia / virescens Dist.' [Distant's handwriting], 'Philippines / A. Salle 1886' [printed], 'Distant Coll. / 1911-383.' [printed]. The second is a male, also at the BMNH with the following labels: 'Acc.No. 6686 / Lot / Bu.of Sci., P.I. [Philippine Islands]' [printed except for the number], 'Distant Coll. / 1911-383.' [printed]. Following Distant's labels the female is designated as lectotype and labelled accordingly. The male is labelled as paralectotype. The remaining type material from the Philippines at the MNP and from Sarawak at the BMNH was not found.

Description: Body largely blackish to brown and castaneous with black central fasciae on pronotal disc and black median, paramedian, and lateral fasciae on mesonotum; pronotal collar always ochraceous to brownish; pale parts sometimes with greenish tinge; tegmina with markings on basal veins of second and third, and usually also fifth and seventh apical cells, and on apices of longitudinal veins of apical cells. Male opercula variable, very long and narrowed towards apex, apex often undulating. Female ovipositor distinctly elongate.
Platylomia spinosa group

Fig. 43. Platylomia virescens: male, dorsal view (Samar).

Head (Figs. 43, 52): Postclypeus either uniformly black with pale anteromedial spot or brownish to greenish with darkening on ridges on dorsal half and broad black margin dorsal of clypeal suture; postclypeus little swollen, in dorsal view shorter than distance between frontoclypeal suture and anterior margin of pronotum. Anteclypeus either blackish and paler medially at clypeal suture or brownish and darkened laterally. Vertex either uniformly blackish or brownish with suture between supra-antennal plates and vertex lobes, and area of ocelli largely black, area lateral of lateral ocelli with small black markings (Fig. 52), in darker specimens latter markings larger and sometimes almost reaching eyes. Genae blackish with brown ventral margin to brownish with blackish transverse band ventral of antennae; lori blackish with ochraceous to brownish dorsal part. Frontoclypeal suture trapezoid, median part broader than distance between lateral margins of lateral ocelli. Rostrum brown with dark castaneous tip; reaching posterior margin hind coxae or beyond, but never further than ridge on sternite 2.

Thorax (Figs. 43, 52): Pronotum about as broad as to distinctly broader than head; broadest part at lateral margin of pronotal collar. Pronotal disc either very dark castaneous with ochraceous anterior margin or brown to castaneous with pattern of black fasciae and markings (Figs. 43, 52); pattern consisting of central fasciae that are occasionally interrupted, dark longitudinal fasciae on median lobes of disc that run from anterior to or almost to posterior oblique fissures, dark area along lateral and posterior margin of lateral lobes of disc, and dark fasciae that run along posterior oblique fissure to posterior margin of pronotal disc. Pronotal collar greenish to ochraceous, posterior margin occasionally black but usually concolorous with remainder of disc; anterolateral corner angular with distinct lateral tooth. Mesonotum blackish to brownish or greenish, mesonotal fissures paler; disc always with pattern of black fasciae (Figs. 43, 52) but pattern almost indistinguishable when mesonotal disc is very dark; median fascia broad on posterior half of
disc and narrow or indistinct on anterior half; paramedian fasciae on anterior part of disc medial of mesonotal fissures and on posterior half of disc as black markings anterior of cruciform elevation; lateral fasciae broad and posteriorly converging, usually not reaching anterior margin of disc. Cruciform elevation concolorous with pronotal collar but darkened medially; depressions between anterior and posterior arms of cruciform elevation occasionally with waxy coating. Katepimeral lobe (Figs. 54-55) about as long as broad or little shorter than broad, dorsal margin parallel with longitudinal axis of body; apex angularly rounded to rounded; ventral margin convex to almost straight. Surface of katepimeral lobe covered with short hairs and with some of long fine hairs along posterior margin. Apex just reaching base or over base of operculum.

Tegmina and wings (Fig. 43): Tegmina clear hyaline; distal margin occasionally with darker reticulation; basal cell yellowish to greenish fumose on anterior half to three quarters; basal veins of second and third apical cells with dark brown to blackish markings, basal veins of fifth and seventh apical cells either with or without small black markings; apices of longitudinal veins of apical cells all with rounded markings. Veins of tegmen brownish to castaneous, darker in distal part of tegmen; clavus pale green to white or greyish. Wings clear hyaline. Veins of wings brownish to castaneous; clavus pale green to white or greyish.

Legs: Fore femora largely ochraceous to brown with castaneous preapical ring to largely castaneous with brown spots on anterior surface near base and paler joints between femora and tibiae; mid tibiae dark castaneous, in paler specimens dorsal surface on basal three quarters ochraceous to brown; fore tarsi castaneous. Mid legs castaneous to brownish; mid femora narrowly castaneous at base and with castaneous spots near apex on anterior and posterior surface; fore tibiae with castaneous basal and apical ring and with dorsal and ventral surface castaneous on apical half; mid tarsi castaneous. Hind legs ochraceous to brown; hind femora with castaneous spots near apex on anterior and posterior surface; mid tibiae with castaneous basal and apical ring. Spines on fore femur as in *P. nigra*.

**Male.** Operculum (Figs. 48-51): Operculum rather variable in shape; reaching posterior margin of sixth to posterior margin of eighth abdominal segment, 3.6-4.7 times as long as maximum width distal of constriction; uniformly ochraceous brown with darkening in lateroproximal corner. Medial margin distal of constriction weakly convex to apex, sometimes straightening for some distance. Apex narrowed and pointed, usually produced and undulating (Figs. 49-51). Lateral margin distal of constriction first convex but concave near apex. Constriction at 0.2-0.3 of length of operculum, lateral concavity slightly deeper than medial concavity, broadest part of operculum distal of constriction 1.2-1.4 times as wide as minimum width at constriction. Distance between opercula at constrictions 1.6-2.0 times as wide as minimum width at constriction and opercula at point of closest approximation separated for a distance of 0.8-0.9 times maximum width between opercula at
constrictions. Operculum close to abdomen but apex divergent when undulating; surface weakly convex.

Figs. 44-47. Platylomia virescens male (Mt Balatukan): 44, genitalia, ventral view; 45, genitalia, lateroventral view; 46, genitalia, dorsal view; 47, uncus, anterior view.
Figs. 48-51. *Platylomia virescens* male: 48, operculum, right, lateroventral view (Cagusco); 49, operculum, right, lateroventral view (Mt Balatukan); 50, operculum, right, apex, lateral view (Mt Balatukan); 51, operculum, right, apex, ventral view (Mt Balatukan).

Abdomen (Fig. 43): Abdomen about 1.3-1.4 times as long as head and thorax together. Dorsal part of tergites brown or castaneous to blackish and anterior segments paler laterally and along posterior margins; tergites 3-6 with dark lateral spots just medial of these areas; tergites often covered with short hairs but without distinct pattern; sternites and ventral part of tergites brown or castaneous, paler than dorsal parts. Tergites 1-5 especially in darker specimens with white waxy coating at anterior margins and in anterolateral corners. Spinules on posterior margin of tergites as in *P. nigra*. Sternite 7 with shallow to very shallow posteromedial emargination. Timbal
covering (Fig. 53) brownish, about 1.1-1.3 times as broad as long; medial margin short and straight; mediodistal corner broadly rounded; distal margin convex; laterodistal corner rounded; lateral margin weakly convex to straight.

Figs. 52-55. Platylomia virescens: 52, male, head and thorax, dorsal view (Samar). 53, male, timbal covering, right (Mt Balatukan); 54, male, katepimeral lobe, right (Davao); 55, female, katepimeral lobe, right (Mt Isarog).

Genitalia (Figs. 44-47): Pygofer and uncus as in P. nigra but differing as follows: Basal part of uncus (Figs. 44-45) narrower and somewhat shorter than in P. nigra, almost angular posteriorly; laterobasal part with few short hairs. Uncus lobes more strongly narrowed (Fig. 44), narrowest point about halfway to distal margin; medial margins weakly convex to weakly concave, sometimes divergent; distal margin concave on medial half; lateral margin concave for whole length except at laterodistal corner. Ridge on outer surface of uncus lobes higher.

