

# Taxonomy of Podoscirtinae (Orthoptera: Gryllidae).

## Part 7: Australo-Oceanian Aphonoidini and geography of the tribe

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Australo-Oceanian species of the tribe Aphonoidini belonging to 8 genera are considered. Brief characteristics of several its taxa described previously (including revision of type material for a few species, designation of lectotype for *Misthenkoana unicolor*, and news on distribution) are given. 3 new genera, 6 new subgenera, and 65 new species are described. A preliminary hypothesis on the historical geography of Aphonoidini is discussed.

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The seventh part in the series of papers on Podoscirtinae contains a partial review of Aphonoidini from Australo-Oceanian region, mainly from New Guinea. Six previous papers (Gorochov, 2002, 2003, 2004, 2005, 2006, 2007) contain data on Old World Podoscirtini, including an introduction about the male genitalia and a chapter about the Podoscirtini geography, as well as data on Indo-Malayan Aphonoidini.

The material considered here is deposited at the following institutions: Zoological Institute, Russian Academy of Sciences, St.Petersburg (ZIAS); Natural History Museum, London (BMNH); Museum für Naturkunde der Humboldt-Universität, Berlin (MNHU).

### Tribe **APHONOIDINI** Gorochov, 1986

Main morphological features of this tribe were characterized in the previous communications (Gorochov, 2002, 2007). At present the Aphonoidini includes 15 genera distributed in the region from Nicobar Islands to Samoa and from Japan to South Australia: *Munda* Stål, 1877; *Aphonoides* Chopard, 1940; *Unka* Otte et Alexander, 1983; *Umbulgaria* Otte et Alexander, 1983; *Utona* Gorochov, 1986; *Misthenkoana* Gorochov, 1990; *Exomunda* Gorochov, 2007; *Zamunda* Gorochov, 2007; *Furcimunda* Gorochov, 2007; *Dinomunda* Gorochov, 2007; *Protomunda* Gorochov, 2007; *Brevimunda* Gorochov, 2007; *Pseudounka* gen. n.; *Paputona* gen. n.; *Deinutona* gen. n. Male genitalia in *Munda*, *Protomunda*, and *Pseudounka* are rather diverse, and these genera are here divided into a few subgenera (some of these subgenera almost reach generic rank).

### Genus **Pseudounka** Gorochov, gen. n.

Type species: *Pseudounka (Pseudounka) manokwari* sp. n.

**Diagnosis.** General appearance typical of Aphonoidini. Head with rather narrow rostrum (scape 1.3-1.5 times as wide as rostrum between antennal cavities); ocelli large (Figs I: 4, 10); apical and subapical segments of maxillary palpi shorter than third one (apical segment moderately thickened and slightly longer than subapical one). Fore tibiae with large oval tympanum on inner surface only (Figs I: 11, 12). Tegmina long and identical in both sexes; crossveins rather sparse; all longitudinal veins of dorsal part almost parallel (no traces of stridulatory apparatus in male); lateral part with oblique branches of Sc. Hind wings much longer than tegmina. Male anal plate transverse and with hind median notch (Fig. I: 8); male genital plate large, elongate, and with roundly angular apex (Fig. I: 9); female genital plate small, short, and with slightly concave hind edge (Fig. I: 14); male cerci with curved proximal part and characteristic inner tubercle provided with bundle of thick and curved setae at apex (Figs I: 7, 8, 13); male genitalia with elongate epiphallus (lacking any apical notch or having a pair of short hind lobes and rather small notch between them), developed spermatophore sac (having distinct sclerites of mold of spermatophore attachment plate), large ectoparameres, and diverse sclerotizations near base of guiding rod (Figs I: 1-3, 5, 6; II: 1-3, 5-9; III: 1-10); spermatophore with almost round and not dark ampulla (Fig. I: 4); ovipositor with drill-like apex (Fig. I: 15).

**Composition.** The genus consists of 3 subgenera considered below.

**Comparison.** This genus is related to the Australian genus *Unka* Otte et Alex. which has the similar structure of male cerci (but their proximal part is not curved). It differs from *Unka* in the absence of traces of stridulatory apparatus in male, much larger inner tympana, and distinctly less deep apical epiphallal notch (male genitalia of *Unka* are insufficiently studied).

#### Subgenus **Pseudounka** s. str.

**Diagnosis.** Male genitalia (Figs I: 1-3, 5, 6): epiphallus almost angularly notched at apex; ectoparameres short and distinctly curved; guiding rod with more or less angular apex; stylet-like sclerites near this rod well developed.

**Included species.** Type species of the genus; *P. (P.) jayapurae* sp. n.

#### **Pseudounka (Pseudounka) manokwari** sp. n. (Figs I: 1-4)

**Holotype.** ♂, **Indonesia**, New Guinea, environs of town Manokwari, primary forest on hills near sea, 4-6.XI.2004, A. Gorochoy (ZIAS).

**Description.** Male (holotype). Upper part of head brown with almost dark brown short median stripe on rostral apex; lower part of head (including mouthparts) yellowish; antennae yellowish with dark brown inner part of scape as well as brown pedicel and most part of scape. Pronotum brown with yellowish lower part of lateral lobes; legs and rest of thorax yellowish; tegmina light brown with yellowish cell membranes in lateral part and rather numerous small dark brown spots (almost dots) around crossveins in distal half of dorsal part and along proximal and anal edges of dorsal part (there are also a few dark dots along lateral edge of this part). Abdomen with darkened dorsal part of tergites and yellowish other parts. Rostral apex of head round; lateral ocelli not very large (Fig. I: 4). Fore tibiae intermediate between those pictured in Figs I: 11, 12. Dorsal tegminal part with 8-9 longitudinal veins; lateral one with 9-10 branches of Sc. Anal and genital plates as well as cerci very similar to those pictured in Figs I: 7-9; genitalia as in Figs I: 1-3.

Female unknown.

Length (in mm). Body 13.5; body with wings 21; pronotum 2.3; tegmina 14.2; hind femora 8.5.

#### **Pseudounka (Pseudounka) jayapurae** sp. n. (Figs I: 5-9)

**Holotype.** ♂, **Indonesia**, New Guinea, environs of city Jayapura, Cyclops Mts, about 500 m, primary forest, 17-19.XI.2004, A. Gorochoy (ZIAS).

**Description.** Male (holotype). Coloration similar to that of *P. manokwari*, but distinguished by following features: upper part of head light brown; eyes with 2 light longitudinal lines near each other; antennae and pronotum uniformly light, but with a pair of dark dots in anterolateral corners of pronotal disc. Rostral apex of head roundly truncate; lateral ocelli somewhat larger than in *P. manokwari* (almost as in Fig. I: 10). Other parts of body (fore legs missing) as in *P. manokwari* (Figs I: 7-9), but dorsal part of tegmina with 7-8 longitudinal veins, and lateral one with 6-7 branches of Sc; genitalia with slightly different shape of epiphallal apex, larger and more strongly curved ectoparameres having distinct lateral denticulate lobes, longer and denticulate paired stylet-like sclerites near guiding rod, and much larger endoparameres and their apodemes (Figs I: 5, 6).

Female unknown.

Length (in mm). Body 13.5; body with wings 21; pronotum 2.1; tegmina 14.4; hind femora 8.7.

**Comparison.** The new species distinctly differs from *P. manokwari* by the coloration of head and pronotum as well as the characters of male genitalia (see description).

#### Subgenus **Neounka** subgen. n.

Type species: *Pseudounka (Neounka) pallens* sp. n.

**Diagnosis.** Male genitalia (Figs II: 1-3, 5-9): epiphallus lacking apical notch or having shallow rounded one; ectoparameres long and almost straight; guiding rod with roundly bifurcate apex; stylet-like sclerites near this rod absent.

**Included species.** Type species of the subgenus; *P. (N.) yapeni* sp. n.; *P. (N.) bicornis* sp. n.; *P. (N.) silex* sp. n.

#### **Pseudounka (Neounka) pallens** sp. n. (Figs I: 10; II: 6, 7)

**Holotype.** ♂, **Indonesia**, New Guinea, environs of city Jayapura, Cyclops Mts, about 500 m, primary forest, 17-19.XI.2004, A. Gorochoy (ZIAS).

**Description.** Male (holotype). Coloration uniformly yellowish, but with almost uniformly brown eyes as well as light brown venation of dorsal tegminal part, branches of Sc, and crossveins between them. Rostral apex of head and ocelli as in *P. jayapurae* (Fig. I: 10). Fore tibiae almost as in Fig. I: 12, but with somewhat larger tympanum. Dorsal tegminal part with 8 longitudinal veins; lateral one with 9 branches of Sc. Anal and genital plates similar to those pictured in Figs I: 8, 9, but notch of hind edge of anal plate much narrower; cerci almost as in Figs I: 7, 8, but hairs near upper part of bundle of setae longer; genitalia as in Figs I: 6, 7.

Female unknown.

Length (in mm). Body 14; body with wings 20.5; pronotum 2; tegmina 14; hind femora 9.2.

**Pseudounka (Neounka) yapeni** sp. n.  
(Figs II: 1-4)

*Holotype*. ♂, **Indonesia**, Yapen I. near northern coast of New Guinea, "N. Dutch New Guinea, Japen, Seroei, Camp 1, Mt. Baduri, Aiam Range, 1000 ft., ix.1938, L.E. Cheesman, B. M. 1938-593" (BMNH).

*Description*. Male (holotype). Coloration yellowish with light brown upper surface of head (from ocelli to hind edge of vertex), brown eyes crossed by light longitudinal band having dark longitudinal line at centre, a pair of dark dots on pronotum (as in *P. jayapurae*), brown venation of dorsal tegminal part, and light brown branches of Sc. Structure of body parts as in *P. pallens*, but lateral part of tegmina with 7-8 branches of Sc; genitalia distinguished from those of latter species by epiphallallic apex long, angular, and narrow (low) in profile, as well as distal part of ectoparameres almost bifurcate (Figs II: 1-3).

Female unknown.

Length (in mm). Body 14.5; body with wings 22; pronotum 2; tegmina 15; hind femora 9.

*Comparison*. The new species differs from *P. pallens* in the less uniform coloration and characteristic structure of male genitalia (see description).

**Pseudounka (Neounka) bicornis** sp. n.  
(Figs I: 13; II: 5)

*Holotype*. ♂, **Indonesia**, New Guinea, "Neu-Guinea, Siwi (Arfak), 21.4-25.5.28, Mayr leg." (MNHU).

*Description*. Male (holotype). Head yellowish with brown upper part (from ocelli to hind edge of vertex), light brown large spot at centre of this darkened part, dark narrow longitudinal line crossing each eye and running along superolateral edge of each scape, and darkish upper part of eyes. Pronotum with almost dark brown disc (having rather numerous small and large light spots) and yellowish lateral lobes; rest of body (hind legs missing) yellowish, but with brown venation in dorsal part, dark brown not large spot at base of this part, and light brown branches of Sc. Structure of body parts as in *P. pallens* and *P. yapeni*, but dorsal part of tegmina with 7 longitudinal veins, lateral one with 6-7 branches of Sc, notch of anal plate wider (slightly narrower than that pictured in Fig. I: 8), and bundle of setae on inner tubercle of cerci distinctly narrower (Fig. I: 13); genitalia distinguished from those of *P. pallens* and *P. yapeni* by convex (almost truncate) epiphallallic apex, presence of a pair of characteristic lateral projections of epiphallus, and not bifurcate distal part of ectoparameres (Figs II: 5).

Female unknown.

Length (in mm). Body 13; body with wings 20.5; pronotum 1.8; tegmina 14.

*Comparison*. The new species differs from all the previous species of this subgenus in the less uniform coloration of head and pronotum as well as narrower bundle of cercal setae and characteristic male genitalia (see description).

**Pseudounka (Neounka) silex** sp. n.  
(Figs I: 11; II: 8, 9)

*Holotype*. ♂, **Papua – New Guinea**, New Guinea, "D. N. Guinea, 246, Hauptlg. b. Malu, 24.I.13, Kais. Augustaf. Exp., Bürgers S.G." (MNHU).

*Description*. Male (holotype). Coloration yellowish with light brown upper part of head (from ocelli to hind edge of vertex) and pronotal disc (having a pair of dark narrow stripes along lateral edges and several very light spots between them), brownish grey lower and upper parts of eyes, dark brown longitudinal line between them (on yellowish background), brown venation of dorsal part of tegmina, and small dark spots at base of this part, along its lateral edge, and on its distal area. Structure of body parts as in previous species of this subgenus, but rostral apex hardly less truncate, fore tibiae as in Fig. I: 11, tegmina with 7-8 both longitudinal veins of dorsal part and branches of Sc, anal plate almost as in *P. bicornis*, and bundle of cercal setae more or less intermediate between those pictured in Figs I: 7, 13; genitalia distinguished from those of all previous species of this subgenus by distinctly rounded epiphallallic apex with narrow (low) lateral lobes (Fig. II: 8, 9) (in *P. pallens*, *P. yapeni*, and *P. bicornis*, these lobes high: Figs II: 3, 7) and spoon-like ectoparameres.

Female unknown.

Length (in mm). Body 15; body with wings 21; pronotum 2; tegmina 14.2; hind femora 9.

*Comparison*. This species distinctly differs from all species of this subgenus by the narrow (low) lateral lobes of epiphallallic apex and spoon-like ectoparameres. Structure of its guiding rod is unclear; that is a reason for some doubts about belonging of *P. silex* to *Neounka*.

**Subgenus Apounka** subgen. n.

Type species: *Pseudounka (Apounka) buergersi* sp. n.

*Diagnosis*. Male genitalia (Figs III: 1-10): epiphallus almost angularly notched at apex; ectoparameres long and almost straight; guiding rod with more or less angular apex; stylet-like sclerites near this rod developed.

*Included species*. Type species of the subgenus; *P. (A.) grisea* sp. n.; *P. (A.) venosa* sp. n.; *P. (A.) modesta* sp. n.; *P. (A.) ulla* sp. n.

**Pseudounka (Apounka) buergersi** sp. n.

(Figs I: 14, 15; III: 3, 4)

*Holotype*. ♂, **Papua – New Guinea**, New Guinea, “D. N. Guinea, Standlager b. Malu, 12-13.III.1912, Dr. Bürgers S.G.” (MNHU).

*Paratypes*. **Papua – New Guinea**, New Guinea: 1 ♀, same data as holotype, but “III-IV.1912” (MNHU); 1 ♂, “D. N. Guinea, 241, Hauptlg. b. Malu, 18.I.13, Kais. Augustaff. Exp., Bürgers S.G.” (ZIAS).

*Description*. Male (holotype). Coloration yellowish with brown eyes and a pair of small spots in anterolateral corners of pronotal disc as well as greyish brown tegminal dorsal part and upper half of tegminal lateral part. Shape of head rostrum and ocelli almost as in Fig. I: 10. Fore tibiae very similar to that pictured in Fig. I: 12. Dorsal part of tegmina with 6-7 longitudinal veins; lateral one with 7-8 branches of Sc. Anal plate almost as in Fig. I: 8; bundle of setae on cercal tubercle not wide (more or less intermediate between those pictured in Figs I: 7, 13); genital plate similar to that pictured in Fig. I: 9; genitalia as in Figs III: 3, 4.

*Variation*. Paratype differs from holotype in hardly darker (almost light brown) apical segment of maxillary palpi and upper surface of head, absence of one of small brown spots on pronotum, and less distinct border between light and dark halves of lateral tegminal part.

*Female*. General appearance as in male-paratype, but head with very small dark spot near (behind) each ocellus and with completely yellowish maxillary palpi, tegmina slightly lighter, tympana hardly smaller, and tegminal Sc with somewhat more numerous branches. Genital plate and apex of ovipositor as in Figs I: 14, 15.

Length (in mm). Body: ♂ 13.5-14, ♀ 17.5; body with wings: ♂ 20-21, ♀ 28; pronotum: ♂ 1.9-2.1, ♀ 2.7; tegmina: ♂ 13.4-13.8, ♀ 19.6; hind femora: ♂ 8.6-8.9, ♀ 11.3; ovipositor 9.

*Etymology*. The species is named after its collector.

**Pseudounka (Apounka) grisea** sp. n.

(Figs I: 12; III: 1, 2)

*Holotype*. ♂, **Papua – New Guinea**, New Guinea, “D. N. Guinea, 370, Mäanderberg, 670 m, 19-31.VII.13, Kais. Augustaff. Exp., Bürgers S.G.” (MNHU).

*Paratype*. ♂, same data as holotype, but “21-30.VIII.13” (ZIAS).

*Description*. Male (holotype). Upper part of head brown with dark brown dorsal part of rostrum before ocelli, area behind (near) ocelli, and longitudinal band behind each eye; lower part of head yellowish with brownish area between antennal cavities and light brown distal segments of maxillary palpi; eyes brown; ocelli yellowish white; scapes brown with almost dark brown inner part; rest of antennae light brown with slightly

darker proximal segments. Pronotum light brown with almost yellowish lower parts of lateral lobes and a pair of dark small spots in anterolateral corners of disc; other parts of thorax and legs yellowish, but tibiae and tarsi light brown with slightly darker (brown) dorsal surface of fore tibiae and distinctly darker (almost dark brown) dorsal surface of hind tibiae and middle part of hind tarsi; tegmina greyish brown with narrow lightish stripe along ventral edge of lateral part; abdomen yellowish with darkenings on both dorsal part of tergites and anal plate. Structure of body parts very similar to that of *P. buergersi* (Fig. I: 12); genitalia distinguished from those of *P. buergersi* by slightly more rounded lobes of epiphallic apex, somewhat shorter stylet-like sclerites near guiding rod (for comparison see Figs III: 1 and 3), distinctly smaller loop formed by these sclerites and by rather heavily sclerotized median part of epiphallus (in both species, median epiphallic part, fused with bases of these sclerites in form of loop, is well visible in profile), and less notched apex of ectoparameres in profile (see Figs III: 2 and 4).

*Variation*. Paratype differs from holotype in almost brown most part of epicranium, slightly reddish tinge of pronotal disc, brown middle tibiae, completely dark brown hind tibiae, and presence of distinct brownish marks on hind femora: long longitudinal line along median part of outer surface and reticular ornament on upper part of this surface (near above-mentioned line).

*Female* unknown.

Length (in mm). Body 13-14.5; body with wings 19-20.5; pronotum 1.8-2; tegmina 12.4-13.3; hind femora 7.8-8.4.

*Comparison*. The new species is distinguished from *P. buergersi* by the darker coloration of head, almost completely darkened tegminal lateral part, and above-mentioned characters of male genitalia (see description).

**Pseudounka (Apounka) venosa** sp. n.

(Figs III: 5, 6)

*Holotype*. ♂, **Indonesia**, New Guinea, “Neu-Guinea, Anggi (Arfakgeb.), 2000 m, 10-16.6.28, Mayr leg.” (MNHU).

*Description*. Male (holotype). Coloration light brown with following marks: eyes brown and crossed by 2 narrow longitudinal lightish stripes situated near each other; mouthparts, lateral lobes of pronotum, and ventral surface of body yellowish; hind tibiae brown (middle legs missing); tegmina light grey, but having dark grey crossveins, stripes around majority of them, humeral spot at base of tegmina, and area between Sc and R (excepting its proximal and distal parts), as well as brown longitudinal veins. Structure of body parts as in *P. buergersi*

and *P. grisea*, but anal plate with distinctly narrower hind notch; genitalia distinguished from those of these species by distinctly longer and almost acute lobes of epiphallallic apex as well as shorter endoparameres and their apodemes; length of stylet-like sclerites near guiding rod and size of loop formed by these sclerites and by epiphallus (see in profile) almost as in *P. grisea*; shape of ectoparameral apex in profile also similar to that of *P. grisea* (Figs III: 5, 6).

Female unknown.

Length (in mm). Body 13.3; body with wings 20.5; pronotum 2.1; tegmina 14; hind femora 8.3.

**Comparison.** The new species is distinguished from *P. buergersi* and *P. grisea* by the light majority of tegminal cell membranes and above-mentioned characters of male genitalia (see description). From the latter species, *P. venosa* differs also in the lighter head.

***Pseudounka (Apounka) ulla* sp. n.**

(Figs III: 9, 10)

**Holotype.** ♂, **Papua – New Guinea**, New Guinea, “D. N. Guinea, 218, Lordberg, 29.XI-2.XII.12, Kais. Augustaff. Exp., Bürgers S.G.” (MNHU).

**Description.** Male (holotype). Coloration similar to that of *P. venosa*, but eyes uniformly brown, pronotum with a pair of distinct small dark spots in anterolateral corners of disc, hind tibiae practically not darkened, and tegmina somewhat lighter: darkenings around crossveins less dark; they almost absent on lateral part and proximal half of dorsal part; dark humeral spot at base of tegmina lighter and much smaller (almost indistinct); area between Sc and R completely not darkened. Structure of body parts very similar to that of *P. buergersi* and *P. grisea*, but dorsal part of tegmina with 8 longitudinal veins, and bundle of setae on cercal tubercle narrower (almost as in Fig. I: 13); genitalia distinguished from all previous species of *Apounka* by shorter and denticulate stylet-like sclerites near guiding rod (Fig. III: 9), smaller loop formed by these sclerites and epiphallus (Fig. III: 10), presence of 2 distinct notches on epiphallallic ventral edge (Fig. III: 10) and of additional paired sclerotizations near base of guiding rod (Fig. III: 9), and shape of ectoparameres: they more flat from below and with additional process of upper part (Figs III: 9, 10).

Female unknown.

Length (in mm). Body 11.5; body with wings 19; pronotum 1.9; tegmina 13; hind femora 7.8.

**Comparison.** The new species distinctly differs from all other species of this subgenus in the characters of male genitalia listed above (see description).

***Pseudounka (Apounka) modesta* sp. n.**

(Figs III: 7, 8)

**Holotype.** ♂, **Papua – New Guinea**, New Guinea, “D. N. Guinea, 128, Quelllag., 13-16.VIII.12, Kais. Augustaff. Exp., Bürgers S.G.” (MNHU).

**Description.** Male (holotype). Coloration light brown with brown eyes, a pair of dark brown small spots in anterolateral corners of pronotal disc, yellowish white ocelli, yellowish mouthparts and ventral surface of body, and brownish grey (rather dark) tegmina having narrow and weakly distinct lighter stripe along ventral edge of lateral part. External structure of body as in other species of *Apounka*, but dorsal tegminal part with 7 longitudinal veins, lateral tegminal part with 8-9 branches of Sc, hind notch of anal plate and bundle of setae on cercal tubercle somewhat narrower than those pictured in Figs I: 8, 13. Genitalia distinguished from all other species of *Apounka* by very short stylet-like sclerites (near guiding rod) fused with hind edge of epiphallus almost without forming of distinct loop (this loop well developed in all other species of *Apounka*) (Figs III: 7, 8) and by ectoparameres somewhat wider (Fig. III: 7) and having short lateral projection (Figs III: 7, 8) absent in all other species of *Apounka*.

Female unknown.

Length (in mm). Body 14; body with wings 21.5; pronotum 2.1; tegmina 14; hind femora 9.2.

**Comparison.** The new species clearly differs from all the species of *Apounka* in the characters of male genitalia listed in this description.

**Genus *Unka* Otte et Alexander, 1983**

Type species: *Unka boreena* Otte et Alexander, 1983 (Queensland).

**Note.** This genus is distributed in Australia. Its differences from the most related genus *Pseudounka* are given above after diagnosis of the latter genus. From all the other genera of this tribe, *Unka* differs by the male cerci having the inner tubercle similar to that of *Pseudounka* and by the presence of traces of stridulatory apparatus in the male tegmina (the latter character is unique and most primitive among Aphonoidini). The genus includes the type species (Figs V: 9-11) and possibly a new species described below.

***Unka? tribulatio* sp. n.**

(Figs XXII: 1-5)

**Holotype.** ♀, **Australia**, Queensland, Cape Tribulation, 16° 07' S, 145° 26' E, 10-30.III.2000, S. Storozhenko (ZIAS).

**Description.** Female (holotype). Head low, depressed dorsoventrally, angular in profile, and with transverse concavity between medial parts

of eyes (behind lateral ocelli); ocelli large, oval, almost equal in size, and situated near each other (almost along transverse line); scape twice as wide as distance between antennal cavities; coloration of head yellowish with light brown eyes and middle and hind parts of dorsum, whitish longitudinal stripe behind each eye (along lateral edge of light brown area), and with following brown marks: 2 longitudinal lines on upper half of each eye, spot behind each lateral ocellus, small mark behind median ocellus, 6 narrow longitudinal stripes behind eyes and above-mentioned marks, bifurcate mark near rostral apex, spot on upper part of membrane of each antennal cavity, 2 longitudinal stripes on dorsal surface of each scape, and base of antennal flagellum (Figs XXII: 1-3). Pronotum transverse, with slightly concave fore and distinctly convex hind edges of disc; coloration of disc light brown with almost dark brown stripes along lateral edges; coloration of lateral lobes yellowish with almost whitish band along dorsal edge (Figs XXII: 2, 3). Tegmina long, with 10-11 more or less oblique longitudinal veins in dorsal part, 12-13 distinctly oblique branches of Sc in lateral part, and rather regular crossveins; dorsal part light brown (semitransparent) with distinct brown venation and numerous small darkish spots on apical area; lateral part transparent with whitish R and crossveins between M and Sc, yellowish stock of Sc, and brownish branches of Sc and crossveins (Figs XXII: 4, 5). Hind wings distinctly longer than tegmina; their exposed part very light with several brownish transverse stripes. Legs moderately short and not very thin (but not thickened), with moderately inflated fore tibiae and moderately narrow hind femora, and without keel on middle tibiae; inner tympanum oval, slightly larger than in *U. boreana*, and distinctly smaller than in *Pseudounka* (Fig. XXII: 2); outer tympanum absent; coloration of legs yellowish with blackish base of hind tibial spines and spurs as well as of hind basitarsal spurs. Thoracic venter and abdomen uniformly yellowish with blackish both dorsal edge of each ventral valve of ovipositor and apical part of ovipositor; genital plate transverse, widening to base, and with short, wide, and rounded hind notch.

Male unknown.

Length (mm). Body 20; body with wings 31; pronotum 3; tegmina 22.5; hind femora 12.5; ovipositor 9.5.

**Comparison.** The new species differs from *U. boreana* in the larger size, absence of dark transverse stripe between eyes, more spotted both rest of head dorsum and pronotal disc, and absence of dark and darkish spots on the proximal half of tegmina and most part of antennal flagellum. From the similar representatives of some other genera, *U. ? tribulatio* is distinguished by the large size,

characteristic coloration, structure of legs, and length of ovipositor.

### Genus **Paputona** gen. n.

Type species: *Paputona occidentalis* sp. n.

**Diagnosis.** Structure of body parts and spermatophore similar to that of *Pseudounka*, but new genus distinguished by following characters: male cerci simple (without any tubercles and bundles of setae as well as with not curved proximal part); male genitalia with a pair of long hind epiphallal lobes (curved upwards apically), large notch between them, and large ectoparameres having wide proximal half and upper apical lobe (or process) directed partly backwards / partly upwards, as well as without additional sclerotizations near base of guiding rod (Figs IV: 1-8).

**Included species.** Type species; *P. cheesmanae* sp. n. These species is strongly distinguished from each other in the structure of ectoparameres, size of spermatophore sac, and length of spermatophore tube. It is impossible to exclude that they belong to different subgenera.

**Comparison.** The new genus differs from *Pseudounka* and *Unka* in the above-mentioned characters; from *Aphonoides* Chop., *Exomunda* Gor., *Zamunda* Gor., and *Furcimunda* Gor., in the not shortened epiphallus and rather wide proximal half of ectoparameres; from *Mistshenkoana* Gor., *Dinomunda* Gor., and *Munda* Stål, in the rounded ampulla of spermatophore; from these 3 genera, *Brevimunda* Gor., and *Protomunda* Gor., in the large notch between hind lobes of epiphallus and longer ectoparameres; from the latter genus, *Umbulgaria* Otte et Alex., and *Utona* Gor., in the absence of outer tympana; additionally from *Brevimunda* and *Utona*, in the large ocelli.

### **Paputona occidentalis** sp. n. (Figs IV: 1-4)

**Holotype.** ♂, **Indonesia**, New Guinea, environs of town Manokwari, primary forest on hills near sea, 4-6.XI.2004, A. Gorochov (ZIAS).

**Paratypes.** **Indonesia**, New Guinea: 1 ♂, same data as holotype (ZIAS); 1 ♀, "Neu-Guinea, Wasior (Wandammen), 18-25.7.1928, Mayr leg." (MNHU).

**Description.** Male (holotype). Coloration light (yellowish) with small brown spot behind (near) each ocellus, light brown both area between these spots and rings on antenal flagellum, 2 short brownish longitudinal lines on dorsal surface of each scape, a pair of similar lines in anterolateral corners of pronotal disc, not large blackish spot on each tegmen (on M and 1st branch of Cu near base of 4th branch of Sc as well as on nearest membranes), small dark brown spot at base of tegmina, and brown or brownish crossveins (and small area around each of them) along anal teg-

minal edge, in distal third of dorsal tegminal part, and in dorsal area of exposed part of hind wings (in rest position), as well as with darkish base of hind tibial spines and middle part of hind tarsi. Scape 1.5 times as wide as rostrum between antennal cavities. Fore tibiae similar to that pictured in Fig. I: 11. Tegmina with 8 longitudinal veins in dorsal part and 10 branches of Sc in lateral one. Anal plate similar to that pictured in Fig. I: 8; genitalia with rather weakly sclerotized median part of hind epiphallic half, hooked (see from above) hind epiphallic lobes, undivided (by membranous areas) ectoparameres having not long and not thin apical lobe (Figs IV: 1-3); spermatophore with rather short tube having lamellar area between proximal and distal parts (Fig. IV: 4).

Variation. Darkening between ocelli almost uniformly light brown; dark spot at base of tegmina smaller and weakly distinct; small brown spots present also at middle third of lateral edge of dorsal tegminal part, and other darkened patches on wings (excepting characteristic blackish tegminal spot) lighter (from light brown to almost indistinct).

Female. Coloration and structure of body parts similar to those of paratype, but without any darkenings between ocelli and on pronotum, as well as with 9 longitudinal veins in dorsal tegminal part.

Length (in mm). Body: ♂ 14.5-15, ♀ 18; body with wings: ♂ 20.5-23.5, ♀ 28; pronotum: ♂ 2-2.3, ♀ 2.7; tegmina: ♂ 14-16.3, ♀ 19.5; hind femora: ♂ 9-10, ♀ 12; ovipositor 9.

**Paputona cheesmanae** sp. n.  
(Figs IV: 5-8)

*Holotype*. ♂, **Indonesia**, Waigeo I. near western coast of New Guinea, "N. Dutch New Guinea, Waigeu, Mt. Nok, vi.1938, L.E. Cheesman, B. M. 1938-593" (BMNH).

*Paratypes*. 1 ♂, 1 ♀, same data as holotype, but ♂ with "Camp Nok, 2500 ft., iv" instead "Mt. Nok, vi" (BMNH and ZIAS).

*Description*. Male (holotype). Coloration yellowish with following marks: upper part of head with brown area between ocelli and middle parts of eyes and with 4 longitudinal stripes on hind part of vertex (2 median stripes very narrow); upper half of antennal cavities and of their membranes brown; scape, 2nd antennal segment, and apical segment of maxillary palpi brownish; pronotum with several brownish spots on disc; legs with light brown 2nd tarsal segment; tegmina with brown venation in dorsal part, light brown longitudinal veins in lateral part, and brown crossveins between latter veins; dorsal part of hind abdominal tergites light brown. Scape 1.3 times as wide as rostrum between antennal cavities. Fore tibiae more or less similar to that pictured in Fig. I: 12. Tegmina with 9 longitudinal veins in dorsal part and 8-9

branches of Sc. Anal plate similar to that of *P. occidentalis*; genitalia distinguished from those of latter species by more heavily sclerotized median parts of epiphallic hind half, not hooked (from above) hind epiphallic lobes, and ectoparameres divided by narrow membranous stripe into 2 sclerites (large lower sclerite and narrow upper sclerite; latter one provided with long, thin, and hooked apical process; Figs IV: 5-7); spermatophore with long and simple tube (Fig. IV: 8).

Variation. Paratype with slightly lighter upper part of antennal cavities and of their membranes, distinct dark spot at base of tegmina, and somewhat darker branches of Sc (excepting main stock of this vein).

Female. Coloration and structure of body parts similar to those of paratype, but coloration of Sc branches as in holotype, dorsal tegminal part with 10 longitudinal veins, and lateral one with 10 branches of Sc.

Length (in mm). Body: ♂ 17-18.5, ♀ 18.5; body with wings: ♂ 24-25, ♀ 32; pronotum: ♂ 2.1-2.3, ♀ 2.8; tegmina: ♂ 16.4-17.6, ♀ 23; hind femora: ♂ 9.5-9.7, ♀ 13; ovipositor 10.8.

*Comparison*. The new species differs from *P. occidentalis* in the more spotted head and pronotum, wider rostrum of head, shorter legs, reticular (not spotted) coloration of dorsal tegminal part, and above-mentioned characters of male genitalia (see description).

*Etymology*. The new species is named after its collector.

**Genus Deinutona** gen. n.

Type species: *Deinutona major* sp. n.

*Diagnosis*. Structure of body parts and spermatophore similar to that of *Pseudounka* and *Paputona*, but scape approximately 1.5 times as wide as rostrum between antennal cavities, male cerci simple (as in *Paputona*), and male genitalia with 3 hind lobes of epiphallus (a pair of longer lateral lobes and shorter median one), large and partly membranous ectoparameres having distal part slightly hooked and directed upwards, and without additional sclerotizations near base of guiding rod (Figs V: 1-7).

*Included species*. Type species; *D. minor* sp. n.

*Comparison*. The new genus differs from all the other genera of Aphonoidini in the male genitalia with 3 distinct hind lobes of epiphallus. Some additional differences from *Pseudounka* (sometimes having trilobate epiphallus) are given above.

**Deinutona major** sp. n. (Figs V: 1-3)

*Holotype*. ♂, **Indonesia**, New Guinea, environs of city Jayapura, Cyclops Mts, about 500 m, primary forest, 17-19.XI.2004, A. Gorochoy (ZIAS).

