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New and little-known taxa of the subfamily Phaloriinae (Orthoptera: Gryllidae) from the Old World

Новые и малоизвестные таксоны подсемейства Phaloriinae (Orthoptera: Gryllidae) из Старого Света

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Ключевые слова: систематика, Orthoptera, Gryllidae, Phaloriinae, Азия, Океания, Африка.

Abstract. The following cricket genera from two tribes of Phaloriinae are considered: *Borneloria* Gor., *Sumatloria* Gor., *Trellius* Gor. and *Phaloria* Stål (Phaloriini); *Subtiloria* Gor., *Schizotrypus* Chop. and *Afrophaloria* Des.-Grand. (Subtiloriini). 11 new species and 1 new subspecies are described: *B. sumatrana* Gorochov, **sp.n.**, *Sumatloria lineata* Gorochov, **sp.n.**, *T. (Protrellius) leuser* Gorochov, **sp.n.**, *T. (P.) leuser lawang* Gorochov, **subsp.n.** and *T. (P.) bohorok* Gorochov, **sp.n.** from Sumatra; *Ph. (Papuloria) bacan* Gorochov, **sp.n.**, *Ph. (P.) ampat* Gorochov, **sp.n.**, *Ph.? signata* Gorochov, **sp.n.**, *Ph.? parasignata* Gorochov, **sp.n.** and *Ph.? enarotali* Gorochov, **sp.n.** from New Guinea and adjacent islands; *Subtiloria ugandae* Gorochov, **sp.n.** and *A. grishai* Gorochov, **sp.n.** from Uganda. The generic composition of the tribe Subtiloriini as well as the species composition of some its genera are discussed: *Subtiloria succinea* (Bol.), **comb.resurr.**, *Subtiloria succinea korup* Gor., **comb.resurr.**, *Schizotrypus modestus* (Gor.), **comb.resurr.** and *Sch. semotus* (Gor.), **comb.n.** are returned or transferred to the respective genera from *Heterotrypus*, *Ornebius* and *Subtiloria*. For some other taxa, new geographic localities are recorded.

Резюме. Рассмотрены следующие роды сверчков из двух триб подсемейства Phaloriinae: *Borneloria* Gor., *Sumatloria* Gor., *Trellius* Gor. и *Phaloria* Stål (Phaloriini); *Subtiloria* Gor., *Schizotrypus* Chop. и *Afrophaloria* Des.-Grand. (Subtiloriini). Описаны 11 новых видов и 1 новый подвид: *B. sumatrana* Gorochov, **sp.n.**, *Sumatloria lineata* Gorochov, **sp.n.**, *T. (Protrellius) leuser* Gorochov, **sp.n.**, *T. (P.) leuser lawang* Gorochov, **subsp.n.** и *T. (P.) bohorok* Gorochov, **sp.n.** из Суматры; *Ph. (Papuloria) bacan* Gorochov, **sp.n.**, *Ph. (P.) ampat* Gorochov, **sp.n.**, *Ph.? signata* Gorochov, **sp.n.**, *Ph.? parasignata* Gorochov, **sp.n.** и *Ph.? enarotali* Gorochov, **sp.n.** из Новой Гвинеи и окрестных островов; *Subtiloria ugandae* Gorochov, **sp.n.** и *A. grishai* Gorochov, **sp.n.** из Уганды. Обсуждены родовой состав трибы Subtiloriini и видовой состав некоторых её родов. Виды *Subtiloria succinea* (Bol.), **comb.resurr.**, *Subtiloria succinea korup* Gor., **comb.resurr.**, *Schizotrypus modestus* (Gor.), **comb.resurr.** и *Sch. semotus* (Gor.), **comb.n.** повторно или впервые переведены в состав соответствующих родов из *Heterotrypus*, *Ornebius* и *Subtiloria*. Для некоторых таксонов указаны новые географические данные.

Introduction

The cricket subfamily Phaloriinae together with the sufbamilies Phalangopsinae, Cacoplistinae and Pteroplistinae belong to the Phalangopsinae subfamily group of the family Gryllidae [Gorochov, 2014]. However, this group is sometimes regarded as the separate family Phalangopsidae including the above mentioned subfamilies as well as the additional «subfamilies» Paragryllinae and Luzarinae, but Pteroplistinae is placed out of this group and without any hypothetical relationship with all the other recent subfamilies of Gryllidae [Chintauan-Marquier et al., 2016; Cigliano et al., 2022]. So, this question is in need of additional studies, but here a more traditional classification is adopted: this subfamily group is treated as belonging to Gryllidae; «Paragryllinae» and «Luzarinae» are included in Phalangopsinae as a tribe and a subtribe [Gorochov, 2019], respectively; Pteroplistinae continues to be considered a possible primitive member of the Phalangopsinae subfamily group on the base of the male tegminal venation.

The present paper is a continuation of my taxonomic work on these crickets: in the last century, the subfamily Phaloriinae was established, 11 genera and subgenera as well as 71 species and subspecies of this subfamily were described as new to science [Gorochov, 1985, 1988, 1990, 1992, 1996, 1999]; in this century, 1 new tribe, 5 new genera and subgenera as well as 58 new species and subspecies of Phaloriinae were described partly in cooperation with foreign colleagues [Gorochov, 2003, 2004a, b, 2005, 2010, 2011, 2014, 2018; Gorochov, Tan, 2012; Tan et al., 2019, 2020]. Also, several independent papers of foreign followers were recently published (see in Cigliano et al. [2022]).

A new material for this paper was collected by Russian colleagues in some countries of South-East Asia, Oceania and tropical Africa. This material, including types of new species and subspecies, is de-

posited at the Zoological Institute, Russian Academy of Sciences, Saint Petersburg (ZIN). All the specimens examined are dry and pinned. The illustrations were made using a Leica M216 stereomicroscope and a DFC290 digital camera.

Phaloriinae
Phaloriini
Borneloria Gorochov, 2018

Type species: *Borneloria spinosa* Gorochov, 2018.

Notes. This genus was described for 2 species from Borneo Island: type one from Sabah and *B. moorei* (Chopard, 1940) from Sarawak. The latter species is divided into 2 subspecies: nominotypical one from the eastern part of Sarawak and *B. moorei occidentalis* Gorochov, 2018 from the western part of this state. Here this genus, distinguished from all the other representatives of Phaloriini by the very characteristic male genitalia, is recorded from Sumatra Island for the first time.

Borneloria sumatrana Gorochov, **sp.n.**

Figs 1–9.

Material. Holotype, ♂: **Indonesia, *Sumatra Island:*** North Sumatra Prov., ~80 km W of Medan City, environs of Bukit Lawang Vill. on Bohorok River near Gunung Leuser National Park, 3°32–33' N, 98°6–7' E, 200–300 m a.s.l., secondary forest, on leaf of bush at night, 6–14.IV.2018, A. Gorochov, M. Berezin, I. Kamskov, E. Tkatsheva (ZIN). Paratypes: 2♀♀, same data as for holotype (ZIN).

Description. Male (holotype). General appearance very similar to that of all other known congeners. Coloration yellowish but with following marks: eyes dark greyish brown; rest of epicranium with dark brown wide transverse band, crossing eyes and antennal bases, and with light brown longitudinal stripes on posterior two thirds of dorsum; antenna with brown scape and a few subsequent segments, as well as with greyish tinge on rest of flagellum; pronotum with light brown disc having brown both median stripe and posterior part, and with dark brown upper two thirds of lateral lobes (Fig. 1); tegmina with light brown but partly transparent dorsal field, dark brown to brown stripe along Sc stem in lateral field, and transparent membranes between Sc branches; distal halves of hind wings light brownish grey to greyish brown (Fig. 2); femora with brown to light brown subapical spot on each of fore and middle femora (Figs 1, 2), as well as with dark brown distal part of hind femur and few greyish brown to light brown areas in more proximal parts of its outer side (Fig. 3); tibiae with brown area around each tympanum, light brown middle and distal parts of fore tibia as well as distal part and proximal two thirds of middle tibia, and with 3 brown to dark brown areas on hind tibia (Fig. 3); fore and middle tarsi light brown with brown middle parts, but hind tarsus with dark brown proximal, brown middle and light brown distal parts (darkened proximal and middle parts separated from each other by distinct yellowish area; Fig. 3); abdominal tergites and all sternites partly darkened, i.e. with greyish brown to light brown areas. Head somewhat dorsoventrally depressed; scape approximately 1.4 times as wide as rostrum between antennal cavities; ocelli indistinct; eyes large, almost as long as high. Pronotum also dorsoventrally depressed, clearly widening to tegmina and with rather low lateral lobes (Fig. 1); tegminal dorsal field as in Fig. 2; tegminal lateral field with distally widened R-M area (this area with numerous regular crossveins in distal part and without them in very narrow proximal part), very narrow (without crossveins) Sc-R area and 22–23 regular (directed mostly downwards) Sc branches, but without crossveins between these branches; hind wings distinctly protruding beyond tegminal apices; inner and outer tympana oval, but outer tympanum somewhat smaller, and inner one slightly immersed. Genital plate elongate, more or less narrowly rounded at apex and with thin ventromedian groove from base to apical part (Fig. 8); genitalia also similar to those of congeners but distinguished by each posterolateral epiphallic lobe with short and acute posteroventral projection, not deep apical notch near it and angular (almost spine–like) dorsal projection located before apical part of this lobe and directed upwards/medially (Figs 4–6).