Female. Operculum reaching about one third to halfway third abdominal segment, curved around abdomen laterally; brown but often with greenish tinge, lateroproximal corner and often lateral margin darkened; shape as in P. nigra.
Fig. 56. Localities of *Platylomia virescens*.
Platylomia Platylomia spinosa group

Abdomen: Abdomen 0.9-1.1 times as long as head and thorax together. Dorsal part of tergites brownish, occasionally dark castaneous along anterior margin; ventral part of tergites and sternites brownish to castaneous, especially darker on medial part of sternites; tergites covered with short hairs, hairs generally greyish but often castaneous on laterally convex paramedian bands across tergites 3-6; tergites 3-7 with small dark lateral spots. Posterior margins of tergites (3) 4-7 with slender dark spinules, spinules decreasing in number both towards medial part of margins and on each more anterior tergite, such that spinules are often absent from medial part of tergite 4 and sometimes completely absent from tergite 3; posterior margin of tergite 8 with few spinules along whole length. Sternite 7 with rounded to angularly rounded posteromedial emargination.

Genitalia: Pygofer castaneous, paler ventrally except for darkened ventral margins; ovipositor sheath dark castaneous. Dorsal length of pygofer about equal to length of tegites 6-8 to 5-8 together, dorsal margin in lateral view weakly concave, ventral margin convex to almost convex; ventrodistal corners angular. Ovipositor sheath usually reaching more than length of caudodorsal beak beyond apex caudodorsal beak; anal valve not reaching as far as apex of caudodorsal beak.

**Measurements in mm** ($\sigma^*: n = 6$; $\Omega^*: n = 6$). Body length: $\sigma^*: 48.0-52.0$ (49.7 ± 1.1), $\Omega^*: 41.0-49.0$ (46.3 ± 2.4) [including ovipositor sheath: 42.0-52.5 (49.4 ± 3.1)]; head width: $\sigma^*: 14.6-16.6$ (15.8 ± 0.6), $\Omega^*: 15.6-17.5$ (16.5 ± 0.6); maximum pronotum width: $\sigma^*: 15.0-16.8$ (15.7 ± 0.6), $\Omega^*: 15.5-17.9$ (16.9 ± 0.8); tegmen length: $\sigma^*: 53.0-61.0$ (57.2 ± 2.2), $\Omega^*: 55.5-64.0$ (60.2 ± 2.3).

**Specimens examined**: PHILIPPINES: Ami O Area, Negro Oriental, 1948, 1 $\Omega^*$, BPBM; Atymona, Luzon Is., 11.vii.1970, S. Sihida, 1 $\sigma^*$, SUU; Caguscos, Libon, Albay Province, 200 m, 15.v.1965, H.M. Torvillas, 1 $\Omega^*$, BPBM; same data, 18-19.v.1965, 1 $\sigma^*$, BPBM; Camiguin Is., L. Luzon, 1984, 1 $\sigma^*$, SUU; Davao, Mindanao, Baker, 1 $\sigma^*$, USNM; Kelapo River, San Jose near Kibongey, City of Davao, Mindanao, 14.iii.1978, N. Kashiwai, 1 $\sigma^*$, SUU; Maloong [River], Basilan [Basilan], vii-viii.1982, K. Kiwasima, 1$\sigma^*$, SUU; Mt Balatukan, 15 km SW of Gingog, Misamis Or., 1000-2000 m, 1-5.v.1960, H. Torrevillas, at light, 1 $\sigma^*$, BPBM; Mt Isarog, Camarinas Sur, 500 m, 4.iv.1963, H.M. Torvillas, 1 $\Omega^*$, BPBM; Mt Isarog, Pili, Camarinas Sur, Luzon, 600-800 m, 11.iv.1965, H.M. Torvillas, 1 $\Omega^*$, BPBM; same data, 300 m, 28.iv.1965, light trap, 1 $\Omega^*$, BPBM; Mount Makiling [Mount Maquiling], Laguna, Luzon, 1000 ft, 30.i.1968, D.E. Hardy, 1 $\sigma^*$, BPBM; Mt Maquiling, 20.vi.1978, 1 $\sigma^*$, SUU; Mt Maquiling, Luzon Is., 19-20.vi.1978, N. Ohbayaahi, 1 $\sigma^*$, SUU; Philippines, 1886, A. Sallé, $\Omega$ lectotype P. virescens, BMNH; P.I. [Philipine Islands], $\sigma^*$ paralectotype P. virescens, BMNH; Polillo Island, Baker, 1 $\Omega^*$, USNM; Samar Id., Philippine Is., C.F. Baker, 1 $\sigma^*$, BMNH; San Jose, 15.iii.1978, N. Kashiwai, 2 $\sigma^*$, 1 $\Omega^*$, SUU; Zamboanga, Mindanao, 1.iii.1957, Y. Kondo, 1 $\sigma^*$, BPBM; Zamboanga, [Mindanao], 1.iii.1965, R. Wada, 1 $\sigma^*$, SUU; same data, 3.iii.1965, 2 $\sigma^*$, SUU.

**Distribution**: The distribution is given in Fig. 56. P. virescens is widespread in the Philippines but less common than P. nigra (Camigun, Luzon, Negro and Mindanao). The record from Sarawak (Distant, 1905; repeated by later authors) could not be verified.
**Platylomia meyeri** (Distant, 1888) (Figs. 57-69)

*Cosmopsaltria meyeri* Distant, 1888: 189, pl. XXV (Figs. 2-2b); Distant, 1890: 51; Distant, 1891: pl. VII (Figs. 5-5b); Distant, 1892b: xii; Breddin, 1901: 26.

*Cosmopsaltria majuscula* Distant, 1888b: 521, syn. nov.

*Cosmopsaltria meyeri* Distant, 1888: 47; Distant, 1890: pl. VII (Figs. 8-8b); Distant, 1892b: xii.

*Cosmopsaltria majuscula* Distant, 1889b: 48; Distant, 1891: pl. VII (Figs. 8-8b); Distant, 1892b: xii.

*Cosmopsaltria majuscula* [sic]: Breddin, 1901: 25.


**Type material and lectotype designation:** Only the male of *Cosmopsaltria meyeri* was described and the original description did not mention the number of specimens involved. The type material at SMTD consists of two males. One male is labelled as follows: ‘358’ [handwritten on yellow label], ‘A. B. Meyer/Celebes 1871’ [printed on yellow label], ‘Typus’ [handwritten], *Cosmopsaltria/meyeri/Dist.’ [Distant’s handwriting], ‘coll. A. Jacobi’ [printed], ‘Platylomia/meyeri (Dist.)’ / det. A. Jacobi’ [handwritten]. A second male is labelled similarly but with the number 359 and without the type label and Distant’s identification label. The male labelled as type was illustrated in the original description and is herewith designated as lectotype. The other male is labelled as paralectotype.

*P. majuscula* was described in a paper on cicadas in MSNG collection but no number of specimens was indicated. In MSNG collection is a single male with the following labels: ‘Menado / Bruijn 75’ [handwritten], *Dundubia/majuscula Dist.’ [Distant’s handwriting]. This male is here designated as lectotype and labelled accordingly. A female at BMNH probably from the same original series is labelled ‘Type’ but since the female was not described originally, it cannot be considered to have been part of the type series.

**Synonymy:** The lectotypes of *P. meyeri* and *P. majuscula* differ in details only and these differences are well covered by the variation in this species. *P. majuscula* is herewith synonymized with *P. meyeri*.

**Description:** Body yellowish brown to castaneous but head and thorax sometimes with greenish tinge; head and thorax with elaborate black pattern, abdomen almost unicolorous with pronotal disc; tegmina clear hyaline with brown infuscations on basal veins of second and third apical cells. Male opercula relatively short and narrow, rounded to angularly rounded at apex. Female ovipositor sheath elongate.