**Paratypes.** **Indonesia**, New Guinea: 1 ♀, same data as holotype (ZIAS); 1 ♀, "Dutch New Guinea, Cyclops Mts, Sabron, 1000 ft., vi.1936, L.E. Cheesman, B. M. 1936-271" (BMNH).

**Description.** Male (holotype). Coloration yellowish with following marks: brown eyes; dark brown spot behind (near) each lateral ocellus; light brown most part of apical segment of maxillary palpi; slightly greyish fore half of pronotal disc; reddish brown venation of dorsal tegminal part. External structure of body similar to that of *P. cheesmanae* (hind legs missing), but rostrum of head somewhat narrower, fore tibiae with hardly smaller tympanum, and tegmina with 8 longitudinal veins in dorsal part and 10-11 branches of Sc; genitalia with apical part of hind lateral epiphallal lobes rounded and hardly curved upwards, notch on ventrolateral edge of these lobes (see from side) rather deep, and hind median epiphallal lobe narrow and bifurcate at apex (figs V: 1-3) (spermatophore unknown).

Female. General appearance as in male, but with small darkened spot also behind (near) median ocellus, short darkish longitudinal stripe behind each eye, and a few small brownish spots and stripes on pronotal disc. Sometimes spots near ocelli and venation of dorsal part lighter (brown and light brown respectively), eyes with distinct dark longitudinal line, and maxillary palpi completely yellowish.

Length (in mm). Body: ♂ 18, ♀ 18-19; body with wings: ♂ 25, ♀ 29-32; pronotum: ♂ 2.3, ♀ 2.8-3; tegmina: ♂ 17, ♀ 20.5-22.5; hind femora, ♀ 11-12.2; ovipositor 7-7.5.

### **Deinutona minor** sp. n. (Figs V: 4-8)

**Holotype.** ♂, **Indonesia**, New Guinea, "Dutch New Guinea, Cyclops Mts, Sabron, 1000 ft., vi.1936, L.E. Cheesman, B. M. 1936-271" (BMNH).

**Paratypes.** 1 ♀, **Indonesia**, Waigeo I. near western coast of New Guinea, "N. Dutch New Guinea, Waigeu, Mt. Nok, vi.1938, L.E. Cheesman, B. M. 1938 593" (BMNH). **Papua – New Guinea**, New Guinea: 1 ♂, "D. N. Guinea, Aprilfluss, VI.1912, Kais. Augustafl. Exp., Ledermann S." (MNHU); 1 ♂, "D. N. Guinea, 112, Kais. Augustafl. Exp., Bürgers S.G." (ZIAS); 1 ♂, "D. N. Guinea, 167, Flusslager 18, 10-20.XI.12, Kais. Augustafl. Exp., Bürgers S.G." (MNHU).

**Description.** Male (holotype). Coloration uniformly yellowish with only dark brown eyes and light brown venation of dorsal tegminal part. External structure of body similar to that of *D. major*, but tegmina with 7 longitudinal veins in dorsal part and 6-7 branches of Sc; genitalia with apical part of hind lateral epiphallal lobes angular and strongly curved upwards, notch on ventrolateral edge of these lobes (see from side) almost undeveloped, and hind median epiphallal lobe with widened and distinctly trifurcate apex (Figs V: 4-6); spermatophore with rounded and

not dark ampulla as well as rather short and more or less simple tube.

**Variations.** 2 paratypes with proximal lateral lobes of ectoparameres somewhat shorter, and hind median epiphallal lobe having almost truncate (very weakly trifurcate) apex (Figs V: 7, 8). Male from "Flusslager 18" with ectoparameres as in holotype and hind median epiphallal lobe as in previous paratypes.

Female. General appearance as in male, but dorsal surface of head with weakly distinct brownish transverse band between middle parts of eyes, almost yellowish venation of dorsal tegminal part, 8 longitudinal veins in this part, and 8-9 branches of tegminal Sc.

Length (in mm). Body: ♂ 12-13, ♀ 13; body with wings: ♂ 17-19, ♀ 23; pronotum: ♂ 1.7-1.9, ♀ 2.3; tegmina: ♂ 12-13, ♀ 17.5; hind femora: ♂ 7.8-8.2, ♀ 10.5; ovipositor 6.

**Comparison.** The new species differs from *D. major* in the distinctly smaller size of body and characters of male genitalia listed in the descriptions of both these species.

**Note.** This species is probably rather widely distributed (from Sepik River to Cyclops Mts and Waigeo I.). However belonging of female from the latter island to this species is somewhat questionable.

### **Genus Aphonoides** Chopard, 1940

Type species: *Gryllus (Eneoptera) punctatus* Haan, 1842 (Sulawesi).

**Note.** The genus is sufficiently characterized in one of the previous communications (Gorochoy, 2007). In the same paper, the list of Indo-Malayan species belonging or possibly belonging to *Aphonoides* is also given. Here this list is supplemented by the following exclusively Australo-Oceanian species: *Laurepa australis* Walker, 1869 (Australia); *Aphonomorphus angustissimus* Chopard, 1925 (Australia); *Aphonoides hackeri* Chopard, 1951 (Australia); 10 species described by Otte & Alexander in 1983 from Australia (*A. biangri*, *A. binderi*, *A. jimjimi*, *A. kaikai*, *A. miripara*, *A. nepotinna*, *A. warratinna*, *A. agantra*, *A. karumbae*, *A. marika*); 19 new species from New Guinea and nearest regions (*A. vulgatus* sp. n., *A. papua* sp. n., *A. lunga* sp. n., *A. waigeo* sp. n., *A. sepik* sp. n., *A. orrori* sp. n., *A. okapa* sp. n., *A. nok* sp. n., *A. flexus* sp. n., *A. frons* sp. n., *A. cuspidatus* sp. n., *A. curtus* sp. n., *A. amplus* sp. n., *A. paramplus* sp. n., *A. simplex* sp. n., *A. bituberculatus* sp. n., *A. excavatus* sp. n., *A. emeljanovi* sp. n., *A. ? morobe* sp. n.). Male of the latter species is unknown; questionable inclusion of this species in *Aphonoides* is based on the presence of rather short ovipositor in *A. ? morobe* and in majority of the true representatives of this genus (with both sexes known).



**Aphonoides vulgatus** sp. n.  
(Figs VI: 1-3)

*Holotype*. ♂, **Papua – New Guinea**, New Guinea, “D. N. Guinea, i. Lager 29 km unterm. D. Mäanderberges a. Sepik, 11-16.VII.13, Nr. 361, Kais. Augustaf. Exp., Bürgers S.G. (MNHU).

*Paratypes*. **Papua – New Guinea**, New Guinea: 1 ♂, same data as holotype (ZIAS); 2 ♀, “D. N. Guinea, 404, Mäanderberg, 21-30.VIII.13, Kais. Augustaf. Exp., Bürgers S.G. (MNHU and ZIAS). **Indonesia**, New Guinea: 1 ♂, “Neu-Guinea, Cyclopedgeb., Lag. 1, 800 m, 18.8-2.9.28, Mayr leg. (MNHU); 1 ♀, environs of city Jayapura, Cyclops Mts, about 500 m, primary forest, 17-19.XI.2004, A. Gorochov (ZIAS).

*Description*. Male (holotype). Coloration yellowish grey with following marks: dorsal surface of head brownish grey; eyes light brown with darkish lower part; ocelli and proximal half of antennae yellowish, but latter half with slight brownish spots at distal part; distal half of antennae brownish with small light spots; pronotum with a pair of large yellowish spots on middle part of disc and rather numerous darkish dots on other areas including a dot at centre of each of above-mentioned yellowish spots (latter dot and dots along fore edge of lateral lobes largest and distinct; other dots more weakly distinct); legs yellowish with rather sparse and slight darkish dots (hind femora on outer surface also with darkish both interrupted longitudinal line and almost indistinct oblique stripes); dorsal tegminal part with light brown veins (hardly darker than membranes) excepting several whitish crossveins along lateral edge; lateral tegminal part almost transparent and with light brownish (almost yellowish) veins excepting whitish crossveins along dorsal edge; exposed part of hind wings brownish grey; abdomen yellowish with brownish both dorsal surface of hind tergites and marks on anal plate. Head rather low (width slightly greater than height), distinctly angular in profile; rostrum with almost truncate apex; scape approximately 1.5 times as wide as rostrum between antennal cavities; ocelli distinct, medium-sized, situated at corners of transverse triangle; dorsal surface of head (including dorsum of rostrum) flat. Pronotum moderately long; its disc with angular hind median lobe. Fore and middle legs comparatively short; shape of fore and middle legs typical of *Aphonoides* (femora almost not widened and slightly depressed; fore tibiae moderately inflated, with large oval inner tympanum and small slight concavity instead outer one; middle tibiae rather thin and almost without keel on dorsal surface). Tegmina extending somewhat behind apex of hind femora, with rather numerous crossveins in dorsal part and with comb of Sc consisting of 5-6 branches almost parallel in relation to R; hind wings distinctly longer than tegmina. Anal and genital plates simple, with more or less rounded distal part; genital plate

moderately long, distinctly longer than short anal plate; genitalia as in Figs VI: 1-3; spermatophore ampulla brown, globular, similar to that pictured in Fig. VI: 10.

*Variations*. Male from “Cyclopedgeb.” with small darkish spots along hind edge of ocelli and brown areas on membranes along lateral edge of dorsal tegminal part (between whitish crossveins).

*Female*. General appearance as in holotype, but with spots near ocelli as in male from “Cyclopedgeb.” (female from environs of Jayapura with all marks more distinct than in all other known specimens of this species). Genital plate almost quadrate, but slightly narrowing to almost truncate or hardly sinuate apex.

*Length* (mm). Body: ♂ 13.5-15, ♀ 12.5-14.5; body with wings: ♂ 20.5-22.5, ♀ 21-22; pronotum: ♂ 2.4-2.5, ♀ 2.4-2.5; tegmina: ♂ 13.5-15, ♀ 14-15.3; hind femora: ♂ 9.5-9.8, ♀ 8.7-9.7; ovipositor 5.5-6.

*Comparison*. The new species differs from all the congeners in the more or less uniform, yellowish grey coloration with whitish crossveins near lateral edge of dorsal tegminal part and near dorsal edge of lateral tegminal part, angular shape of head in profile, flat dorsum of head, medium-sized ocelli situated in corners of transverse triangle, large mold of spermatophore attachment plate in male genitalia, shape of epiphallus and ectoparameres as in Figs VI: 1-3, and characteristic length of ovipositor.

**Aphonoides papua** sp. n.  
(Figs VI: 4-6)

*Holotype*. ♂, **Papua – New Guinea**, New Guinea, “terr. Papua & New Guinea, Maprik, 24.X.1957, I. Smart” (BMNH).

*Description*. Male (holotype). Head light brownish grey with dark brown fore part of epicranium (under rostral apex, antennal cavities, and eyes) and genae (excepting lightish spots along their hind edge), brown clypeus and labrum (labrum with lightish spot at centre), dark very small spots around ocelli, darkish both lower part of eyes and transverse stripe on dorsum between eyes, and slightly darkened longitudinal median stripe between previous stripe and hind edge of vertex; antennae light brown with numerous slightly lighter (almost yellowish) spots; pronotum light brown with weakly distinct brownish grey spots on disc and dark brown lateral lobes (these lobes with lightish both stripe along ventral edge and longitudinal row of spots near this stripe); legs light brown with dark brown both outer surface of fore femora and numerous spots on outer surface of middle femora (these spots partly fused with each other), brown large areas at proximal part of middle femora and distal part of hind femora,

and not numerous darkish spots on other parts of legs; dorsal tegminal part light grey with brown venation (excepting whitish crossveins along lateral edge) and spots on some membranes along lateral edge (spot at middle of this part largest and very distinct); lateral tegminal part brown with light greyish membranes between Sc and M (membranes between Sc and R also with small darkish spots in distal cells and large brown areas in proximal ones), between bases of Sc branches, and between distal parts of these branches (latter membranes partly darkened), as well as with whitish crossveins along dorsal edge; exposed part of hind wings dark grey; abdomen light brown with darkish spots on genital plate. Head rather high (height slightly greater than width), less angular in profile than in *A. vulgatus*; scape approximately 1.5 times as wide as rostrum between antennal cavities; rostral apex almost truncate; ocelli almost as in *A. vulgatus*; upper surface of head slightly concave in region of rostral base. Structure of pronotum, legs, wings, and abdomen more or less similar to that of *A. vulgatus*, but middle tibiae hardly widened and with slight longitudinal keel on dorsal surface, comb of tegminal Sc consisting of 8-9 branches situated obliquely in relation to R, hind wings slightly shorter, and genitalia with deeper and narrower notch of proximal edge of epiphallus, more sclerotized guiding rod, and somewhat smaller mold of spermatophore attachment plate (Figs VI: 4-6).

Female unknown.

Length (mm). Body 14.7; body with wings 21; pronotum 2.5; tegmina 14.8; hind femora 9.2.

**Comparison.** The new species is most similar to *A. vulgatus* in the structure of male genitalia, but distinguished from it by the higher head with dark face, more spotted tegmina, and characters of male genitalia listed above.

***Aphonoides lunga* sp. n.**  
(Figs VI: 7-10)

**Holotype.** ♂. **Solomon Islands**, Guadalcanal I., "Solomon Is, Guadalcanal, Lunga, 14.vi.1935, R.A. Lever" (BMNH).

**Description.** Male (holotype). Coloration light brown with following marks (antennal flagellum missing): dorsum of head (from rostral apex to hind part of head) brown with a pair of longitudinal lightish stripes running from area between medial parts of eyes to hind part of vertex; pronotum and legs with numerous small darkish spots; tegmina light brownish grey with brown veins and humeral stripe between proximal parts of Sc and R, yellowish spots on bases of 3 most distal longitudinal veins (branches) of dorsal part, and very light crossveins along dorsal edge of lateral part; exposed part of hind wings brownish grey. Head similar to that of *A. vulgatus* in structure, but with

wider rostrum between antennal cavities (it hardly narrower than scape) and small, less distinct ocelli. Shape of pronotum and legs more or less similar to that of *A. vulgatus* and *A. papua*, but fore and middle femora somewhat wider and clearly depressed, middle tibiae distinctly wider and weakly depressed, and dorsal surface of middle tibiae with distinct longitudinal keel. Tegmina with venation of dorsal part similar to that of *A. papua* and with venation of lateral part intermediate between those of *A. papua* and *A. vulgatus* (comb of Sc consisting of 5-6 partly oblique branches); hind wings and abdomen similar to those of *A. vulgatus*, but genitalia with proximal part of epiphallus almost as in *A. papua*, hind epiphallal lobes angularly projecting backwards, guiding rod less sclerotized than in *A. papua*, mold of spermatophore attachment plate smaller than in *A. vulgatus*, and distal part of ectoparameres (after bifurcation) distinctly longer than in both these species (Figs VI: 7-9); spermatophore with spermatophylax; its ampulla brownish, globular (Fig. VI: 10).

Female unknown.

Length (mm). Body 12.5; body with wings 19; pronotum 2.1; tegmina 12.5; hind femora 8.9.

**Comparison.** The new species is similar to *A. vulgatus* and *A. papua* in the male genitalia, but distinguished from them by the shape of fore and middle femora, of middle tibiae, and of distal part of both epiphallus and ectoparameres in male genitalia (see description of this species). From *A. papua*, it differs also in the shape and coloration of head.

***Aphonoides waigeo* sp. n.**  
(Figs VII: )

**Holotype.** ♂, **Indonesia**, Waigeo I. near western coast of New Guinea, "N. Dutch New Guinea, Waigeu, Camp Nok, 2,500 ft., iv.1938, L.E. Cheesman, B. M. 1938-593" (BMNH).

**Description.** Male (holotype). Coloration light yellowish grey with following ornament: head dorsum with 2 transverse brown stripes (between eyes and on hind part of vertex) and brown median spot contacting with both these stripes; fore surface of rostrum with a pair of slightly darkened spots under rostral apex; small area behind eyes, labrum, and lower part of mandibles slightly darkened also; eyes light brown with darkish lower part, brown vertical stripes on upper part, and brown longitudinal line on middle part; antennal base with small darkish spot on ventral surface of scape (most part of flagellum missing); pronotum with several brown and brownish grey short longitudinal stripes on fore part and weakly darkened small spots on other parts; fore and middle legs moderately spotted; hind legs weakly spotted (outer surface of their femora with darkish oblique stripes on upper half

near base and weakly distinct large darkening on middle part and on apical part); tegmina light grey with brown venation of dorsal part (base of branches and crossveins near lateral edge yellowish white), light brown venation of lateral part (crossveins between Sc and M yellowish white), and partly brown membranes between Sc and R interrupted by 4-5 distinct yellowish white spots (a few membranes between R and M near base of tegmina partly brown also). Structure of body most similar to that of *A. lunga* including shape of head and middle tibiae, but rostrum hardly narrower, ocelli more distinct, fore and middle femora slightly less depressed, and genitalia with median proximal notch of epiphallus wide (not as in *A. lunga* and *A. papua*) and proximal (narrow) part of ectoparameres distinctly shorter (and less curved) than in *A. vulgatus*.

Female unknown.

Length (mm). Body 11; body with wings 16.5; pronotum 1.8; tegmina 10.8; hind femora 7.4.

**Comparison.** The new species is most similar to *A. lunga* (in the structure of legs) and *A. vulgatus* (in the shape of epiphallus), but distinguished from them by the presence of dark transverse dorsal stripe between eyes and characters of male genitalia listed in the description.

### **Aphonoides sepik** sp. n.

(Figs VII: 4-6)

**Holotype.** ♂, **Papua – New Guinea**, New Guinea, “D. N. Guinea, 291, Hunsteinspitze, 6.III.13, Kais. Augustaf. Exp., Bürgers S.G.” (MNHU).

**Description.** Male (holotype). Coloration yellowish with following numerous marks: dorsum of head brownish (excepting yellowish ocelli, median stripe on rostrum, small spots near medial edge of each eye, and a few interrupted narrow longitudinal stripes on area between these spots and above-mentioned stripe) and with almost dark brown transverse band on hind part of vertex; coloration of eyes almost as in *A. waigeo*; antennae with a few light brown spots on scape; pronotum with brownish disc and upper part of lateral lobes (all pronotal parts with small lightish spots and sparse brown dots); fore and middle legs with numerous reddish brown small spots on outer surface of femora (some of these spots partly fused with each other) and brown spots on outer and dorsal surfaces of tibiae and on basitarsi; hind legs with reddish brown longitudinal spot on proximal part of outer surface of hind femora, light brown reticular ornament on other parts of this surface, brownish longitudinal spots on dorsal surface of tibiae, and brown basitarsi (dorsal surface of these basitarsi lighter); tegmina light grey with slightly darker (brownish) venation (excepting whitish crossveins in Sc-M areas and parts of most other crossveins), brown both a few spots along anal

edge and membranes between proximal parts of Sc and R, and very slightly darkened small spots and rings on most membranes of dorsal part; exposed part of hind wings brownish grey; hind abdominal tergites and anal plate with reddish brown tinge. External structure of body very similar to that of *A. lunga* and *A. waigeo*, but rostrum somewhat narrower (almost as in *A. vulgatus* and *A. papua*) and with slight dorsal concavity in region of its base, ocelli practically as in *A. waigeo*, and legs, as in *A. lunga*. Genitalia distinguished from those of *A. waigeo* by narrower and more acute distal part of hind epiphallal lobes as well as longer and more curved ectoparameres; from genitalia of *A. lunga* and *A. papua*, by distinctly shorter (less deep) proximal median notch of epiphallus; and from genitalia of *A. vulgatus*, by apical tubercle of hind epiphallal lobes clearly projecting backwards (Figs VII: 4-6).

Female unknown.

Length (mm). Body 13.3; body with wings 21.5; pronotum 2.1; tegmina 14.5; hind femora 9.

**Comparison.** The new species is more or less similar to the previous congeners described here in the general structure of male genitalia, and additionally to *A. lunga* and *A. waigeo*, in the shape of legs, but distinguished from all them by the characters of male genitalia listed above.

### **Aphonoides orrori** sp. n.

(Figs VII: 7-10)

**Holotype.** ♂, **Papua – New Guinea**, New Guinea, “Papua, Orrori, 3,500 ft., vii.1933, L.E. Cheesman, B. M. 1933-427” (BMNH).

**Description.** Male (holotype). Coloration yellowish with following marks: dorsum of head brown with almost dark brown fore part (from rostral apex to area between most medial parts of eyes) and light brown ocelli; fore part of head with brown rostral apex, dark brown spot on medial edge of each antennal cavity, and a few darkish dots between lower parts of eyes; eyes light brown with slight darkish ornament similar to that of *A. sepik* and *A. waigeo*; scapes with brownish medial half (antennal flagellum missing); coloration of pronotum almost as in *A. sepik*, but brown dots on disc less distinct; fore and middle legs with several small brown spots on femora and tibiae (hind legs missing); tegmina light grey with hardly darker (brownish) most crossveins of lateral part and all longitudinal veins, darker (brown) most crossveins of dorsal part, and several whitish crossveins in dorsal part along lateral edge and in lateral part along dorsal edge; exposed part of hind wings brownish grey; abdominal tergites and anal plate with brownish tinge. External structure of body most similar to that of *A. lunga* and *A. waigeo*, but scape almost twice as wide as rostrum between antennal cavities, ocelli medium-sized, legs and

wings similar to those of *A. vulgatus*. Genitalia distinguished from those of *A. vulgatus* by lobe-like sclerotization between distal processes of ectoparameres more distinct and distal part of hind epiphallal lobes distinctly wider (higher) in profile; from genitalia of *A. papua*, by same characters and less sclerotized guiding rod; and from genitalia of *A. lunga*, *A. waigeo*, and *A. sepik*, by almost straight dorsal edge of epiphallus in profile, large mold of spermatophore attachment plate, and more truncate apex of hind epiphallal lobes in profile (Figs VII: 7-9); spermatophore with brownish ampulla having somewhat elongate fore part (Fig. VII: 10).

Female unknown.

Length (mm). Body 12.5; body with wings 20; pronotum 2.2; tegmina 13.5.

**Comparison.** The new species is somewhat similar to *A. vulgatus* in the size of ocelli, coloration of tegmina, and shape of legs, but distinguished from it and from all the other previous congeners in the characters of male genitalia listed above.

**Aphonoides okapa** sp. n.  
(Figs VII: 11-13)

**Holotype.** ♂, **Papua – New Guinea**, “New Guinea, E. Highland Dist., Okapa, c. 5,000 ft., 4-15.ii.1965”, “Stn. No. 170”, “M.E. Bacchus, B. M. 1965-120” (BMNH).

**Description.** Male (holotype). Coloration and structure of body very similar to those of *A. orrori* sp. n., but distinguished by following characters: dark fore part of head dorsum with very thin lightish lines along epicranial suture and both frontal sutures; hind area of vertex light brown with several darkish longitudinal stripes running from brown area between eyes to almost hind edge of vertex (coloration of eyes missing); antennae slightly less spotted; pronotum with light brown most part of disc and almost uniform lower half of lateral lobes; spots of fore and middle legs slight (hind legs, missing in *A. orrori*, light brown with darkish apical part of femur, middle and apical parts of tarsus, and spots on dorsal half of tibia and near bases of tibial spurs); all tegminal crossveins hardly darker than membranes (no intensively brown or whitish crossveins); epiphallus slightly longer, with distinctly deeper proximal median notch, somewhat shorter apodemes, less angular hind lobes (see from above), and clearly concave dorsal edge in profile (Figs VII: 12, 13); ectoparameres more arched in profile, straight (if to see from below), and with narrower base of medial process directed mainly downwards (Figs VII: 11, 13).

Female unknown.

Length (mm). Body 9.2; body with wings 16.5; pronotum 1.9; tegmina 11.8; hind femora 6.8.

**Comparison.** *A. okapa* is most similar to *A. orrori*, but distinguished by the above-mentioned

features. From all the other congeners, it differs in the characteristic coloration in combination with the shape of epiphallus (especially hind epiphallal lobes) and ectoparameres (see Figs VII: 11, 12).

**Aphonoides nok** sp. n.  
(Figs VIII: 1-4)

**Holotype.** ♂, **Indonesia**, Waigeo I. near western coast of New Guinea, “N. Dutch New Guinea, Waigeu, Mt. Nok, Camp, 2.VI.1938, 2,700 ft., L.E. Cheesman, B. M. 1938-593” (BMNH).

**Paratype.** ♂, same data as holotype (ZIAS).

**Description.** Male (holotype). Coloration yellowish with following ornament: head dorsum (from rostral apex to hind part of vertex) and eyes light brown; small longitudinal spots along lateral edges of dorsal part of rostrum and medial edges of lateral ocelli darkish (brown); pronotal disc light brown with weakly distinct darkish and lightish spots; pronotal lateral lobes with sparse brownish dots; fore and middle femora with weakly distinct and sparse brownish dots; fore and middle tibiae with slightly larger and more distinct brownish spots; hind femora with weakly distinct, numerous and oblique brownish stripes on outer surface; all tarsi and hind tibiae almost uniformly yellowish; tegmina light, yellowish grey, but with almost brown venation of dorsal part (excepting whitish both base of longitudinal branches and crossveins along lateral edge of this part), brownish membranes of this part situated along its lateral edge and in its apical area, light brown longitudinal veins (including their branches) of lateral part, and whitish crossveins between these veins; exposed part of hind wings brownish, rather light. Structure of body similar to that of *A. vulgatus*, but comb of tegminal Sc with somewhat more numerous (7-8) and less parallel branches, proximal (narrow) part of ectoparameres straight, their distal lobes longer, and mold of spermatophore attachment plate with rather long angular projections (Figs VIII: 1-3); ampulla of spermatophore brown, with distinctly elongate proximal part (Fig. VIII: 4).

**Variations.** Paratype with slightly darker dorsal part of head and pronotum, greyish brown short humeral stripe on tegmina, and almost dark brown most crossveins of dorsal tegminal part.

Female unknown.

Length (mm). Body 13-14.5; body with wings 20.7-21.5; pronotum 2.4-2.5; tegmina 13.3-13.7; hind femora 9-9.2.

**Comparison.** The new species differs from *A. vulgatus* in the above-mentioned characters of tegminal venation and male genitalia; from all the other congeners, in the characteristic coloration, size of ocelli, shape of middle tibiae, and some features of male genitalia: median proximal notch of epiphallus narrow (from *A. waigeo*), apex of

hind epiphallal lobes not acute (from *A. sepik* and *A. lunga*), guiding rod not sclerotized (from *A. papua*), medial process of ectoparameres long (from *A. orrori*), as well as straight ectoparameres and characteristic mold of spermatophore attachment plate.

**Aphonoides flexus** sp. n.

(Figs VIII: 5-7)

*Holotype*. ♂, **Papua – New Guinea**, New Guinea, “D. N. Guinea, 296, Hunsteinspitze, 9.III.13, Kais. Augustaf. Exp., Bürgers S.G.” (MNHU).

*Description*. Male (holotype). Coloration and structure of body similar to those of *A. nok*, but rostrum without darkenings along lateral edges of dorsal part, pronotal disc with a pair of large yellowish spots, lateral pronotal lobes and tibiae with less distinct brownish dots and spots, tegminal dorsal part with all membranes rather light and longitudinal veins (including their branches) light brown, tegminal lateral part with brown crossveins (excepting whitish crossveins between Sc and M) which only hardly lighter than brown crossveins of dorsal part, scape almost twice as wide as rostrum between antennal cavities, apodemes of epiphallus shorter, ectoparameres with proximal (narrow) part distinctly curved, and mold of spermatophore attachment plate typical of genus (without long angular projections) (Figs VIII: 5-7); ampulla of spermatophore almost as in *A. lunga*.

Female unknown.

Length (mm). Body 15.5; body with wings 19.8 (small apical part of hind wings missing); pronotum 2.5; tegmina 15; hind femora 9.3.

*Comparison*. The new species differs from *A. nok* in the above-mentioned characters and from all the other congeners, in the same characters as *A. nok* (excepting shape of both proximal part of ectoparameres and mold of spermatophore attachment plate).

**Aphonoides frons** sp. n.

(Figs VIII: 8-13)

*Holotype*. ♂, **Papua – New Guinea**, New Guinea, “D. N. Guinea, 291, Hunsteinspitze, 6.III.13, Kais. Augustaf. Exp., Bürgers S.G.” (MNHU).

*Paratype*. ♂, same data as holotype, but with number “278” (instead “291”) and date “26.II.13” (ZIAS).

*Description*. Male (holotype). Coloration yellowish with following marks: rostral apex and fore part of epicranium dark brown (excepting yellowish genae, areas under eyes, and a pair of small spots between lower edges of antennal cavities); dorsum of head, eyes, ocelli, and medial half of scapes brown, but with transverse row of yellowish spots on hind part of vertex (behind eyes); pedicel and antennal flagellum almost light brown; pronotal disc and upper half of pronotal

lateral lobes brown with numerous and diverse lighter spots; legs with slight and sparse brownish spots (excepting hind femora having numerous oblique and very slight stripes on outer surface); tegmina light (yellowish grey) with darker (light brown) venation (excepting whitish crossveins in dorsal part along lateral edge and near it as well as in lateral part along dorsal edge) and almost transparent membranes of lateral part; exposed part of hind wings yellowish grey; anal plate and dorsum of hind abdominal tergites brownish. Structure of body similar to that of *A. vulgatus*, but median ocellus small, tegmina distinctly extending behind hind femora, apex of epiphallal hind lobes with rather large angular projection directed partly backwards/partly upwards, proximal median notch of epiphallus comparatively narrow, both distal lobes of ectoparameres directed more or less backwards, and mold of spermatophore attachment plate smaller (Figs VIII: 8-10).

Variations. Paratype slightly darker (dorsal surface of rostrum and large spot on fore part of upper half of lateral pronotal lobes dark brown) and with tegminal venation (excepting above-mentioned whitish crossveins) intensively brown. Its genitalia somewhat distinguished from those of holotype in shape of some structures (for comparison see Figs VIII: 8-10 and 11-13), possibly, on account of deformation of genitalia in paratype.

Female unknown.

Length (mm). Body 11.5-13; body with wings 18.5-19.5; pronotum 2.2-2.3; tegmina 12.8-13.2; hind femora 7.1-7.3.

*Comparison*. The new species differs from all the previous species described here in the dark fore part of head and both distal lobes of ectoparameres directed more or less backwards. It is also distinguished by the head depressed dorso-ventrally, thin middle tibiae, more or less uniform coloration of tegmina, dorsal edge of epiphallus weakly sinuate in profile, moderately narrow proximal median notch of epiphallus, not very long distal lobes of ectoparameres, and not large and rather simple shape of mold of spermatophore attachment plate.

**Aphonoides cuspidatus** sp. n.

(Figs IX: 1-5)

*Holotype*. ♂, **Papua – New Guinea**, New Guinea, “D. N. Guinea, 221, Lordberg, 5-6.XII.12, Kais. Augustaf. Exp., Bürgers S.G.” (MNHU).

*Description*. Male (holotype). Coloration yellowish with following ornament: fore part of head with dark brown both large median transverse spot near clypeus (each lateral part of this spot with narrow upper tongue almost reaching antennal cavity) and median part of labrum, brown clypeus (excepting a pair of yellowish transverse lateral spots near clypeal suture), a pair of light brown

spots between antennal cavities, and 4 brownish dots under eyes and on membranes under scapes; rest of epicranium with brown area behind each eye (this area with small dark brown spot in lower corner near eye and lightish mark near it), weakly distinct brownish dots on rostral dorsum, and 3 short brownish longitudinal stripes on hind part of vertex (behind eyes and in median part; latter stripe with thin light median line); antennae with brownish spots on dorsal part of scape and numerous greyish spots on flagellum; pronotum with dark brown wide bands along lateral edges of disc (each of these bands with transverse yellowish line at middle) and sparse dots near these bands; dorsal spots on fore tibiae near tympana and on hind femora near their apex brown and comparatively large; other parts of legs with small and rather numerous brown and brownish spots (these spots on some parts of hind femora less distinct); dorsal part of tegmina with light brown longitudinal veins (having distal halves partly dark brown), wide whitish crossveins (some of them with darkened parts), intensively brown membranes near apical area and some membranes at basal area, brownish narrow and interrupted stripe on membranes along lateral edge of dorsal part, and greyish (light) rest of membranes; lateral tegminal part with dark brown both band along dorsal edge (this band having numerous whitish spots) and rest of venation in proximal third (some parts of longitudinal veins in this third almost yellowish), light brown rest of venation in middle third, intensively brown rest of venation in distal third, and almost transparent rest of membranes; exposed part of hind wings brownish; anal plate with weakly distinct darkenings. Head moderately high, but distinctly angular in profile; fore part of head dorsum (from rostral apex to area between hind halves of eyes) flat, distinctly oblique in profile in relation to hind part of dorsum; ocelli small, lateral ones almost indistinct; scape almost 1.5 times as wide as rostrum between antennal cavities. Legs, tegmina, and abdomen more or less similar to those of *A. papua*, but genitalia with hind epiphallal lobes acute and very long, guiding rod not sclerotized, and ectoparameres having proximal (narrow) part gradually widening to distal part (Figs IX: 1-3); spermatophore with spermatophylax and rather light, almost globular ampulla (Figs IX: 4, 5).

Female unknown.

Length (mm). Body 10.2; body with wings 16; pronotum 1.7; tegmina 10; hind femora 7.2.

*Comparison.* The new species differs from all the congeners in the characteristically spotted head and tegmina, acute and very long hind epiphallal lobes, and ectoparameres gradually widening to distal part.

### **Aphonoides curtus** sp. n.

(Figs IX: 6-8)

*Holotype.* ♂, **Papua – New Guinea**, New Guinea, “D. N. Guinea, 234, Hauptlg. B. Malu, 7.I.1913, Kais. Augustaf. Exp., Bürgers S.G.” (MNHU).