Female. Coloration and structure of body similar to those of male, but light brown stripes on head dorsum sometimes fused with each other, pronotum somewhat less widening to tegmina and with disc sometimes lacking darker median stripe, tegminal dorsal field much narrower as well as with 10–11 oblique longitudinal veins and rather sparse regular crossveins, tegminal lateral field with R-M area narrow and almost lacking crossveins as well as with Sc-R area wide from base to apex and having sparse crossveins (region of Sc branches as in male, but these branches more oblique and less numerous: 10–11), and genital plate somewhat elongate semi-conical but with almost truncate (roundly sinuate) apex (Fig. 9); ovipositor with distal part as in Fig. 7.

Length in mm. Body: ♂ — 10, ♀ — 10–10.5; body with wings: ♂ — 17.5, ♀ — 17.8–18.5; pronotum: ♂ — 2.6, ♂ — 2.4–2.6; tegmina: ♂ — 13, ♀ — 12–12.5; hind femora: ♂ — 11, ♀ — 11–11.3; ovipositor 6.6–6.8.

Comparison. The new species is similar to *B. spinosa* in the presence of a distinct acute–angled posteroventral projection on each posterolateral epiphallic lobe, but in the new species, this projection is distinctly shorter (not spine–like), and the apical notch near this projection is much less deep. From *B. moorei*, the new species differs in the presence of the above mentioned projection and notch (in *B. moorei*, the posterolateral epiphallic lobes lack posteroventral projections and apical notches).

Etymology. The new species is named after the island where it was collected.

Sumatloria Gorochov, 2003

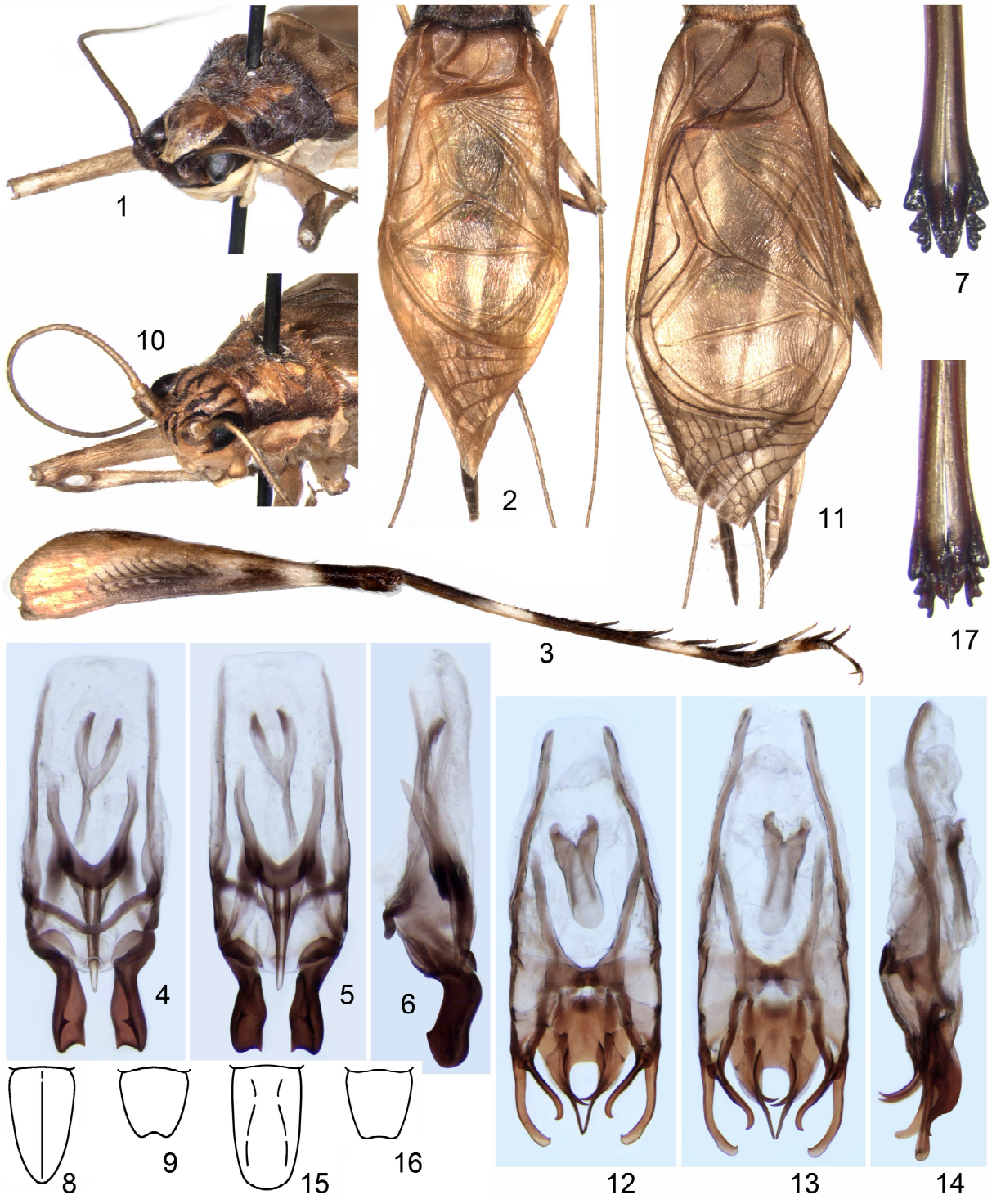
Type species: *Sumatloria minima* Gorochov, 2003.

Notes. The genus was originally described only for its type species from Sumatra Island, but an additional species, *S.? testaceus* (Chopard, 1925) from «Pulu-Babi» (small island near Sumatra or Malay Peninsula), was questionably included in this genus in the same paper [Gorochov, 2003]. The study of the male from this locality, determined by Chopard as «cotype» of the latter species, showed that its tegmina are strongly different in venation from Chopard's picture [Chopard, 1925; Gorochov, 1999]; thus, *S.? testaceus* is a rather problematical species. Later, a third species, *S. juara* Gorochov, 2011, was described from a female collected in Tioman Island near Malay Peninsula, but its generic position is not very exact due to the absence of male. Moreover, the male genitalia of the genus *Vescelia* Stål, 1877 are rather similar to those of *Sumatloria* and distinguished from them in the absence of dorsal epiphallic processes only. So, these genera may be 2 subgenera of the same genus, but more exact decision will be possible only after an additional study, because *Vescelia* is also problematic genus (its type species is known after a single female).

Sumatloria lineata Gorochov, **sp.n.**

Figs 10–17.

Material. Holotype, ♂: **Indonesia, *Sumatra Island:*** Aceh Prov. near border with North Sumatra Prov., environs of



Figs 1–17. Details of two new Phaloriini species: *Borneloria sumatrana* sp.n. (1–9) and *Sumatloria lineata* sp.n. (10–17); male (1–6, 8, 10–15), female (7, 9, 16, 17). 1, 10 — head with pronotum and fore leg from side/above and slightly in front; 2, 11 — tegmina with hind wings and middle leg as well as cerci from above; 3 — outer surface of hind leg; 4, 12 — genitalia from above; 5, 13 — genitalia from below; 6, 14 — genitalia from side; 7, 17 — distal part of ovipositor from below; 8, 9, 15, 16 — genital plate from below.