**Head** (Figs. 57-58, 68): Postclypeus black, anteromediaial spot, lateral parts on ventral side, and sometimes small area at frontoclypeal suture brownish or greenish; postclypeus little swollen, in dorsal view at most as long as distance between frontoclypeal suture and anterior margin of pronotum. Anteclypeus black. Vertex greenish to brownish, vertex lobes and area of ocelli largely black. Genae black except for transverse band ventral of antennae, lori black except at lateral margin. Frontoclypeal suture trapezoid, median part broader than distance between lateral margins of lateral ocelli. Rostrum brownish, darkened at tip only; reaching about halfway hind coxae to posterior margin hind coxae.
Figs. 57-58. *Platylomia meyeri*: 57, male, dorsal view (Edwards Camp); 58, female, dorsal view (Dumoga Bone N.P.).
Thorax (Figs. 57-58, 68): Pronotum distinctly broader than head. Pronotal disc yellowish brown to brown, often with greenish tinge, central fasciae distinct and black, sometimes almost interrupted halfway or almost confluent medially; lateral margin of lateral lobes and in darker specimens also posterior oblique fissure narrowly black. Pronotal collar concolorous with pronotal disc or slightly paler, laterally with small black spot at lateral lobe of disc; anterolateral corner with small but distinct lateral tooth. Mesonotum and cruciform elevation concolorous with or slightly paler than pronotal disc; mesonotal disc with narrow black median fascia that broadens on posterior half of disc and often splits before merging with black spots anterior of anterior arms of cruciform elevation, paramedian fasciae black, running just medial of mesonotal fissures and occasionally broadening so that they almost merge with median fascia, lateral fasciae black and broad, sometimes merging with black spots anterior of anterior arms of cruciform elevation. Katepimeral lobe (Fig. 65) short and triangular; dorsal margin more or less straight, sometimes weakly convex near apex; apex angular; ventral margin straight to weakly concave. Surface of katepimeral lobe concave, covered with short, waxy hairs and with dense fringe of long fine hairs along posterior margin.

Tegmina and wings (Figs. 57-58): Tegmina clear to slightly brownish or yellowish hyaline, usually with indistinct brownish reticulation along distal margin; basal veins of second and third apical cells dark brownish infuscate; apices of longitudinal veins of apical cells with small dark spots that get increasingly more indistinct from first apical cell towards third to fifth apical cell; basal cell yellowish to greenish infuscate. Veins of tegmen brownish to greenish and slightly darker distally, second anal vein dark brown to black. Wings clear to slightly brownish or yellowish hyaline. Veins of wings greenish to brownish but darker in distal half.

Legs: Fore legs, usually including coxae, largely dark brownish to blackish on anterior surface, posterior surface brownish. Mid legs castaneous brown on anterior surface and brownish on posterior surface, joint between femur and tibia rather yellowish brown. Hind legs brown but distinctly darker on anterior surface, joint between femur and tibia rather yellowish brown. Fore femur posteroventrally with middle spine shorter than proximal spine; proximal spine slender and directed somewhat distally; medial spine often broadened at base and more or less triangular, usually erect and only rarely directed distally; distal spine short but distinct, erect and usually pointed; gap between middle and distal spines rather narrow and deep. Hind tibiae with two anterodorsal spines and three anteroventral spines; spines darker than tibiae.

Male. Operculum (Fig. 63): Operculum reaching from just beyond anterior margin of fifth to just beyond anterior margin of sixth abdominal segment, 3.2-3.6 times as long as maximum width distal of constriction; greenish or brown to dark brown, lateral margin slightly darker proximal. Medial margin with constriction sometimes extending over half length of operculum, distal of constriction weakly convex to apex. Apex rounded or, when narrowed, angularly rounded; apex lateral to medial of midline. Lateral margin
Platylomia spinosa group

distal of constriction weakly convex to apex. Constriction at about 0.4 of length of operculum, both concavities shallow, broadest part of operculum distal of constriction 1.1-1.3 times as wide as minimum width at constriction. Opercula slightly divergent from base and more or less parallel distal of constrictions, close to abdomen for whole length. Surface weakly convex on both proximal and distal halves, and with transverse wrinkles about halfway.

Figs. 59-62. Platylomia meyeri male: 59, genitalia, ventral view (Minahassa); 60, genitalia, lateroventral view (Minahassa); 61, genitalia, dorsal view (Dumoga Bone NP); 62, uncus, anterior view (Minahassa).
Figs. 63-67. *Platylomia meyeri*: 63, male, operculum, right, lateroventral view (Minahassa); 64, male, timbal covering, right (Dumoga Bone NP); 65, male, katepimeral lobe, right (Minahassa); 66, female, operculum, lateroventral (site 1, Barlow); 67, female, genitalia, lateral (Dumoga Bone NP).

Abdomen (Figs. 57, 68): Abdomen about 1.4-1.6 times as long as head and thorax together. Dorsal part of tergites yellowish brown to castaneous, tergites at most with indistinct darker spots laterally; sternites and ventral parts of tergites little paler than dorsal parts. Posterior margin of tergite 7 with many short dark spinules along whole length, posterior margins of tergites 5-6 with spinules along whole length but fewer, especially on tergite 5. Sternite 7 with at most very shallow posteromedial emargination. Timbal covering (Fig. 64) brownish, sometimes with greenish tinge, to castaneous, about 1.1-1.2 times as broad as long; medial margin short, virtually straight to convex; mediodistal corner broadly rounded; distal margin weakly convex; laterodistal corner narrowly rounded; lateral margin weakly concave to straight.
Platylomia spinosa group

Genitalia (Figs. 59-62): Yellowish brown, uncus lobes sometimes darker. Basal pygofer lobes narrow and raised (Figs. 59-60), rounded and clearly removed from lateral margin pygofer; hairs on anteroventral margin erect, increasing in length towards basal pygofer lobes but short again distally on those lobes; medial part of surface enclosed by anteroventral margin largely devoid of hairs, lateral part with short hairs; pygofer surface anterior of medial part of anteroventral margin with few hairs only; lateral and dorso-lateral surface of posterior part of pygofer with scattered, short hairs that are interspersed with occasional long hairs. Dorsal part of pygofer as in Fig. 61 but caudodorsal beak often shorter. Basal part of uncus (Figs. 59-60) longer than in _P. spinosa_, broad and little globose, somewhat rounded posteriorly; laterobasal part broader than in _P. spinosa_, near bases of uncus lobes with some erect hairs. Uncus lobes (Figs. 59-60) raised compared to basal part of uncus; medial margin weakly concave to weakly convex and curved inwards, especially at bases of uncus lobes; mediiodistal corner narrowly rounded; distal margin somewhat curved inwards, weakly concave and with small, irregular bumps (Fig. 62); laterodistal corner angularly rounded; lateral margin concave near base, distally almost straight to weakly undulating. Outer surface of uncus lobes with narrow, curved ridge running from almost mediiodistal corners towards bases of uncus lobes and anteromedially across basal part of uncus, forming concavity at aedeagal opening; medial margin with some shallow transverse grooves but surface otherwise virtually smooth. Bases of uncus lobes usually with some strong erect hairs along margin with basal part; outer surface otherwise with scattered, erect and fine hairs; inner surface with longer and thicker hairs near bases of uncus lobes and along medial margin, otherwise with scattered fine hairs.

Female. Operculum (Fig. 66): Operculum greenish or brownish to castaneous, lateroproximal castaneous to black except on lateroproximal lobe; reaching just beyond anterior margin third abdominal segment. Lateral margin weakly convex distal of lateroproximal lobe and straightening near laterodistal corner; laterodistal corner angular; distal margin straight or weakly concave near laterodistal corner, weakly convex near mediiodistal corner; mediiodistal corner broadly rounded; medial margin straight, medial margins strongly divergent from bases of opercula.

Abdomen (Fig. 58): Abdomen (excluding ovipositor sheath) about 1.0-1.1 times as long as head and thorax together. Dorsal part of tergites dark yellowish brown to castaneous, tergites narrowly darkened on median line, lateral spots rarely visible, tergite 2 with narrow black posterior margin, tergite 7 often slightly concave medially; sternites and ventral parts of tergites paler than dorsal parts. Posterior margins of tergites 5-7 with short dark spinules, especially numerous on tergite 7, few medially on tergite 6 and very few medially on tergite 5; posterior margin of tergite 8 with scattered, short spinules paramediadly and occasionally also medially. Sternite 7 with angularly rounded to angular posteromedical emargination in median lobe as in Fig. 102 but median lobe may be slightly longer or broader.
Chapter 3

Figs. 68-69. Platylomia meyeri: 68, male, dorsal view; 69, localities of P. meyeri and P. wallacei.