*Description.* Male (holotype). Coloration and structure of body very similar to those of *A. cuspidatus*, but distinguished by following characters: head lighter (yellowish with following small brownish spots: median spot on apex of labrum, median spot on upper part of clypeus, 2 spots under each antennal cavity, 2 spots under each eye, a few spots behind each eye, several spots on hind part of vertex, and very small spots around lateral ocelli); pronotum with distinctly narrower dark bands; fore and middle femora with more distinct dark spots near apical part; fore tibiae and hind femora with less distinct dorsal spots; tegminal dorsal part with slightly more distinct darkening near base, slight additional darkening between base and middle of this part, less distinct darkening near apical area, and somewhat darker venation (majority of veins in dorsal part with dark and darkish parts); lateral tegminal part with weakly darkened band along dorsal edge (this band having 2-3 large whitish spots in middle part, several yellowish proximal crossveins, and a few small dark spots along dorsal edge) and light brown rest of venation; anal plate uniformly yellowish; genitalia with much shorter hind epiphallal lobes and slightly shorter proximal (narrow) part of ectoparameres (Figs IX: 6-8).

Female unknown.

Length (mm). Body 10; body with wings 16; pronotum 1.9; tegmina 10.5; hind femora 7.5.

*Comparison.* The new species is most similar to *A. cuspidatus*, but distinguished from it by the characters listed above. From the other congeners, *A. curtus* differs in the characteristic coloration and shape of ectoparameres (proximal part of ectoparameres rather short, their distal process long, and their medial process comparatively short).

### **Aphonoides amplus** sp. n.

(Figs X: 1-7)

*Holotype.* ♂, **Indonesia**, Yapen I. near northern coast of New Guinea, “N. Dutch New Guinea, Japan, Seroei, Camp 1, Mt. Baduri, Aiam Range, 1,000 ft., ix.1938, L.E. Cheesman, B. M. 1938-593” (BMNH).

*Paratypes:* 1 ♀, same data as holotype. **Papua – New Guinea**, New Guinea: 1 ♂, “D. N. Guinea, 237, Hauptlg. B. Malu, 11.I.1913, Kais. Augustaf. Exp., Bürgers S.G.” (MNHU); 1 ♂, “D. N. Guinea, 387, Mäanderberg, 1-10.VIII.13, Kais. Augustaf. Exp., Bürgers S.G.” (MNHU). 1 ♂, “D. N. Guinea, 149, Standlager a. Aprilfluss, 6-11.IX.1912, Kais. Augustaf. Exp., Bürgers S.G.” (ZIAS).

*Description.* Male (holotype). Coloration brownish grey with following marks: head with dark brown both transverse stripe on hind part of vertex

and small spots near ocelli (behind median ocellus and along medial edge of each lateral ocellus), brown longitudinal line on middle part of eye, brownish marks on scape, and slightly darkened spots on antennal flagellum; pronotum with slight darkish spots on fore half of disc, somewhat darker dots on hind part of lateral lobes, and a pair of distinct small dark brown spots on middle part of disc; legs with small darkish (brown) spots on both distal part of fore femora and outer surface of hind femora, dark brown spots on distal part of middle femora, on apical part of hind femora, on dorsal part of fore tibiae, on outer surface of middle tibiae, and on dorsal, lateral, and medial surfaces of hind tibiae and tarsi; proximal third of dorsal tegminal part dark brown with numerous small lightish spots; its middle third light grey with brown venation (majority of veins including crossveins with whitish borders) and group of distinct dark brown spots on membranes near lateral edge; distal third of this part slightly darker than middle third, but with hardly lighter apical area; lateral tegminal part light grey with weakly darkened (almost brown) longitudinal veins, small dark spots near base and along proximal third of dorsal edge, dark crossveins in proximal third of this part, whitish spots along middle third of dorsal edge and crossveins in rest of this part (latter crossveins in middle third of this part partly darkened); exposed part of hind wings brownish grey; anal plate with large slight darkening. External structure of body more or less similar to that of *A. vulgatus*, but head slightly higher, ocelli slightly smaller, middle legs somewhat widened and depressed, middle tibiae with distinct dorsal keel, and comb of tegminal Sc with more numerous branches (8-9) situated obliquely in relation to R. Genitalia with characteristic shape of proximal median epiphallic notch and with sinuate medial edge of distal ectoparameral process of ectoparameres (Figs X: 1-3); spermatophore with globular and rather light ampulla.

Variations. Coloration sometimes darker (with more uniform dorsal part of head, pronotum, and tegmina) or lighter (with only a few dark spots on proximal third of dorsal tegminal part). Paratype from "Malu" distinguished from holotype by acute apex of hind epiphallic lobes (their angular projection directed partly upwards/partly backwards; Figs X: 4, 5); epiphallus of paratype from "Mäanderberg" almost identical to that of holotype (angular projection of its hind lobes directed mainly upwards; Fig. X: 6); hind epiphallic lobes in paratype from "Aprilfluss" hardly shorter than in other males studied and intermediate between those in holotype and male from "Malu" in shape of apical part.

Female. General appearance similar to that of holotype, but legs less spotted and proximal third

of dorsal tegminal part slightly lighter. Genital plate more or less similar to that of *A. vulgatus*.

Length (mm). Body: ♂ 15.5-17.5, ♀ 16; body with wings: ♂ 24-26, ♀ 27; pronotum: ♂ 2.7-2.9, ♀ 3; tegmina: ♂ 16.2-17.5, ♀ 18.5; hind femora: ♂ 10.8-12, ♀ 11.5; ovipositor 8.5.

*Comparison.* The new species differs from all the congeners in the rather large size of body, comparatively dark coloration with spotted tegmina, characteristic shape of proximal median epiphallic notch, and sinuate medial edge of hind process of ectoparameres.

### **Aphonoides paramplus sp. n.**

(Figs X: 8-10)

*Holotype.* ♂, **Papua – New Guinea**, New Guinea, "D. N. Guinea, 259, Lager am Rosensee, 10.II.13, Kais. Augustaf. Exp., Bürgers S.G." (MNHU).

*Description.* Male (holotype). Coloration and structure of body very similar to those of holotype of *A. amplus*, but distinguished by following characters: dorsum of head with larger dark spots near ocelli, slight darkish transverse stripe between eyes, and median darkish stripe running from previous stripe to dark transverse band on hind part of vertex; pronotum slightly more uniform and with a pair of less distinct darkish spots in middle part of disc; legs with somewhat less distinct spots; tegmina greyish with row of dark brown spots between proximal halves of Sc and M, a few less distinct and smaller spots along lateral and medial (anal) edges of dorsal part, brown venation of dorsal part and of proximal half of lateral part (crossveins with yellowish borders), light brown venation of distal half of lateral part, and slightly darkened membranes in apical area of dorsal part; anal plate rather light; genitalia with much more transverse epiphallus having distinctly shorter apodemes and slightly longer hind lobes (angular projection of these lobes directed mainly backwards); ectoparameres hardly longer, with more curved proximal (narrow) part, distinctly wider distal process, and shorter medial process (Figs X: 8-10).

Female unknown.

Length (mm). Body 17; body with wings 24; pronotum 2.8; tegmina 16; hind femora 11.5.

*Comparison.* The new species is very similar to *A. amplus*, but clearly distinguished from it in the above-mentioned features of male genitalia. From all the other congeners, the new species differs in the same characters as *A. amplus*.

### **Aphonoides simplex sp. n.**

(Figs X: 11-13)

*Holotype.* ♂, **Papua – New Guinea**, New Guinea, "D. N. Guinea, 183, Standlager a. Aprilfluss, 13-14.X.1912, Kais. Augustaf. Exp., Bürgers S.G." (MNHU).

**Paratypes.** **Papua – New Guinea**, New Guinea: 1 ♂, same data as holotype (ZIAS); 1 ♂, "D. N. Guinea, 243, Hauptlg. B. Malu, 20.I.13, Kais. Augustafl. Exp., Bürgers S.G." (MNHU).

**Description.** Male (holotype). Coloration light brown with following marks: fore part of head (from area between lower parts of antennal cavities to apex of labrum) dark brown; hind half of vertex and large spots behind eyes brown; subgenae, oblique stripe behind lower part of each eye, and 4 longitudinal lines on hind half of vertex yellow; eye with slight darkish longitudinal line in middle part; scape with brown longitudinal stripe on lateral part; pronotum with yellow stripes along lateral edges of disc and brown lateral lobes (these lobes rather dark in upper part and almost light brown in lower part); legs and venter of body almost yellowish, but with rather numerous brown and brownish small spots on fore and middle legs, almost brown outer and dorsal surfaces of hind femora (outer surface with lighter both lower band and numerous oblique stripes in proximal part; rest of this surface as well as dorsal surface with small and sparse lightish spots), and weakly spotted hind tibiae and tarsi; tegmina brownish grey (comparatively light) with darker (brown) venation and narrow stripe along dorsal edge of lateral part (this stripe with 3-5 small yellowish spots in region of crossveins); exposed part of hind wings grey (moderately darkened); apical part of genital plate slightly darkened. External structure of body similar to that of *A. vulgatus*, but ocelli hardly smaller and middle tibiae almost as in *A. papua*. Epiphallus slightly more transverse than in *A. amplus* and less transverse than in *A. paramplus*, having proximal median notch rather simple and apex of hind lobes not acute; ectoparameres long, almost straight, having rather small and simple (lobe-like) distal part (Figs X: 11-13); spermatophore similar to that of *A. cuspidatus*.

**Variations.** Sometimes, yellow stripes on head and on pronotum less distinct, legs less spotted, outer surface of hind femora with only longitudinal dark stripe, and tegminal lateral part with dark stripes along majority of longitudinal branches. One of paratypes with most convex part of lateral edge of ectoparameres slightly more distal than in holotype.

**Female unknown.**

**Length (mm).** Body 8.5-11.5; body with wings 15.5-18; pronotum 1.8-2.1; tegmina 10.5-11.8; hind femora 6.9-7.4.

**Comparison.** The new species differs from all the congeners in the dark face and pronotal lateral lobes, comparatively uniform tegmina, and long and straight ectoparameres with the small and simple distal part.

**Aphonoides bituberculatus** sp. n.  
(Figs XI: 1-5; XXIII: 1-4; XXIV: 1-4)

**Holotype.** ♂, **Indonesia**, Yapen I. near northern coast of New Guinea, "N. Dutch New Guinea, Japen, Seroei, Camp 1, Mt. Baduri, Aiam Range, 1,000 ft., ix.1938, L.E. Cheesman, B. M. 1938-593" (BMNH).

**Paratypes.** 3 ♂, same data as holotype (BMNH, ZIAS). 1 ♂, **Papua – New Guinea**, New Guinea, "D. N. Guinea, 167, Flusslager 18, 10-20.XI.12, Kais. Augustafl. Exp., Bürgers S.G." (MNHU).

**Description.** Male (holotype). Coloration light brown with following ornament: fore part of head with large intensively brown median spot occupying area from lower half of medial edge of antennal cavities to clypeus, somewhat darkened upper part of clypeus and median part of labrum, and small dark marks along ventral edge of eyes; eyes almost dark brown; rest of epicranium with rather dark (brown) areas on genae behind eyes and median spot on hind part of vertex; antennae with darkish stripes along lateral and medial edges of dorsal part of scape; pronotum with rather dark upper half of lateral lobes excepting hind pronotal part having several small darkish spots along hind edge (Figs XXIII: 1-3); legs with sparse and not very distinct brown spots excepting uniform both proximal half of all femora and ventral part of all femora and of fore and middle tibiae (Figs XXIII: 2, 3; XXIV: 1-3); tegmina with brown dorsal part and upper half of lateral part (all these areas having distinct light and dark marks as in Figs XXIV: 1-4) as well as lighter lower half of lateral part consisting of brown longitudinal veins, rather light (brownish grey) membranes, and slightly lighter (than these membranes) crossveins; exposed part of hind wings brown. Head not high, angular in profile, with medium-sized lateral ocelli and moderately small median ocellus; head dorsum more or less flat, but with a pair of distinct tubercles between medial parts of eyes and hardly concave area between rostral apex and these tubercles; scape almost twice as wide as rostrum between antennal cavities; eyes with almost angular upper part (Figs XXIII: 1, 3). Pronotum typical of *Aphonoides*, but with slightly sinuate lateral edges (Fig. XXIV: 2); structure of legs, wings, and abdomen more or less similar to that of *A. papua*, but hind wings longer, and genitalia with comparatively short ectoparameres and with notch between epiphallic apodemes somewhat similar to that of *A. amplus* and *A. paramplus* (Figs XI: 1-3); spermatophore with round and not very dark (brown) ampulla (Fig. XI: 4).

**Variations.** Paratypes from Yapen I. sometimes without median darkening on hind part of vertex and/or with rather light apex of tegmina; one of these paratypes with weakly developed tubercles between eyes. Paratype from New Guinea with slight tubercles also, but its coloration differs from



that of holotype in following characters: above-mentioned tubercles whitish; area between rostral apex and these tubercles yellowish with small darkish marks near ocelli (Fig. XXIII: 4); vertex with darkish hind area contacting with darkish areas behind eyes; pronotal disc somewhat darkened and with a pair of light spots at middle; proximal and ventral areas of femora and tibiae with darkish spots; tegmina with lighter proximal area of dorsal part (Figs XXIV: 3, 4); abdomen partly darkened. Differences in structure of genitalia insignificant (for comparison see Figs XI: 1 and 5).

Female unknown.

Length (mm). Body 11-13; body with wings 20-21.5; pronotum 2.1-2.4; tegmina 11.5-12.8; hind femora 8.7-9.2.

**Comparison.** The new species distinctly differs from all the congeners in the presence of a pair of small tubercles between eyes, almost angular upper part of eyes, above-mentioned characters of coloration, comparatively short ectoparameres, and characteristic shape of epiphallal apodemes (see Figs XI: 1, 5).

#### **Aphonoides excavatus** sp. n.

(Figs XI: 6, 7; XXIII: 5-10; XXIV: 5-8)

**Holotype.** ♂, **Papua – New Guinea**, New Guinea, “D. N. Guinea, 369, Mäanderberg, 670/m, 19-31.VII.13, Kais. Augustaff. Exp., Bürgers S.G.” (MNHU).

**Paratype.** ♀, **Indonesia**, Waigeo I. near western coast of New Guinea, “N. Dutch New Guinea, Waigeu, Camp Nok, 2,500 ft., iv.1938, L.E. Cheesman, B. M. 1938-593” (BMNH).

**Description.** Male (holotype). Coloration and structure of body very similar to those of *A. bituberculatus*, but distinguished by following characters: head with only a pair of low valliculi (not tubercles) between eyes; area between rostral apex and these valliculi slightly more concave and completely whitish; fore and lateral parts of epicranium as well as clypeus and labrum blackish with yellowish subgenae, vertical stripe under each eye, dot behind each eye, and lateral spots on clypeus and labrum; most part of mandibles and rest of mouthparts yellowish; hind part of vertex yellowish with blackish lateral spots and small median marks; dorsum between eyes with blackish transverse stripe; eyes with round upper part; antennae contrastingly spotted; pronotum with very light median part of disc, blackish upper part of lateral lobes, and small darkish spots on their lower part (Figs XXIII: 5-7); tegmina dark with whitish proximal area of dorsal part and more distinct spots on distal half of this part and on lateral part (Figs XXIV: 5, 6); exposed part of hind wings dark brown; abdomen brown with dark brown lateral parts of tergites and light brown base of cerci; genitalia with almost symmetrical mold of spermatophore attachment plate (having

smaller apodeme), slightly wider sclerotized part of hind epiphallal lobes (Fig. XI: 6), and more round ventroapical corner of these lobes in profile (Fig. XI: 7).

Female. General appearance similar to male (especially structure and coloration of fore part of head dorsum), but distinguished by presence of small almost angular convexity at upper part of eyes, much larger light areas on lateral surfaces of lower part of epicranium, darker hind part of vertex and median part of pronotal disc (coloration of this disc almost as in paratype of *A. bituberculatus* from New Guinea) (Figs XXIII: 8-10), absence of light area in proximal part of tegmina, and partial fusion of whitish spots on distal half of dorsal tegminal part with each other (Figs XXIV: 7, 8). Genital plate short, somewhat narrowing to widely truncate apex (posterolateral corners of this plate rounded).

Length (mm). Body: ♂ 13.5, ♀ 12.3; body with wings: ♂ 21, ♀ 20; pronotum: ♂ 2.2, ♀ 2.1; tegmina: ♂ 13, ♀ 12; hind femora: ♂ 9, ♀ 8.5; ovipositor 5.

**Comparison.** *A. excavatus* is most related to *A. bituberculatus*, but distinguished by the characters listed in the description. From all the other congeners, the new species differs in the same features as *A. bituberculatus*.

#### **Aphonoides emeljanovi** sp. n.

(Figs XI: 8-10)

**Holotype.** ♂, **Australia**, New South Wales, 30 km NNE of city Sidney, environs of vill. Pearl Beach, 8-9.III.1997, A. Emeljanov (ZIAS).

**Paratypes.** 2 ♀, same data as holotype (ZIAS).

**Description.** Male (holotype). Coloration uniformly light brown (almost yellowish), but with dark brown eyes and pedicel of antennae, brown scape, a few proximal segments of flagellum, and sparse spots on rest of flagellum (spots in distal half of flagellum slight, almost indistinct), darkish second tarsal segments, dorsal part of spines and spurs of hind tibiae, and median spot on anal plate. Head low, strongly angular in profile, with almost flat dorsum, moderately small ocelli (distinctly larger than in *A. angustissimus*), and narrow rostrum (scape twice as wide as rostrum between antennal cavities) having practically parallel lateral sides (not gradually narrowing to apex as in *A. angustissimus*) and truncate apex (not roundly convex as in *A. angustissimus*). External structure of thorax, abdomen, and their appendices more or less similar to that of *A. vulgatus*, but comb of tegminal Sc with somewhat more numerous (7-8) and more oblique branches. Genitalia as in Figs XI: 8-10.

Female. General appearance as in male, but dorsum of epicranium (and pronotal disc in one of paratypes) with reddish tinge, distal half of scapes

dark brown, second segment of hind tarsi as well as dorsal part of spines and spurs of hind tibiae almost blackish, and membranes of both dorsal tegminal part and exposed part of hind wings darker (hardly or distinctly darker than venation of these parts).

Length (mm). Body: ♂ 10, ♀ 9.5-12.5; body with wings: ♂ 17, ♀ 18; pronotum: ♂ 1.7, ♀ 1.8-1.9; tegmina: ♂ 11, ♀ 11.5-12; hind femora: ♂ 7.4, ♀ 7.5-8; ovipositor 4.3-4.6.

**Comparison.** *A. emeljanovi* is most similar to *A. australis* sensu Otte et Alexander, 1983 and *A. miripara* (the both latter species are from northern half of Australia), but distinguished by the darkened basal part of antennae and characteristic shape of epiphallus in profile (low hind part of epiphallus somewhat longer; proximal part of epiphallus moderately high, clearly lower than in *A. australis* and *A. miripara*; each hind lateral lobe with small dorsal subapical notch). From *A. angustissimus*, the new species differs in the characters mentioned in the description; and from all the other congeners, in the deep notch between the hind epiphallal lobes as well as distinctly widened apex of guiding rod in male genitalia.

#### **Aphonoides? morobe** sp. n. (Figs XXII: 6-11)

**Holotype.** ♀, **Papua – New Guinea**, New Guinea, "Papua New Guinea, Morobe Prov., coast, Buso, 10.xi.1979, J.H. Martin coll." (BMNH).

**Description.** Female (holotype). Coloration yellowish with following marks: head with almost dark brown longitudinal lateral band behind each eye, light brown and sparse dots and small spots on head dorsum, slightly darkened apex of labrum, and uniformly brown eyes (Figs XXII: 6-8); antennae with brownish spots on scape, light brown proximal half of flagellum having darker and lighter small rings (distal edge of each darker ring contacting with proximal edge of lighter ring), and almost dark brown rest of flagellum provided with sparse light rings; pronotum with almost dark brown sinuate band along dorsal edge of each lateral lobe, sparse brownish dots on disc, and a few small brown spots on lower half of lateral lobes (Figs XXII: 7-9); legs (excepting coxae) with brownish spots more numerous on distal part of femora (these spots rather large in middle part of tarsi and on hind tibiae, absent in ventral parts of legs excepting tarsi and in proximal half of femora, and rather small on other areas of legs) (Figs XXII: 6-8, 10, 11); tegmina greyish (very light, semitransparent) with almost dark brown venation of dorsal part, longitudinal veins of lateral part, stripe along lateral edge of dorsal part (this stripe not developed in basal and apical areas of tegmina), and upper half of Sc-R area in lateral part, whitish rather small basal

spot in dorsal part, short humeral band contacting with this spot, and row of small spots in dorsal part along lateral edge of this part (each of these spots includes crossvein and/or base of longitudinal branch), lightish crossveins of lateral part, and darkish spots on membranes along anal edge and in apical area; exposed part of hind wings brownish grey with light crossveins (Figs XXII: 10, 11). Body somewhat more slender than in many other representatives of *Aphonoides*; head not high, angular in profile, with very small ocelli (especially median one), flat dorsum, and not narrow rostrum (scape 1.3 times as wide as rostrum between antennal cavities) having truncate apex; pronotum longer than in majority of congeners (its width and length almost equal); structure of legs and wings more or less similar to that of *A. vulgatus*, but hind femora narrow (Fig. XXII: 11); genital plate similar to that of *A. excavatus*.

Male unknown.

Length (mm). Body 13.5; body with wings 23.5; pronotum 2.7; tegmina 14.5; hind femora 10.5; ovipositor 5.

**Comparison.** The new species is slightly similar to *A. angustissimus* in the shape of body and size of ocelli, but distinguished by the distinctly wider rostrum with the truncate apex. From all the other similar species of Aphonoidini, it differs in the characteristic coloration, slender body, very small ocelli, long pronotum, almost longitudinal branches of tegminal Sc, narrow hind femora, and short ovipositor.

#### **Genus Mistshenkoana** Gorochoy, 1990

Type species: *Mistshenkoana kongtumensis* Gorochoy, 1990 (Vietnam).

**Note.** This genus is sufficiently characterized in the previous papers (Gorochoy, 1990, 2007). In the latter paper, the list of true and possible Indo-Malayan representatives of *Mistshenkoana* is given. At present this list is supplemented by several species from Fiji (*Aphonus vitiensis* Saussure, 1878; *M. fijiensis* Gorochoy, 1990; *M. sharovi* Gorochoy, 1990; *Aphonoides catastictos* Otte et Cowper, 2007; *A. kadavu* Otte et Cowper, 2007; *A. namalata* Otte et Cowper, 2007; *A. perestiges* Otte et Cowper, 2007; *A. xylurgos* Otte et Cowper, 2007), two species from Samoa (*Laurepa unicolor* Walker, 1869; *Aphonomorphus surdus* Chopard, 1929), two possible congeners from Australia (*Aphonoides weta* Otte et Alexander, 1983) and Loyalty Islands near New Caledonia (*A. ouveus* Otte, 1987), and 21 new species from New Guinea, New Britain, Solomon Islands, and Vanuatu (*M. asymmetrica* sp. n., *M. decora* sp. n., *M. longa* sp. n., *M. lata* sp. n., *M. symmetrica* sp. n., *M. polyphemus* sp. n., *M. ralum* sp. n., *M. solomonica* sp. n., *M. pileata* sp. n., *M. kolobagara*

sp. n., *M. rennell* sp. n., *M. malakula* sp. n., *M. erromango* sp. n., *M. anatom* sp. n., *M. oumua* sp. n., *M.?* *baduri* sp. n., *M.?* *uniformis* sp. n., *M.?* *designata* sp. n., *M.?* *kukum* sp. n., *M.?* *vanuatu* sp. n., *M.?* *rufa* sp. n.). Questionable inclusion of 6 new species in this genus is based on their long ovipositor (males of these species are unknown). Such ovipositor presents also in majority of the true congeners of *Mistshenkoana* (with both sexes known).

***Mistshenkoana asymmetrica* sp. n.**  
(Figs XII: 1-4)

*Holotype*. ♂, **Papua – New Guinea**, New Guinea, "Terr. Papua & New Guinea, Finsch Haven, 11.i.1958, J. Smart" (BMNH).

*Description*. Male (holotype). Coloration light brown (almost yellowish) with whitish ocelli and majority of tegminal crossveins, almost transparent membranes of tegminal lateral part, small brown spot near apical part of fore tibia, and brownish (hardly darker than general coloration of body) tegminal longitudinal veins as well as crossveins in apical part of tegmina and exposed part of hind wings. Head typical of *Mistshenkoana* (angular in profile, with almost flat dorsum between rostral apex and hind parts of eyes, and with scape almost twice as wide as rostrum between antennal cavities), but ocelli large (lateral ocelli oval; median ocellus somewhat smaller and round; distance between lateral ocellus and median one slightly shorter than lateral ocellus and slightly wider than median ocellus). Pronotum, legs (hind legs missing), and wings also typical of this genus (hind pronotal edge with median projection short and rounded; fore tibiae strongly inflated (excepting distal third), with large oval inner tympanum and only traces of outer one; comb of tegminal Sc with 7-8 branches; hind wings distinctly longer than tegmina). Anal plate simple and short, with almost round hind edge; genitalia with partly asymmetrical both epiphallus (left half of epiphallus, excepting narrow proximal stripe, almost membranous; medial edge of this half distinctly visible as almost median line strongly and asymmetrically curved in proximal part of epiphallus) and mold of spermatophore attachment plate (Fig. XII: 2); hind epiphallal lobes rather short (Fig. XII: 3); ampulla of spermatophore typical of this genus (Fig. XII: 4).

Female unknown.

Length (mm). Body 13.3; body with wings 20.5; pronotum 2; tegmina 13.4.

*Comparison*. The new species distinctly differs from all the known congeners in the almost uniformly yellowish coloration with majority of the tegminal crossveins whitish, large ocelli, and characteristic asymmetrical epiphallus.

***Mistshenkoana decora* sp. n.**  
(Fig. XII: 5)

*Holotype*. ♂, **Papua – New Guinea**, New Guinea, "D. N. Guinea, 404, Mäanderberg, 21-30.VIII.13, Kais. Augustafl. Exp., Bürgers S.G." (MNHU).

*Description*. Male (holotype). Coloration and structure of body similar to those of *M. asymmetrica*, but distinguished by following characters: eyes darker (brown); dorsum of head with dark brown area between middle part of vertex and ocelli (this dark area contacting with all ocelli); fore tibiae uniformly yellowish; tegminal crossveins almost transparent (excepting several whitish crossveins between Sc and R); exposed part of hind wings darker (brownish grey); ocelli slightly larger (width of median ocellus and distance between it and lateral ocellus almost equal; lateral ocellus distinctly longer than this distance); costal area of tegmina with only a few crossveins irregularly situated between branches of Sc (in *M. asymmetrica*, these crossveins almost regular and distinctly more numerous); genitalia with distinctly longer hind epiphallal lobes and with straight posteromedial edge of these lobes (see from above; Fig. XII: 5).

Female unknown.

Length (mm). Body 11.2; body with wings 17; pronotum 1.6; tegmina 10.5; hind femora 8.

*Comparison*. The differences of this species from *M. asymmetrica* (a species most similar to *M. decora*) are given in its description.

***Mistshenkoana longa* sp. n.**  
(Figs XII: 6-9)

*Holotype*. ♂, **Papua – New Guinea**, New Guinea, "D. N. Guinea, Berlinhafen, H. Schoede S.G." (MNHU).

*Paratypes*. 1 ♂, **Papua – New Guinea**, New Guinea, "D. N. Guinea, 149, Standlager a. Aprillfluss, 6-11.IX.1912, Kais. Augustafl. Exp., Bürgers S.G." (ZIAS). 1 ♀, **Indonesia**, Yapen I. near northern coast of New Guinea, "N. Dutch New Guinea, Japen, Seroci, Camp 1, Mt. Baduri, Aiam Range, 1,000 ft., ix.1938, L.E. Cheesman, B. M. 1938-593" (BMNH).

*Description*. Male (holotype). Coloration and structure of body similar to those of *M. asymmetrica*, but distinguished by following features: ocelli hardly smaller; dorsum between lateral ocelli with a pair of low oblique valliculi (these valliculi higher in lateral part and lower in medial one, practically contacting with each other, and almost whitish in highest part); fore tibiae uniformly yellowish; all visible crossveins whitish; tegminal longitudinal veins hardly lighter (their coloration practically as in membranes of dorsal part); epiphallus with much longer and thinner hind lobes (Figs XII: 6-8).

Variations. Paratype distinguished from holotype by dorsum of head hardly darker, rostrum having small whitish spot contacting with fore

edge of median ocellus, whitish spots on valliculi (situated between lateral ocelli) larger (almost contacting with each other), hind epiphallal lobes hardly shorter, and ectoparameres somewhat more twisted (Fig. XII: 9).

Female. General appearance similar to that of male, but coloration of head as in paratype [excepting absence of whitish spot near median ocellus and fusion of whitish spots on above-mentioned valliculi with each other (these spots look as a transverse V-shaped stripe between lateral ocelli)], pronotal disc and tegminal longitudinal veins hardly darker, coloration of crossveins in dorsal tegminal part similar to that of tegminal longitudinal veins (excepting several whitish crossveins along lateral edge of this part), and comb of tegminal Sc with 8-9 branches. Genital plate short and slightly narrowing to widely truncate apex having more or less rounded lateral corners.

Length (mm). Body: ♂ 12-13, ♀ 14.3; body with wings: ♂ 19-21, ♀ 25; pronotum: ♂ 1.9-2.2, ♀ 2.4; tegmina: ♂ 12-13.3, ♀ 16.7; hind femora: ♂ 8.5-9.5, ♀ 9.8; ovipositor 11.2.

*Comparison.* The new species is most similar to *M. asymmetrica* in the presence of characteristic asymmetry of epiphallus, but distinguished from it by the distinctly longer and thinner hind epiphallal lobes. From all the other known congeners, *M. longa* differs in the partly asymmetrical epiphallus.

**Mistshenkoana lata** sp. n.  
(Figs XII: 10-12)

*Holotype.* ♂, **Indonesia**, New Guinea, environs of town Manokwari, primary forest on hills near sea, 4-6.XI.2004, A. Gorochoy (ZIAS).

*Description.* Male (holotype). Coloration and structure of body similar to those of *M. asymmetrica*, but distinguished by following features: ocelli light brown; dorsum of head with fore part slightly darker than general coloration of body (excepting small dark brown marks near lateral ocelli); pronotal disc having weakly and distinctly darkened spots; tegmina with almost dark brown spots on distal half of dorsal part and with crossveins similar to membranes of this part in coloration (excepting several whitish crossveins along lateral edge of dorsal part and between proximal thirds of Sc and M); exposed part of hind wings brownish grey; hind abdominal tergites and anal plate with slight darkenings; ocelli somewhat smaller (length and width of each ocellus smaller than distance between median and lateral ones); genitalia with shorter and wider epiphallus (having distinctly narrower median proximal notch), somewhat larger ectoparameres, and much longer and complicated mold of spermatophore attachment plate (Figs XII: 10-12).

Female unknown.

Length (mm). Body 11.2; body with wings 18; pronotum 1.9; tegmina 11.8; hind femora 8.5.

*Comparison.* The new species differs from *M. asymmetrica* and *M. longa* in the shorter and wider epiphallus having the distinctly narrower median proximal notch, from the latter species (additionally), in the shorter and wider hind epiphallal lobes, and from all the other congeners with known males, in the partly asymmetrical epiphallus.

**Mistshenkoana symmetrica** sp. n.  
(Figs XIII: 1-3)

*Holotype.* ♂, **Indonesia**, New Guinea, environs of town Manokwari, primary forest on hills near sea, 4-6.XI.2004, A. Gorochoy (ZIAS).

*Paratype.* ♂, same data as holotype, but collected as nymph, and imago reared XII.2004 (ZIAS).

*Description.* Male (holotype). Coloration yellowish with following darker and lighter parts: pronotum, upper part of head (including antennae), and dorsal part of tegmina light brown (these very weakly darkened parts with yellowish both band along ventral edge of each pronotal lateral lobe and not numerous small marks on head dorsum and rest of pronotum); legs with brownish grey sparse dots on inner surface of distal part of fore femora, longitudinal line on both dorsal surface of all tibiae and dorsolateral part of middle femora, and a few longitudinal stripes on outer and dorsal surfaces of each hind femur; all tarsi with small darkenings in middle part; tegmina with whitish crossveins and small spot around each of them; exposed part of hind wings and median part of abdominal sternites brownish grey. Structure of body similar to that of *M. asymmetrica*, but ocelli smaller (length of lateral ocellus and distance between it and median ocellus almost equal), anal plate more or less truncate, and genitalia with symmetrical both epiphallus and mold of spermatophore attachment plate (Figs XIII: 1-3).

Variations. Paratype with more uniform (almost completely yellowish) pronotum and legs (head, hind legs, and distal part of wings missing).

Female unknown.

Length (mm). Body 15.8; body with wings 22; pronotum 2.2-2.3; tegmina 14.5; hind femora 11.5.

*Comparison.* The new species differs from all the congeners in the rather light coloration with the numerous small whitish spots on tegmina, symmetrical male genitalia, characteristic shape of both median (more sclerotized) area of epiphallus and hind lateral epiphallal lobes, and large, strongly twisted ectoparameres which are distinctly arched in profile (see Figs XIII: 1-3).

**Mistshenkoana polyphemus** sp. n.  
(Figs XIII: 4, 5)

*Holotype*. ♂, **Indonesia**, New Guinea, environs of city Jayapura, Cyclops Mts, about 500 m, primary forest, 17-19.XI.2004, A. Gorochoy (ZIAS).

*Paratype*. ♀, same data as holotype (ZIAS).

*Description*. Male (holotype). Coloration light brown with dark brown fore half of head dorsum (excepting lightish ocelli), slightly darker (almost brown) hind half of head dorsum, upper half of pronotum, longitudinal veins of tegmina, and majority of crossveins in tegminal dorsal part, whitish crossveins along proximal and middle parts of lateral edge of tegminal dorsal part, small darkish spots around crossveins situated along distal half of tegminal anal edge and in tegminal apical area, almost transparent membranes and crossveins in tegminal lateral part, and brownish grey exposed part of hind wings and median part of abdominal dorsum. Structure of body similar to that of *M. symmetrica* (anal plate damaged), but genitalia (partly damaged also) with narrower hind epiphallic lobes (Fig. XIII: 4), larger endoparameres, and different shape of ectoparameres (Figs XIII: 4, 5); ampulla of spermatophore similar to that of *M. asymmetrica*.

Female. General appearance as in male, but hind part of head dorsum lighter (light brown), and hind femora with row of sparse darkish dots along dorsal edge and 2 small darkish spots on outer surface near apex; genital plate similar to that of *M. longa*.