Рис. 1–17. Детали строения двух новых видов трибы Phaloriini: *Borneloria sumatrana* sp.n. (1–9) и *Sumatloria lineata* sp.n. (10–17); самец (1–6, 8, 10–15), самка (7, 9, 16, 17). 1, 10 — голова с переднеспинкой и передней ногой сбоку/сверху и слегка спереди; 2, 11 — надкрылья с задними крыльями, средней ногой и церками сверху; 3 — задняя нога самца снаружи; 4, 12 — гениталии самца сверху; 5, 13 — то же снизу; 6, 14 — то же сбоку; 7, 17 — дистальная часть яйцеклада снизу; 8, 9, 15, 16 — генитальная пластинка снизу.

Ketambe Vill. on Alas River near Gunung Leuser National Park, 3°41−42' N, 97°38−39' E, 300−500 m, primary forest, on leaf of bush at night, 15−24.IV.2008, A. Gorochov, M. Berezin, I. Kamskov, E. Tkatsheva (ZIN). Paratypes: 1♂, 1♀, same data as for holotype (ZIN); 2♂♂, same country and island, North Sumatra Prov., ~80 km W of Medan City, environs of Bukit Lawang vill. on Bohorok River near Gunung Leuser National Park, 3°32−33' N, 98°6−7' E, 200−300 m, secondary forest, on leaf of bush at night, 6−14.IV.2018, A. Gorochov, M. Berezin, I. Kamskov, E. Tkatsheva (ZIN).

Description. Male (holotype). General appearance somewhat similar to that of *B. sumatrana* sp.n. Coloration yellowish with following pattern: eyes blackish; a pair of areas behind eyes, longitudinal stripes on dorsum and on anterior surface of head rostrum dark brown; scape with greyish spot on ventral (ventromedial) surface; pronotum with brown upper half of each lateral lobe and few light brown marks on disc (Fig. 10); tegmina with very light brown and almost transparent dorsal field (Fig. 11), as well as with transparent membranes of lateral field and brown to light brown stripe along Sc stem (this stripe narrower than in *B. sumatrana* sp.n.); distal parts of hind wings darkish; fore and middle legs similar to those of this species in coloration, but darkened parts smaller and somewhat lighter; hind leg with 3 light brown areas on outer side of femur (apical, subapical and mid-lower areas), few brown to light brown small marks on dorsal surface of femur, 6 brown to light brown spots on tibia, and darkish middle part of tarsus; other bodyparts without darkenings. Head and pronotum somewhat less dorsoventrally depressed than in *B. sumatrana* sp.n.; scape almost as wide as rostrum between antennal cavities; ocelli very small, but median ocellus almost indistinct, and lateral ones more distinct; eyes almost as long as high; shape of pronotum as in this species but with somewhat higher lateral lobes (Fig. 10); tegmina also similar to those of this species in shape but longer, with venation of dorsal field as in Fig. 11, and with 27–28 branches of Sc; structure of legs distinguished from those of *B. sumatrana* sp.n. mainly by hardly more immersed outer tympanum; genital plate rather long as well as with almost parallel lateral sides and widely rounded apex but without distinct ventral groove (Fig. 15). Genitalia: epiphallus very short in median part but having 2 pairs of long (almost spine-like) and curved posterolateral processes (medial processes shorter, hooked, directed upwards/medially, and basally articulated with rest of epiphallus; lateral ones longest, apically hooked, somewhat curved medially in distal portion, and basally fused with rest of epiphallus); ectoparameres S-shaped and intermediate in length; rachis widely triangular but having rather wide and deep apical notch as well as a pair of narrow lobules of similar (to ectoparameres) length located around this notch and directed backwards/medially and slightly upwards; formula distinctly elongate (but not very long), slightly widened and rather low in profile (Figs 12–14).

Variations. Other males sometimes with distinct greyish brown both longitudinal stripe on dorsomedial part of scape and posteromedian area on pronotal disc, almost without darkened stripe along Sc stem in tegminal lateral field, and with roundly truncate apex of genital plate. Males from North Sumatra Prov. with somewhat larger apical notch of rachis.

Female. Coloration and structure of body similar to those of holotype; however, tegmina and shape of pronotal disc more similar to those of female of *B. sumatrana* sp.n., but tegminal dorsal field almost greyish brown and with 9–10 longitudinal veins, and tegminal lateral field almost without darkenings and with 13–14 branches of Sc; genital plate and distal part of ovipositor as in Figs 16, 17.

Length in mm. Body: ♂ — 11–13, ♀ — 10.5; body with wings: ♀ — 18–20 , ♀ — 19; pronotum: ♂ — 2.2–2.4, ♀ — 2; tegmina: ♂ — 14–15.5, ♀ — 13.5; hind femora: ♂ — 11–11.5, ♀ — 10.3; ovipositor 6.5.

Comparison. The new species is clearly distinguished from *S. minima* by the longer male tegmen having the much longer apical area and 2 (not 1) dividing veins in the mirror, as well as by the dorsal epiphallic processes more hooked, the rachis with a pair of posterolateral lobules and a distinct notch between them, the endoparameral apodemes longer, and the formula of the male genitalia shorter and less high but wider (not almost lamellar). From *S. juara*, it differs in the absence of darkened spots on the female dorsal tegminal field and in the longer ovipositor (hind femur length / ovipositor length = about 1.9 in *S. juara* and about 1.6 in new species). From *S.? testaceus* sensu Chopard [1925], the new species differs in the distinctly longer apical area of the male tegmina and the much wider apical notch of the rachis, but from the male determined by the same author as «cotype» of this species [Gorochov, 1999], in the latter character of the rachis only.

Etymology. This species name is the Latin word «lineata» (lineate, with lines) due to the head dorsum coloration.

Trellius Gorochov, 1988

Type species: *Heterotrypus vitalisi* Chopard, 1925.

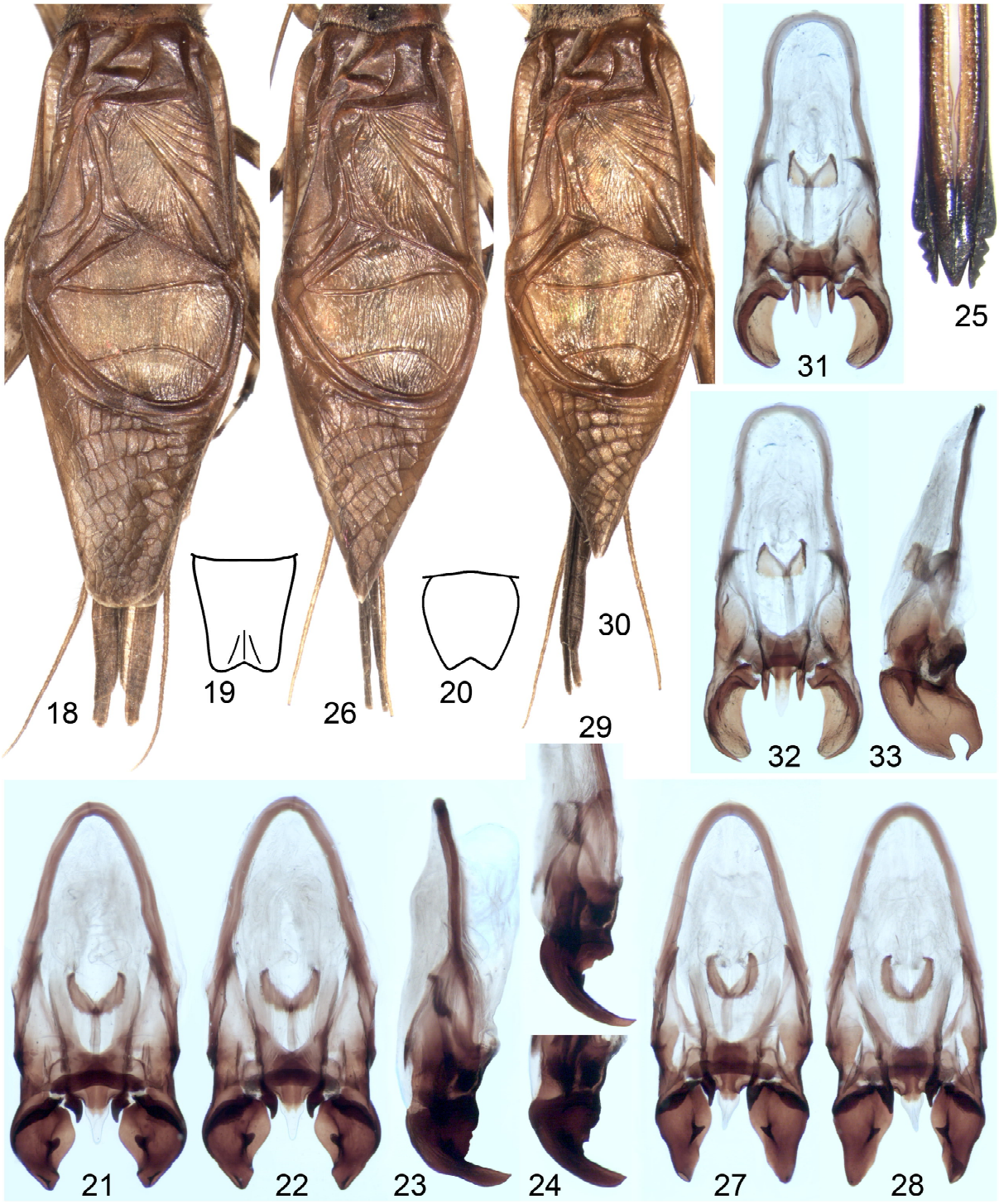
Notes. This genus consists of 5 subgenera: nominotypical one with 12 species; *Neotrellius* Gorochov, 1992 with 4 species; *Protrellius* Gorochov, 1996 with 17 species; *Vescelotrellius* Gorochov, 1999 with 2 species; *Zatrellius* Gorochov, 1999 with 5 species; *Diatrellius* Gorochov, 2003 with 1 species. These taxa are distributed from Indochina to Malay Archipelago and characterized mainly by the rami of the male genitalia fused with each other anteriorly; however, some species from *Zatrellius* and *Diatrellius* are without such fusion, but this feature may be a result of secondary reduction. Differences between these subgenera are less distinct and include different shape and size of the posterolateral epiphallic processes, different structure of the rachis and ectoparameres, and some other small details of their male genitalia.