Genitalia (Fig. 67): Pygofer brownish to castaneous, paler on ventral parts; distal part of ovipositor sheath brown to dark castaneous. Dorsal length of pygofer about equal to length of tergites 6-8 together, in lateral view weakly concave; ventral margin almost straight; ventrodistal corners rounded. Ovipositor sheath reaching far beyond apex of caudodorsal beak; anal valve never reaching as far as caudodorsal beak.

Measurements in mm ($σ$: n = 7; $φ$: n = 5). Body length: $σ$: 51.5-56.0 (53.0 ± 0.9), $φ$: 42.5-46.0 (44.0 ± 1.0) [including ovipositor sheath: 47.0-50.0 (48.3 ± 1.0)]; head width: $σ$: 13.4-15.0 (14.5 ± 0.5), $φ$: 14.4-15.3 (14.7 ± 0.4); maximum pronotum width: $σ$: 14.4-16.2 (15.3 ± 0.5), $φ$: 15.3-16.1 (15.6 ± 0.2); tegmen length: $σ$: 55.0-59.5 (57.6 ± 1.5), $φ$: 54.5-57.5 (56.2 ± 0.8).

Specimens examined: INDONESIA: SULAWESI: Celebes, 1871, A.B. Meyer, $σ$ lectotype and $1σ$ paralectotype Cosmopsaltria meyeri Distant, SMTD; Dumoga-Bone N.P., Sulawesi Utara, xi.1985, 1$φ$, BMNH; same data, xii.1985, 1$σ$, BMNH; Dumoga-Bone N.P., Sulawesi Utara, Site 1, 200 m, v.1985, H. Barlow, 1$σ$, 8 $φ$ $φ$, Rothamsted light trap, BMNH; same data, vi.1985, 1$σ$, 2 $φ$, BMNH; Dumoga-Bone NP, E. of Kotamobagu, N. Sulawesi, 0°34’N 123°54’E, 225 m, prim. forest, 23.iii.1985, F.G. Rozendaal, attracted to light, 19.00h, 1$σ$, RMNH; Edwards Camp,
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Dumoga-Bone N.P., 664 m, 26-30.iv.1985, J.H. Martin, at light, 1 Q, BMNH; Edwards Camp, Sulawesi Utara, Dumoga-Bone N.P., stat. 27, 1000 m, lowland rainforest, understorey / canopy, 21.ii.1985, J.P. Duffels & J.D. Holloway, MV light-trap, 1c', 1 Q, ZMAN; same data, stat. 29, canopy, 24.ii.1985, 1c', 1 Q, ZMAN; Edwards Subcamp, Dumoga-Bone National Park, 650 m, 27.iv.1985, J. van Tol & R. de Jong, at light, 2 Q, RMNH; Hog's Back Camp, Sulawesi Utara, 600 m, side of ridge, lowland rainforest, understorey / canopy, 12-13.ii.1985, J.P. Duffels & J.D. Holloway, MV light-trap, 1c', ZMAN; Hog's Back Camp, Sulawesi Utara, stat. 30 A, 600 m, lowland rainforest, canopy, 16.ii.1985, J.D. Holloway, MV light-trap, 1c', 1 Q, ZMAN; Lake Mala [Danau Mala], Sulawesi Utara, 0°4'N 124°07'E, 1080 m, forest, 9.ix.1985, A.H. Kirk-Spriggs, light trap, 2 Q, NMWC; Menado [Manado], 1875, Bruijn, ? lectotype Dundubia majuscula Distant, MSNG; same data, Bruijn, 1 Q, BMNH; Minahassa, 1c', ZMAN; Minahassa, P.J. v.d. Bergh, 1c', ZMAN; Page Camp, Dumoga-Bone N.P., stat. 9, 350 m, lowland rainforest, 4-8.ii.1985, J.P. Duffels & J.D. Holloway, MV light-trap, 1 Q, ZMAN; Tomohon, Minahassa, N. Celebes, 1950, G.H. v. Rijssel, 1 Q, ZMAN; along river Toraut, Dumoga-Bone National Park, 210 m, 16.v.1985, J. van Tol, at light, 1c', RMNH; Toraut Camp, Dumoga-Bone NP, N. Sulawesi, 210 m, sec growth river bank, 7.vi.1985, Huijbregts & native collector, 1c', RMNH; Toraut, Dumoga-Bone N.P., stat. 23, lowland rainforest, site 2, understorey / canopy, 17.ii.1985, H.S. Barlow, light trap, 1 Q, ZMAN; same data, 20.ii.1985, 1 Q, ZMAN; Toraut, Dumoga-Bone NP, E. of Kotamobagu, N. Sulawesi, base camp, 0°34'N 123°54'E, 211 m, prim. forest, 21.iv.1985, F.G. Rozendaal, attracted to light, 1c', RMNH; Toraut, Dumoga-Bone NP, N. Sulawesi, 15-16.viii.1985, J. Huijbregts, at light, 1 Q, RMNH; Toraut, Dumoga-Bone NP, Sulawesi Utara, lowland rainforest, 1-3.x.1985, M.R. de Jong, 1 Q, ZMAN; same data, 11.x.1985, 1 Q, ZMAN; same data, 14.x.1985, at light, 1 Q, ZMAN; River Tumpah, Toraut, Domoga Bone N.P., 0°34'N 123°54'E, 211 m, forest, 6.ix.1985, A.H. Kirk-Spriggs, light trap, 1 Q, NMWC; Tumpah River Forest, N. Sulawesi, 220 m, 28.iii.1985, T.W. Harman, m.v. light, 1 Q, ZMAN; same data, 250 m, 28.iii.1985, 1 Q, ZMAN.

LOCATION UNKNOWN: Barlow site 2, -1.iv.1985, at light, 2 Q, BMNH; no locality label, Id. Hodkinson, 1 Q, BMNH; India Archipel, 1867, 1c', NHMW.

Distribution: The distribution is given in Fig. 69. P. meyeri is a locally common species that is so far only recorded from northern Sulawesi.

Platylomia wallacei, sp. nov. (Figs. 69-80)

Description: Body variegated yellowish brown to castaneous, abdomen almost unicolorous; tegmina clear hyaline with brown infuscations on basal veins of second, third, fifth, and seventh apical cells and infuscation extending well along longitudinal veins of apical cells and along marginal vein. Male tergites with median spots of white waxy coating; opercula rounded at apex and surface of distal part convex. Female tergite 8 with triangular mark of white waxy coating.

Head (Figs. 70-71, 76): Postclypeus castaneous but ochraceous on anteromedial spot and parts immediately around it and brown on lateroventral margin, area between clypeal suture and anteromedial spot with short and narrow black fascia, in dark specimens with broadening black marking from clypeal suture on to anteromedial spot; postclypeus little swollen, in dorsal...
view shorter than distance between frontoclypeal suture and anterior margin of pronotum. Anteclypeus castaneous. Vertex brownish, suture between supra-antennal plates and vertex lobes, and area of ocelli largely black, area lateral of lateral ocelli with small black markings but in darker specimens these markings larger and sometimes almost reaching eyes. Genae brown except for black transverse band ventral of antennae, lori dark castaneous. Frontoclypeal suture trapezoid, median part broader than distance between lateral margins of lateral ocelli. Rostrum brownish, darkened at tip only; reaching to about posterior margin hind coxae.

Thorax (Figs. 70-71, 76): Pronotum as broad as head to distinctly broader than head, broadest part always at lateral margin of pronotal collar. Pronotal disc greenish or yellowish brown to brown, central part castaneous; posterior margin of disc often with small black V-shaped medial marking; median lobes of disc with dark longitudinal fasciae running from anterior to posterior oblique fissures; lateral lobes of disc dark along lateral and posterior margin and with dark longitudinal fasciae running along posterior oblique fissure to posterior margin of pronotal disc. Pronotal collar somewhat narrowed medially, concolorous with pronotal disc; lateral part with dark marking running from lateral margin disc to lateral margin of collar and usually including lateral tooth on anterolateral corner; posterior margin of collar not black. Mesonotum yellowish brown to brown or greenish and castaneous with black fasciae; median fascia black and broad on posterior half of disc, on anterior half of disc narrow or indistinct; paramedian fasciae on anterior part of disc running just medial of mesonotal fissures, black and narrow all along or broadening posteriorly, on posterior half of disc present as black markings anterior of and extending on to cruciform elevation; lateral fasciae distinct and somewhat convergent posteriorly, on anterior half often narrowed and sometimes even interrupted; hourglass-shape area enclosed by paramedian fasciae castaneous, parts lateral of this area (roughly delimitied by mesonotal fissures on anterior margin of disc, broadest point of central fascia and posterior end of lateral fasciae) yellowish brown to brown, remainder brownish to greenish but often partly yellowish brown near lateral margin of disc. Cruciform elevation yellowish brown to greenish, medial part often castaneous and anterior arms partly black. Katepimeral lobe (Fig. 79) very short and rounded; surface coverd with short, waxy hairs and with dense fringe of long fine hairs along posterior margin.