Length (mm). Body: ♂ 12, ♀ 14; body with wings: ♂ 18.5, ♀ 24; pronotum: ♂ 1.9, ♀ 2.3; tegmina: ♂ 12, ♀ 15.3; hind femora: ♂ 8, ♀ 10; ovipositor 8.7.

*Comparison*. The new species differs from all the congeners in the above-mentioned characters of coloration in combination with the medium-sized ocelli, narrow hind lobes of epiphallus, long and rather wide endoparameres, and characteristic shape of ectoparameres (Figs XIII: 4, 5).

**Mistshenkoana ralum** sp. n.  
(Figs XIII: 6-9)

*Holotype*. ♂, **Papua – New Guinea**, New Britain, “Bismarck-Arch., Ralum, Dahl S., 1896-97”, “Ralum, Lowou, 28.1.97” (MNHU).

*Description*. Male (holotype). Coloration light brown with hardly darker epicranium, eyes, and pronotal disc, distinctly darker (brown) upper part of clypeus, tegminal longitudinal veins, and small spots on dorsal surface of hind tibiae, weakly darkened crossveins in medial and apical areas of tegminal dorsal part, small spot around almost each of these crossveins in dorsal half of this part, and exposed part of hind wings, whitish crossveins in lateral area of tegminal dorsal part

(excepting its apical area) and in upper half of tegminal lateral part, transparent membranes in latter part and crossveins in lower half of this part, indistinct darkish areas on hind abdominal tergites and on anal and genital plates. Structure of body similar to that of *M. symmetrica*, but lateral ocelli hardly longer, anal plate with rounded hind part, epiphallus with shorter hind lobes and shorter membranous areas of distal half, and ectoparameres more simple and with not process-like distal part and long proximal part (Figs XIII: 6-9).

Female unknown.

Length (mm). Body 15; body with wings 22; pronotum 2.4; tegmina 15.5; hind femora 10.3.

*Comparison*. The new species differs from all the congeners in the characteristic coloration and shape of genital structures (epiphallus with short, angular hind lobes and short membranous areas in distal half; ectoparameres with rather long proximal part and with not process-like distal part; endoparameres comparatively wide and not long).

**Mistshenkoana solomonica** sp. n.  
(Figs XIV: 1)

*Holotype*. ♂, **Solomon Islands**, Kolombangara I. near New Georgia I., “Solomon Is., New Georgia, Kolombangara, 30.8.1963, M. McQuillan, 7537” (BMNH). Specimen with label “*Aphonoides mckillani*, Type, L. Chopard det.”, but description of this species unpublished.

*Description*. Male (holotype). Coloration uniformly yellowish with hardly darker (almost light brown) head dorsum, pronotal disc, longitudinal veins of tegminal dorsal part, dorsum of hind part of abdomen, and apex of genital plate (hind legs missing). Structure of body similar to that of *M. asymmetrica*, but ocelli very large (median ocellus distinctly wider than distance between it and lateral ocellus, and lateral ocellus almost 3 times as long as this distance), epiphallus and mold of spermatophore attachment plate symmetrical, and ectoparameres wide (having long transverse sclerotized lobe directed medially) and with not process-like distal part (Fig. XIV: 1).

Female unknown.

Length (mm). Body 14; body with wings 20; pronotum 2; tegmina 13.5.

*Comparison*. The new species differs from all the congeners in the almost uniform coloration, very large ocelli, and symmetrical male genitalia with the wide ectoparameres having the long transverse sclerotized lobe directed medially.

**Mistshenkoana pileata** sp. n.  
(Figs XIV: 2-5)

*Holotype*. ♂, **Solomon Islands**, San Jorge I. near Santa Isabel I., “Solomon Islands, San Jorge, ix.65, Roy. Soc. Exped., B. M. 1966-1”, “Black light, scrub covered laterite slope and fringe of *Casuarina* forest” (BMNH).

**Description.** Male (holotype). Coloration and structure of body very similar to those of *M. solomonica*, but upper half of head dark brown, scape with slight darkish spots, pronotum uniformly light brown with reddish tinge, and genitalia with hardly smaller hind epiphallic lobes, slightly wider ventral sclerotized stripes of epiphallus situated between distal parts of ectoparameres, and more sclerotized guiding rod (Figs XIV: 2-4); spermatophore as in Fig. XIV: 5).

Female unknown.

Length (mm). Body 12; body with wings 19; pronotum 1.9; tegmina 13.2; hind femora 8.2.

**Comparison.** The differences from *M. solomonica* are given in the description. From the other congeners, *M. pileata* differs in the same characters of ocelli and genitalia as *M. solomonica*.

**Mistshenkoana kolobagara** sp. n.  
(Figs XIV: 6-8)

**Holotype.** ♂, **Solomon Islands**, Kolombangara I. near New Georgia I., "Solomon Is., Kolombangara, Kolobagara, 25/29.VIII.1965, 2500', at light", "Roy. Soc. Exped., Brit. Mus. 1966-1" (BMNH).

**Description.** Male (holotype). Coloration light brown with dark brown fore part of head dorsum (between rostral apex and area situated between medial edges of eyes), brown longitudinal (but irregular) lines on vertex (behind dark fore part of head), wide and interrupted band along each lateral edge of pronotal disc, small and less distinct spots and dots between these bands, longitudinal venation of tegmina, crossveins along anal tegminal edge (excepting its proximal part) and in apical tegminal area, small spot around almost each of these crossveins, and proximal half of area between tegminal Sc and R, almost transparent other tegminal membranes, whitish crossveins along lateral edge of dorsal tegminal part, darkish small spots near apex of middle and hind tibiae and at base of hind tibial spines, and indistinct darkenings on hind part of abdominal dorsum and distal part of genital plate. Structure of body more or less similar to that of *M. asymmetrica*, but rostrum narrower (scape almost 2.5 times as wide as rostrum between antennal cavities), anal plate with more or less truncate hind part, and genitalia with symmetrical epiphallus, almost symmetrical mold of spermatophore attachment plate, and somewhat different shape of hind epiphallic lobes (in profile) and of ectoparameres (Figs XIV: 6-8).

Female unknown.

Length (mm). Body 16.5; body with wings 22.5; pronotum 2.3; tegmina 16; hind femora 9.5.

**Comparison.** The new species differs from all the congeners in the above-mentioned characters of coloration in combination with the large (but not very large) ocelli, symmetrical epiphallus with almost bifurcate hind lobes in profile, and normal

ectoparameres similar to those of *M. solomonica* and *M. pileata* in shape, but distinguished by the smaller size and distinctly less long (less transverse) medial lobes (for comparison see Figs XIV: 1, 2, and 6).

**Mistshenkoana rennell** sp. n.  
(Figs XIV: 9-11)

**Holotype.** ♂, **Solomon Islands**, Rennell I., "Savata, Rennell I., British Solomons, R.J.A.W. Lewer, 22.2.1934" "953" (BMNH).

**Description.** Male (holotype). Coloration and structure of body very similar to those of *M. kolobagara* (middle and hind legs missing), but distinguished by following characters: dorsum of head light brown with only small dark brown spots around lateral ocelli; pronotum uniformly light brown; tegmina with crossveins from light brown to almost transparent (no distinct brown or whitish crossveins) and without any brown spots or stripes; genital plate completely yellowish; median ocellus smaller (almost twice as wide as distance between it and lateral ocellus); genitalia with shorter membranous areas of epiphallus and with ectoparameres having 2 angular proximal projections (*M. kolobagara* with 1 such projection), medial lobe notched at apex (*M. kolobagara* without notch at apex of this lobe), and proximal part less produced backwards (Figs XIV: 9-11).

Female unknown.

Length (mm). Body 14.5; body with wings 19.5; pronotum 2.1; tegmina 13.

**Comparison.** The differences from *M. kolobagara* are given above. From the other congeners, the new species differs in the characters of male genitalia as in *M. kolobagara* (see the precedent comparison) and above-mentioned features of both coloration of body and structure of ocelli.

**Mistshenkoana malakula** sp. n.  
(Figs XV: 1-4)

**Holotype.** ♂, **Vanuatu**, Malakula I., "New Hebrides, Malekula, Malua Bay, vi.1929, Miss L.E. Cheesman, B. M. 1929-410" (BMNH).

**Paratype.** ♂, **Vanuatu**, Malakula I., "New Hebrides, Malekula, ii.1930, L.E. Cheesman, B. M. 1930-178" (ZIAS).

**Description.** Male (holotype). Coloration light brown (almost yellowish) with brown both very narrow rings around lateral ocelli and longitudinal venation of dorsal tegminal part, whitish crossveins along lateral edge of this part, and more or less transparent membranes of lateral tegminal part. Head almost angular in profile, with flat dorsum, narrow rostrum (scape twice as wide as distance between antennal cavities), and ocelli as in *M. asymmetrica* (lateral ocellus slightly longer than distance between it and median ocellus, and

latter ocellus slightly less wide than this distance). Pronotum, legs, wings, and external structure of abdomen typical of *Mistshenkoana*, but comb of tegminal Sc with 6-7 branches, and anal plate with widely rounded hind part. Genitalia with long epiphallus, moderately elongate hind epiphallic lobes having rather narrow distal part (see from above) and shallow notch on ventral edge (see from side), and normal ectoparameres (Figs XV: 1-3); spermatophore with very large proximal part, not very large ampulla, and rather high neck (wide from side and narrow from above) (Fig. XV: 4).

Variations. Paratype with weakly visible and very narrow dark ring around median ocellus as well as with hardly darkened dorsum of hind abdominal tergites.

Female unknown.

Length (mm). Body 11.5-12.5; body with wings 17.2-17.8; pronotum 1.8-1.9; tegmina 11.5-11.8; hind femora 7.8-8.

*Comparison.* *M. malakula* is distinguished from Indo-Malayan and Papuan congeners by the rather uniform coloration, long and symmetrical epiphallus (provided with the moderately long hind lobes), not large ectoparameres, and characteristic shape of spermatophore (spermatophore neck high, proximal part of spermatophore not shorter than ampulla). From Australian *M. ? weta* and New Caledonian *M. ? ouveus* (both with insufficiently described male genitalia), the new species differs in the somewhat longer hind epiphallic lobes, and from Fijian representatives, in the different shape of these lobes in profile (one of Fijian species has spermatophore more or less similar to that of *M. malakula*, but distinctly shorter; for comparison see Figs XV: 4 and XVI: 4).

***Mistshenkoana erromango* sp. n.**  
(Figs XV: 5, 6)

*Holotype.* ♂, **Vanuatu**, Erromango I., "New Hebrides, Erromanga, viii.1930, L.E. Cheesman, B. M. 1930-496" (BMNH).

*Description.* Male (holotype). Coloration and structure of body very similar to those of paratype of *M. malakula*, but tegminal crossveins from yellowish to light brown (no whitish crossveins), comb of tegminal Sc with 5-6 branches, and genitalia with shorter hind epiphallic lobes directed mainly upwards (in *M. malakula*, these lobes directed mainly backwards) and lacking distinct notch on their ventral edge (Figs XV: 5, 6); spermatophore very similar to that of *M. malakula*.

Female unknown.

Length (mm). Body 12.8; body with wings 17.2; pronotum 1.7; tegmina 11.4; hind femora 7.3.

*Comparison.* *M. erromango* is most related and similar to *M. malakula*, but distinguished by the above-mentioned characters. From *M. ? weta* and *M. ? ouveus*, the new species differs in the more

concave dorsal edge of epiphallus in profile, and from all the other congeners, in the same characters as *M. malakula*.

***Mistshenkoana anatom* sp. n.**  
(Figs XV: 7-10)

*Holotype.* ♂, **Vanuatu**, Anatom I., "New Hebrides, Aneityum, Red Crest, 1,200 ft., 3 m. N.E. of Anelghauhat, v-vi.1955", "L.E. Cheesman, B. M. 1955-217" (BMNH).

*Description.* Male (holotype). Coloration yellowish with reddish tinge and following marks: head dorsum, pronotal disc, and longitudinal veins of tegmina hardly darker; tegminal crossveins hardly lighter (light yellowish); eyes more or less brown; ocelli whitish. Structure of body similar to that of *M. malakula* and *M. erromango*, but rostrum slightly narrower (scape 2.2 times as wide as distance between antennal cavities), ocelli very large (median ocellus twice as wide as distance between it and lateral ocellus, and latter one 3 times as long as this distance), comb of tegminal Sc with 7-8 branches, and genitalia with hind epiphallic lobes intermediate between those of *M. malakula* and *M. erromango* in length, less concave dorsal edge of epiphallus in profile, and somewhat wider proximal part of ectoparameres (Figs XV: 7-9); spermatophore distinguished from that of 2 previous species from Vanuatu by shorter proximal part, distinctly longer and thicker ampulla, and rather low (narrow in profile) neck (Fig. XV: 10).

Female unknown.

Length (mm). Body 14.8; body with wings 22; pronotum 2.1; tegmina 15; hind femora 9.

*Comparison.* The new species is most similar to *M. sharovi* from Fiji, but differs from it in the distinctly larger ocelli and not whitish tegminal crossveins. From all the other congeners, it is distinguished by the same characters in combination with the almost uniformly yellowish coloration (with slight reddish tinge), distinctly different sizes of median and lateral ocelli, symmetrical epiphallus having the almost straight dorsal edge (in profile) and medium-sized hind lobes, as well as comparatively large ectoparameres with the rather wide proximal part.

***Mistshenkoana onunua* sp. n.**  
(Figs XV: 11-13)

*Holotype.* ♂, **Vanuatu**, Malakula I., "New Hebrides, Malekula, Onunua, iv.v.1929, Miss L.E. Cheesman, B. M. 1929-371" (BMNH).

*Description.* Male (holotype). Coloration yellowish with following marks: head with brownish grey (rather dark) eyes, short and narrow brown strip on fore part of dorsal edge of each antennal cavity, small brownish spot on upper part of membrane of this cavity, small brown spot behind

(near) each lateral ocellus, a pair of brownish marks between hind edges of eyes, and light brown area behind each eye; pronotum with brown upper part of lateral lobes more or less interrupted by almost vertical lighter stripes (these brown parts fused with brown spots on lateral areas of hind part of disc); legs with sparse brownish dots and small spots on middle legs and with 2 brown spots on dorsal surface of each hind tibia (near base and at middle part) (fore legs missing); tegmina with light brown longitudinal veins of dorsal part, almost whitish crossveins, and transparent membranes of lateral part; abdomen with distinctly darkened hind part of dorsum and slightly darkened middle part of cerci (apical part of cerci missing). Head somewhat more elongate and higher than in typical representatives of *Mistshenkoana*; rostral apex roundly angular in profile; median ocellus absent, and lateral ones small, but distinct; scape twice as wide as distance between antennal cavities. Length and width of pronotum approximately equal; hind edge of pronotal disc almost straight; middle legs with distinctly widened and laterally depressed femora, but with rather thin tibiae; hind legs with femora hardly narrower and tibiae hardly thicker than in typical representatives of this genus; tegmina slightly longer than hind wings, and comb of their Sc with 9 oblique branches. Genital plate normal for *Mistshenkoana* (anal plate deformed); genitalia with rather short epiphallus, characteristic shape of hind epiphallal lobes in profile, and unique ectoparameres having short and rather narrow proximal part, longer and wider middle part gradually narrowing to almost finger-like distal part, and row of rather long medial hairs (Figs XV: 11-13).

Female unknown.

Length (mm). Body 17; body with wings 21.5; pronotum 2.7; tegmina 14.5; hind femora 9.5.

**Comparison.** The new species is distinctly differs from all the congeners and similar species of other genera in the characteristic shape of head, pronotum, and middle femora, absence of median ocellus, small size of lateral ocelli, peculiarities of coloration, and above-mentioned characters of male genitalia.

***Mistshenkoana fijiensis* Gorochov, 1990**  
(Figs XVI: 1-4)

**Note.** It is possible that this Fijian species, described from Viti Levu I. (Gorochov, 1990), was recently mentioned as "*Aphonoides vitiensis* (Saussure)" (Otte, Cowper, 2007). However the latter species, described as *Aphonus vitiensis* from the same island, has the rather long ovipositor (10.5 mm) (Saussure, 1878), but the specimens, studied by Otte & Cowper, have much shorter ovipositor (6.5 mm) and more correspond to the description

of *M. fijiensis* than to that of Saussure's species. These authors did not study the type material of Saussure's species; all the specimens, mistakenly indicated by them as belonging to its type series, were collected in 2003 and 2004.

***Mistshenkoana sharovi* Gorochov, 1990**  
(Figs XVI: 5-8)

**Note.** *M. xylurgos*, another Fijian species recently described from Vanua Levu I. and Viti Levu I. (Otte, Cowper, 2007), is very similar to *M. sharovi* from Viti Levu I. in the shape of male genitalia, and this name may be a junior synonym of the latter species. However the holotype (male) of *M. sharovi* is somewhat larger (tegmenal length 16 mm) than that of *M. xylurgos* (tegmenal length 13 mm).

***Mistshenkoana unicolor* (Walker, 1869),**  
comb. n.  
(Figs XVI: 9, 10)

**Note.** This species was described from Samoa (Walker, 1869: "Navigator's Island") and originally included in one of Neotropical genera (*Laurepa* Walk.) belonging now to the tribe Hapithini (Podoscirtinae). Later it was transferred to the genus *Metrypa* Br.-W. (Saussure, 1878: *Metrypus*) synonymized by Chopard (1968) with *Tafalisca* Walk. (Podoscirtinae: Tafaliscini); this genus also includes only Neotropical representatives. The collection of BMNH contains a male corresponding to Walker's description and provided with the following labels: "Navigat Islas", "461.", "*Laurepa unicolor*. One of Walker's series so named. Type."; the specimen was studied by me and must be included in *Mistshenkoana* (it is here designated as lectotype of this species, as Walker did not indicate the number of males studied). The general appearance of *M. unicolor* is more or less typical of this genus: coloration is light brown with the hardly darker head dorsum and pronotum, almost brown proximal part of dorsal tegmenal part and band in lateral tegmenal part situated along its dorsal edge, yellowish (almost whitish) ocelli and tegmenal crossveins (in dorsal part, these crossveins more distinct and forming longitudinal light line along lateral edge of this part); ocelli are large, forming a triangle; scape is approximately twice as wide as a distance between the antennal cavities [or this ratio is slightly greater (?)]; tegmina have 7-8 longitudinal veins in dorsal part, and hind wings are somewhat longer than them. But *M. unicolor* differs from all the congeners (excepting one of them considered below) in the fore tibiae lacking tympana (this character is almost unique for *Mistshenkoana*). The male genitalia (and spermatophore) are more or less



normal for this genus, but their endoparameres and sclerotized lateral stripes of guiding rod are probably partly fused with each other, and their rami are indistinct (membranous) or missing (Figs XVI: 9, 10).

Length (mm) of male (lectotype). Body 15.5; body with wings 21; pronotum 2.3; tegmina 14.5; hind femora 10.

**Mistshenkoana surda** (Chopard, 1929),  
comb. n.  
(Fig. XVI: 11)

*Note.* The description of this species was based on 2 syntypes (male and female) from Samoa (Tutuila I.). In the collection of BMNH, I found only one of them (female). It has the following labels: "Syntype", "Afono Trail 9-25-23", Tutuila Samoa", "Swezey & Wilder", "Brit. Mus. 1929-172", "Aphonomorphus surdus Chop. L. Chopard, det."; I don't designate it as lectotype, as I hope that the more useful second syntype (male) may be found in future. *M. surda* is most similar to *M. unicolor* (including the absence of tympana in only 2 these species of *Mistshenkoana*), but somewhat distinguished by the larger size of body, longer wings, more uniform coloration (without distinct darkenings and with not whitish crossveins), and more numerous longitudinal veins of dorsal tegminal part (9-10). There are also some small differences between these species in the shape of epiphallal apex pictured by Chopard (1929: Fig. 47) for male of *M. surda* (for comparison see Figs XVI: 9 and 11); Chopard's picture clearly shows that the epiphallus and spermatophore in *M. surda* are typical of *Mistshenkoana*. Possibly these species belong to the separate group of *Mistshenkoana* lacking tympana and distributed in only Samoa.

Length (mm) of female (syntype). Body 15; body with wings 31; pronotum 3.3; tegmina 21; hind femora 13.5; ovipositor 13.5.

**Mistshenkoana? baduri** sp. n.  
(Figs XXV: 1, 2; XXVI: 1, 2)

*Holotype.* ♀, **Indonesia**, Yapen I. near northern coast of New Guinea, "N. Dutch New Guinea, Japen, Seroei, Camp 1, Mt. Baduri, Aiam Range, 1,000 ft., ix.1938, L.E. Cheesman, B. M. 1938-593" (BMNH).

*Description.* Female (holotype). Coloration and structure of body very similar to those of holotype of *M. polyphemus*, but head (Figs XXV: 1, 2) with distinct small brown spots under both each eye and each antennal cavity (near them) as well as weakly distinct lightish spot between ocelli and contrastingly spotted antennal flagellum, tegmina with hardly darker membranes of dorsal part and without distinct darkish spots around crossveins of this part (Figs XXVI: 1, 2), abdomen lacking

distinct darkenings, and ovipositor slightly longer than hind femora.

Male unknown.

Length (mm). Body 12.3; body with wings 21.7; pronotum 2; tegmina 13.5; hind femora 8.5; ovipositor 9.

*Comparison.* The new species is distinguished from all the similar species by the long ovipositor (longer than hind femora), presence of dark small spots under eyes and under antennal cavities, contrastingly spotted antennae, and some other characters of coloration (see above).

**Mistshenkoana? uniformis** sp. n.  
(Figs XXV: 9, 10; XXVI: 9, 10)

*Holotype.* ♀, **Indonesia**, Waigeo I. near western coast of New Guinea, "N. Dutch New Guinea: Waigeu, Mt Nok, Camp, 2.VI.1938, 2,700 ft., L.E. Cheesman, B. M. 1938-593", "at light" (BMNH).

*Description.* Female (holotype). Coloration uniformly yellowish, but with hardly darker median spot on hind part of vertex (Fig. XXV: 9), transverse area on hind part of pronotal disc (Fig. XXV: 10), longitudinal veins of tegmina, and middle part of tarsi, very small brown spot on dorsal surface of each hind tibia near its base, and almost transparent membranes of lateral tegminal part (Figs XXVI: 9, 10). Head almost angular in profile, with flat dorsum, not very narrow rostrum (scape 1.5 times as wide as distance between antennal cavities), and rather small ocelli (lateral ocellus slightly shorter than distance between it and median ocellus, and this distance almost twice greater than width of median ocellus); pronotum hardly narrowing to head, with short and roundly angular hind lobe of disc. Legs and tegmina typical of *Mistshenkoana*, but comb of tegminal Sc with 6-7 branches; genital plate as in *M. longa*; ovipositor slightly shorter than hind femora.

Male unknown.

Length (mm). Body 10; body with wings 20; pronotum 2; tegmina 12.5; hind femora 8.8; ovipositor 8.

*Comparison.* From majority of the Aphonoidini representatives having the long ovipositor and only inner tympana, the new species differs in the almost uniformly yellowish coloration, small ocelli, and not very narrow rostrum (see above). A few similar species from Indo-Malayan region, *M.? ouveus* from New Caledonia, and some Australian species are almost indistinguishable from *M.? uniformis*, but the latter species has the unique combination of small peculiarities: all the tegminal crossveins yellowish (no whitish or darkish crossveins); each hind tibia with only small brown spot near its base (no darkened stripe, lines, or marks on spines); the median ocellus distinctly smaller than lateral ocelli; the ovipositor slightly shorter than hind femora.

**Mistshenkoana? designata** sp. n.

(Figs XXV: 3, 4; XXVI: 3, 4)

*Holotype*. ♀, **Indonesia**, Waigeo I. near western coast of New Guinea, "N. Dutch New Guinea, Waigeu, Mt Nok, Camp, 2.VI.1938, L.E. Cheesman, B. M. 1938-593" (BMNH).

*Paratype*. ♀, **Indonesia**, Yapen I. near northern coast of New Guinea, "N. Dutch New Guinea, Japen, Seroei, Camp 1, Mt. Baduri, Aiam Range, 1,000 ft., ix.1938, L.E. Cheesman, B. M. 1938-593" (ZIAS).

*Description*. Female (holotype). Coloration light brown with following marks: eyes, dorsum of head, small spots on proximal part of antennae (most part of antennal flagellum missing) and on fore legs (excepting proximal and middle parts of femora), longitudinal veins of dorsal tegminal part, and majority of crossveins between them brownish grey; pronotal disc, sparse dots on lateral lobes of pronotum and on middle legs, small spots on dorsal and distal parts of hind femora and on middle and hind tarsi, longitudinal veins of lateral tegminal part, and some membranes of dorsal tegminal part (situated near lateral edge of this part) slightly darkened (their coloration intermediate between brownish grey marks and light brown general background); all crossveins of lateral tegminal part and some crossveins in dorsal tegminal part (situated along its lateral edge) whitish (almost each of latter crossveins is at centre of small whitish spot occupying small areas of nearest membranes); membranes of lateral tegminal part almost transparent (Figs XXV: 3, 4; XXVI: 3, 4). Structure of body more or less similar to that of *M. ? uniformis*, but length of lateral ocellus and distance between it and median ocellus almost equal, fore tibiae somewhat thickened (not typical of *Mistshenkoana*) (Fig. XXV: 3), and ovipositor slightly longer than hind femora.

Variations. Paratype with pronotal disc having weakly distinct lightish spots and with hind tibiae weakly spotted.

Male unknown.

Length (mm). Body 12-13.5; body with wings 23-25; pronotum 2.4-2.6; tegmina 15-15.7; hind femora 9.4-9.8; ovipositor 10.5-11.

*Comparison*. The new species differs from all the similar species of Aphonoidini in the characteristic coloration in combination with the above-mentioned peculiarities of ocelli, fore tibiae (see Fig. XXV: 4), and ovipositor.

**Mistshenkoana? kukum** sp. n.

(Figs XXV: 5, 6; XXVI: 5, 6)

*Holotype*. ♀, **Solomon Islands**, Guadalcanal I., "Solomon Is, Guadalcanal I., Kukum, 12.IV.1956, E.S. Brown, B. M. 1957-201, 4977" (BMNH).

*Description*. Female (holotype). Coloration yellowish with following marks: head with narrow dark brown stripe along dorsal edge of each anten-

nal cavity and with short and narrow brown stripe along hind edge of each ocellus (Figs XXV: 5, 6); tegmina with longitudinal veins near lateral edge of dorsal part and near dorsal edge of lateral part hardly lighter (light yellowish), some membranes between R and M as well as some membranes of distal part (situated along its lateral edge) brownish, membranes between branches of Sc transparent, and rest of membranes yellowish with greyish tinge (Figs XXVI: 5, 6); exposed part of hind wings greyish. Structure of body similar to that of *M. ? uniformis*, but rostrum of head narrower (scape almost twice as wide as distance between antennal cavities), ocelli larger (median ocellus hardly wider than distance between it and lateral ocellus; latter ocellus approximately 1.5 times as long as this distance), and comb of tegminal Sc with 7-8 branches.

Male unknown.

Length (mm). Body 12.5; body with wings 23; pronotum 2.3; tegmina 15; hind femora 10.2; ovipositor 9.5.

*Comparison*. The new species is distinguished from all the similar species of Aphonoidini by the uniformly yellowish coloration with the characteristic ornament of head and tegmina, narrow rostrum, rather large ocelli, not thickened fore tibiae, and ovipositor slightly shorter than hind femora.

**Mistshenkoana? vanuatu** sp. n.

(Figs XXV: 11-14)

*Holotype*. ♀, **Vanuatu**, Malakula I., "New Hebrides, Malekula, iv.1930, Miss L.E. Cheesman, B. M. 1930-393" (BMNH).

*Description*. Female (holotype). Coloration and structure of body most similar to those of *M. malakula*, but distinguished by following characters: ocelli slightly smaller; antennal flagellum with numerous small darkish spots; dorsum of head and pronotal disc darker (brownish grey), but with small lightish spots on latter disc; legs with rather numerous darkish dots and small spots; dorsal tegminal part light brownish grey with hardly darker proximal part having almost whitish crossveins, 3 rather small (but distinct) yellow spots along lateral edge, and small darkish (slightly darker than nearest membranes) spot around each of crossveins in distal half (Figs XXV: 11-14). Structures of abdominal apex similar to those of *M. ? designata*.

Male unknown.

Length (mm). Body 13; body with wings 22; pronotum 2.3; tegmina 15.5; hind femora 8.2; ovipositor 8.7.

*Comparison*. The new species differs from all the representatives of Aphonoidini known from Vanuatu in the more spotted coloration and smaller ocelli. From all the other similar species, it is

distinguished by the same characters in combination with the ovipositor slightly longer than hind femora and other above-mentioned features.

**Mistshenkoana? rufa** sp. n.  
(Figs XXV: 7, 8; XXVI: 7, 8)

*Holotype*. ♀, **Vanuatu**, Espiritu Santo I., "New Hebrides, West Santo, near Luaimoli, 600 ft., 13.Nov.1933, J.R. Baker", "Oxf. Univ. Exp., B. M. 1934-141" (BMNH).

*Description*. Female (holotype). Coloration and structure of body similar to those of *M. anatom* (especially in presence of uniformly coloration with distinct reddish tinge), but distinguished by following characters: ocelli much smaller (median ocellus distinctly less wide than distance between it and lateral ocellus; latter ocellus almost as long as this distance); rostrum slightly wider (scape 1.8 times as wide as distance between antennal cavities); eyes almost brown; ocelli light reddish; head dorsum and pronotal disc hardly lighter (Figs XXV: 7, 8); tegminal venation practically identical to tegminal membranes in coloration (Figs XXVI: 7, 8); exposed part of hind wings hardly darker than general coloration. Right antennal flagellum with brown ring not far from base, but this darkening may be artefact (most part of this flagellum and almost all segments of left flagellum missing). Structures of abdominal apex similar to those of *M.? uniformis* and *M.? kukum*.

Male unknown.

Length (mm). Body 13.5; body with wings 21; pronotum 2.1; tegmina 14; hind femora 9; ovipositor 8.7.

*Comparison*. The new species differs from majority of the Aphonoidini species in the characteristic uniformly yellowish coloration with the distinct reddish tinge. From *M. anatom* and some other species having the similar coloration, *M.? rufa* is distinguished by the above-mentioned characters of ocelli, head rostrum, and ovipositor.

**Genus Protomunda** Gorochoy, 2007

Type species: *Protomunda nigella* Gorochoy, 2007 (Sulawesi).

*Note*. The genus is characterized by the presence of 2 tympana on each fore tibia (inner tympanum is distinctly larger than outer one). This character is also present in *Umbulgaria* Otte et Alex., *Utona* Gor., and some species of *Munda* Stål. *Protomunda* differs from 2 the first genera in the distinctly longer and thin fore and middle legs, and from the latter genus, in the oblique (not parallel to R) branches of tegminal Sc. The structure of male genitalia in Sulawesi representatives of *Protomunda* is similar to that of *Brevimunda* Gor. and *Mistshenkoana*, but ampulla of spermatophore in the latter genus is distinctly longer. 2 new species described below are more or less similar to

these Sulawesi species in the structure of legs, tegmina, and spermatophore. However their male genitalia are somewhat different. There are also some peculiarities in the shape of head which distinguish the above-mentioned new species and 2 additional new species (their male unknown) from Sulawesi ones. So, all these new species may be included in a new subgenus of *Protomunda*.

**Subgenus Aenigmunda** subgen. n.

Type species: *Protomunda (Aenigmunda) imitatoria* sp. n.

*Diagnosis*. Head rather high (height clearly greater than width; in nominotypical subgenus and *P.? albida* sp. n., width and height almost equal), with weak or distinct concavity on fore part of head dorsum (between median ocellus and medial parts of eyes) and strongly convex hind half of vertex in profile (Figs XXVII: 1-12). Fore legs with rather large oval inner tympanum and small or very small outer one. Male genitalia distinguished from those of *Protomunda* s. str. by epiphallus divided into 3 sclerites (short and transverse proximal one, and a pair of distal sclerites provided with longitudinal medial sclerotized stripes situated each near other and almost reaching median part of proximal sclerite; Figs XVII: 3, 8), ectoparameres short and deeply bifurcate (Figs XVII: 1, 2, 4, 6, 7), mold of spermatophore attachment plate asymmetrical, and guiding rod with long lateral sclerites (Figs XVII: 1, 6); spermatophore similar to that of nominotypical subgenus (ampulla dark and weakly or moderately elongate, spermatophylax well developed and situated near spermatophore neck; Figs XVII: 5, 9).

*Included species*. 4 new species from New Guinea and nearest islands: type species; *P. (A.) cryptica* sp. n.; *P. (A.) pulchra* sp. n.; *P.? albida* sp. n. Systematic position of 2 the latter species is unclear, as their males are unknown. *P. pulchra* has the coloration and some other characters more or less similar to *P. cryptica* and *P. imitatoria*, but *P.? albida* has not other similarity to *Protomunda* excepting the presence of inner and outer tympana as well as oblique position of branches of tegminal Sc. Tentative putting of *P.? albida* near the other representatives of *Aenigmunda* is based on the similar shape of head dorsum only (see the diagnosis) which may be a result of convergence (as in *Aphonoides excavatus*).

**Protomunda (Aenigmunda) cryptica** sp. n.  
(Figs XVII: 1-5; XXVII: 1-3; XXVIII: 1, 2)

*Holotype*. ♂, **Papua – New Guinea**, New Guinea, "D. N. Guinea, 218, Lordberg, 29.XI-2.XII.12, Kais. Augustaf. Exp., Bürgers S.G." (MNHU).

*Paratypes*. **Indonesia**: 1 ♀, Waigeo I. near western coast of New Guinea, "N. Dutch New Guinea, Waigeu, Mt Nok, vi.1938, L.E. Cheesman, B. M. 1938-593" (BMNH); 2 ♀,

New Guinea, "Dutch N. Guinea, Utakwa R. Exp., Sep. 1912 to Mch. 1913, A.F.R. Wollaston, 1913-244", "Base Camp to Canor Camp, sea level to foot hills" (BMNH, ZIAS).