Trellius (Protrellius) leuser Gorochov, **sp.n.**

Figs 18–25.

Material. Holotype, ♂: **Indonesia, *Sumatra Island:*** Aceh Prov. near border with North Sumatra Prov., environs of Ketambe Vill. on Alas River near Gunung Leuser National Park, 3°41−42' N, 97°38−39' E, 300−500 m above see level, primary forest, on leaf of bush at night, 15−24.IV.2008, A. Gorochov, M. Berezin, I. Kamskov, E. Tkatsheva (ZIN). Paratypes: 1♂, 1♀, same data as for holotype (ZIN).

Description. Male (holotype). General appearance similar to that of all other species of this subgenus. Head light brown with brown rostrum, few vertical stripes on dorsum as well as on epicranium under both rostrum and antennal cavities, areas on genae and behind eyes, and spots on labrum and mandibles; pronotum also light brown with greyish brown median spot on posterior half of disc, dark brown to brown stripes along anterior and posterior edges of each lateral lobe as well as slightly wider stripe along ventral edge of this lobe; tegmina brown to light brown with some membranes of dorsal field semitransparent, and most part of membranes of lateral field light grey but almost transparent; other body parts light brown with brown to greyish brown spots on legs and light greyish brown cerci. Eyes vertical (distinctly higher than long); scape almost as wide as rostrum between antennal cavities; pronotum distinctly widening to tegmina, with lateral lobes moderately high and having oblique



Figs 18–33. Details of two new Phaloriini species and a new subspecies: *Trellius (Protrellius) leuser* sp.n. (18–25), *T. (P.) leuser lawang* subsp.n. (26–29), *T. (P.) bohorok* sp.n. (30–33); male (18, 19, 21–24, 26– 33), female (20, 25). 18, 26, 30 — tegmina with hind wings and cerci from above; 19, 20 — genital plate from below; 21, 27, 31 — genitalia from above; 22, 28, 32 — genitalia from below; 23, 33 — genitalia from side; 24 — posterior half of genitalia from side; 29 — posterior two thirds of genitalia from side; 25 — distal part of ovipositor from below.

Рис. 18–33. Детали строения двух новых видов и нового подвида трибы Phaloriini: *Trellius (Protrellius) leuser* sp.n. (18–25), *T. (P.) leuser lawang* subsp.n. (26–29), *T. (P.) bohorok* sp.n. (30–33); самец (18, 19, 21–24, 26– 33), самка (20, 25). 18, 26, 30 — надкрылья с задними крыльями и церками сверху; 19, 20 — генитальная пластинка снизу; 21, 27, 31 — гениталии сверху; 22, 28, 32 — гениталии снизу; 23, 33 — гениталии сбоку; 24 — задняя половина гениталий сбоку; 29 — задние две трети гениталий сбоку; 25 — дистальная часть яйцеклада снизу.

ventral edges; dorsal tegminal field with long apical area and slightly transverse mirror having clearly angular medial projection (mirror almost 1.1 times as wide as long; Fig. 18); lateral tegminal field similar to that of *Borneloria sumatrana* sp.n. and *Sumatloria lineata* sp.n. but with 23–24 branches of Sc; tympana also similar to those of these species, but inner tympanum slightly more immersed than even in latter species; hind tibia with inner dorsoapical spur reaching almost middle of last segment of hind tarsus; genital plate elongate (but less elongate than in aforementioned taxa) and with slightly notched apical part (Fig. 19). Genitalia: median epiphallic plate clearly transverse and with short anterolateral apodemes; each lateral epiphallic part posteriorly with large cup-like lobe which strongly widened in proximal half, narrower and moderately long as well as directed partly upwards in posterior part, and with tubercle-like hook at middle of concave dorsomedial surface; ectoparameres much smaller than these lobes, almost shortly hook-like; endoparameres with rather wide median bridge between them, and moderately long apodemes; rachis rather small, with almost membranous and pear-shaped but concave ventrally distal half as well as semisclerotized ventral plate in proximal half (this plate moderately elongate and with wider anterior half); formula falcate, with moderately long and rather thin apodeme directed backwards; rami long and strong, clearly fused with epiphallic lateral parts posteriorly and with each other anteriorly (Figs 21–23).

Variations. Second male distinguished from holotype by small details of epiphallic lobes only (Fig. 24).

Female. Coloration and structure of body as in males; however, each pronotal lateral lobe greyish brown with light brown middle area, tegminal dorsal field also greyish brown, shape of pronotal disc and structure of tegmina more similar to those of females of *Borneloria sumatrana* sp.n. and *Sumatloria lineata* sp.n. but with 12–13 longitudinal veins in dorsal field and 16–17 branches of Sc, and genital plate slightly elongate and almost semi-conical but with distinctly angular posteromedian notch (Fig. 20); ovipositor significantly shorter than in these species, with distal part as in Fig. 25.

Length in mm. Body: ♂ — 16–16.5, ♀ — 15.5; body with wings: ♂ — 29–30 , ♀ — 28; pronotum: ♂ — 3.2–3.4, ♀ — 2.9; tegmina: ♂ — 20–21, ♀ — 18.5; hind femora: ♂ — 13.3–14, ♀ — 13; ovipositor 4.4.

Comparison. The new species is most similar in the structure of the male genitalia to *T. (P.) aequatorialis* Gorochov, 2003 from the middle part of Sumatra Island, but differs in the clearly more transverse median epiphallic plate, the presence of a tubercle–like hook at the middle of the dorsomedial surface of each posterior epiphallic lobe, and the somewhat shorter and distally less narrowed ectoparameres.

Etymology. This species is named after the Gunung Leuser National Park situated near its type locality.

Trellius (Protrellius) leuser lawang Gorochov, **subsp.n.**

Figs 26–29.

Material. Holotype, ♂: **Indonesia, *Sumatra Island:*** North Sumatra Prov., ~80 km W of Medan City, environs of Bukit Lawang Vill. on Bohorok River near Gunung Leuser National Park, 3°32−33' N, 98°6−7' E, 200−300 m above see level, secondary forest, on leaf of bush at night, 6−14.IV.2018, A. Gorochov, M. Berezin, I. Kamskov, E. Tkatsheva (ZIN).