Tegmina and wings (Figs. 70-71): Tegmina clear to brownish hyaline, usually with indistinct brownish reticulation along distal margin; basal veins of second, third, fifth, and seventh apical cells brownish infuscate, infuscations on basal veins of second, third, and fifth apical cells usually connected along longitudinal veins, occasionally all connected; longitudinal veins of apical cells with brownish infuscations that broaden at apices of veins; basal cell yellowish brown infuscate except along posterior margin. Veins of tegmen brownish to greenish but darkened distally; clavus pale to dark greyish brown. Wings clear hyaline. Veins of wings brownish; clavus greyish.
Figs. 70-71. *Platylomia wallacei*: 70, male, dorsal view (Rano Rano); 71, female, dorsal view (Ice Station Zebra).
Figs. 72-75. *Platylomia wallacei* male (holotype): 72, Genitalia, ventral view; 73, Genitalia, lateroventral view; 74, Genitalia, dorsal view; 75, Uncus, anterior view (holotype).
Legaes: All legs pale brownish to blackish, at least all joints between femora and tibiae pale brownish; fore femora castaneous to blackish with pale brownish markings on anterior and posterior surfaces; fore tibiae brownish; fore tarsi slightly paler than tibiae. Mid legs brown to castaneous; mid femora brown but dark castaneous on dorsal surface; mid tibiae castaneous; mid tarsi slightly paler than tibiae. Hind legs brown to dark castaneous; hind femora dark castaneous but brownish on posterior surface and ventrally on basal half; hind tibiae castaneous; hind tarsi pale brownish. Fore femur posteroventrally with middle spine shorter than proximal spine; proximal spine slender; medial spine broadened at base and sometimes triangular; distal spine short but distinct, erect and usually pointed; gap between middle and distal spines narrow and deep to broad and shallow. Hind tibiae with two anterodorsal spines and three anteroventral spines; spines darker than tibiae.

Male. Operculum (Fig. 77): Operculum reaching about halfway fifth to about halfway sixth abdominal segment, 2.3-2.5 times as long as maximum width distal of constriction; brown to castaneous, lateral margin slightly darker proximally except on lateroproximal lobe. Medial margin distal of constriction convex to apex, more strongly so near apex. Apex broadly rounded, at midline or lateral of midline. Lateral margin distal of constriction convex to apex or almost straight for some distance on distal half. Constriction at 0.3-0.4 of length of operculum, concavities equally deep, broadest part of operculum distal of constriction 1.4-1.6 times as wide as minimum width at constriction. Distance between opercula at constrictions about 1.0-1.2 times as wide as minimum width at constriction. Opercula at point of closest approximation separated for a distance of 0.5-0.7 times maximum width between opercula at constrictions. Surface of operculum evenly convex except at level of constriction and often with transverse wrinkles about halfway, opercula somewhat curved around abdomen laterally.

Abdomen (Figs. 70, 76): Abdomen about 1.2-1.4 times as long as head and thorax together. Dorsal part of tergites brown to castaneous, tergites 3-7 laterally with darker spots, posterior spots smaller; sternites and ventral parts of tergites little paler than dorsal parts. Tergites (2) 3-7 with spots of white waxy coating on posterior margin; all tergites to some degree covered by short greyish hairs but hairs especially dense on posterior tergites. Posterior margin of tergite 7 with many short dark spinules along whole length but fewer laterally, posterior margin of tergite 6 with spinules along whole length but fewer medially, posterior margin of tergite 5 with few spinules laterally. Sternite 7 with shallow to very shallow posteromedial emargination. Timbal covering (Fig. 78) brownish to castaneous, about 1.1-1.2 times as broad as long; medial margin short, straight to convex; mediiodistal corner broadly rounded; distal margin weakly convex; laterodistal corner rounded; lateral margin weakly convex.

Genitalia (Figs. 72-75): Brown to castaneous, ventral parts except uncus lobes usually paler. Basal pygofer lobes (Figs. 72-73) raised and ridge-like, rather broad and curved laterad; hairs on anteroventral margin erect and
long, slightly decreasing in length towards basal pygofer lobes but short on lobes themselves; medial part of surface enclosed by anteroventral margin largely devoid of hairs, lateral part and part along posterior margin with short hairs; pygofer surface anterior of medial part of anteroventral margin with many long hairs; lateral surface of posterior part of pygofer with scattered, short hairs that are interspersed with long hairs near posterior and along posteroventral margin. Dorsal part of pygofer as in Fig. 74. Basal part of uncus short (Figs. 72-73) broad and short but longer than in P. spinacea, as narrow strip along bases of uncus lobes and slightly undulating medially; laterobasal part with scattered long hairs. Uncus lobes (Figs. 72-73, 75) raised compared to basal part of uncus; medial margin weakly convex to straight and curved inwards; mediiodistal corner rounded and curved inwards; distal margin weakly concave to straight and with one or two small bumps near mediiodistal corner; laterodistal corner produced in to long projection that is curved inwards (dorsad); lateral margin weakly convex, often weakly concave near laterodistal corner. Outer surface of uncus lobes posterior of aedeagal opening with high ridge that extends on to uncus lobes as low ridge more than halfway to distal margin just lateral of medial margin. Surface of uncus lobes with scattered short hairs but hairs more densely set on medioproximal corners, bases of uncus lobes both ventrally and dorsally with strong erect hairs along margin.

**Female.** Operculum (Fig. 80): Operculum brownish, lateroproximal corner castaneous to blackish except on lateroproximal lobe; reaching to about halfway third abdominal segment. Lateral margin convex just distal of lateroproximal lobe and straight on distal half; laterodistal corner angular; distal margin weakly concave to weakly convex; mediiodistal corner rounded; medial margin short and weakly convex to straight.

Abdomen (Fig. 71): Abdomen about 1.0-1.1 times as long as head and thorax together. Dorsal part of tergites brown to castaneous; sternites and ventral parts of tergites paler than dorsal parts; tergites 3-7 with small dark lateral spots and occasionally tergites 2-5 (6) with dark medial spots; tergite 8 with triangular spot of white waxy coating on anterior margin, occasionally tergite 7 with similar smaller spot. Posterior margins of tergites (4) 5-7 with short dark spinules, especially numerous on tergite 7, fewer medially on tergite 6, very few or absent medially on tergite 5, often few laterally on tergite 4; posterior margin of tergite 8 with scattered, short spinules but fewer medially. Sternite 7 with rounded posteromedial emargination in short and broad median lobe.

Genitalia: Pygofer brownish to castaneous, blackish dorsally on dark paramedian fasciae on anterior half, in darker specimens also with small blackish lateral marking near posterior margin and darkened along ventral margins; ovipositor sheath dark castaneous. Dorsal length of pygofer about equal to length of tergites 6-8 together or longer; dorsal margin in lateral view weakly concave, ventral margin weakly convex; ventrodistal corners rounded to angularly rounded. Ovipositor sheath reaching little but distinctly
beyond apex of caudodorsal beak; anal valve never reaching as far as caudodorsal beak.

Figs. 76-80. Platylomia wallacei: 76, male, dorsal view; 77, male, operculum, right, lateroventral view (paratype, Masamba); 78, male, timbal covering, right (holotype); 79, male, katepimeral lobe, right (paratype Rano Rano); 80, female, operculum, lateroventral (site 12, Holloway).