**Description.** Male (holotype). Coloration almost whitish (very light yellowish) with following marks: eyes brownish with numerous dark vertical lines crossed by longitudinal dark stripe in lower part of upper third; median area of fore part of epicranium as well as median part of clypeus and labrum light brown; genae with brown spots between lower part of eyes and hind part of subgenae; areas of head behind hind half of eyes as well as base of antennal flagellum (rest of flagellum missing) slightly darkened; scape and palpi with darkish spots; pronotum with characteristic brown and brownish areas and spots on hind half of lateral lobes and on lateral parts of disc (Figs XXVII: 1-3); legs with brown and brownish spots (majority of them small, but spots in proximal half of middle femora larger and darker) (Figs XXVII: 2; XXVIII: 1); dorsal tegminal part with numerous brown and light brown spots (a few spots along lateral edge and near apical part largest and most distinct); lateral tegminal part with light brownish upper longitudinal band crossed by several triangular whitish spots and with almost transparent membranes between brownish venation in rest of this part (almost each crossvein between branches of Sc with hardly darker border around it) (Figs XXVIII: 1, 2); exposed part of hind wings brownish with yellowish venation; abdomen with light brown spots on hind tergites and anal plate as well as with brownish grey spots on middle and distal parts of cerci. Head with weakly angular (in profile) rostrum, very strongly convex vertex in profile, distinct concavity between lateral ocelli, distinct transverse valliculum between eyes, and without median ocellus (lateral ocelli distinct, but not large); scape approximately 1.5 times as wide as rostrum between antennal cavities. Pronotum narrowing in front, somewhat saddle-shaped and with rather large hind median lobe having roundly angular distal part (Figs XXVII: 2); legs long and thin, with very small oval outer tympanum and not very large inner one (Fig. XXVII: 3); tegmina long (but distinctly shorter than hind wings), with rather irregular venation of dorsal part and with comb of Sc having 8-9 oblique branches (Figs XXVIII: 1, 2). Anal plate with almost truncate hind part; genital plate more or less similar to that of *Aphonoides*; genitalia and spermatophore as in Figs XVII: 1-5.

Female. General appearance similar to that of male, but with a few differences: paratype from Waigeo I. with very small median ocellus, brown both most part of lower half of head and transverse stripe between hind halves of eyes, smaller darkenings of pronotum, less spotted legs, slightly darker (greyish) membranes between branches of tegminal Sc, and more distinct yellowish (almost

whitish) stripe along lateral side of exposed part of hind wings; other paratypes with lateral ocelli less distinct, median ocellus distinct or indistinct, and coloration similar to that of the previous female (but having much more developed dark spots on pronotum and legs) or lighter (almost as in holotype, but with smaller darkenings of pronotum and slightly darker stripe along costal edge of tegmina). Genital plate short and gradually narrowing to widely truncate apex; ovipositor distinctly shorter than hind femora.

Length (mm). Body: ♂ 13, ♀ 11.5-15.5; body with wings: ♂ 21.5, ♀ 21-25; pronotum: ♂ 2.3, ♀ 2.4-2.8; tegmina: ♂ 13.3, ♀ 12.5-15; hind femora: ♂ 9.5, ♀ 10-11.5; ovipositor 5-5.5.

**Protomunda (Aenigmunda) imitatoria** sp. n.  
(Figs XVII: 6-9; XXVII: 4-6; XXVIII: 3, 4)

**Holotype.** ♂, **Papua – New Guinea**, New Guinea, "D. N. Guinea, 404, Mäanderberg, 21-30.VIII.13, Kais. Augustafl. Exp., Bürgers S.G." (MNHU).

**Description.** Male (holotype). Coloration and structure of body very similar to holotype of *P. cryptica*, but distinguished by following characters: dark ornament on eyes indistinct; fore part of head light yellowish with small brown spot at centre of clypeus and blackish V-shaped mark on labrum; genae with smaller brown spots between eyes and subgenae (Figs XXVII: 4, 6); antennal flagellum light brownish with rather sparse lighter rings; distal part of fore and middle tibiae as well as fore and middle tarsi almost dark brown (Fig. XXVII: 5) (coloration of both rest of these legs and hind legs similar to that of *P. cryptica*); dorsal tegminal part with somewhat darker area along medial (anal) edge; lateral tegminal part with more numerous whitish spots along dorsal edge (Figs XXVIII: 3, 4); abdomen with light brown sternites, brown hind tergites and anal plate, and almost dark brown hind part of genital plate; lateral ocelli indistinct; epiphallus with proximal sclerite having hind median area truncate (not angular) and with distal sclerites longer and provided with wider longitudinal medial stripes (Fig. XVII: 8); ectoparameres with narrower lower process (Fig. XVII: 7) and S-shaped upper one (Fig. XVII: 6); spermatophore with slightly thicker tube and probably shorter ampulla (Fig. XVII: 9).

Female unknown.

Length (mm). Body 15; body with wings 21; pronotum 2.3; tegmina 13.4; hind femora 10.

**Comparison.** The new species differs from *P. cryptica* in the genital characters listed above.

**Protomunda (Aenigmunda?) pulchra** sp. n.  
(Figs XXVII: 7-9; XXVIII: 5, 6)

**Holotype.** ♀, **Papua – New Guinea**, New Guinea, "D. N. Guinea, 234, Hauptlg. b. Malu, 7.I.1913, Kais. Augustafl. Exp., Bürgers S.G." (MNHU).

**Description.** Female (holotype). Coloration yellowish with following marks: lower part of epicranium with 7 small brown spots (3 pairs of spots under eyes and antennal cavities, and 1 median spot near clypeus); clypeus with small brown median spot near clypeal suture; labium with darkish lateral and distal parts; vertex behind eyes and between their hind halves with numerous small darkish spots and dots; lateral ocelli with dark border around them; eyes brownish with several darker dots; antennae with darkish spots on scape and with light brown flagellum provided with lighter rings in proximal part (rest of flagellum missing); pronotum with numerous brown and dark brown spots on upper half of lateral lobes and on fore, hind, and lateral parts of disc (Figs XXVII: 7-9); legs with numerous small darkish spots fused in larger and darker spots on middle femora near their apex and on hind tibiae; tegminal dorsal part with greyish membranes, dark brown narrow stripe along lateral edge crossed by a few whitish spots, partly dark and partly whitish longitudinal veins and crossveins, and darkish parts of some of membranes (Fig. XXVIII: 5); tegminal lateral part with almost dark grey band along dorsal edge (this band crossed by 4 large and obliquely triangular whitish spots having blackish borders) and with somewhat lighter rest of this part having yellowish areas on some membranes and darkened venation (crossveins slightly darker than branches of Sc) (Fig. XXVIII: 6); exposed part of hind wings with greyish and transparent areas on each cell membrane, greyish longitudinal veins, and yellowish crossveins; abdomen light brown with darkened middle and distal parts of cerci. Head with less convex vertex in profile and less concave fore part of dorsum than in *P. crypticus* and *P. imitatoria*; width of rostrum approximately as in these species; transverse valliculum between eyes almost indistinct; ocelli well developed, small (but not very small); median ocellus only slightly smaller than lateral ones (Fig. XXVII: 7). Structure of pronotum similar to that of 2 latter species in shape, but slightly less saddle-shaped; legs shorter than in these species (see comparison and measurements), distinctly thicker (especially fore and middle legs), and with tympana somewhat larger (Figs XXVII: 8, 9) and middle tibiae having weak keel along dorsal edge; tegmina with almost regular venation in dorsal part and with comb of tegminal Sc having 7-8 oblique branches; hind wings distinctly longer than tegmina. Structure of abdominal apex similar to that of *P. crypticus*.

Male unknown.

Length (mm). Body 12.5; body with wings 18.5; pronotum 2.2; tegmina 12; hind femora 8.2; ovipositor 5.5.

**Comparison.** The new species is more or less similar to *P. crypticus* and *P. imitatoria* in the

coloration (especially in the ornament of lateral tegminal part), but distinguished from them by the less convex vertex, less concave fore part of head dorsum, and shorter legs (in *P. pulchra*, the fore tibiae are 1.1 times as long as pronotum, but in the above-mentioned congeners, this ratio is 1.4-1.5).

**Protomunda? albida** sp. n.  
(Figs XXVII: 10-12; XXVIII: 7, 8)

**Holotype.** ♀, **Indonesia**, New Guinea, environs of city Jayapura, Cyclops Mts, about 500 m, primary forest, 17-19.XI.2004, collected as nymph, imago reared IV.2005, A. Gorochoy (ZIAS).

**Description.** Female (holotype). Coloration whitish with following ornament: lower part of epicranium with 3 dark brown marks (narrow stripe along ventral edge of each antennal cavity and transverse median spot near clypeus) and a few small brown spots between eyes and subgenae; genae with a pair of short dark brown longitudinal stripes behind middle part of eyes; vertex between hind halves of eyes and behind them with 5 light brown longitudinal bands and dark brown transverse stripe along hind edge (this stripe with short median tongue directed forwards); clypeus brown with a pair of transverse whitish lateral spots not far from clypeal suture (these spots almost contacting with each other); labrum brownish grey; eyes almost uniformly brown; antennae with a few small brownish longitudinal stripes on dorsal surface of each scape and with several light brown spots on proximal part of flagellum (rest of flagellum missing); palpi with a few very small darkish spots; pronotum yellowish with a few darkish dots on lateral parts and greyish stripe along hind edge of disc (Figs XXVII: 10-12); legs with rather small brown and dark brown spots (these spots fused with each other and darker on inner surface of distal half of fore tibiae, on outer surface of distal part of fore and middle femora, on inner surface of distal part of middle femora, on ventral surface of middle tibiae and around apical part of hind femora); dorsal tegminal part white with light brown venation (many of crossveins as well as small sections of other crossveins and of longitudinal veins white; longitudinal veins, situated near and along lateral edge of dorsal part, with short dark brown sections), brownish oblique spot near apical area, and light greyish parts of some membranes in medial area; lateral tegminal part also white, but with light brownish grey venation and membranes in upper third (this third of lateral part with 3 large white spots, situated on some membranes and including some crossveins, as well as with brown borders around other crossveins), dark brown proximal branches of Sc and crossveins between them, and brown rest of venation (Figs XXVIII: 7, 8); exposed

part of hind wings whitish with short and narrow brownish stripes; abdomen light brown with some darkenings in apical part (but not on genital plate) and yellowish cerci. Structure of head similar to that of *P. pulchra*, but head width greater (see diagnosis of *Aenigmunda*), rostrum slightly wider (scape 1.3 times as wide as distance between antennal cavities), fore part of dorsum hardly more concave (intermediate between those of *P. pulchra* and other known representatives of *Aenigmunda*), median ocellus distinctly smaller, and lateral ocelli indistinct. Structure of pronotum, legs, and wings also more or less similar to that of *P. pulchra*, but fore tibiae hardly thicker, middle femora with low keel along ventral edge having row of very long hairs, middle tibiae with distinct keel along dorsal edge, hind femora with very long hairs on ventral surface, tegmina with rather irregular venation of dorsal part (somewhat similar to that of *P. cryptica* and *P. imitatoria*) and with comb of Sc having 10-11 oblique branches. Hind part of genital plate rounded; ovipositor approximately equal to hind femora in length.

Male unknown.

Length (mm). Body 16; body with wings 29; pronotum 3.3; tegmina 18; hind femora 12; ovipositor 12.5.

**Comparison.** The new species is distinguished from all the congeners by the following combination of characters: body large; tegmina white with the rather small darkenings; outer tympana not very small; fore and middle legs rather short; middle legs with the distinct keels on femora and tibiae; middle and hind femora with the very long ventral hairs; female genital plate with the rounded hind part; ovipositor and hind femora approximately equal in length.

## Genus *Munda* Stål, 1877

Type species: *Munda picturata* Stål, 1877 (Philippines).

**Note.** The previous characteristic of this genus (Gorochov, 2007) contained a few characters of external morphology and of male genitalia. This characteristic was based on only Indo-Malayan representatives of *Munda*. The study of Australo-Oceanian Aphonoidini shows that at present this genus may be divided into 3 subgenera with rather different male genitalia. One of them (*Munda* s. str.) includes all Indo-Malayan congeners with known male genitalia (Gorochov, 2007) and 2 species from New Guinea: *Munda basimaculata* Chopard, 1951 and *M. bella* sp. n. Male genitalia of these species are characterized by the median sclerotized area in the distal half of epiphallus long and more or less narrow, proximal and distal sclerotized parts of epiphallus laterally fused with each other, and ectoparameres provided with the

moderately elongate both proximal and distal parts as well as comparatively narrow medial lobe (Figs XVIII: 1-3, 5-7). Male genitalia of the other subgenera are characterized below (in the diagnoses of these taxa). There are also some other differences between these subgenera. *Munda* s. str. and *Subtilomunda* subgen. n. show a certain similarity in the structure of epiphallus. Spermatophore in one of their species has the rather short, rounded ampulla (Fig. XIX: 4). Possibly the long ampulla in the other species of these subgenera and in the representatives of *Elegomunda* subgen. n. (Figs XVIII: 4, 8; XIX: 8; XX: 4; XXI: 4, 8) has independent origin from the rounded ampulla of their general ancestor. Some insufficiently known species from New Guinea (*Munda punctipes* Chopard, 1951 and *M. flavolineata* Chopard, 1951) may be also included in the genus *Munda*, but their subgeneric position is unclear.

## *Munda (Munda) bella* sp. n.

(Figs XVIII: 1-4)

**Holotype.** ♂, **Indonesia**, New Guinea, environs of town Manokwari, primary forest on hills near sea, 4-6.XI.2004, A. Gorochov (ZIAS).

**Description.** Male (holotype). General shape of body and its appendices somewhat shortened, similar to that of majority of Indo-Malayan congeners. Head uniformly dark brown (eyes and mouthparts hardly lighter) with yellowish antennae and light brown palpi; ocelli very small, rounded (median ocellus somewhat smaller than lateral ones); scape 1.2 times as wide as rostrum between antennal cavities. Pronotum yellow with sparse light brown dots on disc, small brown spots on lateral lobes, and narrow dark brown stripe along hind edge. Legs yellowish with brown dots and small spots on femora (hind femora also with dark brown apical part, large spot on middle part, and outer proximal longitudinal stripe fused with this spot), light brown fore and middle tibiae and tarsi (having darkish spots on dorsal surface of tibiae and middle of tarsi), and dark brown hind tibiae and second segment of hind tarsi (excepting light brown spines and spurs); all tibiae more or less thin; inner tympanum not large, oval; outer one also oval, but slightly smaller. Tegmina dark brown with slightly lighter (brown) longitudinal veins and some yellow interspaces between them (this interspaces forming yellow longitudinal humeral band and two proximal spots: one in dorsal part and one in lateral part); dorsal part with 7 longitudinal parallel veins and rather weakly distinct crossveins; lateral part with comb of Sc having 3-4 branches parallel to R and with more distinct crossveins (some of these crossveins yellowish). Hind wings distinctly longer than tegmina; their exposed part very dark brown. Abdomen and ventral part of thorax yellowish

with light brown abdominal dorsum; anal plate short and with rounded hind notch (central part of this plate darkish); genital plate long and with almost angular apex; genitalia and ampulla of spermatophore as in Figs XVIII: 1-4.

Female unknown.

Length (mm). Body 15.5; body with wings 18; pronotum 2.3; tegmina 11.5; hind femora 9.5.

*Comparison.* The new species is most similar to Indo-Malayan *M. asyrinx* (Sauss.), *M. fasciata* (Haan), *M. certa* Gor., and possibly *M. renschi* Gor., but distinguished by the characteristic coloration and somewhat wider proximal part of ectoparameres. From the other Indo-Malayan congeners, *M. bella* differs in the presence of inner and outer tympana or not very long wings.

**Munda (Munda) basimaculata** Chopard, 1951 (Figs XVIII: 5-8)

*Material.* 1 ♂, **Indonesia**, New Guinea, "Dutch New Guinea, Cyclops Mts, Sabron, Camp 1, 1,200 ft., 22.v.1936, L.E. Cheesman, B. M. 1936-271" (BMNH). **Papua – New Guinea**, New Guinea: 1 ♂, "D. N. Guinea, V.1912, am Maifluss, Kaiserin Augustaf. Exp., Ledermann S.G." (MNHU); 1 ♂, "D. N. Guinea, Schraderbg, 5-13.VI.13, Kais. Augustaf. Exp., Bürgers S.G." (ZIAS); 1 ♂, 1 ♀, "D. N. Guinea, 192, Standlager a. Aprilfluss, 5-27.X.1912, Kais. Augustaf. Exp., Bürgers S.G." (MNHU); 1 ♀, "D. N. Guinea, Kais. Augustaf. Exp., Bürgers S.G." (ZIAS).

*Note.* This species is similar to *M. bella* in the structure of body, but clearly distinguished by the following features: head dark brown with light brown antennae (excepting dark brown scape) and palpi (sometimes fore part of head with additional lightish marks, and hind half of vertex with a few light brown longitudinal lines); pronotum dark brown with a few lightish (distinct or almost indistinct) marks on lateral parts of disc and on upper part of lateral lobes; fore and middle legs brown or dark brown (sometimes with small lightish spots); hind femora light brownish grey with dark apical part, large spot in basal part, and usually less distinct darkish area in middle part (sometimes this area clearly distinct or almost indistinct); hind tibiae, base of hind basitarsi, and distal half of hind tarsi brown or dark brown (sometimes these tibiae as well as their spines and spurs with lighter marks); tegmina brown or dark brown, but with yellowish large proximal spot in dorsal part, small humeral spot or spots not far from base of apical area, and crossveins or some of them in lateral part (in males, proximal spot larger and including parts of veins, and humeral spot longitudinal and not very small; but in females, proximal spot smaller and consisting of only yellowish crossveins, and humeral one very small or divided into a few very small spots); abdomen and thoracic venter light brown with darkened areas on hind tergites and on anal and genital plates in both sexes as well as with yellowish cerci having small

darkish spots; male genitalia with asymmetrical mold of spermatophore attachment plate, much longer medial lobe of ectoparameres directed backwards, and some other distinct differences in structure of ectoparameres and epiphallus (see Figs XVIII: 5-7). These genital characters show that *M. basimaculata* is most isolated from all representatives of this subgenus.

Subgenus **Subtilomunda** subgen. n.

Type species: *Munda (Subtilomunda) simulata* sp. n.

*Diagnosis.* External structure of body distinguished from that of *Munda* s. str. by general shape of body more slender (similar to that of *Brevimunda* Gor.), head somewhat lower and with almost sharply angular (in profile) rostrum, femora thinner (especially hind ones; Figs XXIX: 7, 13), fore tibiae distinctly inflated and with very large inner tympanum (outer tympanum distinctly smaller, but not very small), middle tibiae slightly thickened and with very low (hardly visible) keel along dorsal surface, tegmina not arched in profile, male anal plate with almost truncate hind part, and male genital plate slightly or distinctly shorter. Male genitalia with median sclerotized area in distal half of epiphallus more or less long and very narrow, proximal and distal sclerotized parts of epiphallus separated from each other by membranous areas, and ectoparameres provided with moderately elongate proximal part, almost hooked and more or less elongate distal part, and rather diverse middle part (having medial lobe and/or lateral projection) (Figs XIX: 1-3, 5-7; XX: 1-3, 5-7).

*Included species.* Type species; *Munda melanocephala* Chopard, 1951; *M. punctata* Chopard, 1951; *M. quadrimaculata* Chopard, 1951. All from New Guinea.

**Munda (Subtilomunda) melanocephala** Chopard, 1951 (Figs XIX: 1-4)

*Material.* 3 ♂, **Papua – New Guinea**, New Guinea, "D. N. Guinea, 402, Mäanderberg, 21-30.VIII.13, Kais. Augustaf. Exp., Bürgers S.G." (MNHU, ZIAS).

*Note.* This species is characterized by the following features: coloration of head dark brown with brown eyes, maxillae, and labium, light brown proximal part of antennal flagellum (scape almost dark brown, and pedicel more or less brown), and yellowish palpi and rest of flagellum; lateral ocelli small (but distinctly larger than median ocellus), elongate, and almost contacting with eyes; scape almost twice as wide as rostrum between antennal cavities; pronotum light brown with yellowish line along edges (excepting somewhat wider yellowish stripe along hind edge of disc), brown rest of lateral lobes and transverse

stripe on disc near previous stripe (not far from hind edge of disc); legs yellowish with more or less brownish dorsal part of tibiae and distal part of hind femora; tegmina brownish grey with slightly or hardly lighter dorsal part and yellowish or light brown small spot at base of dorsal part (sometimes this spot forming short humeral stripe in proximal part of tegmina); dorsal tegminal part with 6-7 longitudinal veins and sparse crossveins; comb of tegminal Sc with 3-4 longitudinal branches (parallel to R) and somewhat less sparse crossveins; hind wings distinctly longer than tegmina and with greyish brown exposed part; abdomen yellowish with brownish areas on tergites and light brown distal half of cerci; male genitalia and spermatophore as in Figs XIX: 1-4. *M. melanocephala* is strongly distinguished from all the representatives of *Subtilomunda* (excepting maybe *M. punctata*) by the most primitive type of spermatophore ampulla (rounded and not very elongate) which is unique for this genus.

**Munda (Subtilomunda) punctata** Chopard, 1951  
(Figs XIX: 5-8)

*Material.* 1 ♂, **Papua – New Guinea**, New Guinea, “Papua, Mafulu, 4,000 ft., i.1934, L.E. Cheesman, B. M. 1934-321” (BMNH).

*Note.* This species is characterized by the almost uniformly dark coloration (epicranium and pronotum black; antennal base and tegminal lateral part dark brown; eyes, mouthparts, tegminal dorsal part, exposed part of hind wings, most part of fore and middle legs, apical part of hind femora, most part of dorsal surface of hind tibiae, their spines and spurs, ventral half of hind basitarsi, second segment of hind tarsi, abdominal tergites, and anal plate brown; rest of body almost light brown) and some peculiarities of body structure: head dorsum and pronotum strongly punctulate; pronotum slightly longer than in *M. melanocephala*; tegmina with slightly thickened longitudinal veins and with only traces of crossveins in lateral part; other characters of external structure more or less similar to those of *M. melanocephala*; male genitalia and spermatophore ampulla as in Figs XIX: 5-8 (rami, valvae, and most part of epiphallus missing). Probably this species is most related to *M. melanocephala* as ectoparameres of the both species have the elongate proximal part, almost hooked distal part, convex medial edge of middle part, and lobe-like lateral projection of this part (spermatophore of *M. punctata* is unknown).

**Munda (Subtilomunda) simulata** sp. n.  
(Figs XX: 1-4)

*Holotype.* ♂, **Papua – New Guinea**, New Guinea, “D. N. Guinea, Regenber, 550 m, 8-15.V.13, Kais. Augustaff. Exp., Bürgers S.G.” (MNHU).

*Paratypes.* **Papua – New Guinea**, New Guinea: 1 ♂, “D. N. Guinea, 128, Quelllag., 13-16.VIII.12, Kais. Augustaff. Exp., Bürgers S.G.” (ZIAS); 1 ♀, “D. N. Guinea, Standlager b. Malu, 12-13.III.1912, Dr. Bürgers S.G.” (MNHU); 1 ♀, “D. N. Guinea, 110, Kais. Augustaff. Exp., Bürgers S.G. (ZIAS); 1 ♀, “18.V, Erinna, Neu-Guinea, Planlagen, Lauteroach S.” (MNHU).

*Description.* Male (holotype). Head brown with dark brown fore half of dorsum and proximal part of antennae, light brown 2 distal segments of maxillary palpi, area on maxillae, and middle part of antennae (rest of antennae missing); pronotum brown with yellow line along fore, ventral, and hind edges of lateral lobes as well as along hind edge of disc; legs brown with 2 light brown lines on dorsal surface of hind and middle tibiae, 2 large whitish spots on each hind femur (larger spot near base and somewhat smaller one not far from distal part), and light brown dorsal longitudinal stripe on distal part of this femur; tegmina brown with 2 not very large whitish spots in dorsal part near its lateral edge, 2 partly whitish longitudinal (humeral) veins, a few very small yellowish spots in lateral part, and lightish tegminal apex; exposed part of hind wings brownish grey; abdomen more or less spotted. External structure of body similar to that of *M. melanocephala*, but tegminal venation almost as in *M. punctata*; male genitalia and spermatophore ampulla as in Figs XX: 1-4.

*Variations.* In paratype, all parts of head dorsum dark brown, middle part of antennae with yellowish spot near proximal part, pronotum dark brown, dorsal surface of fore tibiae with 2 light brown lines, and tegmina dark brown with yellowish marks in dorsal part and near it (these marks similar to those of holotype), but without light spots in lateral part.

*Female.* General appearance as in male, but pronotum sometimes with light brown line along fore edge of disc and usually with a few small yellow spots at middle of disc, tegmina with whitish or yellowish both 3 longitudinal stripes between some of Sc branches (each stripe between 2 nearest branches) and several crossveins in lateral part, but in female from “Erinna”, light longitudinal stripes between Sc branches replaced by a few very small light spots. Ovipositor slightly longer than hind femora.

*Length (mm).* Body: ♂ 8.5-8.9, ♀ 9-10.5; body with wings: ♂ 13.5-14, ♀ 16.5-18; pronotum: ♂ 1.6-1.7, ♀ 1.8-2; tegmina: ♂ 9.2-9.5, ♀ 10.5-11.3; hind femora: ♂ 5.8-6, ♀ 7-7.3; ovipositor 7.6-7.9.

*Comparison.* The new species is very similar to *M. quadrimaculata*. Their differences are given below in the note about the latter species. From all the other congeners, *M. simulata* differs in the characteristic coloration and structure of male genitalia (including distinctly bifurcate distal part of ectoparameres).



**Munda (Munda) quadrimaculata** Chopard,  
1951  
(Figs XX: 5-7)

*Material.* 2 ♂, 1 ♀, **Papua-New Guinea**, New Guinea, "Papua, Kokoda, 1,200 ft.", IV-VIII.1933, "L.E. Cheesman, B. M. 1933-427" (ZIAS, BMNH). 2 specimens (♂, ♀) received by ZIAS from Dr. B.C. Townsend (BMNH) in exchange; one of them (♂) determined by him as *M. quadrimaculata*.

*Note.* This species is very similar to *M. simulata*, but distinguished from it by the following characters: general coloration darker (almost blackish); spots and lines on antennae, pronotum, tegmina, and legs whitish (excepting almost transparent tegminal apex); most part of maxillary palpi also whitish; middle part of antennae (more distal than whitish spot) light brown (distal antennal part missing); legs without lighter lines on fore tibiae, but with short light brown dorsal longitudinal stripe on distal part of each of fore and middle femora; tegmina of both sexes with lateral part completely dark including most part of humeral (longitudinal) veins; male genitalia with proximal sclerotized area of epiphallus (including narrow distal median part of this area) longer (Figs XX: 5, 7), apical epiphallic parts somewhat different in shape (for comparison see Figs XX: 3 and 7), and ectoparameres having practically not bifurcate distal parts, membranous ventromedial area of this part (not reaching its apex), and thicker and more straight guiding rod (Figs XX: 6, 7).

Subgenus **Elegomunda** subgen. n.

Type species: *Munda (Elegomunda) excellentis* sp. n.

*Diagnosis.* External structure of body characterized by a few characters similar to those of *Subtilomunda* and different from those of *Munda* s. str. (body slender, head low and angular in profile, hind legs rather thin, tegmina not arched in profile, male genital plate more or less long; Figs XXIX: 1-13), as well as some other characters which similar to those of *Munda* s. str., but different from those of *Subtilomunda* [fore and middle tibiae not inflated and not thickened, all tibiae without distinct keels, tympana not very large and not very small (Figs XXIX: 2-12, 14), inner tympanum slightly larger than outer one, male anal plate with distinct hind notch]. Male genitalia differ from those of *Munda* s. str. and *Subtilomunda* by median sclerotized area in distal half of epiphallus much shorter, proximal and distal sclerotized parts of epiphallus not separated from each other (as in nominotypical subgenus), and ectoparameres with short distal part and wide medial lobe (Figs XXI: 1-3, 5-7).

*Included species.* Type species; *M. (E.) elegantis* sp. n.; *M. (E.) recedentis* sp. n. All from New Guinea.

**Munda (Elegomunda) excellentis** sp. n.  
(Figs XXI: 1-4)

*Holotype.* ♂, **Papua – New Guinea**, New Guinea, "D. N. Guinea, 154, Standlager a. Aprillfluss, 18-19.IX.1912, Kais. Augustafl. Exp., Bürgers S.G." (MNHU).

*Paratypes.* **Papua – New Guinea**, New Guinea: 1 ♀, same data as holotype, but 27.X.1912 (MNHU); 1 ♂, "D. N. Guinea, Regenber, 550 m, 8-15.V.13, Kais. Augustafl. Exp., Bürgers S.G." (MNHU); 2 ♂, "D. N. Guinea, Lager a. Topferfluss, 13.IV.13, Kais. Augustafl. Exp., Bürgers S.G." (MNHU, ZIAS). 1 ♀, **Indonesia**, New Guinea, "Holl. N. Guinea, Centralgebirge, Moszkowski S.G." (ZIAS).

*Description.* Male (holotype). Head dark brown with light brown ocelli, antennae (excepting weakly distinct small brown spots on ventral surface of scapes), maxillae, labium, and stripe under rostral apex along medial edge of each antennal cavity, as well as with moderately brown eyes; ocelli small, not contacting with eyes; median ocellus very small, distinctly smaller than lateral ones; scape 1.7 times as wide as distance between antennal cavities. Pronotum yellowish with sparse brownish dots along fore edge and on disc, as well as with several small brown spots along hind edge; latter edge weakly angular. Legs yellowish with weakly distinct darkish marks on dorsal surface of fore and middle tibiae, brown apical part of hind femora and base of hind tibiae, light brown 2 oblique bands (wide distal and narrower proximal) on rest of hind femora, brownish proximal half of hind tibiae (excepting their darker small basal part), apical part of these tibiae, and middle part of all tarsi. Tegmina dark brown with light brown crossveins in middle area of dorsal part and in upper half of lateral part, yellowish longitudinal stripe between proximal parts of R and M, 3 not large spots in dorsal part along its lateral edge, proximal crossveins of this part, and tegminal apex; dorsal part with 6-7 longitudinal veins; comb of Sc with 4 distinct branches practically parallel to R. Hind wings distinctly longer than tegmina; their exposed part dark brown. Thoracic venter and most part of abdomen yellowish; abdominal dorsum and median spots on sternites brownish; hind half of genital plate light brown; distal part of cerci spotted. Genitalia and spermatophore as in Figs XXI: 1-4.

*Variations.* Sometimes coloration of body slightly lighter: light brown stripes under rostral apex fused with each other, pronotal disc almost uniformly yellowish, bands on hind femora weakly distinct, and most part of hind tibiae light. Sometimes this coloration hardly darker than in holotype: tegmina almost without light crossveins.

*Female.* General appearance similar to that of male, but sometimes head with light brown hind half of vertex, pronotum with darkish most part of lateral lobes and more distinct darkened marks on disc, hind femora with more distinct (brown)

bands, tegmina slightly lighter (brown) and with less distinct light spots, and exposed part of hind wings also lighter (brown). Genital plate with roundly notched apex; ovipositor hardly shorter than hind femora.

Length (mm). Body: ♂ 11-12.5, ♀ 13-14; body with wings: ♂ 17-19, ♀ 21.5-23; pronotum: ♂ 1.8-2.1, ♀ 2.4-2.5; tegmina: ♂ 11.5-12.5, ♀ 14.5-15; hind femora: ♂ 8.2-8.5, ♀ 10.4-10.6; ovipositor 9.2-9.5.

**Munda (Elegomunda) elegantis** sp. n.

(Figs XXI: 5-8; XXIX: 1-7)

*Holotype*. ♂, **Papua-New Guinea**, New Guinea, "D. N. Guinea, 300, Hunsteinspitze, 12.III.13, Kais. Augustaff. Exp., Bürgers S.G." (MNHU).

*Description*. Male (holotype). Coloration (Figs XXIX: 1-7) dark brown with following marks: epicranium (excepting eyes and hind part of vertex) blackish; base of antennal flagellum, apical part of hind femur, and middle part of all tarsi brown; ocelli, rest of antennal flagellum, rest of legs (excepting proximal part of all femora and middle transverse band on hind femora), thoracic venter, and lower half of abdomen light brown; palpi, proximal part of all femora, middle transverse band on hind femora, cerci, and a few marks on dorsal tegminal part (transverse spot at base, short humeral proximal stripe, and 4 rather small spots along lateral edge) yellowish; upper half of abdomen slightly darkened. Structure of body similar to that of *M. excellentis*, but rostral apex distinctly narrower (scape 2.8 times as wide as distance between antennal cavities), dorsal tegminal part with 7-8 longitudinal veins, comb of tegminal Sc with 3-4 branches, and male genitalia with much narrower proximal sclerotized area of epiphallus, less deep notch between hind epiphallal lobes, less protruded distal part of these lobes, longer proximal (narrow) part of ectoparameres, more angular (in profile) and narrower (see from below) middle part of ectoparameres, and hooked distal part of ectoparameres (Figs XXI: 5-7). Spermatophore with distinctly shorter and higher neck than in *M. excellentis* (Figs XXI: 8),

Female unknown.

Length (mm). Body 11; body with wings 18.5; pronotum 1.7; tegmina 12; hind femora 8.3.

*Comparison*. The new species differs from *M. excellentis* in the above-mentioned characters of male genitalia and characteristic coloration (see description).

**Munda (Elegomunda) recedentis** sp. n.

(Figs XXIX: 8-14)

*Holotype*. ♀, **Indonesia**, New Guinea, environs of city Jayapura, Cyclops Mts, about 500 m, primary forest, 17-19.XI.2004, A. Gorochoy (ZIAS).

*Description*. Female (holotype). Coloration brown with following marks: eyes, scapes, triangular spot on hind part of vertex, median longitudinal spot on pronotal disc, fore legs and distal part of middle legs (excepting apical segment of tarsi), as well as middle transverse band on hind femora almost dark brown; proximal and middle parts of middle femora, thoracic venter, and abdominal sternites more or less light brown; proximal part of hind femora, transverse band behind dark band on these femora, transverse spot at base of dorsal tegminal part, longitudinal stripe along middle third of lateral edge of this part, and humeral stripe along proximal third of dorsal edge of lateral tegminal part yellowish (antennal flagellum missing) (Figs XXIX: 8-14). Structure of body very similar to that of *M. elegantis*, but rostrum of head hardly wider, and dorsal tegminal part with 6-7 longitudinal veins. Genital plate with sinuate (almost truncate) apex; ovipositor slightly shorter than hind femora.