Description. Male (holotype). Coloration and structure of body very similar to those of nominotypical subspecies but with following differences: tegminal mirror with slightly less angular medial projection (length and width of mirror practically equal; Fig. 26); genitalia (Figs 27–29) with posterolateral lobe of epiphallus somewhat less wide in proximal half, with distal (narrowed) part of this lobe longer, and with almost spine–like (not tubercle–like) hook at middle of concave dorsomedial surface of this lobe (apex of left posterolateral epiphallic lobe broken off).

Female unknown.

Length in mm. Body 15.5; body with wings 28; pronotum 3.2; tegmina 20; hind femora 14.

Comparison. The new subspecies differs from *T. (P.) leuser leuser* in the characters listed above.

Etymology. This new subspecies is named after its type locality (Bukit Lawang).

Trellius (Protrellius) bohorok Gorochov, **sp.n.**

Figs 30–33.

Material. Holotype, ♂: **Indonesia, *Sumatra Island:*** North Sumatra Prov., ~80 km W of Medan City, environs of Bukit Lawang Vill. on Bohorok River near Gunung Leuser National Park, 3°32−33' N, 98°6−7' E, 200−300 m a.s.l., secondary forest, on leaf of bush at night, 6−14.IV.2018, A. Gorochov, M. Berezin, I. Kamskov, E. Tkatsheva (ZIN).

Description. Male (holotype). Coloration and structure of body similar to those of both subspecies of previous congener but with following characteristic features: coloration slightly lighter, i.e. head rostrum light brown with small brown marks near ocelli, darkened parts of head smaller, pronotum with light brown disc and brown each lateral lobe having 2 small yellowish spots in anterior two thirds, tegminal dorsal field barely lighter than in *T. (P.) leuser* and more semitransparent, and other light parts of body (except for light brown most part of head dorsum and greyish brown distal parts of hind wings) almost yellowish; tegmina with dorsal field having slightly shorter apical area and not transverse mirror (length and width of this mirror almost equal; Fig. 30), and with lateral field having 25–26 branches of Sc; genitalia distinguished from those of *T. (P.) leuser* by each posterolateral epiphallic lobe with distal part wider but rather deeply and narrowly notched, without tubercle or spine at middle of dorsomedial concave surface of this lobe, with longer and distally angular (but not hooked) ectoparameres, narrower endoparameral apodemes, partly sclerotized distal half of rachis (this half narrower, not pear-shaped), and not falcate shape of formula (Figs 31–33).

Female unknown.

Length in mm. Body 16; body with wings 29; pronotum 3.1; tegmina 19; hind femora 13.5.

Comparison. The new species is similar to *T. (P.) kerinci* Gorochov, 2003, *T. (P.) barisan* Gorochov, 2010, *T. (P.) lampung* Gorochov, 2010 and *T. (P.) curup* Gorochov, 2010 from the southern half of Sumatra in the apical part of each posterolateral epiphallic lobe distinctly notched, but it is distinguished from the first species by this lobe clearly wider, from the others by the presence of 1 apical notch (not 2 or more ones) on this lobe, and additionally from *T. barisan* and *T. curup* by this notch distinctly larger than all such notches or much smaller than largest one of these notches, respectively.

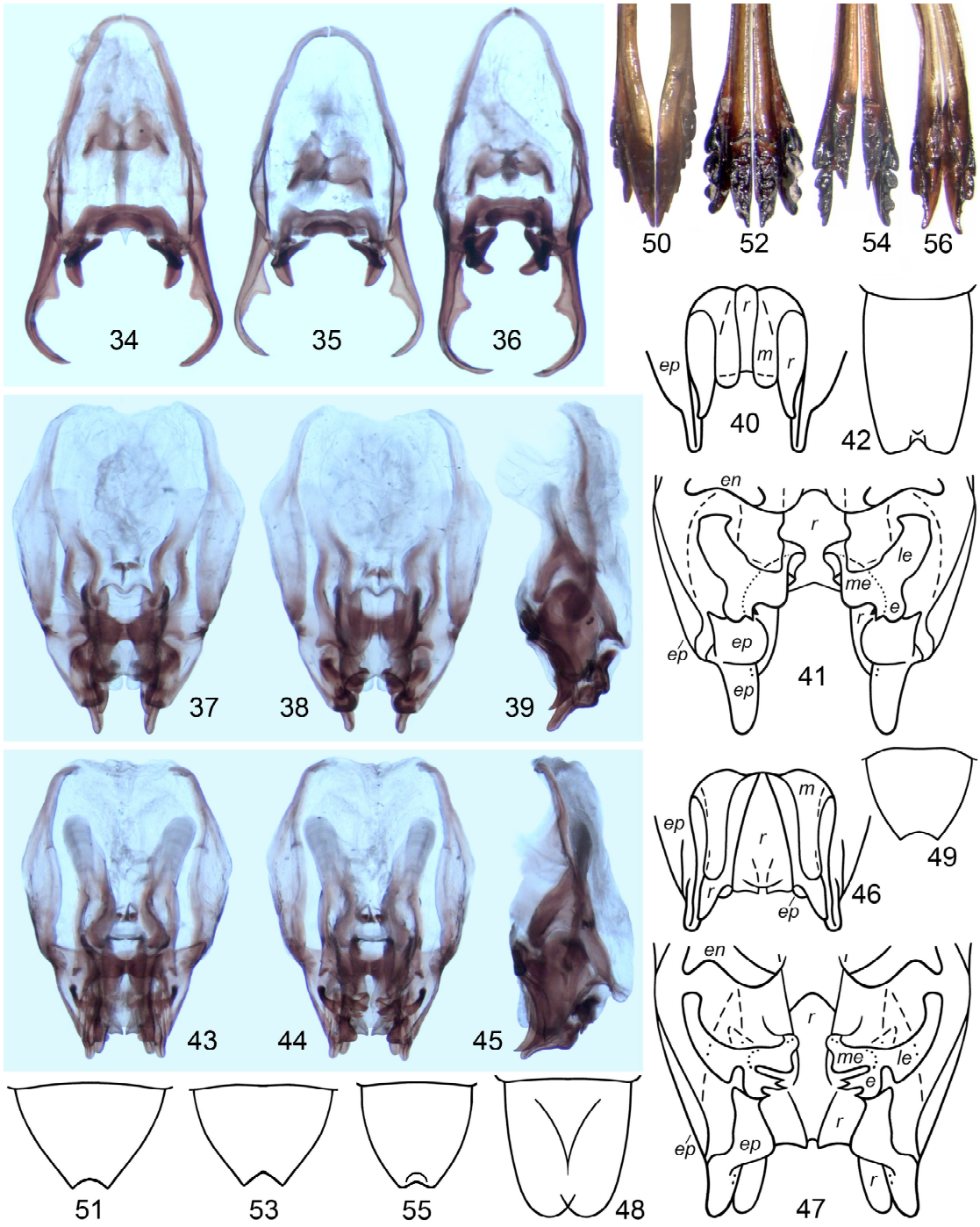
Etymology. This new subspecies is named after a river in its type locality (Bohorok River).

Trellius (Trellius) deminutus Gorochov, 1990

Figs 34–36.

Material. **Vietnam:** 1♂, 1♀, Kon Tum Prov., Kon Plong Distr., environs of Mang Canh Vill., 1100−1350 м a.s.l., forest, 11.XII.2018, N. Orlov, L. Ioganssen (ZIN).

Notes. The species is recorded from this Vietnamese province for the first time, because previously it was known only from a nearest (more southern) province of Vietnam (Gia



Figs 34–56. Details of six Phaloriini species: *Trellius (Trellius) deminutus* Gor. (34–36: holotype (34), specimens from Gia Lai Prov. (35) and from Kon Tum Prov. (36)), *Phaloria (Papuloria) bacan* sp.n. (37–42), *Ph. (P.) ampat* sp.n. (43–50), *Ph.? signata* sp.n. (51, 52), *Ph.? parasignata* sp.n. (53, 54), *Ph.? enarotali* sp.n. (55, 56); male (34–48), female (49–56). 34–36, 38, 44 — genitalia from below; 37, 43 — genitalia from above; 39, 45 — genitalia from side; 40, 46 — posterior half of both epiphallus and rachis from above; 41, 47 — posterior third of male genitalia without membranous epiphallic lobules from below; 42, 48, 49, 51, 53, 55 — genital plate from below; 50, 52, 54, 56 — distal part of ovipositor from below. Abbreviations: *e*, posterior part of ectoparamere; *en*, endoparamere; *ep*, epiphallus; *le*, lateral part of ectoparamere; *m*, membranous epiphallic lobule; *me*, medial part of ectoparamere; *r*, rachis.