Measurements in mm (♂: n = 10; ♀: n = 5). Body length: ♂: 40.0-49.5 (45.7 ± 2.1), ♀: 39.5-43.0 (40.5 ± 1.4) [including ovipositor sheath: 40.0-44.5 (41.7 ± 1.4)]; head width: ♂: 12.6-14.4 (13.7 ± 0.4), ♀: 13.2-14.9 (13.9 ± 0.4); maximum pronotum width: ♂: 12.8-15.2 (14.4 ± 0.6), ♀: 14.3-15.4 (15.0 ± 0.3); tegmen length: ♂: 48.0-55.0 (51.5 ± 1.8), ♀: 50.5-56.0 (52.0 ± 1.6).

Holotype ♂, 'INDONESIA / Sulawesi Tenggara / J.P. Duffels', 'CENTIPEDE CAMP / c. 3°49'S 121°40'E / nr Gng Watowila / NE of Kolaka / 1100m, 5.XI.1989', 'Sample Sul. 34 / Undisturbed hilly / rainforest / At light' (deposited at ZMAN).
Platylomia spinosa group

BPBM; Roroka Timbu, 1500 m, 2♂, iv-v.1979, E. de Vogel, RMNH; Sampuraga, S. Sulawesi, ca. 1500 m, 2♂, 30.x.1985, S. Nagai, SUU; same data, 2♂, 1.xi.1985, SUU; same data, 2♂, 6.xi.1985, SUU; same data, 2♂, 29.v.1986, SUU; same data, 3♂, 30.v.1986, SUU; same data, 5♂, 31.v.1986, SUU; same data, 1♂, 2.vi.1986, SUU; Take Pangana, 4 km NE Gimpu, Lore Lindu N.P., Sulawesi Tengah, Stat. 44, 700 m, lowland rainforest, 2♂, 29.i.1985, J.P. & M.J. Duffels, ML-light, ZMAN.

Etymology: This species is named after Alfred Russel Wallace (1823-1913) after whom the expedition to Sulawesi was named that yielded much of the material on which the above description is based.

Distribution: The distribution is given in Fig. 69. P. wallacei appears to be quite common at higher altitudes in northern Sulawesi and occurs locally elsewhere in Sulawesi.

Platylomia celebensis Distant, 1913, comb. nov. (Figs. 81-88)


Type material: The type material of P. celebensis is still at the BMNH and consists of a lectotype and a paralectotype, both males. The lectotype is labelled as follows: 'Type' [printed in red circle], 'N.W. Celebes / (de Giacomi)' [handwritten], 'Champaka / celebensis / type Dist.' [Distant's handwriting], 'Distant Coll. / 1911-383.' [printed], 'Lectotype / Champaka / celebensis / Distant, 1913 / des. Duffels, 1991' [Beuk's handwriting]. The paralectotype is labelled as paralectotype and bears the same locality and collection labels as the lectotype.

The lectotype of C. maculipennis is a male in the MÜLLER collection labelled as follows 'Paloe / N. W. Celebes' [handwritten], 'Champaka [male] / maculipennis Hpt' [handwritten], 'Champaka celebensis / Distant / det. J.P. Duffels, 1991' [printed].

Synonymy: P. celebensis and P. maculipennis were synonymized by Duffels (1991) after examination of the lectotypes.

General remarks: P. celebensis and P. viridimaculata previously were placed together in the genus Champaka with the shape of the male operculum as one of the diagnostic characters. In the phylogenetic analysis above (Fig. 1a) it is shown that this character is homoplasious and that these two species are not sister species as one might expect. On the basis of three characters (lateral fasciae on mesonotum, colour of the lateral lobes of the pronotal disc, the colour of the central fasciae on the pronotal disc and the shape of the katepimeral lobe) these species are grouped in different clades. It must be pointed out, however, that each of these characters is subject to parallel development (Fig. 1a).

Description: Body brown to castaneous, head and thorax sometimes with greenish tinge, central area on pronotal disc usually more distinctly brown than remainder, pronotal disc otherwise with some small dark markings,
pronotal collar anteriorly with dark marking, paramedian fasciae on mesonotum narrow, lateral fasciae usually only distinct on posterior half of mesonotum, tegmina with markings on basal veins of second, third, fifth and seventh apical cells, and usually on apices of anterior longitudinal veins of apical cells. Male opercula narrowed towards apex and short, reaching no further than posterior margin third abdominal segment. Female unknown. Superficially resembling P. spinoaa but differing as described below.

Closely resembling P. spinoza but differing as described below.

Head: Head brown to castaneous, paler on anteromedial spot and darker on area of ocelli. Postclypeus little swollen, in dorsal view shorter than distance between frontoclypeal suture and anterior margin of pronotum. Frontoclypeal suture trapezoid, median part just broader than distance between lateral margins of lateral ocelli. Rostrum as in P. spinoa.

Thorax: Pronotum just to distinctly broader than head, broadest part always at lateral margin of pronotal collar. Pronotal disc greenish or brown to castaneous, central part brown and usually darker than remainder; posterior margin of disc often with small black medial marking; median lobes of disc often with dark longitudinal fasciae running from anterior to posterior oblique fissures; lateral lobes of disc dark along lateral margin and with dark longitudinal fasciae running along posterior oblique fissure to posterior margin of pronotal disc. Pronotal collar concolorous with pronotal disc; lateral part with dark marking from running lateral margin disc to lateral margin of collar; posterior margin of collar not black; anterolateral corner angular with distinct lateral tooth. Mesonotum brownish to castaneous, sometimes with greenish tinge; paramedian fasciae on anterior half of disc narrow and only little darkened, on posterior half present as indistinct darker spots anterior of cruciform elevation; lateral fasciae broad and blackish, present on posterior half of disc only. Mesonotal disc with short pale hairs along lateral and posterior margins only, depressions between anterior and posterior arms of cruciform elevation without waxy coating. Cruciform elevation paler than mesonotal disc. Katepimeral lobe (Fig. 87) very short and rounded, apex never reaching base of operculum.

Tegmina and wings: Tegmina clear to pale brownish hyaline; distal margin with indistinct darker reticulation; basal cell yellowish to greenish fumose on anterior three quarters; basal veins of second, third, fifth, and seventh apical cell with dark brown to blackish markings, marking on basal vein of fifth apical cell sometimes very small, of seventh apical cell extending posteriorly along longitudinal vein of apical cell; apices of longitudinal veins of apical cells usually all with rounded markings but markings often very faint. Veins of tegmen brown to castaneous, sometimes with greenish tinge; clavus dark greyish. Wings clear hyaline. Veins of wings pale to dark brown; clavus grey to brownish.

Legs: Legs dark brown; proximal half of fore femora paler on posterior and anteroventral surface; fore and mid legs paler on joints of femora and
tibiae. Spines on fore femur as in *P. spinosa*, but middle spine less triangular at base.

Figs. 81-84. *Platylomia celebensis* male (G. Rankoenau): 81, genitalia, ventral view; 82, genitalia, lateroventral view; 83, genitalia, dorsal view; 84, uncus, anterior view.
Fig. 85-87. *Platylomia celebensis* male: 85, operculum, right, lateroventral view (Palu); 86, timbal covering, right (G. Tompoe); 87, katepimeral lobe, male, right (Palu).

Fig. 88. Localities of *Platylomia celebensis*. 
Male. Operculum (Fig. 85): Operculum short and triangular; reaching from halfway to posterior margin third abdominal segment; brown to dark brown, lateroproximal corner castaneous. Medial margins almost straight and divergent. Apex angularly rounded, medial of midline. Lateral margin weakly convex on proximal half, weakly convex to weakly concave on distal half. Surface of operculum weakly convex.

Abdomen: Abdomen 1.3-1.4 times as long as head and thorax together, narrower than in P. spinosa. Dorsal part of tergites brown to castaneous, paler laterally; surface densely covered with short hairs, hairs mostly whitish on median strip and laterally, brownish in-between; tergites 3-6 (7) often with small dark spots near lateral margin but spots may be covered by hairs; sternites and ventral part of tergites slightly paler than dorsal part of tergites. Posterior margins of tergites 5-7 with many slender dark spinules along whole length but fewer medially, posterior margin of tergite 4 with scattered short spinules medially. Sternite 7 with shallow posteromedial emargination. Timbal covering (Fig. 86) brown to castaneous, about 1.0-1.2 times as broad as long; medial margin short and straight; mediodistal corner and distal margin broadly rounded; laterodistal corner rounded; lateral margin straight.