Male unknown.

Length (mm). Body 8; body with wings 17; pronotum 1.9; tegmina 11; hind femora 9.2; ovipositor 7.7.

*Comparison*. The new species is most similar to *M. elegantis*, but distinguished by the lighter head and pronotum, less spotted tegmina, dark fore legs, and more spotted hind femora. From *M. excellentis*, the new species differs in the smaller size, less spotted tegmina, and distinctly darker coloration of pronotum and of fore legs.

**Australo-Oceanian taxa probably or possibly belonging to Aphonoidini**

Belonging of the genera *Umbulgaria* Otte et Alexander, 1983 and *Utona* Gorochoy, 1986 (each of these genera contains 2 Australian species) to Aphonoidini is very probable. But their differences from each other are unclear as their body structure is rather similar (their fore and middle legs rather short and depressed, fore tibiae with outer and inner tympana, and hind legs long and rather thin) and male genitalia are insufficiently studied. Otte (1994) synonymized these genera, but it is premature opinion, as the both species of *Umbulgaria* have the ovipositor shorter than hind femora, but in *Utona*, it is much longer (more than 1.5 times as long as hind femora).

There are several species from New Guinea (*Aphonus apiatius* Saussure, 1878; *Aphonoides bicolor* Chopard, 1951) and Australia (*Aphonomorphus debilis* Chopard, 1925; *Aphonoides brevis* Chopard, 1951; *A. lowanna* Otte et Alexander, 1983; *A. weeronga* Otte et Alexander, 1983) included in the genus *Aphonoides* by Chopard (1968) and Otte & Alexander (1983). Their male genitalia and spermatophore are unknown or insuf-

ficiently studied, and generic position of these species is unclear. However all they probably belong to Aphonoidini. Some other species (*Podoscirtus regulus* Saussure, 1878 from Ambon I.; *P. insularis* Saussure, 1878 and *Aphonus depressiusculus* Saussure, 1878 from Fiji) transferred by Chopard (1968) to the genera *Munda* and *Aphonoides*, as well as the genus *Gryllaphonus* Chopard, 1951 (with only *G. striatipennis* Chopard, 1951 from Fiji) possibly also belong to Aphonoidini, but this opinion is in need of examination.

*Podoscirtus chopardi* Willemse, 1925 from Vanuatu as well as *Sweszwilderia suvae* Gorochoy, 1986, *S. tshernovi* Gorochoy, 1986, and *Aphonoides tavuki* Otte et Cowper, 2007 from Fiji, included by Chopard (1968) and Otte & Cowper (2007) in the genera *Munda* and *Aphonoides*, do not belong to Aphonoidini and Podoscirtinae. The first species is a possible representative of Phaloriini (Phaloriniinae), and 3 the latter species undoubtedly belong to Eneopterinae (Gorochoy, 1986).

### Geography of Aphonoidini

Area of this tribe is more local than that of Podoscirtini (only these tribes are presented in Old World). The Aphonoidini is known from the following regions: South China, southern Japan, Indochina including Malacca, Malayan Archipelago, Nicobar Islands near northern part of Sumatra, Australia, New Guinea, islands around New Guinea and between it and Samoa (Fig. XXX). True representatives of this tribe are not found in the other regions (even in India, Sri Lanka, Bangladesh, and Myanmar) [Eades & Otte (2008) included the Indian genus *Corixogryllus* Bol. in Aphonoidini, but it is possibly an aberrant member of Podoscirtini (Gorochoy, 2003)]. The absence of finds of Aphonoidini in Myanmar is probably connected with the weak studying of this country, but India and Sri Lanka are much more studied (Chopard, 1969), and this tribe may be really absent in the latter regions.

15 known genera of Aphonoidini may be assigned to the following groups of genera which are probably or possibly holophyletic: [1] *Aphonoides* generic group consisting of *Aphonoides* Chop., *Exomunda* Gor., *Zamunda* Gor., and *Furcimunda* Gor. (the first genus is widely distributed; the other genera are known from Malacca, Sumatra, and Borneo; all have the same type of ectoparameres in male genitalia and primitive structure of spermatophore); [2] *Mistshenkoana* generic group containing the widely distributed genus *Mistshenkoana* Gor., the genus *Dinomunda* Gor. from Malacca, and possibly *Gryllaphonus* Chop. from Fiji (these genera, maybe excepting the little known genus *Gryllaphonus*, have the long ampulla of sper-

matophore and primitive ectoparameres of male genitalia); [3] *Munda* generic group including the genus *Munda* Stål distributed from the Philippines and Java to New Guinea and Timor (its subgenera are very different and may be equally considered genera related to each other in the tegminal Sc provided with the branches practically parallel to the tegminal R); [4] *Protomunda* generic group consisting of *Protomunda* Gor. and *Brevimunda* Gor. (the first genus is presented in New Guinea and Sulawesi, and the second genus is known from northern Borneo only; their male genitalia and spermatophore are similar, but rather primitive, and holophyly of this group is not dependable); [5] *Unka* generic group with the genera *Unka* Otte et Alex. from Australia and *Pseudounka* Gor. from New Guinea (they are synapomorphic in the characteristic structure of male cerci); [6] *Deinutona* generic group including the New Guinean genera *Deinutona* Gor. and *Paputona* Gor. (their synapomorphies in the structure of male genitalia are probable, but not very dependable); [7] *Utona* generic group containing *Utona* Gor. and possibly *Umbulgaria* Otte et Alex. from Australia (this group is characterized by the comparatively short fore and middle legs; it is provisional as these genera are in need of additional study).

Distribution of these generic groups is shown in Fig. XXX. They are most numerous in New Guinea (6 groups) and Queensland (4 groups). 2 groups (*Aphonoides* generic group and *Mistshenkoana* generic group) are widely distributed: the first group, from Nicobar Islands and Ryukyu to Solomon Islands and southern Australia; the second group, from northern Sumatra and Ryukyu to Samoa and New Caledonia. 3 generic groups are known in Java and Borneo, but wide distribution of 2 the previous groups supposes the presence of 3 generic groups also in the Philippines, Sulawesi, and some islands situated between Java and New Guinea.

Such distribution of Aphonoidini allows me to propose a preliminary hypothesis about historical geography of this tribe. It is most probable that the origin and primary radiation of Aphonoidini, originally adapted to the life in tropical and warm subtropical forests, had place in New Guinea and Australia (at the past, these territories have been connected with each other by the terrestrial bridge and situated farther from Asia than now; Australia also had less arid climate, and Australian Aphonoidini were possibly distributed not only near sea). After the approach of these territories to Asia, representatives of some progressive generic groups (*Aphonoides* group, *Mistshenkoana* group, *Munda* group, *Protomunda* group) migrate to many islands of Malayan Archipelago and to Philippine Islands. 2 most progressive genera (*Aphonoides* and *Mistshenkoana*) reach even

Sumatra, Indochina, and Ryukyu (at the same period or early, they reach Solomon Islands), and in the new enormous equatorial territories (Borneo, Sumatra, Malacca), they form several new genera as a result of the quick secondary radiation (inevitable unevenness of this process leads to the presence of these new genera and their ancestral genera in the recent faunas). One of these ancestral genera (*Mistshenkoana*) reaches also Vanuatu, New Caledonia, Fiji, and Samoa. In different islands or groups of islands, the migrants form the additional centres of subgeneric and/or species radiation (in Samoa, for example, the both species of *Mistshenkoana* are lacking tympana; their lost is possibly an unique synapomorphy of these species). If the latter idea is suitable, the Fijian genus *Gryllaphonus* must be related to *Mistshenkoana*, or it must belong to another tribe.

This hypothesis on the historical geography of Aphonoidini logically follows from our recent knowledge of this tribe. However this knowledge is very incomplete, and the hypothesis must be changed, if in future some new facts will contradict it.

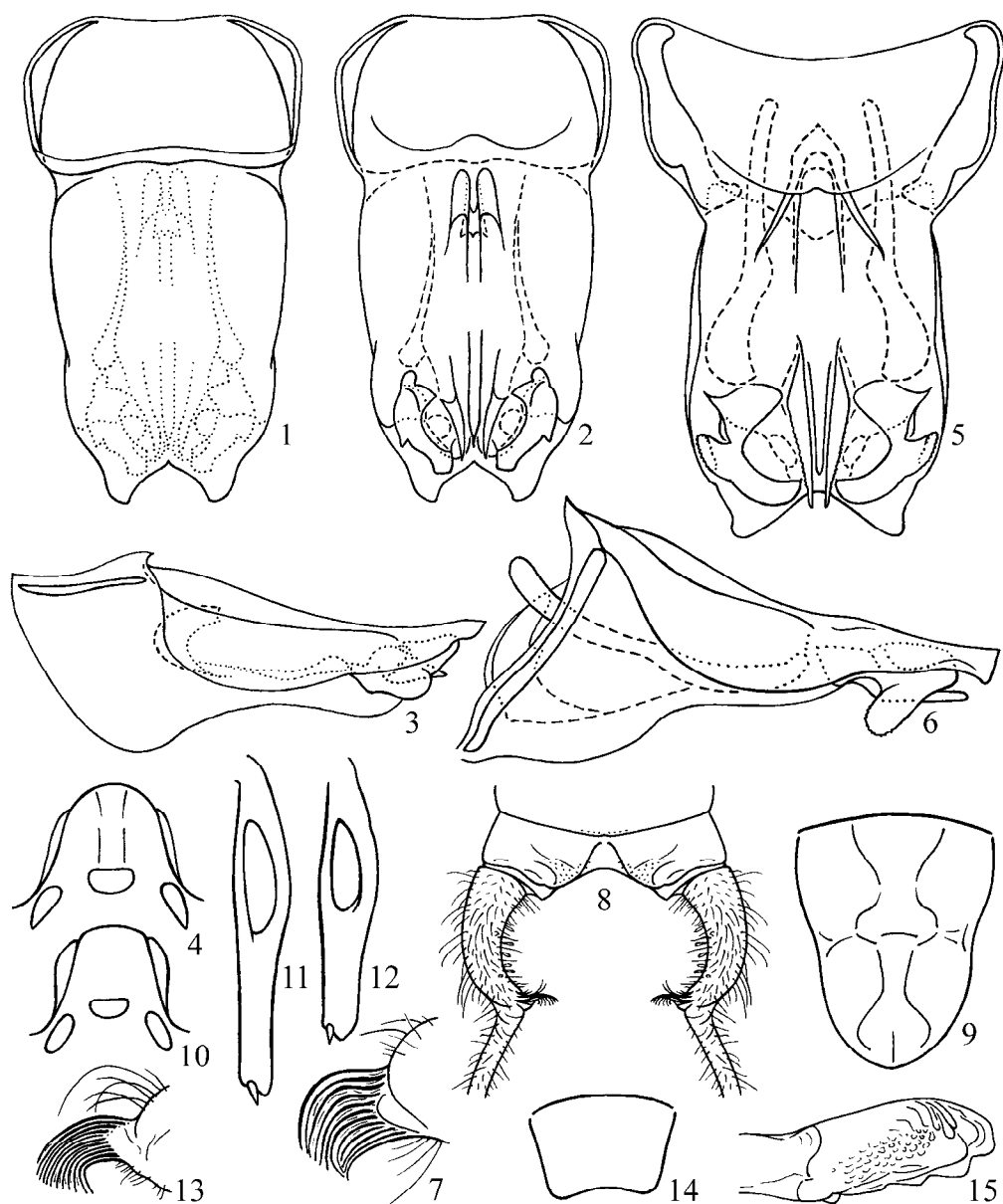
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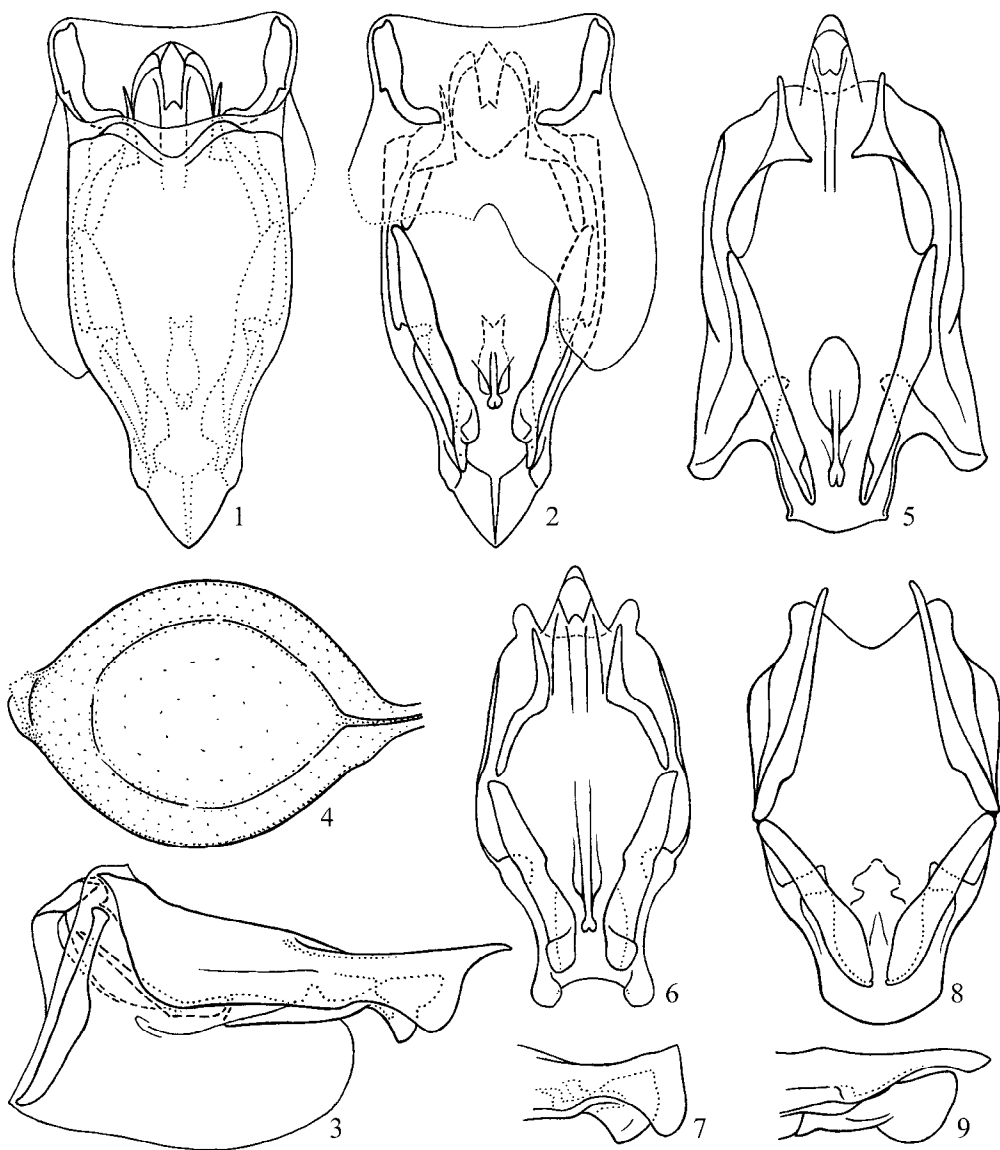
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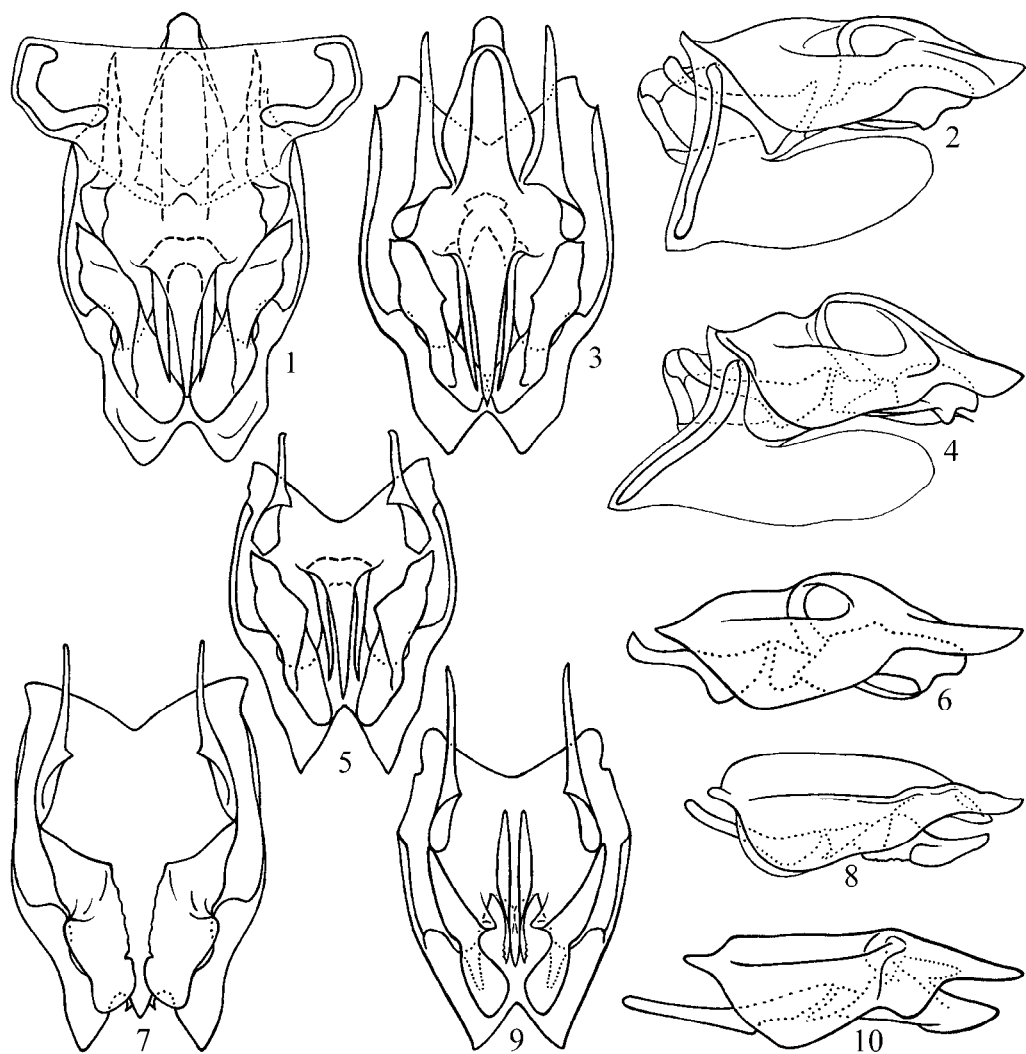
*Received 28 September 2008, accepted 2 October 2008.*



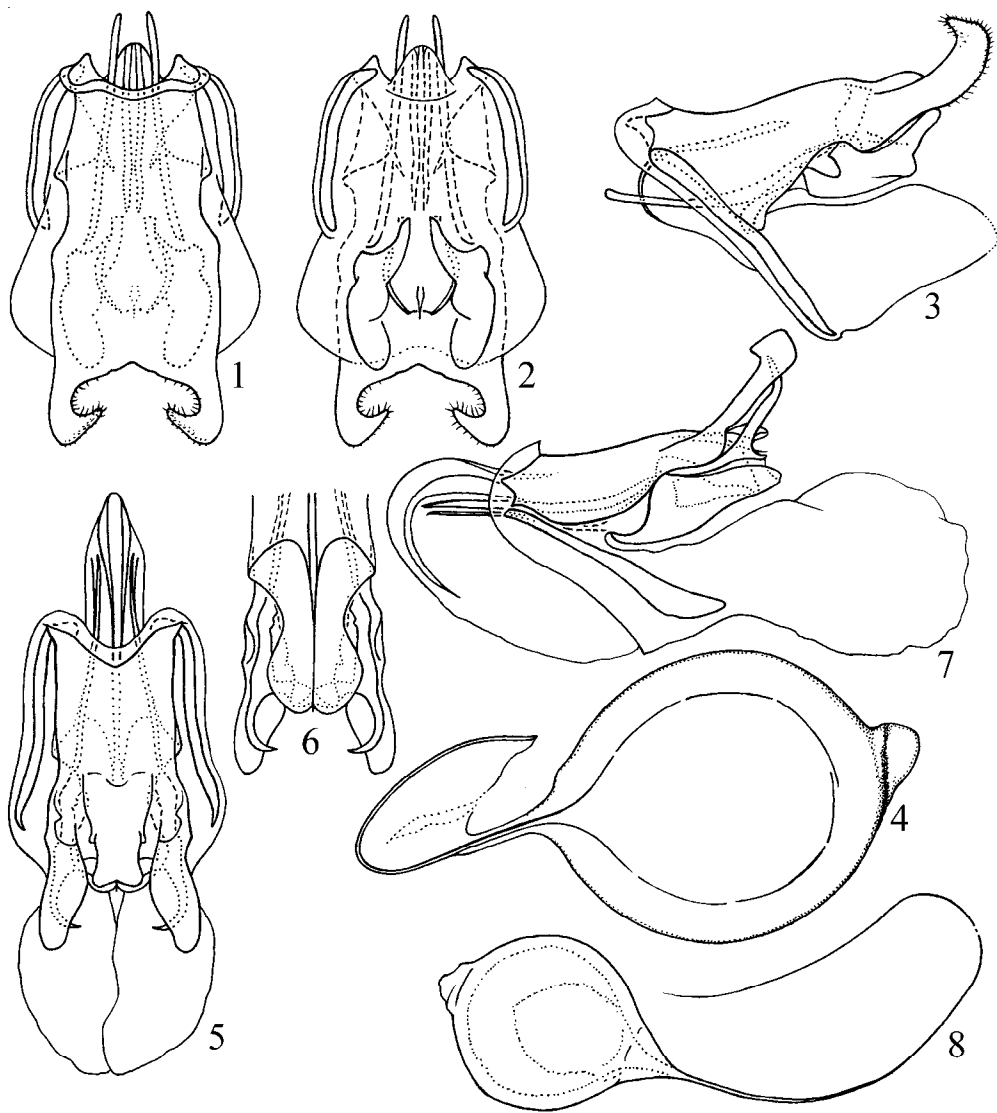
**Figs I (1-15).** *Pseudounka*. 1-4, *P. manokwari*; 5-9, *P. jayapurae*; 10, *P. pallens*; 11, *P. silex*; 12, *P. grisea* (paratype); 13, *P. bicornis*; 14, 15, *P. buergersi*. Male genitalia from above (1), from below (2, 5), and from side (3, 6); rostrum with ocelli of male from above (4, 10); bundle of setae on inner tubercle of male cerci from behind (7, 13); anal plate with cercal proximal halves of male (8); male genital plate from below (9); inner surface of male fore tibia (11, 12); female genital plate from below (14); apex of ovipositor from side (15).



**Figs II (1-9).** *Pseudounka*, male. **1-4**, *P. yapeni*; **5**, *P. bicornis*; **6, 7**, *P. pallens*; **8, 9**, *P. silex*. Genitalia from above (1), from below (2, without left valva; 5, 6, without valvae and rami; 8, same, but additionally without mold of spermatophore attachment plate and possibly guiding rod), and from side (3; 7, 9, distal part only); ampulla of spermatophore from side (4).

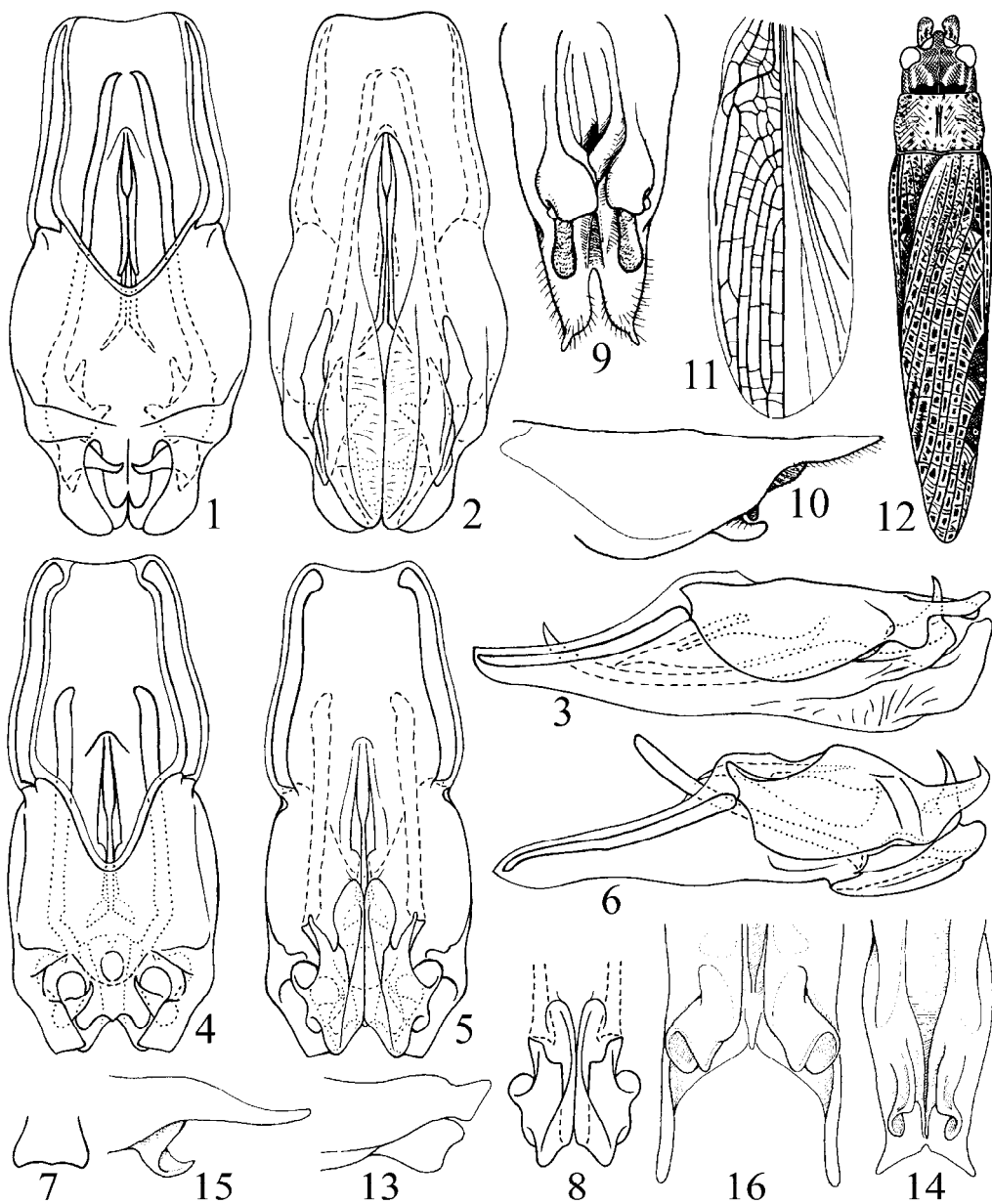


**Figs III (1-10).** *Pseudounka*, male. 1, 2, *P. grisea* (holotype); 3, 4, *P. buergersi* (holotype); 5, 6, *P. venosa*; 7, 8, *P. modesta*; 9, 10, *P. ulla*. Genitalia from below (1, without valvae; 3, without valvae and rami; 5, 7, 9, same, but additionally without mold of spermatophore attachment plate) and from side (2; 4; 6, 8, 10, without valvae, rami and mold of spermatophore attachment plate).

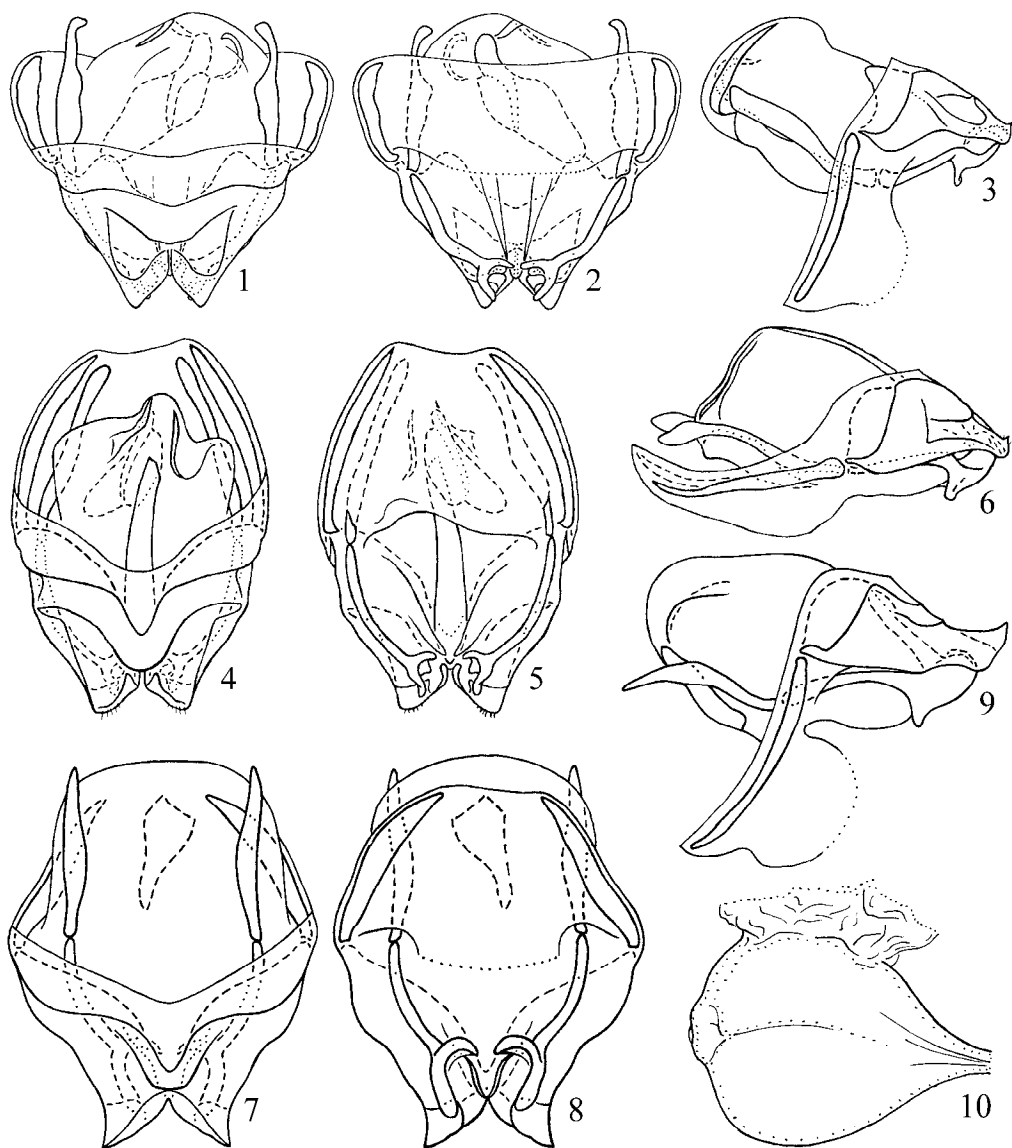


**Figs IV (1-8).** *Paputona*, male. **1-4**, *P. occidentalis* (holotype); **5-8**, *P. cheesmanae* (holotype). Genitalia from above (1, 5), from below (2, 6, without proximal half), and from side (3, 7); spermatophore from side (4, 8).