Рис. 34–56. Детали строения шести видов трибы Phaloriini: *Trellius (Trellius) deminutus* Gor. (34–36: голотип (34), экземпляры из Gia Lai Prov. (35) и из Kon Tum Prov. (36)), *Phaloria (Papuloria) bacan* sp.n. (37–42), *Ph. (P.) ampat* sp.n. (43–50), *Ph.? signata* sp.n. (51, 52), *Ph.? parasignata* sp.n. (53, 54), *Ph.? enarotali* sp.n. (55, 56); самец (34–48), самка (49–56). 34–36, 38, 44 — гениталии снизу, 37, 43 — гениталии сверху; 39, 45 — гениталии сбоку; 40, 46 — задние половины эпифаллуса и рахиса сверху; 41, 47 — задняя треть гениталий самца без мембранозных лопастинок снизу; 42, 48, 49, 51, 53, 55 — генитальная пластинка снизу; 50, 52, 54, 56 — дистальная часть яйцеклада снизу. Сокращения: *e*, задняя часть эктопарамера; *en*, эндопарамер; *ep*, эпифаллус; *le*, латеральная часть эктопарамера; *m*, мембранозная эпифаллическая лопастинка; *me*, медиальная часть эктопарамера; *r*, рахис.

Lai). These specimens are almost identical to the specimens from Gia Lai in external morphology but distinguished by some small characters of the male genitalia: their genitalia are somewhat longer and with the apices of the epiphallic posterolateral lobes more widely spaced (compare Figs 34, 35 and 36). Possibly this species consists of 2 subspecies, but for such decision additional material from Kon Tum is needed (the study of only 1 male does not allow me to understand the variability of the possible northern subspecies).

Trellius (Trellius) riparius Gorochov, 1990

Material. **Vietnam:** 5♂♂, 1♀, Kon Tum Prov., Kon Plong Distr., Mang Canh Vill., 1200 m a.s.l., III–IV.2005, N. Orlov, S. Ryabov (ZIN); 1♂, 1♀, same data (including district) but without locality (ZIN); 4♂♂, 4♀♀, same district, environs of Mang Canh Vill., 1100–1350 м a.s.l., forest, 11.XII.2018, N. Orlov, L. Ioganssen (ZIN); 5♂♂, Thua Tien Hue Prov., 40 km SE of Hue City, Bach Ma National Park, 1300 m a.s.l., X.2003, N. Orlov (ZIN); 1♂, «Quong [Quang] Tri Prov., Huong Hoa, Huong Lap, Ban Kup», 400 m a.s.l., V.2005, N. Orlov (ZIN); 1♂, Quang Binh Prov., 35 km NW of Dong Hoi, Phong Nha — Ke Bang National Park, 600 m a.s.l., IX–X.2003, N. Orlov (ZIN).

Notes. This species is here recorded from some new provinces of Vietnam (it was originally described from the Vietnamese province Gia Lai). All these provinces are located in the central part of Vietnam; however, Gia Lai and Kon Tum are placed near its southern part, and the others, near its northern part. Thus, this species is rather widely distributed in comparison with other congeners, and its variability within the entire area and in almost every locality is rather insignificant and does not allow me to divide it into 2 or more subspecies.

Phaloria Stål, 1877

Type species: *Phaloria amplipennis* Stål, 1877.

Notes. The genus is divided into 4 subgenera: nominotypical one; *Papuloria* Gorochov, 1996; *Trelloria* 1996; *Sulaweloria* Gorochov, 2011. *Papularia* is a most rich subgenus having about 50 species distributed from Seychelles to Australia and Oceania; this subgenus has a very characteristic feature of the male genitalia: their epiphallus is with a more or less large posteromedian notch, and the epiphallic edges of this notch have a pair of more or less rounded, lamellar and membranous lobules. However, these lobules are often almost indistinct and not indicated in the descriptions; thus, some species are included in this subgenus more or less tentatively, and they need an additional study. *Phaloria* s.str. is distinguished from *Papuloria* by the absence of the above mentioned membranous lobules and in accordance to Cigliano et al. [2022] contains 17 species distributed within the *Papuloria* area, but only some of them are with the male genitalia sufficiently studied; i.e. many of these species may belong to *Papuloria* in reality. *Trelloria* and *Sulaweloria* include 2 species from Papuan Region and 1 species from Sulawesi, respectively; in relation to the above mentioned feature, *Trelloria* is similar to *Papuloria* but differs mainly in the formula of the male genitalia with a much larger unpaired apodeme (this apodeme is larger than in all the other subgenera of *Phaloria* s.lat.), and *Sulaweloria* is similar to *Phaloria* s.str. but distinguished by the rachis strongly reduced (more strongly than in all these subgenera).

Phaloria (Papuloria) bacan Gorochov, **sp.n.**

Figs 37–42, 57–59.

Material. Holotype, ♂: **Indonesia, *Bacan Island*** (near Halmahera Island): Maluku Utara Prov., environs of Labuha Town, primary/secondary forest, 2–7.V.2019, A. Egorov (ZIN). Paratypes: 2 ♂♂, same data as for holotype (ZIN).