Genitalia (Figs. 81-84): Brown to dark castaneous; ventral part of pygofer usually paler. Basal pygofer lobes (Figs. 81-82) narrow and raised but lower than in P. spinosa, rounded in lateral view and concave laterally; hairs on anteroventral margin of pygofer erect and decreasing in length quite abruptly close to apex; pygofer surface encosed by anteroventral margin with hairs except on medial strip; pygofer surface anterior of medial part of anteroventral margin without hairs; dorsolateral and posterolateral surface and posterolateral margin of pygofer with numerous short hairs interspersed with several long hairs close to posterolateral margin. Dorsal part of pygofer as in Fig. 83. Basal part of uncus (Figs. 81-82) broad and short, as narrow strip along bases of uncus lobes; laterobasal part with scattered long hairs and numerous shorter hairs.Uncus lobes (Figs. 81-82, 84) narrowest at or just proximal of distal margin; medial margin weakly concave or almost straight and curved inwards; mediodistal corner rounded and curved inwards; distal margin straight to weakly concave; laterodistal corner angular to angularly rounded; lateral margin concave. Ridge on outer surface as in P. spinosa but extending slightly further distally on uncus lobes. Outer and inner surfaces of uncus lobes with scattered hairs, short hairs on distal part, long hairs near bases of uncus lobes and around ridge; patch of short hairs on medioproximal corners less dense.

Female. Unknown.

Measurements in mm (♂: n = 7). Body length: ♀: 49.5-55.0 (52.1 ± 1.4); head width: ♀: 14.4-15.4 (14.6 ± 0.4); maximum pronotum width: ♀: 14.8-16.1 (15.4 ± 0.4); tegmen length: ♂: 55.5-59.5 (57.7 ± 1.3).

same data, xii.1936, 1♂, ZMAN; G. Tompoe [Gunung Tumpul], Paloe [Palu], W. Celebes, 2700 ft, i.1937, J.M.A. v. Groenendaal, 5♂, ZMAN; N.W. Celebes, de Giacomì, ♂ lectotype Champaka celebensis, BMNH; sama data, ♂ paralecotype Champaka celebensis, BMNH; Paloe [Palu], N.W. Celebes, ♂ lectotype Champaka maculipennis, MÜLLER; same data, 2♂, DEI; Palu, Middle Sul. [Middle Sulawesi], 17.xi.1971, Y. Murakami, 1♂, SUU; Palu, 27.vii.1989, J. van Tol, 1♂, at light, RMNH; Puncak Palopo, S.W. Sulawesi, x-xi.1996, Tajuddin, 1♂, ZMAN; Sampuraga, S. Sulawesi, ca. 1500 m, 28.x.1985, S. Nagai, 1♂, SUU.

Distribution: The distribution is given in Fig. 88. P. celebensis is a scarce but apparently widespread species in Sulawesi.

Platylomia aerata (Distant, 1888), comb. nov. (Figs. 89-103)


Dundubia? aerata: Distant, 1889b: 42; Distant, 1890: pl. VI (Figs. 7-7b); Distant, 1892b: xii; Kato, 1932: 165; Kato, 1944a: 8.

Type material: In the original description of P. aerata no type was designated and no number of specimens was mentioned. Later, however, Distant (1889b) noted that he only had a single specimen available. This specimen should thus be considered as holotype (ICZN 73aii). The specimen is still preserved at the BMNH and is labelled as follows: ‘Holo- / type’ [printed in red circle], ‘Elopura [Sandakan] / Mch 84’ [hand-written], ‘aerata / Dist.’ [Distant’s handwriting].

Description: Body yellowish brownish to castaneous, often with head and thorax and sometimes abdomen green, pronotal suture with dark median spot and posterior margin pronotal collar black, tegmina clear hyaline on proximal half or more, bronze brown hyaline distally and without further markings. Male opercula relatively short and somewhat narrowed towards apex, apex angularly rounded. Female opercula rounded, ovipositor sheath elongate.

Head (Fig. 89): All parts of head yellowish brown to brown or greenish, only distal part of rostrum blackish. Postclypeus somewhat swollen, in dorsal view slightly longer than distance between frontoclypeal suture and anterior margin of pronotum. Frontoclypeal suture trapezoid, median part much broader than distance between lateral margins of lateral ocelli. Rostrum generally reaching no further than anterior margin hind coxae but generally distinctly shorter.

Thorax (Fig. 89): Pronotum slightly to distinctly broader than head. Pronotal disc yellowish brown to brown or greenish. Pronotal suture usually with dark brown to black median spot. Pronotal collar concolorous with or slightly paler than pronotal disc with black posterior margin; anterolateral part of collar with dark marking between lateral margin and lateral lobe of disc but marking not extending on to anterolateral corner; anterolateral corner with small but distinct lateral tooth. Mesonotum and cruciform elevation concolorous with or slightly paler than pronotal disc and with out distinct markings,
at most the mesonotal fissures narrowly darkened. **Lateral and posterior margins** of mesonotal disc with dense fringe of short, pale hairs. Katepimeral lobe (Fig. 98) very short, margin smoothly rounded. Surface of katepimeral lobe covered with short, waxy hairs and with dense fringe of long fine hairs along posterior margin.

![Image](image_url)

**Fig. 89. Platylomia aerata: male, dorsal view (Presqu’île de Malacca).**

Tegmina and wings (Fig. 89): Tegmina (Fig. 99) almost clear hyaline in proximal half or more, distal part bronze brown hyaline with indistinct brownish reticulation along distal margin and in apical cells; basal cell yellowish infuscate; basal vein of seventh apical cell almost perpendicular on longitudinal axis of tegmen. Veins of tegmen brownish to greenish, second anal vein dark brown to black; clavus brownish. Wings clear to slightly brownish hyaline and with indistinct brownish reticulation along distal margin. Veins of wings greenish to brownish.

Legs: All legs greenish or ochraceous brown to brown, only spines darkened at apex. Fore femur posteroventrally with middle spine shorter than proximal spine, middle spine often broadened at base and thus somewhat triangular; distal spine usually distinct and pointed, but often curved towards femoral surface and partly or completely sunk into it, so gap between middle and distal spines variable. Hind tibia with two dorsal spines and three anteroventral spines; spines brownish.

**Male.** Operculum (Fig. 96): Operculum reaching from about halfway fourth to just beyond anterior margin of fifth abdominal segment, 2.4-2.7 times as long as maximum width distal of constriction; greenish or yellowish brown to brown, lateral and medial margins often slightly darker. Medial margin convex for short distance proximal of constriction, distal of constriction convex to apex. Apex rounded to angularly rounded, just lateral to just medial of middle. Lateral margin convex for short distance proximal of constriction, concave at level of timbal covering to about halfway third abdominal segment, distal of constriction convex to apex. Constriction at about 0.4 of length of operculum, lateral concavity longer and deeper than medial con-
cavity, broadest part of operculum distal of constriction 1.1-1.3 times as wide as minimum width at constriction. Opercula divergent from base and more or less parallel distal of constrictions, close to abdomen for whole length. Surface with convex area on both proximal and distal halves.

Figs. 90-95. *Platylomia aerata* male: 90, genitalia, ventral view (holotype); 91, genitalia, lateroventral view (holotype); 92, genitalia, dorsal view (holotype); 93, uncus, ventral view (Forest Camp N. of Kalabakan); 94, uncus, ventral view (Kuching); 95, uncus, ventral view (Rompin Mining Co.).
Platylomia spinosa group

Figs. 96-102. *Platylomia aerata*: 96, male, operculum, right, lateroventral view (Rompin Mining Co.); 97, male, timbal covering, right (holotype); 98, male, katepimeral lobe, right (Forest Camp N. of Kalabakan); 99, female, tegmen (W. Melinau Gorge); 100, female, operculum, lateroventral (Mt Dulit); 101, female, genitalia, lateral (Padang-Bedagai); 102, female, sternite 7, posterior margin ventral (Java).
Abdomen (Fig. 89): Abdomen about 1.4-1.5 times as long as head and thorax together. Dorsal part of tergites yellowish brown to castaneous but occasionally with greenish tinge, tergites darkened along posterior margins and often with slightly darker spots laterally; sternites and ventral parts of tergites paler than dorsal parts but less so towards genitalia. Posterior margin of tergite 7 with many short dark spinules along whole length, posterior margins of tergites 5-6 with spinules along whole length but very few medially and often much thinner or even absent. Sternite 7 with shallow to very shallow posteromedial emargination. Timbal covering (Fig. 97) brownish, sometimes with greenish tinge, to castaneous, about 1.1-1.3 times as broad as long; medial margin short, virtually straight to convex; mediodistal corner, distal margin and laterodistal corner broadly rounded; lateral margin weakly convex to straight.