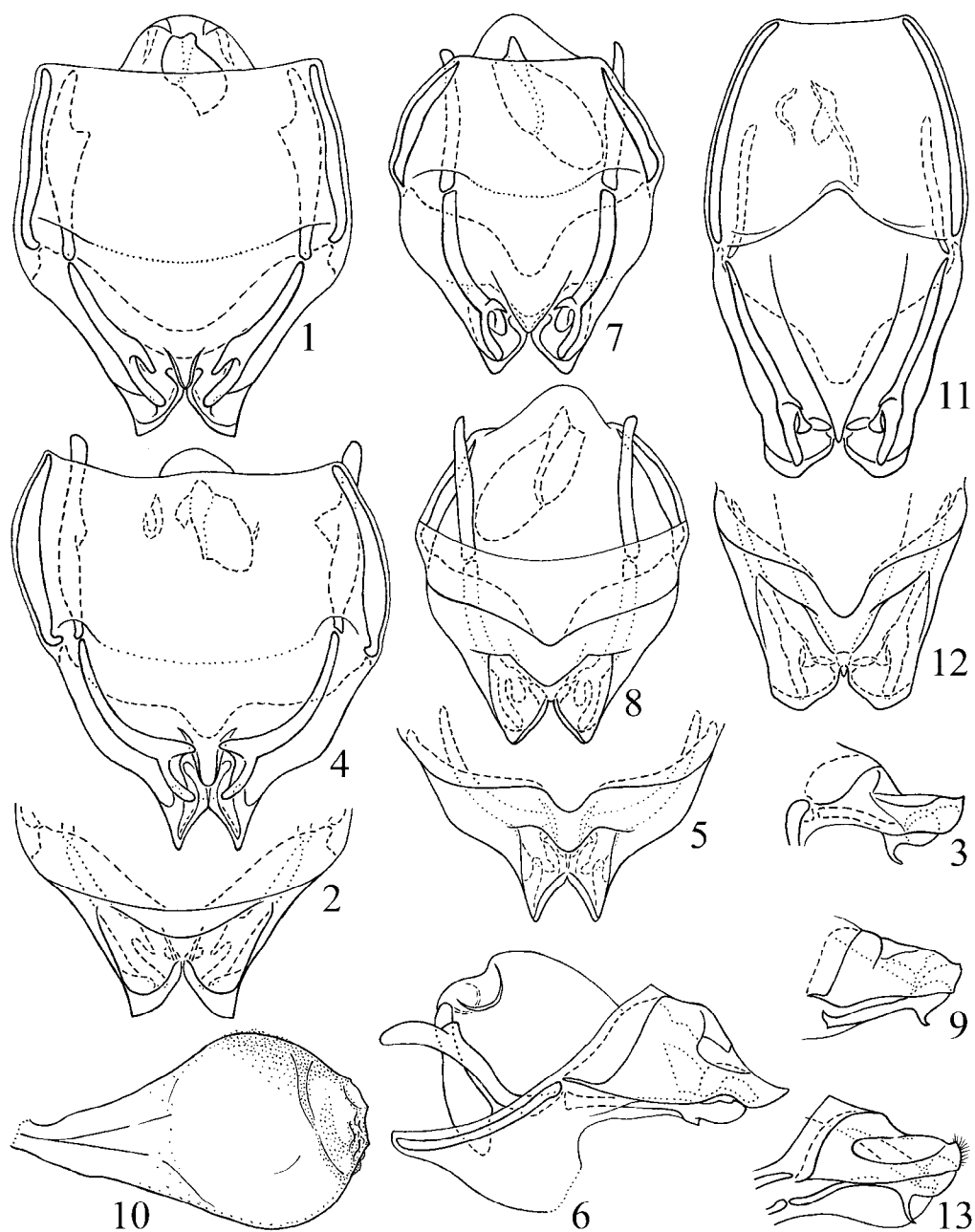




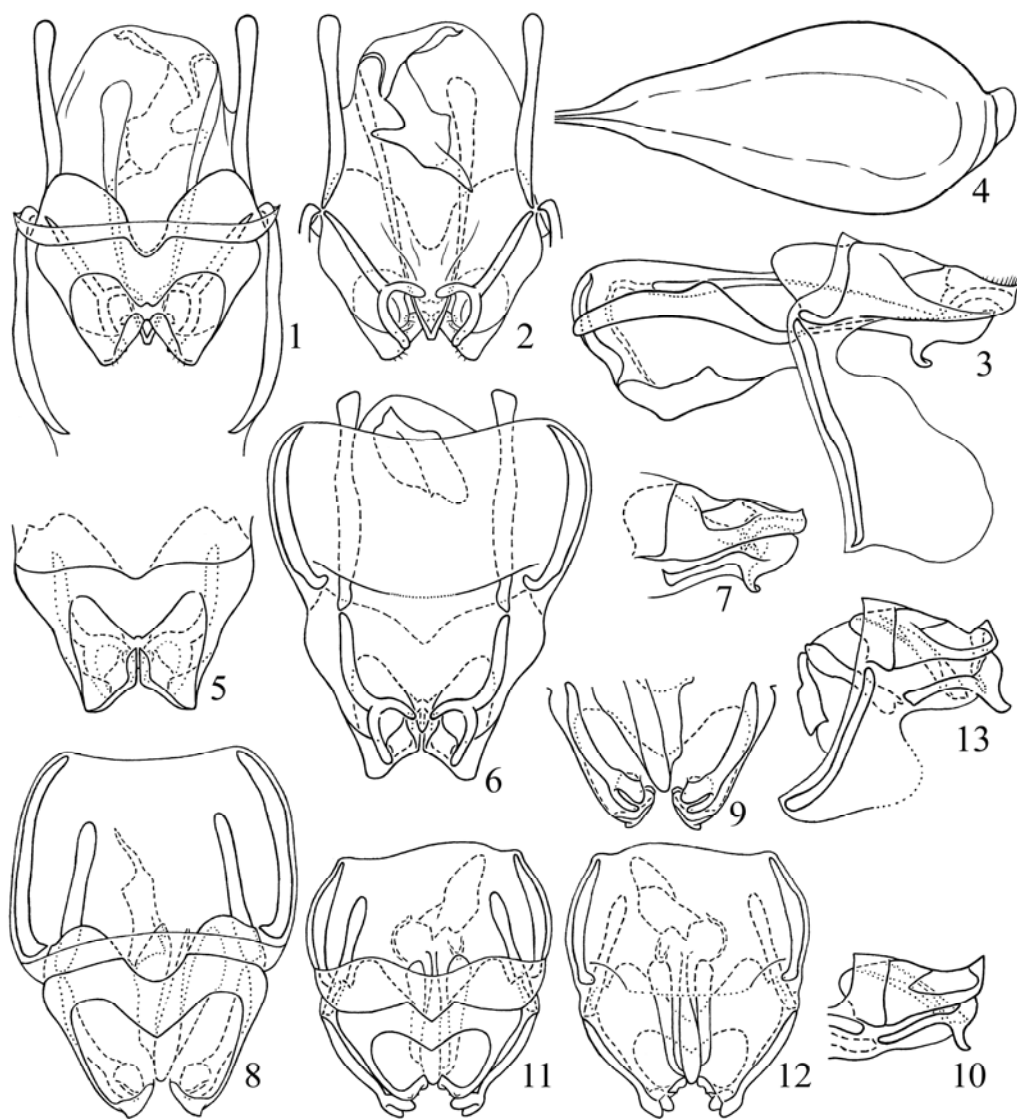
**Figs V (1-16).** 1-3, *Deinutona major*; 4-8, *D. minor* (4-6, holotype); 9-11, *Unka boreana* Otte et Alex.; 12, *Utona longicauda* Gor.; 13, 14, *U. obscura* (Chop.); 15, 16, *Umbulgaria ita* Otte et Alex. Male genitalia from above (1, 4), from below (2, 5), and from side (3, 6); hind median lobe of epiphallus from above (7); ectoparameres from below (8); distal half (9, 10, 14) and distal third (13, 15, 16) of male genitalia from below (9, 14, 16) and from side (10, 13, 15) (Otte, Alexander, 1983); male tegmen (11) (Otte, Alexander, 1983); head, pronotum and dorsal tegminal part of female from above (12) (Gorochov, 1986).



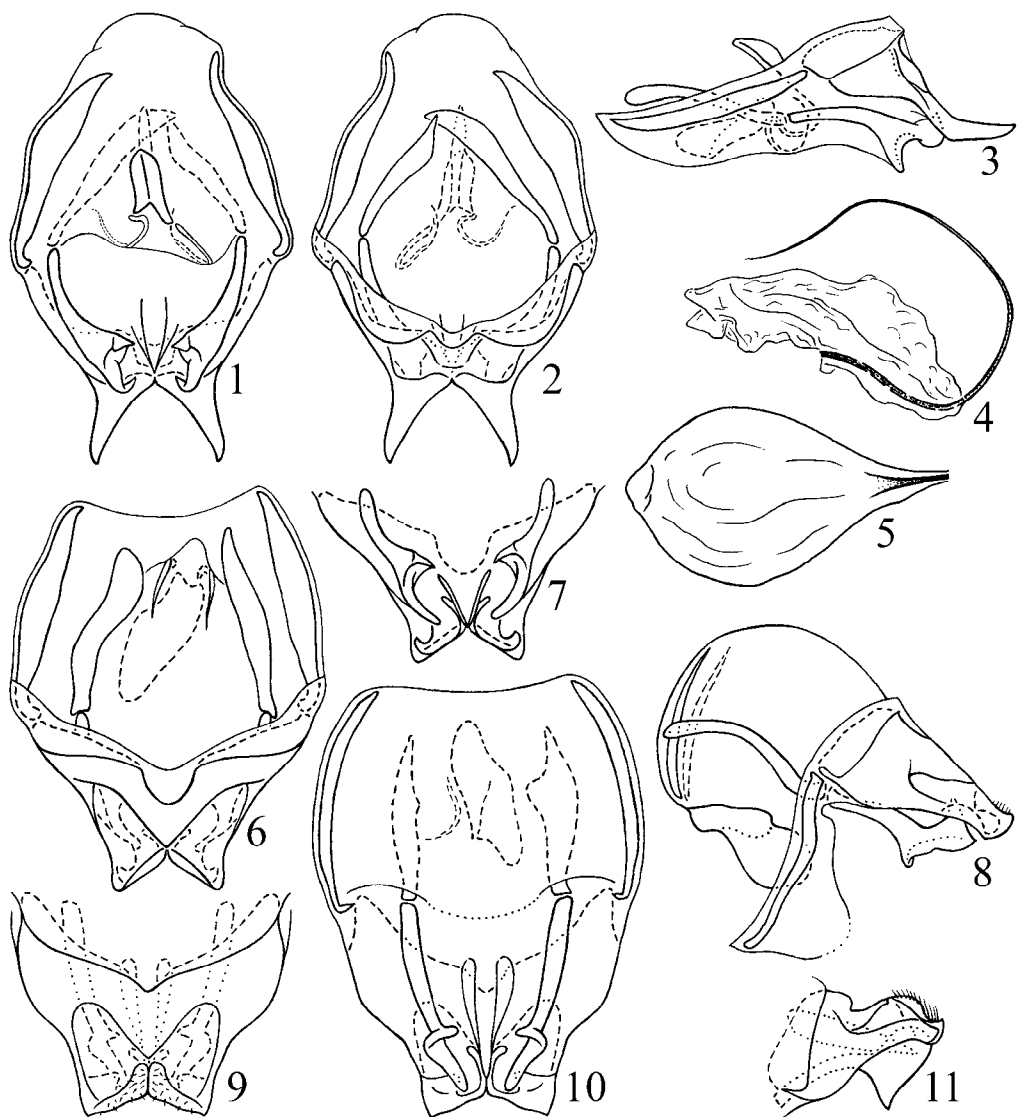
**Figs VI (1-10).** *Aphonoides*, male. **1-3,** *A. vulgatus* (holotype); **4-6,** *A. papua*; **7-10,** *A. lunga*. Genitalia from above (1, 4, 7), from below (2, 5, 8), and from side (3, 6, 9); ampulla of spermatophore with traces of spermatophylax from side (10).



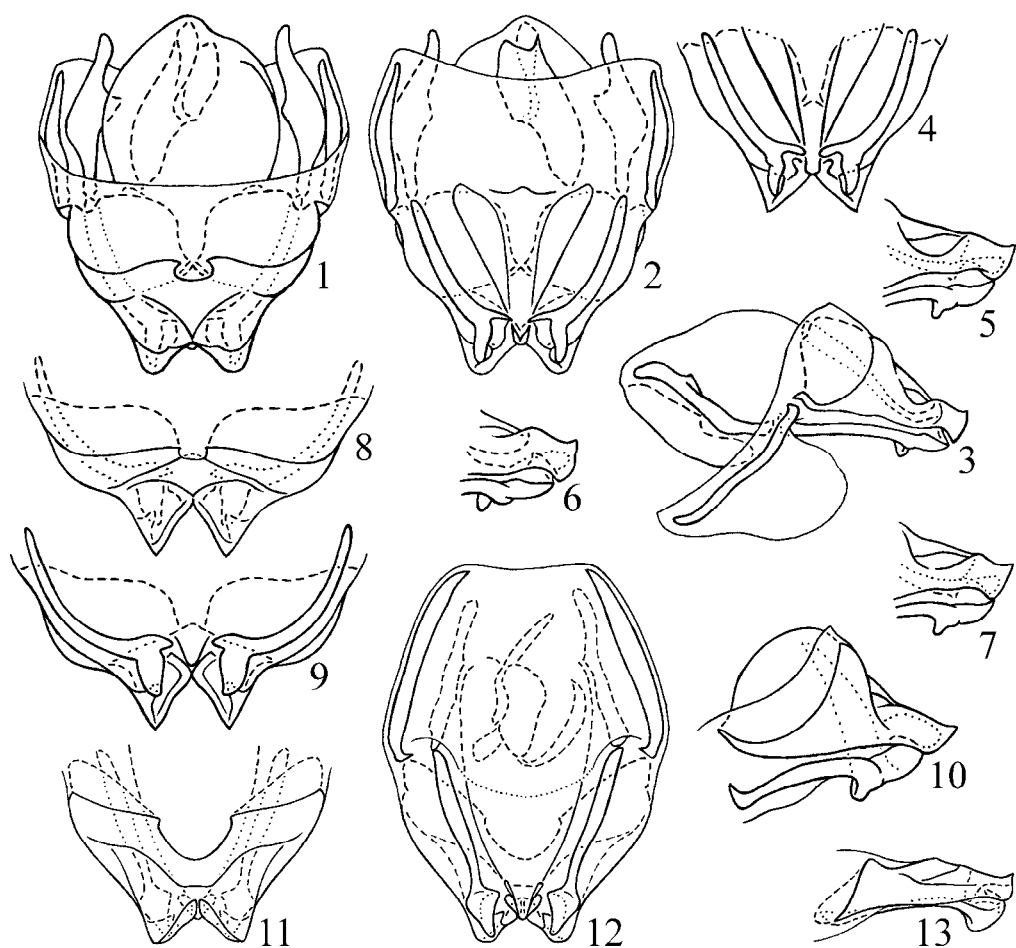
**Figs VII (1-13).** *Aphonoides*, male. 1-3, *A. waigeo*; 4-6, *A. sepik*; 7-10, *A. orrori*; 11-13, *A. okapa*. Genitalia from below (1, 4, 7, 11), from above (8), and from side (6); their distal half from above (2, 5, 12) and from side (3, 9, 13); ampulla of spermatophore from side (10).



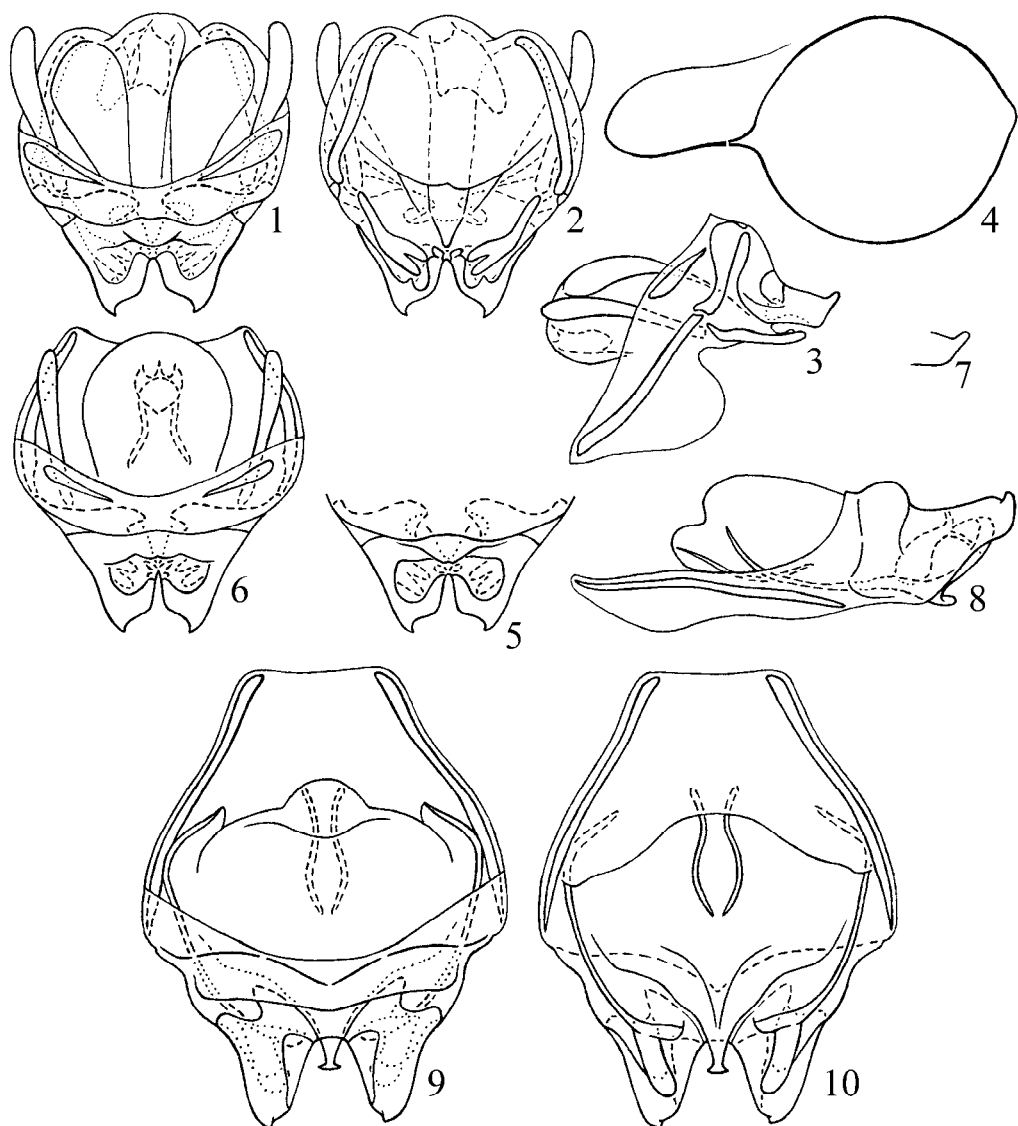
**Figs VIII (1-13).** *Aphonoides*, male. 1-4, *A. nok* (holotype); 5-7, *A. flexus*; 8-13, *A. frons* (8-10, holotype). Genitalia from above (1, 8, 11), from below (2, without rami and valvae; 6; 12), and from side (3, 13); their distal half from above (5), from side (7, 10), and from below (9); ampulla of spermatophore from side (4).



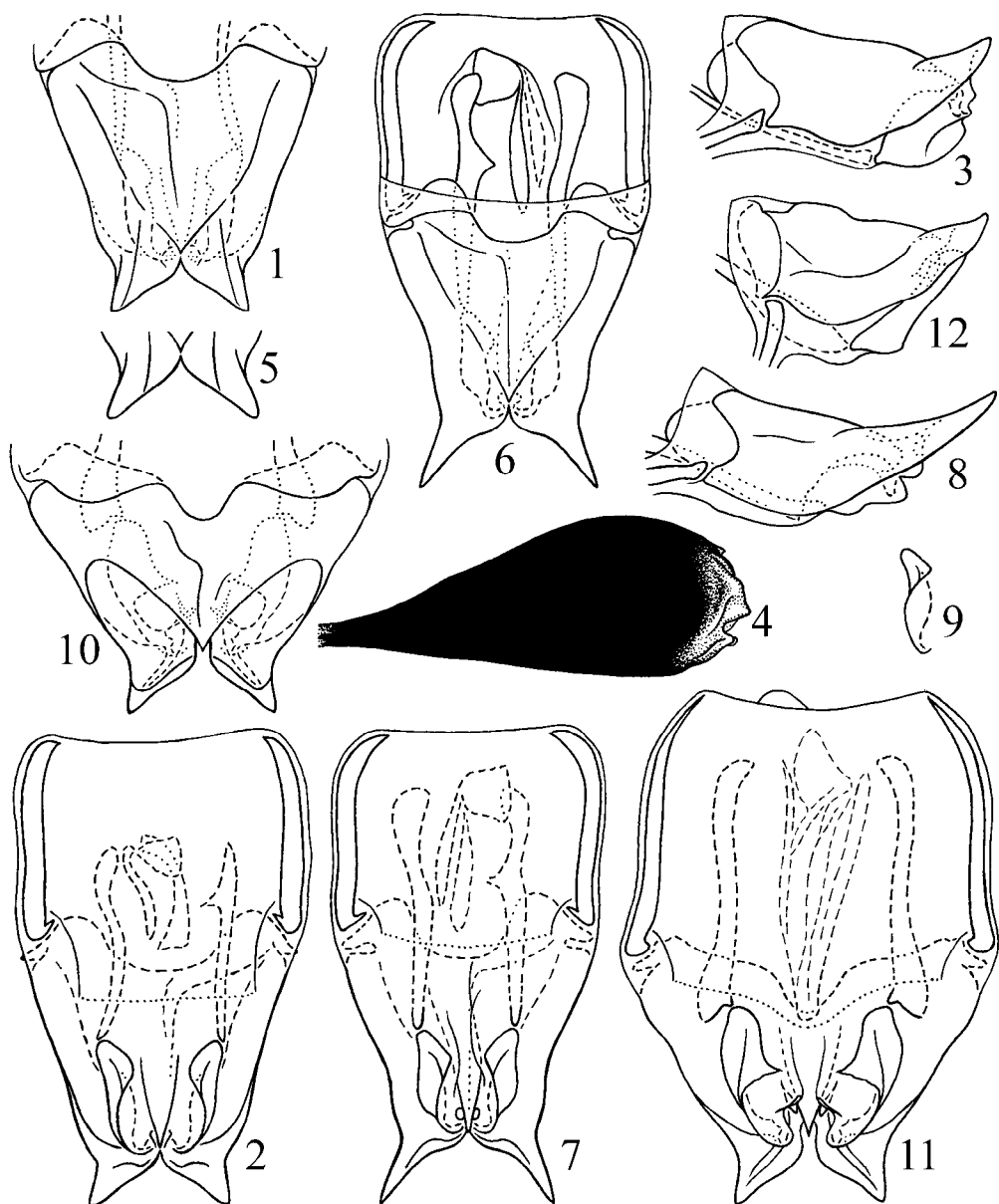
**Figs IX (1-11).** *Aphonoides*, male. **1-5,** *A. cuspidatus*; **6-8,** *A. curtus*; **9-11,** *A. binderi* Otte et Alex. (Australia: Pearl Beach). Genitalia from below (1, 10), from above (2, 6), and from side (3, 8); their distal half from below (7), from above (9), and from side (11); spermatophore from side: tube with spermatophylax (4), ampulla (5).



**Figs X (1-13).** *Aphonoides*, male. **1-7**, *A. amplus* (1-3, holotype; 4, 5, paratype from "Malu"; 6, paratype from "Mäanderberg"; 7, paratype from "Aprilfluss"); **8-10**, *A. paramplus*; **11-13**, *A. simplex* (holotype). Genitalia from above (1), from below (2, 12), and from side (3); their distal half from below (4, 9), from above (8, 11), and from side (10, 13); distal part of genitalia from side (5-7).

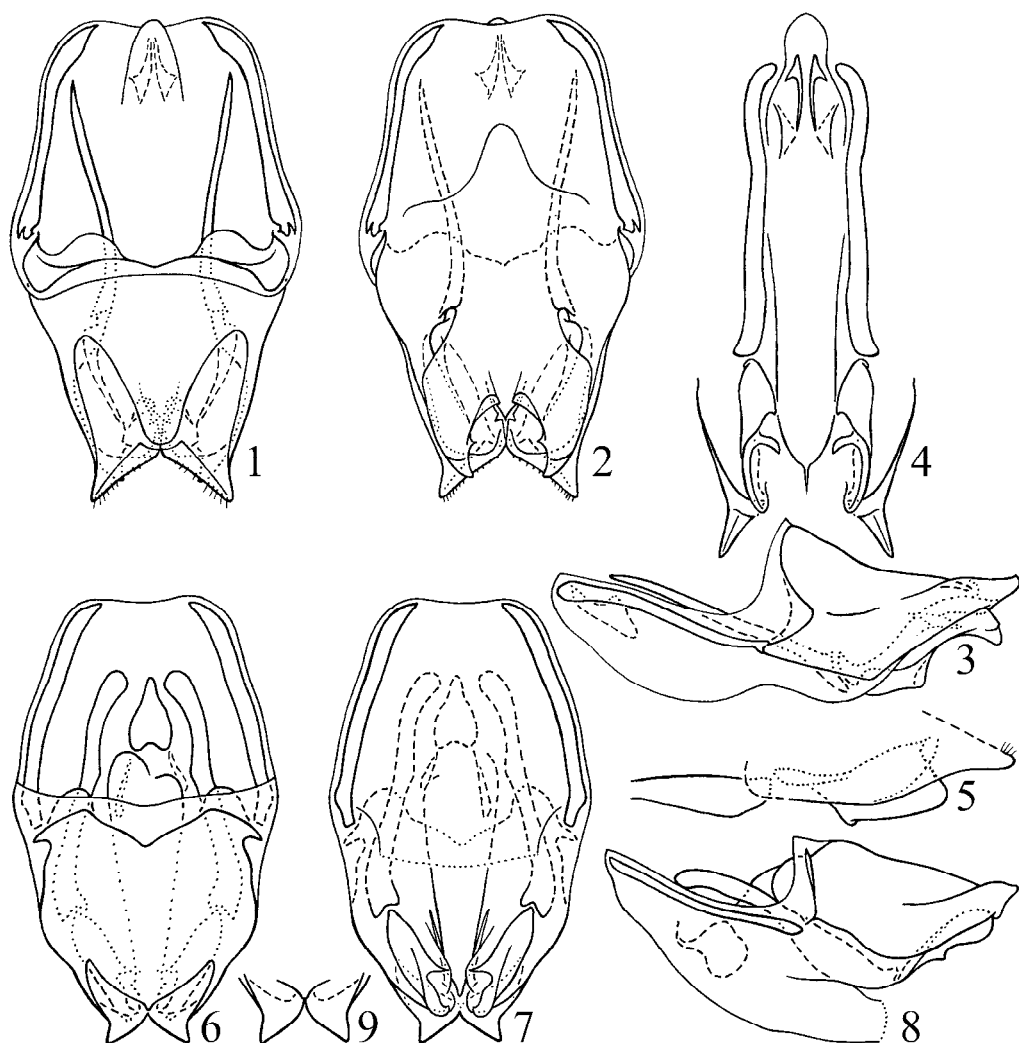


**Figs XI (1-10).** *Aphonoides*, male. **1-5,** *A. bituberculatus* (1-4, holotype; 5, paratype from New Guinea); **6, 7,** *A. excavatus*; **8-10,** *A. emeljanovi*. Genitalia from above (1, 6, 9), from below (2, 10), and from side (3, 8); spermatophore from side (4); distal half of genitalia from above (5); distal part of hind epiphallal lobes from side (7).

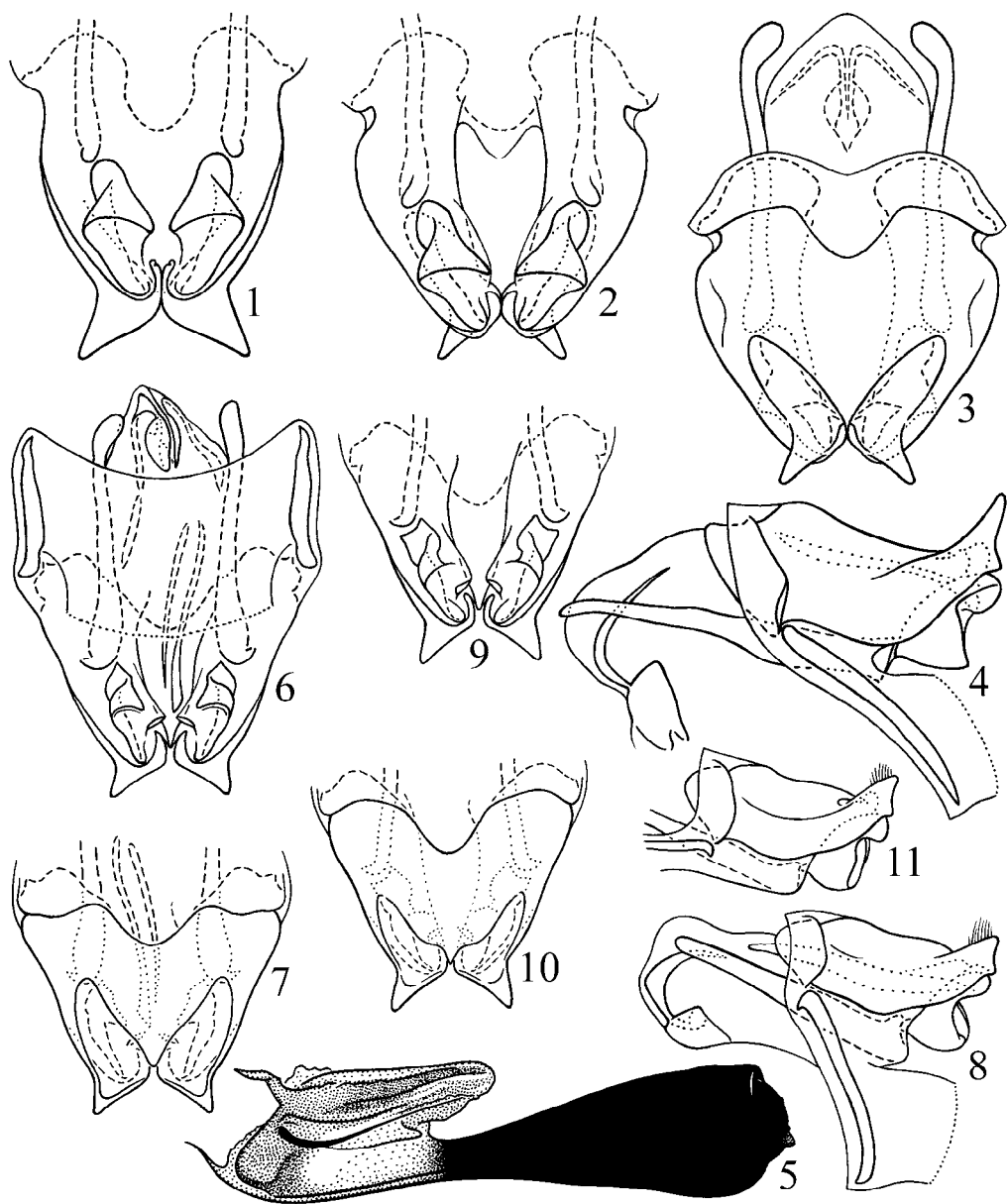


**Figs XII (1-12).** *Mistshenkoana*, male. 1-4, *M. asymmetrica*; 5, *M. decora*; 6-9, *M. longa* (6-8, holotype); 10-12, *M. lata*. Genitalia (2, 6, 7, 11), its distal half (1, 3, 8, 10, 12), and its apical part (5) from above (1, 5, 6, 10), from below (2, 7, 11), and from side (3, 8, 12); ampulla of spermatophore from side (4); right ectoparamere from below (9).

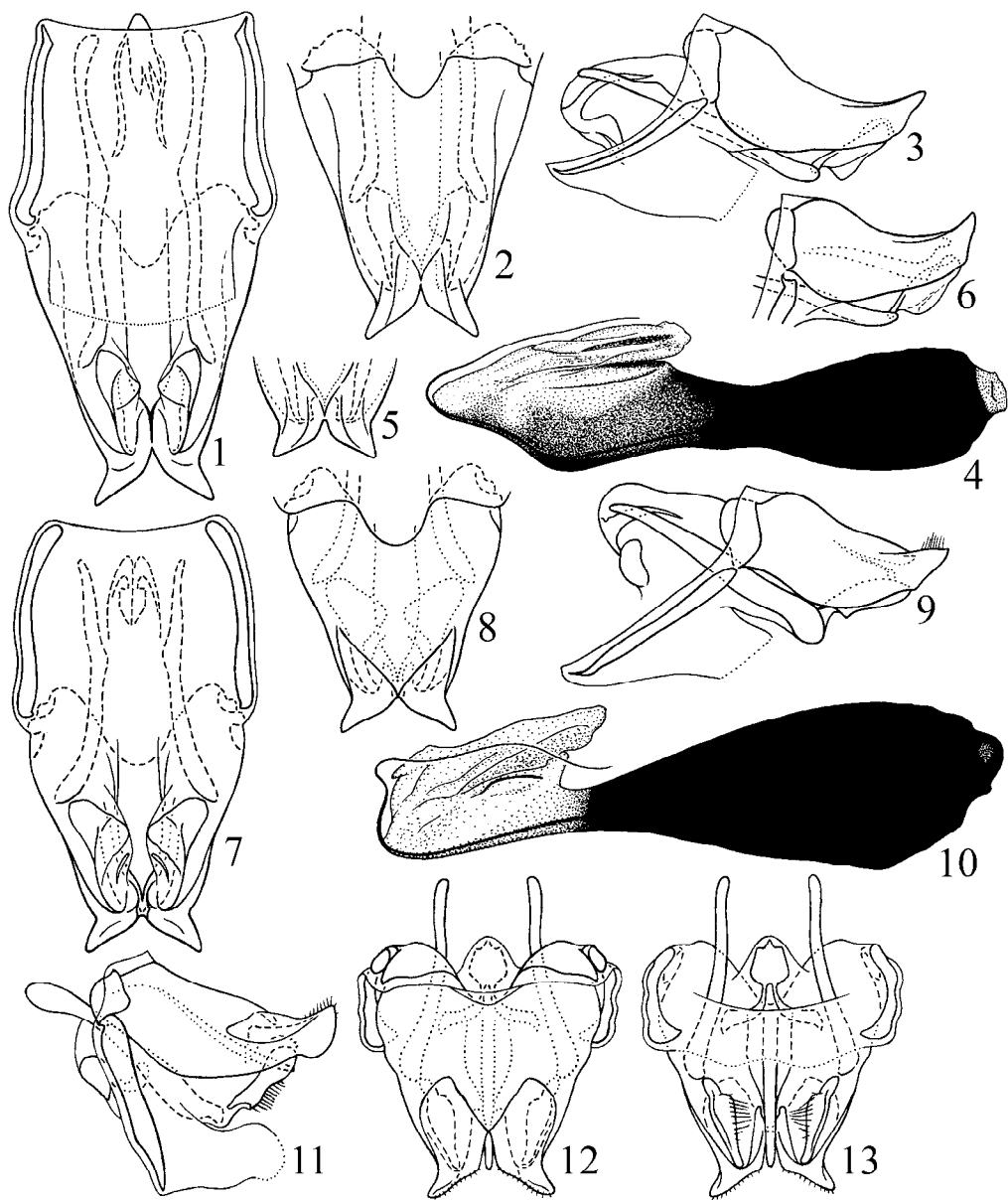




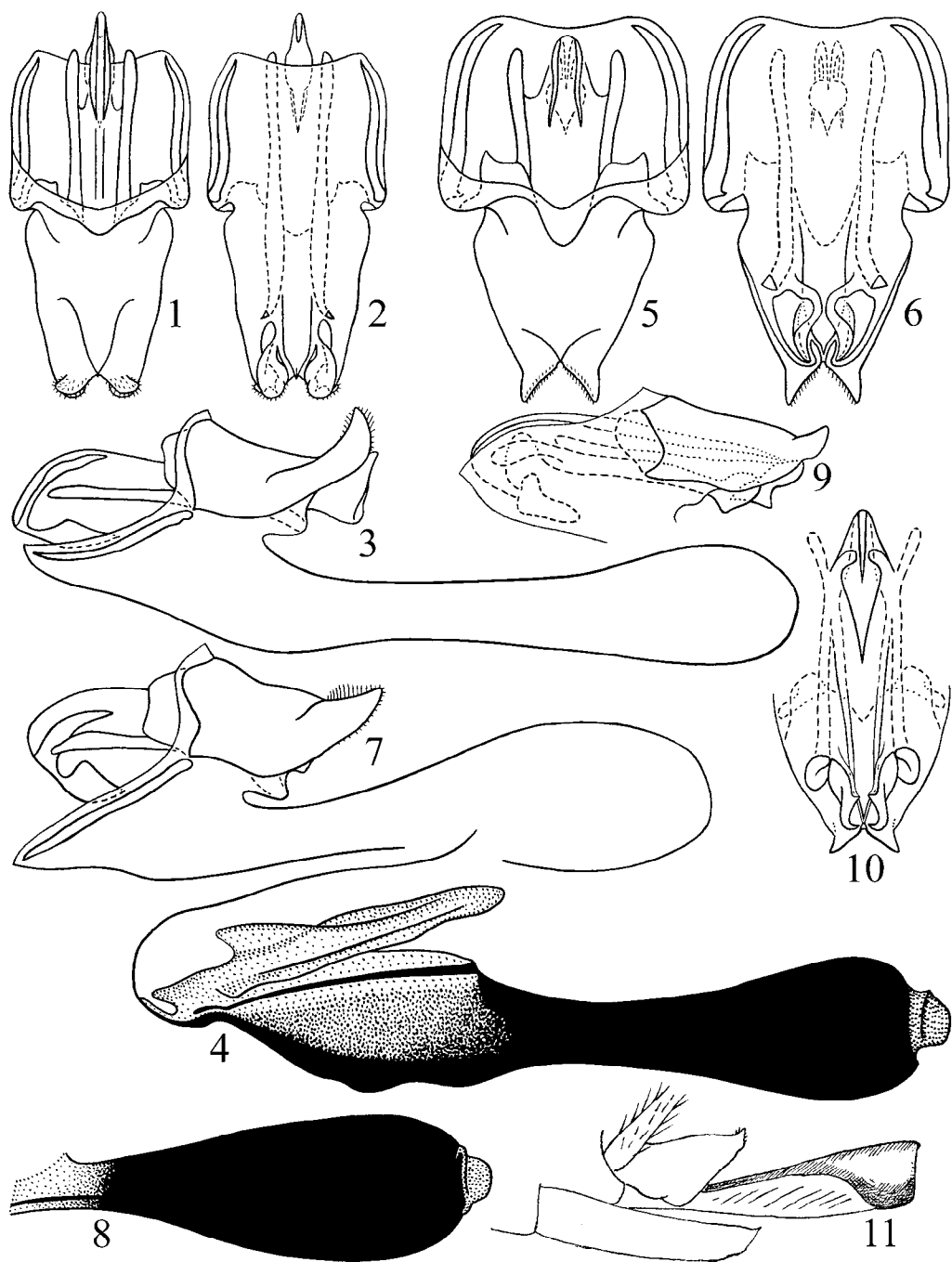
**Figs XIII (1-9).** *Mistshenkoana*, male. **1-3,** *M. symmetrica* (holotype); **4, 5,** *M. polyphemus*; **6-9,** *M. ralum*. Genitalia from above (1, 6), from below (2, 7), and from side (3, 8); ectoparameres, guiding rod, and endoparameres with parts of both epiphallus and spermatophore sac from below (4); ectoparameres with parts of both epiphallus and endoparameres from side (some missing parts of epiphallus tentatively pictured by interrupted line) (5); apical part of epiphallus from above and slightly in front (9).