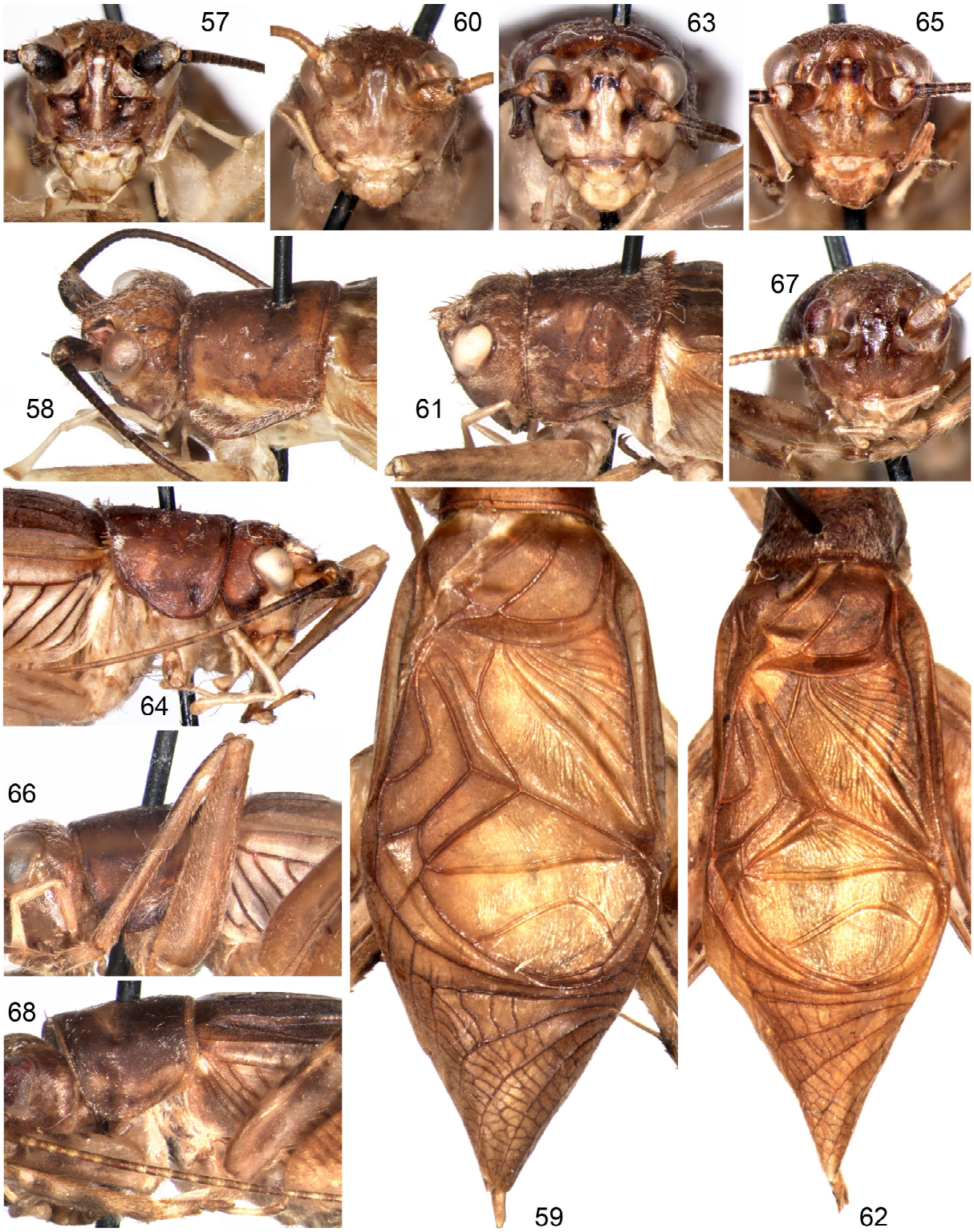
Description. Male (holotype). General view typical of representatives of this subgenus with more or less light unicolorous body and not very long spines of hind tibiae. Head light brown with yellowish eyes, ocelli, vertical median stripe on anterior surface of epicranium and most part of mouthparts, with barely distinct darkish longitudinal lines on dorsum, with greyish brown basal part of each antenna (scape, pedical and several subsequent segments) and a pair of wide areas on epicranium under antennal cavities as well as few brown to light brown marks on upper part of clypeus and proximal part of each mandible (Fig. 57); pronotum also light brown with a pair of almost brown spots in middle part of disc, greyish brown band on each lateral lobe along its ventral edge and yellowish spot in anterior half of this lobe near above mentioned band (Fig. 58); tegminal dorsal field slightly lighter, light yellowish brown and having brown venation (Fig. 59); tegminal lateral field very light (whitish/yellowish) and with semitransparent membranes as well as yellowish Sc and light brown Sc-R area (including R); legs yellowish with light brown fore and middle tibiae having dark greyish brown proximal parts, with brown to light brown longitudinal stripes and short oblique lines on proximal two thirds of outer side of hind femur, and with greyish brown apical part of this femur and proximal part of hind tibia as well as few spots on dorsal half of rest of this tibia; venter of thorax and abdomen (including cerci) also yellowish. Head higher than wide, with eyes slightly vertical, ocelli small but distinct, and scape almost 1.4 times as wide as rostrum between antennal cavities; pronotum distinctly but not strongly widening to tegmina, with rather high lateral lobes having almost straight but slightly oblique ventral edges; tegmina long and wide, with mirror about 1.3 times as wide as long, apical area shorter than mirror width and longer than mirror length (Fig. 59), and lateral field more or less similar to that of *Borneloria sumatrana* sp.n. in structure but having 26–27 branches of Sc; tympana oval, but outer tympanum rather small, and inner one almost twice larger and barely immersed; spines and spurs of hind tibia almost without pubescence and not very long, i.e. spines 1.2–1.6 mm in length, and longest (dorsal inner) apical spur reaching apex of hind basitarsus; genital plate as in Fig. 42. Genitalia (Figs 37–41) not long; epiphallus rather short and having deep posteromedian notch as well as a pair of thin but not long and almost finger-like apical processes (Fig. 40); ectoparameres small and somewhat obliquely transverse but consisting of three different parts (medial, lateral and posterior) having characteristic folds and lobes as well as small hooks (Fig. 41); rachis slightly elongate but rather wide and laterally sclerotized as well as distally notched and having a pair of apical processes similar to epiphallic apical processes in shape but reaching only their bases (Figs 39–41); formula very small and almost transverse; rami strongly widened (high) in posterior two thirds (Figs 37–39).

Variations. Other males with following differences: proximal part of antenna sometimes light brown but having two darkened spots on venter of scape and few darkened rings on subsequent segments; pronotal disc varied from light brown to almost brown; tegminal Sc light brown; apical tegminal area sometimes almost greyish brown.

Female unknown.

Length in mm. Body 16.5–17.5; body with wings 22–23; pronotum 3.3–3.6; tegmina 16–17; hind femora 14–14.5.

Comparison. The new species is most similar to *Ph. (P.) verecunda* Gorochov, 2005 and possibly to *Ph. (P.) brevis* Tan et Robillard, 2021 from the western part of New Guinea Island in some structures of the male genitalia (Figs 40, 41). It differs from *Ph. verecunda* in the dorsal field of the male tegmina wider, the



Figs 57–68. Details of five new Phaloriini species: *Phaloria (Papuloria) bacan* sp.n. (57–59), *Ph. (P.) ampat* sp.n. (60–62), *Ph.? signata* sp.n. (63, 64), *Ph.? parasignata* sp.n. (65, 66), *Ph.? enarotali* sp.n. (67, 68); male (57–62), female (63–68). 57, 60, 63, 65, 67 — head in front; 58, 61, 64, 66, 68 — anterior part of body from side; 59, 62 — tegmina with hind wings from above.

Рис. 57–68. Детали строения пяти новых видов трибы Phaloriini: *Phaloria (Papuloria) bacan* sp.n. (57–59), *Ph. (P.) ampat* sp.n. (60–62), *Ph.? signata* sp.n. (63, 64), *Ph.? parasignata* sp.n. (65, 66), *Ph.? enarotali* sp.n. (67, 68); самец (57–62), самка (63–68). 57, 60, 63, 65, 67 — голова спереди; 58, 61, 64, 66, 68 — передняя часть тела сбоку; 59, 62 — надкрылья с задними крыльями сверху.

epiphallic *(ep)* apical processes longer, the membranous epiphallic posteromedial lobule *(m)* narrower, the ectoparameral medial part *(me)* wider (longer), the notch between the medial *(me)* and posterior *(e)* ectoparameral parts wider, the lateral ectoparameral part *(le)* less transverse, and the formula of the male genitalia clearly smaller (Fig. 37, 38); from *Ph. brevis*, the new species is distinguished by the ectoparameres more curved, the medial ectoparameral part distinctly wider (longer), and the posterior ectoparameral part clearly narrower (these species possibly differ from each other also in some characters of the epiphallic apical part and of the rachis, but the original description of *Ph. brevis* was illustrated by the photographs of its male genitalia with unclear some genital structures; Tan et al., 2021). From *Ph. (P.) ternate* Gorochov, 2011 (Ternate Island near Halmahera), known only after a female with the pronotal coloration similar to that of the new species, the latter species differs in the more spotted head (*Ph. ternate* head is uniformly brown, without darkened marks on the antennae and under the antennal cavities, and without light median stripe on the face).

Etymology. The new species is named after Bacan Island, its type locality.

Phaloria (Papuloria) ?ternate Gorochov, 2011

Material. **Indonesia, *Halmahera Island:*** 1♀, Maluku Utara Prov., eastern coast near Veda Town, primary/secondary forest, 8–11.V.2019, A. Egorov (ZIN).

Notes. This female is almost identical to the holotype (female) of *Ph. (P.) ternate*, but its head coloration is more or less intermediate between that of this holotype and that of *Ph. (P.) bacan* sp.n.: in this female, the antennae and epicranium lack distinct darkenings (as in *Ph. ternate*), but the anterior epicranial surface has a light median stripe (almost as in *Ph. bacan* sp.n.). Possibly *Ph. bacan* sp.n. is a more southern subspecies of *Ph. ternate* only.

Phaloria (Papuloria) ampat Gorochov, **sp.n.**

Figs 43–50, 60–62.

Material. *Holotype*, ♂: **Indonesia, *Batanga Island:*** Raja Ampat Archipelago (not far from Western part of New Guinea Island), Papua Barat [West Papua] Prov., primary/secondary forest, 27–30.XI.2018, M. Mironov, H. Lotmentseva (ZIN). Paratype: 1♀, same data as for holotype (ZIN).