Genitalia (Figs. 90-95): Brown; dorsal part of pygofer somewhat darker than ventral part; uncus usually darker, especially on uncus lobes and on anal valve. Basal pygofer lobes (Figs. 90-91) narrow and raised, angular and somewhat pointed; hairs on anteroventral margin erect, increasing in length towards basal pygofer lobes but short again distally on those lobes; hairs continuing on surface enclosed by anteroventral margin except on central part; pygofer surface for short distance anterior of medial part of anteroventral margin and lateral of anteroventral margin with scattered hairs, and with several longer hairs along laterodistal margins. Dorsal part of pygofer as in Fig. 92. Basal part of uncus (Figs. 90-91) narrow, almost semicircular and little globose; laterobasal part as narrow strip along bases of uncus lobes and near bases of uncus lobes with some erect hairs. Uncus lobes (Figs. 90-91, 93-95) variable in shape, ranging from short or long and ranging from parallel to divergent; medial margin weakly concave to weakly convex, curved inwards at bases of uncus lobes; shape of distal part variable, as illustrated in Figs. 90, 93-95; lateral margin concave near base, distally either weakly concave, almost straight or weakly undulating. Outer surface of uncus lobes on proximal half with concavity along medial margins that is deepest where uncus lobes meet; surface otherwise virtually smooth. Bases of uncus lobes usually with numerous strong erect hairs along margin with basal part but few medially; outer surface otherwise with scattered, rather short and fine hairs; inner surface with longer hairs, hairs thick and erect near bases of uncus lobes, fine on distal part on uncus lobes.

Female. Operculum (Fig. 100): Operculum greenish to ochraceous brown, at most little darkened along lateral margin distal of lateroproximal lobe; reaching beyond anterior margin of third abdominal segment but no further than halfway, curved around abdomen laterally. Operculum semicircular to somewhat ovoid, at most laterodistal corner slightly angularly rounded.

Abdomen: Abdomen (excluding ovipositor sheath) about 1.0-1.1 times as long as head and thorax together. Dorsal part of tergites as in male but lateral spots only rarely distinct and posterior margins of tergites less extensively darkened; sternites and ventral parts of tergites paler than dorsal parts. Posterior margins of tergites 3-7 with short dark spinules, spinules de-
creasing in number both towards medial part of margins and on each more anterior tergite, such that spinules are absent from medial part of tergite 3 and often also of tergite 4; posterior margin of tergite 8 with scattered, short spinules medially. Tergite 8 medially with small triangular protuberance on posterior margin. Sternite 7 with angularly rounded to rounded postero-medial emargination in median lobe as in Fig. 102 but median lobe may either be longer or broader.

Genitalia (Fig. 101): Pygofer brownish to castaneous, darker along posterior margin and on caudodorsal beak, paler on ventral parts; distal part of ovipositor sheath brown to dark castaneous. Dorsal length of pygofer about equal to length of tergites 6-8 together, in lateral view weakly concave; ventral margin almost straight; ventrodistal corners acute. Ovipositor sheath reaching far beyond apex of caudodorsal beak; anal valve never reaching as far as caudodorsal beak.

Measurements in mm (♂: n = 7; ♀: n = 5). Body length: ♂: 48.5-52.0 (49.3 ± 1.3), ♀: 40.5-45.0 (43.7 ± 1.3) [including ovipositor sheath: 44.5-52.0 (49.8 ± 2.1)]; head width: ♂: 13.2-14.5 (13.9 ± 0.3), ♀: 13.4-14.5 (14.1 ± 0.4); maximum pronotum width: ♂: 13.7-14.8 (14.3 ± 0.4), ♀: 14.2-15.7 (14.8 ± 0.5); tegmen length: ♂: 51.5-57.0 (53.6 ± 1.4), ♀: 53.5-61.5 (57.0 ± 2.7).

Specimens examined: WEST MALAYSIA: Kuala Pilah, 1♂, BMNH; Pasoh Forest Reserve, 10 km W Ayer Hitam, N. Sembilan, 0.3 km ESE station quarters, 350 m, buffer zone of regenerating forest (selectively logged), at light, 9.iii.1997, M. Kos & S. Azman, 1♂, ZAMN; Presque'ille de Malacca, 1899, Errington de la Croix & P. Chapé, 1♂, MNP; Rompin Mining Co. Railway Track, SE Pahang, 50 km, 3.iv.1961, T.C. Maas, 1♂, BPBM.

EAST MALAYSIA: SARAWAK: Brumas Camp, Tawau, N. Borneo, xi.1974, C. Pruttet, 1♂, 1♀, BMNH; Danum Valley Field Centre, 60 km W of Lahad Datu, E. Sabah, at junction of Sg Segamas and Sg Palum Tambun, bridge of Segama, 4°58'N 117°48'E, 150 m, clearing edge of untouched evergr. lowl. rainforest, 19.iii.1987, van Tol & Huisman, at light, 18.30-21.30, 1♂, ZMAN; Elopura [Sandakan], iii.1884, ♂ holotype Dundubia aerata, BMNH; 19 km. N. of Kalabakan, North Borneo (SE), forest camp, 28.ix.1962, Y. Hiraishima, 1♀, BPBM; same data, 150 m, 21.ix.1962, light trap, 1♂, BPBM; Lahud Datu [Lahad Datu], 60 km W of Danum Valley Field Centre at junction of Sg Segamas and Sg Palum Tambun, bridge of Segama, 4°58'N 117°48'E, 150 m, clearing edge of untouched evergr. lowl. rainforest, 19.iii.1987, van Tol & Huisman, at light, 18.30-21.30, 1♂, ZMAN; Telupid, Sabah, 17.iv.1979, S. Nagai, at light, 1♀, SUU; same data, 18.iv.1979, 1♂, SUU; same data, 21.iv.1979, 2♂, SUU; same data, 23.iv.1979, 1♂, SUU.

EAST MALAYSIA: SARAWAK: Bidi, Sarawak, 1907-1908, C.J. Brooks, 1♂, BMNH; Gunong Mulu Nat. Park, Site 20, W. Melinau Gorge, PEG 3, kerangas, MV - understorey, 150 m, iii.iv.1978, J.D. Holloway, 1♂, BMNH; Kuching, 9.viii.1899, 1♂, BMNH; Kuching, 15.iii.1900, 1♂, BMNH; Kuching, Sarawak, 11.x.1909, J. Moulton, 1♂, 1♀, MNP; same data, iii.1911, 1♀, BMNH; R. Koyan [Sungai Koyan], Mt. Dulit [Bukit Dulit], 2500 ft, primary forest, 19.x.1932, B.M. Hobby & A.W. Moore, light trap, 1♂, BMNH.

INDONESIA: BORNEO, KALIMANTAN: Boentok [Buntok], Barito Riv. [Sungai Barito], Cent. Borneo, G.C. Shortridge, 1♂, BMNH; Kalimantan, xii.1981,
1σ', SUU; Long Bagun [Longbangun], 25 km SE of Longboh, S. Mahakan, Kalimantan Timur, 7.iv.1996, R. Sözer, 1σ', ZMAN; Mahakkam [Sungai Mahakam], 1894, Nieuwenhuis, 1σ', 1♀, RMNH.


INDONESIA: JAVA: Java, 1♀, BMNH.

Fig. 103. Localities of *Platylomia aerata*.

_Distribution:_ The distribution is given in Fig. 103. _P. aerata_ is widespread in West Malaysia, Borneo (Sabah, Sarawak, Kalimantan), and Sumatra but generally uncommon and collected in small numbers. The record from the Metaweii Islands (Overmeer & Duffels, 1967) could not be verified.

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