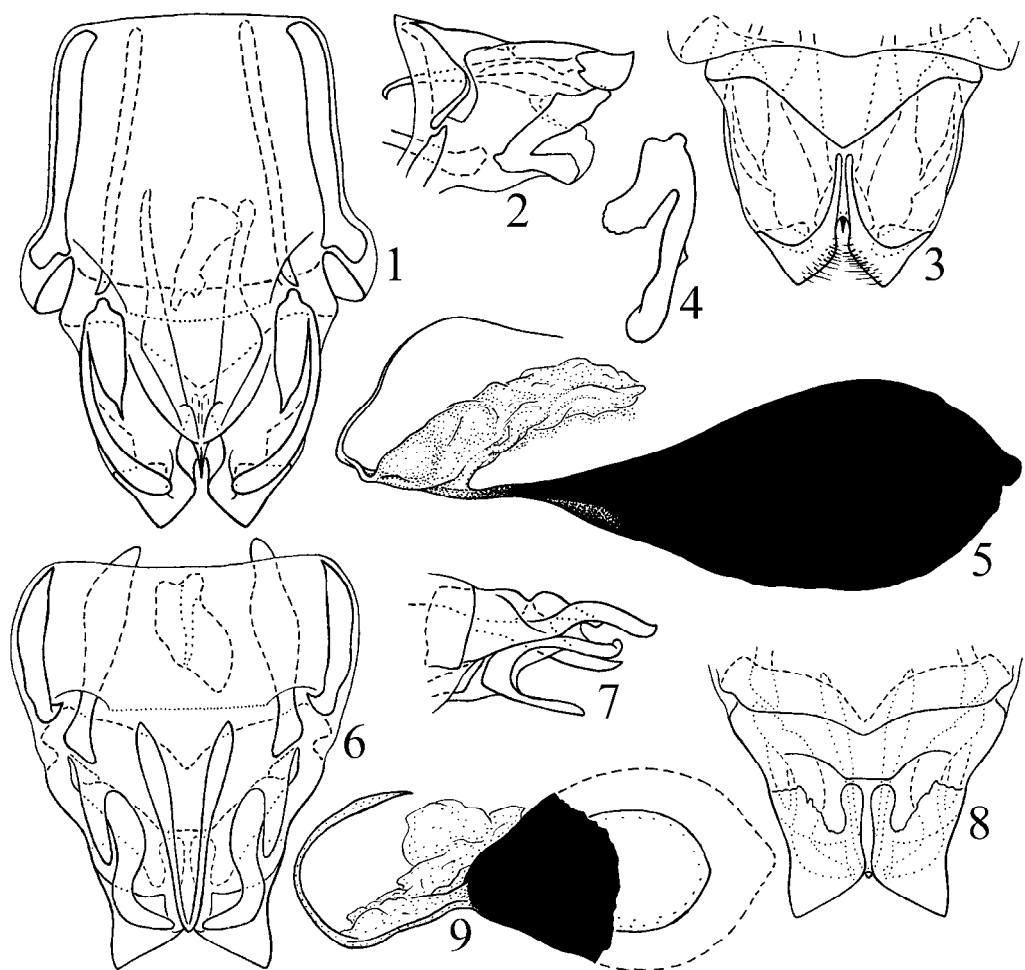
**Figs XIV (1-11).** *Mistshenkoana*, male. 1, *M. solomonica*; 2-5, *M. pileata*; 6-8, *M. kolobagara*; 9-11, *M. rennell*. Genitalia from above and slightly behind (3), from side (4, 8), and from below (6); their distal half from below (1, 9), from below and slightly in front (2), from above (7, 10), and from side (11); spermatophore from side (5).



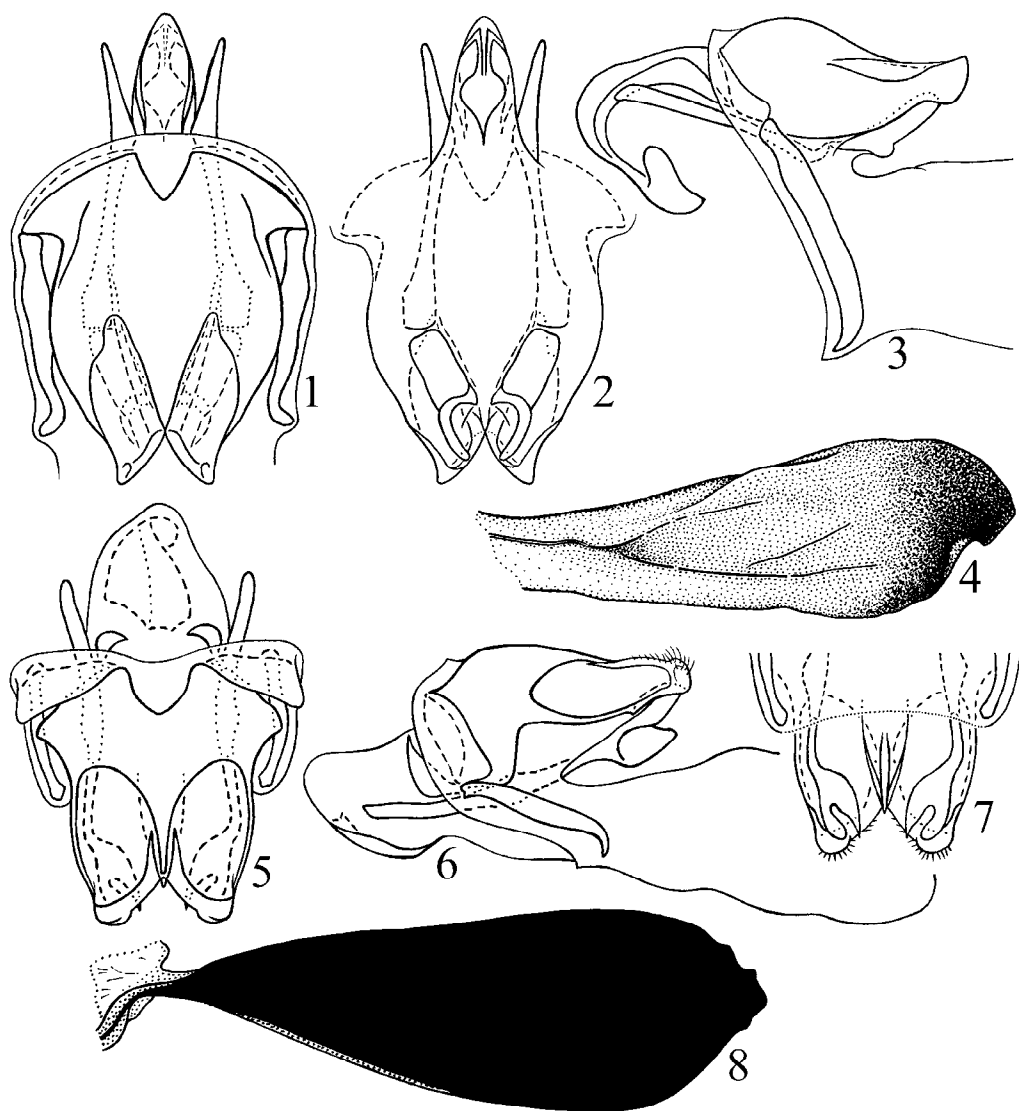
**Figs XV (1-13).** *Mistshenkoana*, male. 1-4, *M. malakula* (holotype); 5, 6, *M. erromango*; 7-10, *M. anatom*; 11-13, *M.? ounua*. Genitalia from below (1, 7, 13), from side (3, 9, 11), and from above (12); their distal half (2, 6, 8) and apical part (5) from above (2, 5, 8) and from side (6); spermatophore from side (4, 10).



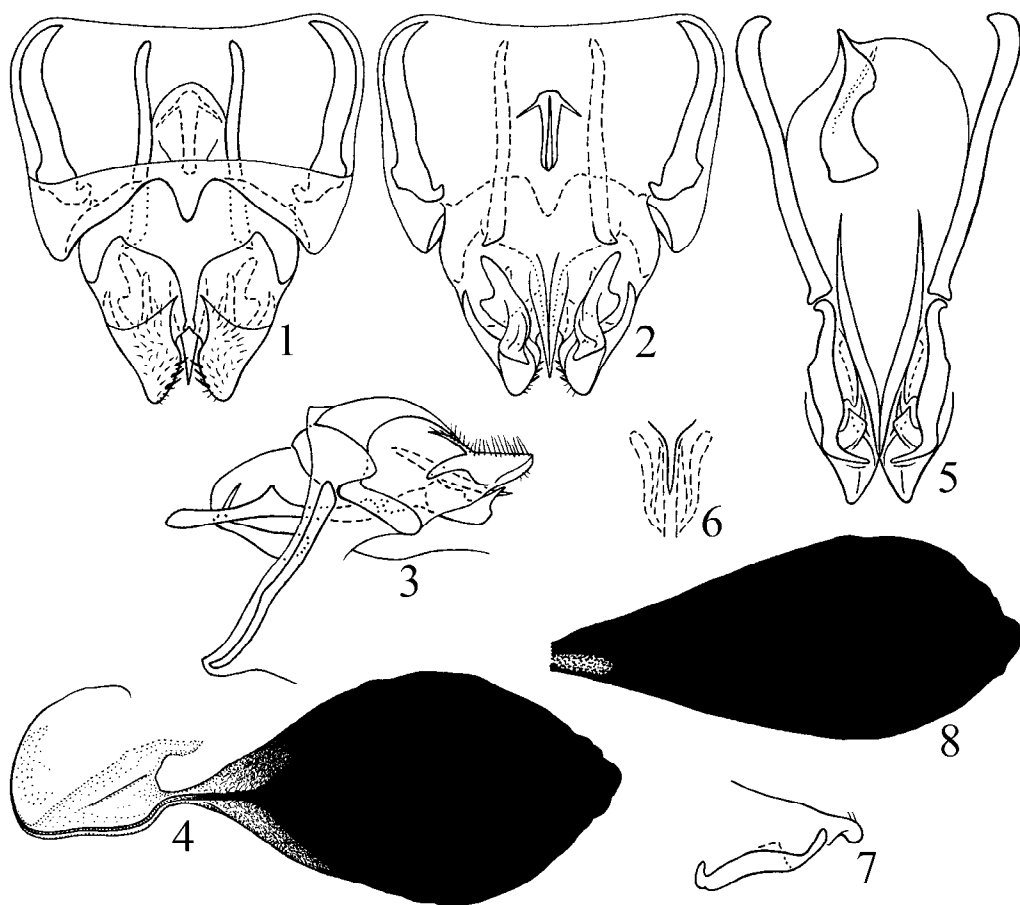
**Figs XVI (1-11).** *Mistshenkoana*, male (1-8, after Gorochov, 1990; 11, after Chopard, 1929). **1-4.** *M. fijiensis* Gor. (holotype); **5-8.** *M. sharovi* Gor. (holotype); **9, 10.** *M. unicolor* (Walk.) (lectotype); **11.** *M. surda* (Chop.) (syntype). Genitalia from above (1, 5), from below (2, 6, 10), and from side (3, 7, 9); spermatophore (4) and its ampulla with neck (8) from side; abdominal apex without both its upper part and distal half of cerci (11).



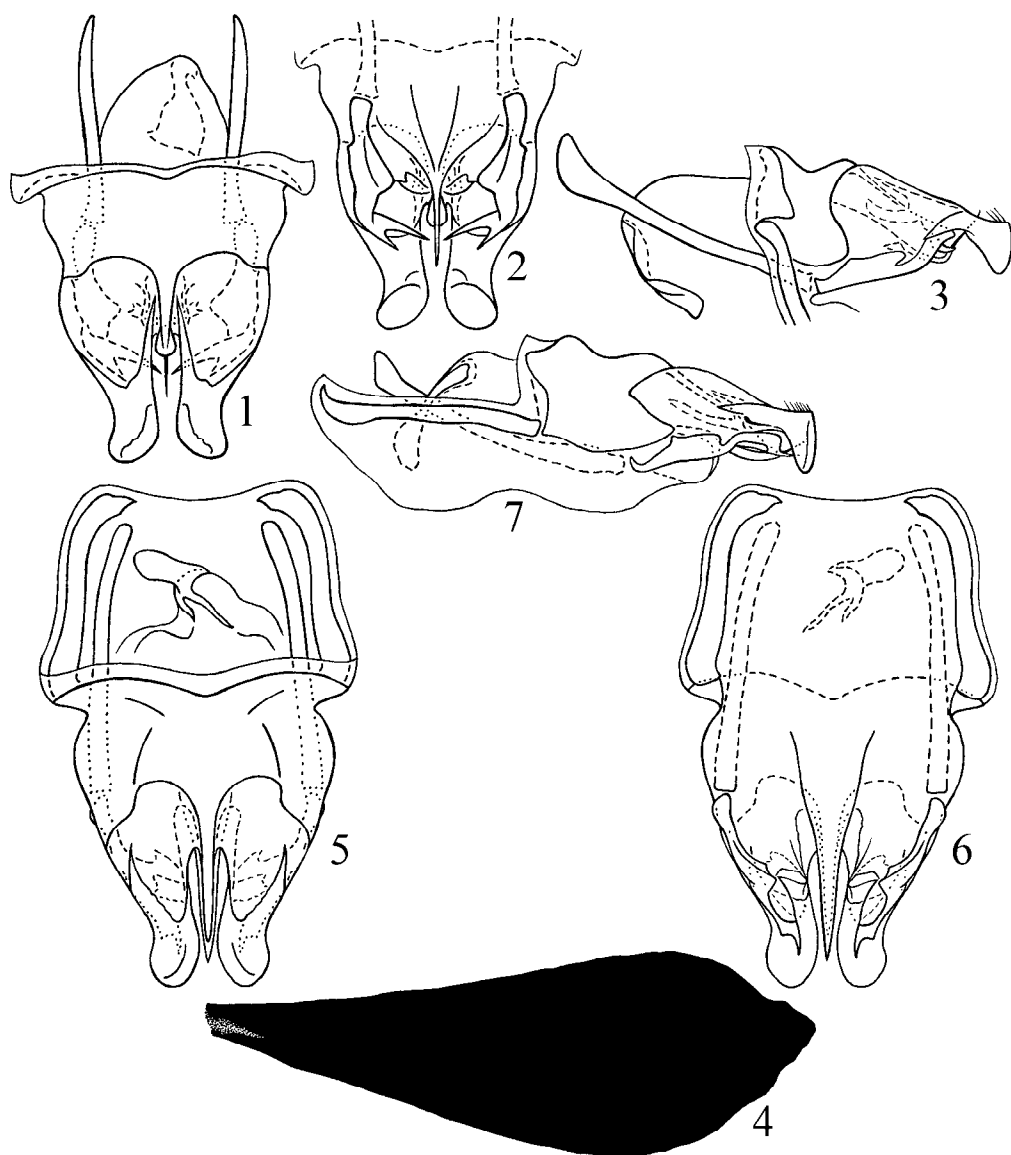
**Figs XVII (1-9).** *Protomunda*, male. **1-5, *P. cryptica*; 6-9, *P. imitatoria*.** Genitalia from below (1, 6); their distal half from side (2, 7) and from above (3, 8); sclerite of left ectoparamere partly from below / partly from side (4); spermatophore from side (5, 9).



**Figs XVIII (1-8).** *Munda*, male. 1-4, *M. bella*; 5-8, *M. basimaculata* Chop. Genitalia from above (1, 5), from below (2, 7, without proximal half and valvae), and from side (3, 6); ampulla of spermatophore from side (4, 8).

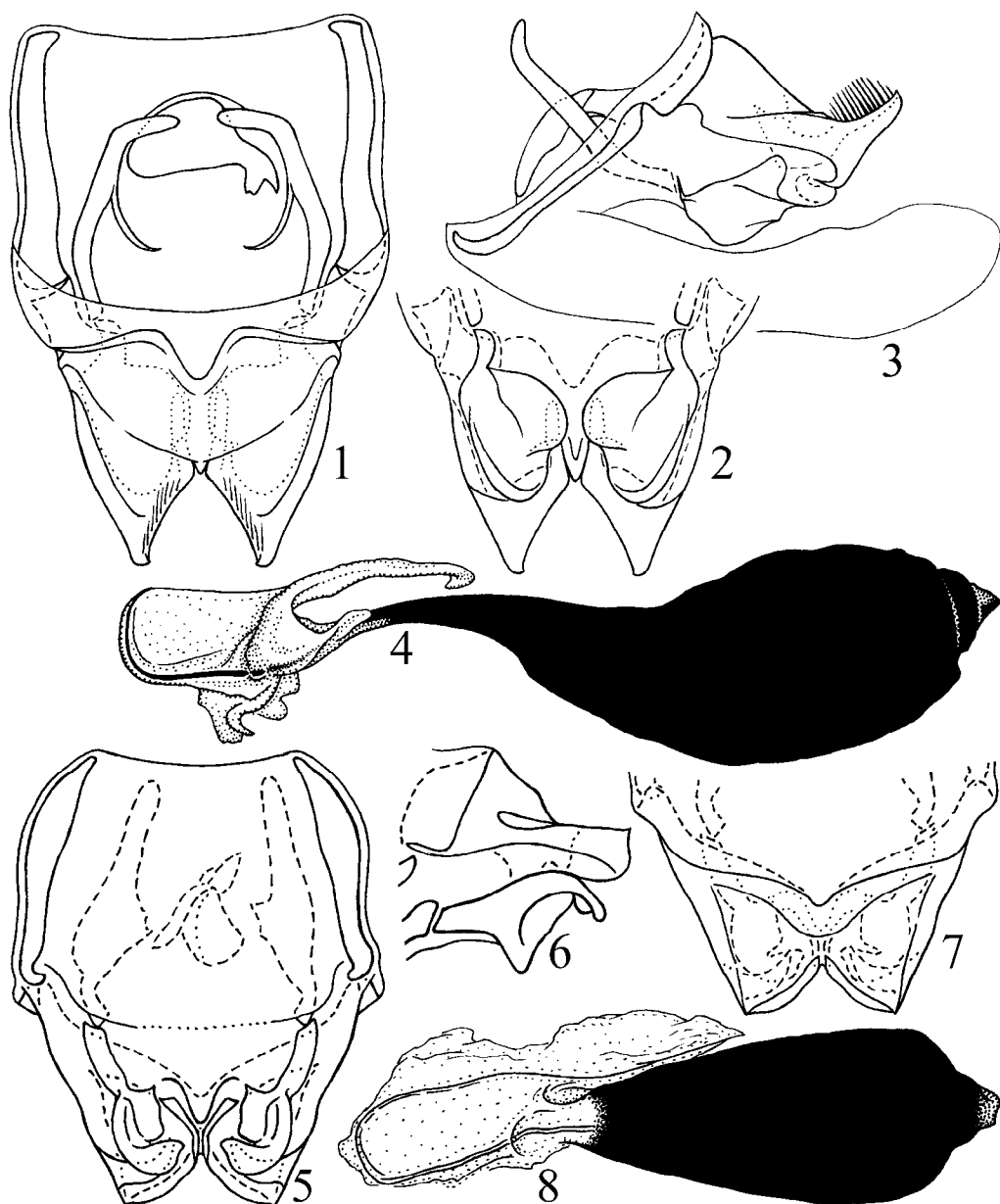


**Figs XIX (1-8).** *Munda*, male. 1-4, *M. melanocephala* Chop.; 5-8, *M. punctata* Chop. Genitalia from above (1), from below (2, without valvae; 5, valvae, rami, and proximal part of epiphallus missing), and from side (3); spermatophore (4) and its ampulla (8) from side; distal median part of proximal sclerotized area of epiphallus from above (6); distal half of epiphallus with ectoparameres from side (7).



**Figs XX (1-7).** *Munda*, male. 1-4, *M. simulata* (holotype); 5-7, *M. quadrimaculata* Chop. Genitalia from above (1, 5), from below (2, without proximal half; 6, without valvae), and from side (3, 7); ampulla of spermatophore from side (4).





**Figs XXI (1-8).** *Munda*, male. 1-4, *M. excellentis* (holotype); 5-8, *M. elegantis*. Genitalia from above (1), from side (3), and from below (5); their distal half from below (2), from side (6), and from above (7); spermatophore from side (4, 8).



**Figs XXII (1-11).** Photographs of body parts, female. **1-5, *Unka? tribulatio***; **6-11, *Aphonoides? morobe***. Head in front (1, 6); head, pronotum, and fore legs from above (2, 7), from side (3, 8), and partly from side / partly from above (9); tegmina from above (4) and from side (5); tegmina and some legs from above (10) and from side (11).



**Figs XXIII (1-10).** Photographs of body parts. **1-4**, *Aphonoides bituberculatus*, male (1-3, holotype; 4, paratype from New Guinea); **5-10**, *A. excavatus* (5-7, male; 8-10, female). Head in front (1, 4, 5, 8); head, pronotum, and fore legs from above (2, 6, 9) and partly from side / partly from above (3, 7, 10).



**Figs XXIV (1-8).** Photographs of body parts. **1-4**, *Aphonoides bituberculatus*, male (1, 2, holotype; 3, 4, paratype from New Guinea); **5-8**, *A. excavatus* (5, 6, male; 7, 8, female). Tegmina and some legs from above (1, 3, 5, 7), partly from side / partly from above (2, 4, 6), and from side (8).





**Figs XXV (1-14).** Photographs of body parts, female. **1, 2,** *Mistshenkoana? baduri*; **3, 4,** *M.? designata*; **5, 6,** *M.? kukum*; **7, 8,** *M.? rufa*; **9, 10,** *M.? uniformis*; **11-14,** *M.? vanuatu*. Head in front (1, 5, 7, 11); same with fore tibia (3) or with fore leg (9); head and pronotum from above (2, 4, 6, 8, 10, 12); body without some parts from side (13) and from above (14).

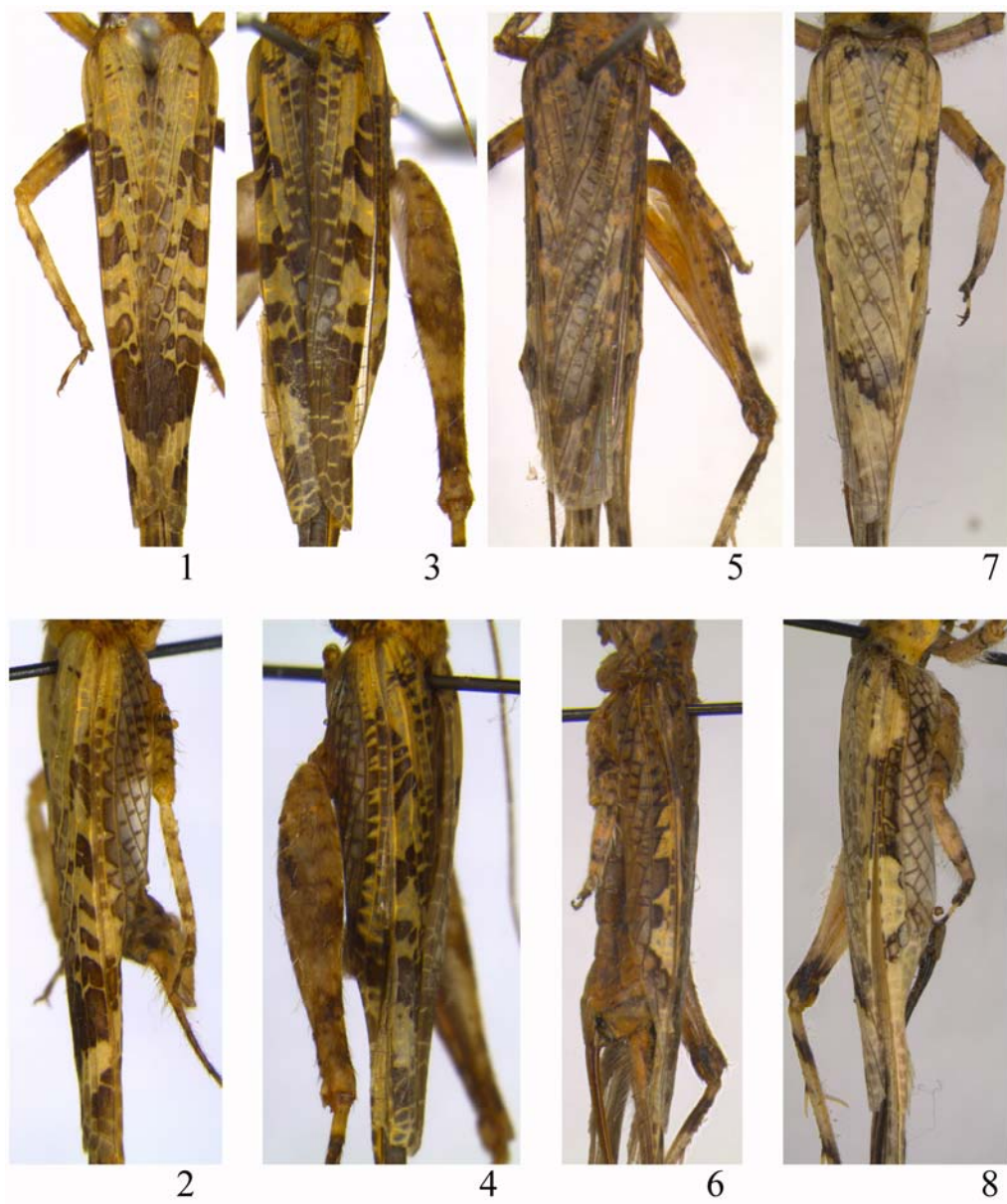


**Figs XXVI (1-10).** Photographs of body parts, female. **1, 2,** *Mistshenkoana? baduri*; **3, 4,** *M.? designata*; **5, 6,** *M.? kukum*; **7, 8,** *M.? rufa*; **9, 10,** *M.? uniformis*. Tegmina with some legs (1-5, 10) or without them (6-9) from above (1, 3, 5, 7, 9), from side (2, 6, 8, 10), and partly from above / partly from side (4).





**Figs XXVII (1-12).** Photographs of body parts. **1-3,** *Protomunda cryptica*, male; **4-6,** *P. imitatoria*, male; **7-9,** *P. pulchra*, female; **10-12,** *P. ? albida*, female. Head in front (1, 4, 7, 10); head, pronotum and fore legs from above (2, 5, 8, 11) and partly from side / partly from above (3, 6, 9, 12).

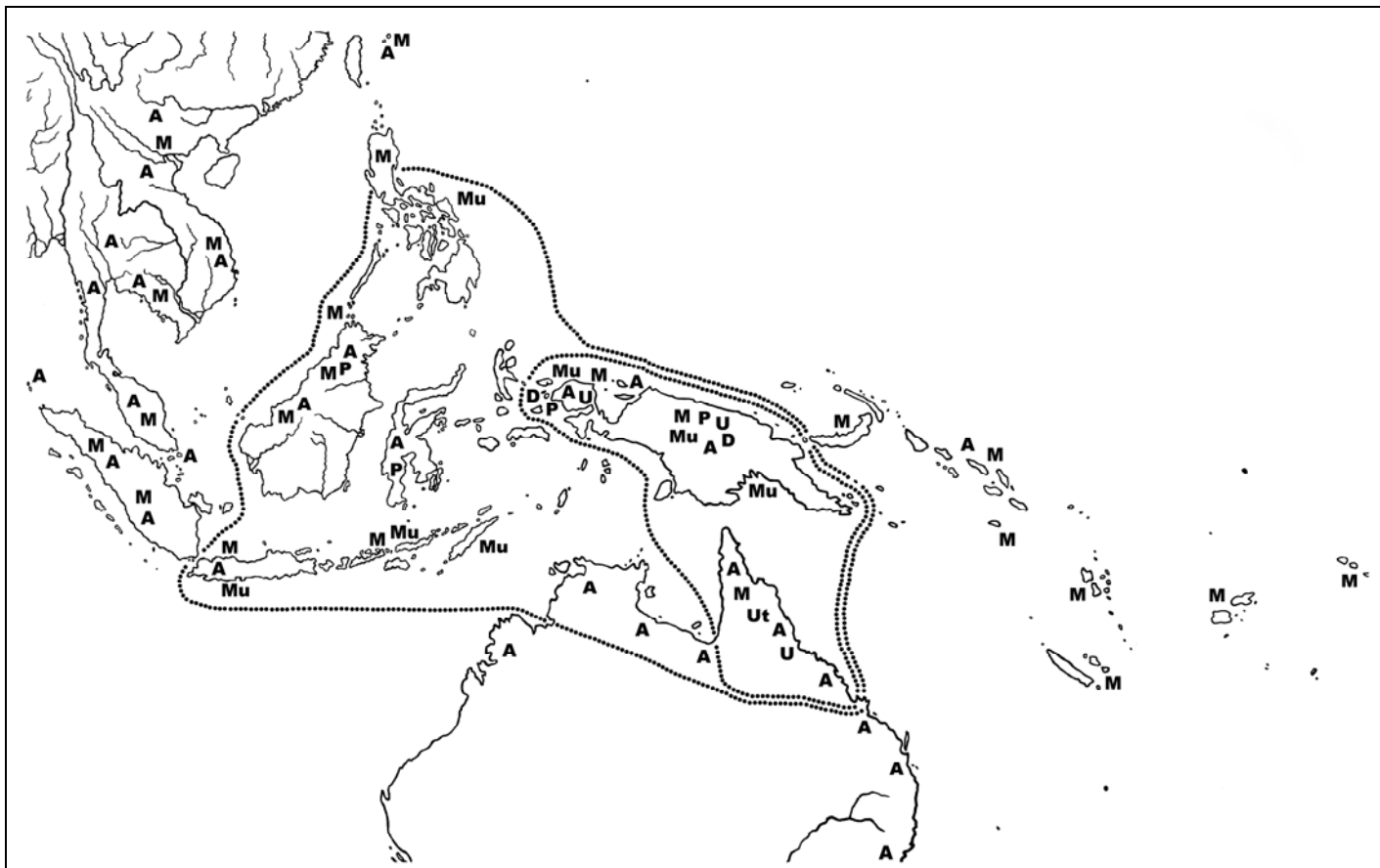


**Figs XXVIII (1-8).** Photographs of body parts. **1, 2,** *Protomunda cryptica*, male; **3, 4,** *P. imitatoria*, male; **5, 6,** *P. pulchra*, female; **7, 8,** *P. ? albida*, female. Tegmina and some legs from above (1, 3, 5, 7), partly from side / partly from above (2, 4), and from side (6, 8).





**Figs XXIX (1-14).** Photographs of body parts. **1-7, *Munda elegantis*, male; 8-14, *M. recedentis*, female.** Head in front (1); same with fore leg (8); head, pronotum and fore leg from side (2, 9), from above (3, 10), and partly from side / partly from above (4); body without some parts from above (5, 11) and from side (6, 7, 12); outer side of hind leg (13); inner side of fore leg and outer side of middle leg (14).



**Fig. XXX.** Distribution of Aphonoidini. **A**, *Aphonoides* generic group; **D**, *Deinutona* generic group; **M**, *Misthenkoana* generic group; **Mu**, *Munda* generic group; **P**, *Protomunda* generic group; **U**, *Unka* generic group; **Ut**, *Utona* generic group; large area, limited by line from dots, shows region with more than 2 generic groups; small area, limited by line from dots, shows region with 4-6 generic groups.