Description. Male (holotype). General appearance similar to that of *Ph. (P.) bacan* sp.n. but with following differences: head and pronotum more unicolorous, i.e. brown with light brown lower part of epicranium, a pair of brown dots in dorsolateral corners of clypeus and yellowish eyes, ocelli and mouthparts (Figs 60, 61); legs almost uniformly light brown with only very slight darkenings on hind legs (these darkenings more or less similar in shape to those of *Ph. bacan* sp.n.); dorsal tegminal field narrower (more similar to that of *Ph. verecunda*), with mirror approximately 1.15 times as wide as long, and with apical area almost as long as mirror width (Fig. 62); genital plate less long, slightly wider and with somewhat different apical notch (Fig. 48). Genitalia (Figs 43–47) distinguished from those of *Ph. bacan* sp.n. by following characters: epiphallus (*ep*) with apical processes slightly shorter (Figs 46); ectoparamere with medial part (*me*) distinctly narrower (shorter), posterior part (*e*) much narrower at base and separated from medial part by narrow and clearly deeper notch, and lateral part (*le*) narrower and separated from posterior part by narrow and deeper notch (Fig. 47); rachis (*r*) with apical processes almost reaching apices of apical epiphallic processes (Figs 45–47).

Female. Coloration and structure of body as in male, but lateral lobes of pronotum lighter (light brown), pronotal disc slightly less widening to tegmina, dorsal tegminal field with 9–10 longitudinal but slightly oblique veins as well as moderately sparse and regular crossveins between them, lateral tegminal field with moderately wide (but not widened) Sc-R and R-M areas (latter area strongly narrowed in proximal third) as well as similar crossveins in these areas and 20 branches of Sc (no crossveins between these branches), and genital plate as in Fig. 49; ovipositor (Fig. 50) similar to that of *Ph. ternate*.

Length in mm. Body: ♂ — 15, ♀ — 12; body with wings: ♂ — 20.5, ♀ — 19.5; pronotum: ♂ — 3.1, ♀ — 3; tegmina: ♂ — 15, ♀ — 13.5; hind femora: ♂ — 13, ♀ — 13; ovipositor — 7.8.

Comparison. The new species differs from *Ph. (P.) bacan* sp.n. in the more uniform coloration, the narrower dorsal tegminal field in male and the male genital characters listed above. From *Ph. (P.) ternate*, the new species is distinguished by the uniformly brown or light brown coloration of the lateral pronotal lobes; from *Ph. (P.) verecunda*, by the posterior ectoparameral part (*e*) narrower at the base and separated from the lateral (*le*) and medial (*me*) ectoparameral parts by deeper or less narrow notches, respectively (Fig. 47); and from *Ph. (P.) brevis*, by the same character of the ectoparameral posterior part and much deeper notches around this part as well as the narrower, longer and more curved lateral ectoparameral part.

Etymology. The new species is named after Raja Ampat Archipelago, where this species was collected.

Phaloria (Papuloria) aspersa Gorochov, 1996

Material. **Indonesia: *Batanga Island:*** 1♂, Raja Ampat Archipelago (not far from Western part of New Guinea Island), Papua Barat [West Papua] Prov., primary/secondary forest, 27–30.XI.2018, M. Mironov, H. Lotmentseva (ZIN).

Notes. This species was described from the Indonesian part of New Guinea Island and recorded also from Supiori Island near the northern coast of New Guinea [Gorochov, 2005] as well as from some other localities in the western half of New Guinea [Gorochov, 2018; Tan et al., 2021]. Here, this rather widely distributed species is additionally indicated for an island not far from the western coast of New Guinea.

Phaloria (Papuloria) halmahera Gorochov, 2011

Material. **Indonesia, *Bacan Island*** (near Halmahera Island): 2♂♂, Maluku Utara Prov., environs of Labuha Town, primary/secondary forest, 2–7.V.2019, A. Egorov (ZIN); ***Halmahera Island:*** 1♂, 1♀, same province, eastern coast near Veda Town, primary/secondary forest, 8–11.V.2019, A. Egorov (ZIN).

Notes. These specimens were first collected in the central part of Halmahera Island and in an island near the southern part of Halmahera. They are practically identical to the type series of this species originating from the northern part of Halmahera.

Phaloria? signata Gorochov, **sp.n.**

Figs 51, 52, 63, 64.

Material. *Holotype*, ♀: **Indonesia, *Gam Island:*** Raja Ampat Archipelago (not far from Western part of New Guinea Island), Papua Barat [West Papua] Prov., primary/secondary forest, 15–20.XII.2018, M. Mironov, H. Lotmentseva (ZIN).

Description. Female (holotype). General appearance similar to that of female of *Ph. ampat* sp.n. but with distinct differences in coloration and small differences in structure of body parts: head (Fig. 63) yellowish with brown posterior part of genae and dorsum behind rostrum (including all areas behind eyes), dark brown spots on anterior surface of epicranium

(a pair of small spots near rostral apex and a pair of somewhat larger spots under antennal cavities) and sinuate stripes along anterior edges of brown areas on genae and dorsum, light brown upper part of clypeus and narrow stripes along dorsal and ventral edges of subgenae as well as proximal portion of antennae (but scape with large dark brown ventromedial area and smaller brown dorsal spot, and antennal flagellum with few dark brown to brown proximal segments and sparse darkish rings on more distal part of this portion); pronotum uniformly brown (Fig. 64); tegmina with light brown most part of dorsal field, yellowish (semitransparent) membranes in lateral field, brown Sc stem and longitudinal vein in dorsal field near its lateral edge, light brown to almost yellowish other venation located in lateral field above Sc, and dark brown branches of Sc; legs yellowish with 2 greyish marks on dorsal part of fore and middle tibiae, few light brown spots on hind femur, 4 greyish brown spots on dorsal part of hind tibia, and more or less darkened middle part of all tarsi as well as spines and spurs of hind tibia; rest of body yellowish with greyish distal part of genital plate, brown stripe on each lateral side of ovipositor, and dark brown ovipositor apex (Fig. 52); dorsal tegminal field with 12 longitudinal but partly oblique veins as well as with moderately sparse and almost regular crossveins; lateral tegminal field with sparse and very sparse crossveins between Sc and M as well as with 15–16 branches of Sc; hind wings practically not protruding beyond tegminal apices; outer tympanum almost as in *Ph. (P.) ampat* sp.n., but inner tympanum slightly larger than outer one (i.e. smaller than in this species); dorsal spines of hind tibia 0.8–1.7 mm in length; inner dorsal (longest) apical spur of hind tibia slightly not reaching apex of hind basitarsus; genital plate basally wider than in *Ph. ampat* sp.n. but apically somewhat narrower (Fig. 51); ovipositor longer than in this species and with distal part as in Fig. 52.

Male unknown.

Length in mm. Body 15; body with wings 18.5; pronotum 3.2; tegmina 13.5; hind femora 12.8; ovipositor 14.

Comparison. The new species is clearly distinguished from all other congeners by the characteristic coloration of both head and tegminal lateral field in combination with a uniformly brown pronotum, a comparatively small inner tympanum, rather short spines and spurs of the hind tibia, and a long ovipositor.

Etymology. This species name is the Latin word "signata" (marked) due to the characteristic coloration of some body parts.

Phaloria? parasignata Gorochov, **sp.n.**

Figs 53, 54, 65, 66.

Material. Holotype, ♀: **Indonesia, *New Guinea Island:*** Papua Prov., environs of Fawi [Faowi] Vill. in upper part of Tariku River (tributary of Mamberamo River), secondary forest near river, on leaf of bush at night, 29.I–17.II.2012, A. Gorochov (ZIN).

Description. Female (holotype). General appearance most similar to that of *Ph.? signata* sp.n. but with some characteristic features. Body somewhat smaller. Coloration more uniformly light brown and with following pattern: head with yellowish rostrum and anterior surface of epicranium as well as mouthparts and most part of antennae (rostral apex with a pair of dark brown spots near median ocellus, and antennal flagellum with few brown proximal segments (Fig. 65); pronotum with almost brown disc and dark brown band on lateral lobe along its ventral edge (Fig. 66); tegmina with yellowish grey membranes of dorsal field and whitish membranes of lateral field as well as greyish brown to brown longitudinal veins (including Sc branches) and light brown crossveins (Fig. 66); legs uniformly light greyish brown with barely darkened marks on dorsal part of fore and middle tibiae as well as slightly darkened distal portion of hind femur and 7 differently darkened spots on more distal part of hind leg (5 spots on tibia, including darkened spines and spurs, and 2 spots on tarsus); other bodyparts with coloration as in female of *Ph.? signata* sp.n. but without any darkening on genital plate. Body structure distinguished from that of this species by following characters: tegmina insignificantly protruding beyond abdominal apex, with 10 longitudinal veins in dorsal field (6 distal veins branched from lateral veins and barely oblique, widest area between longitudinal veins of this field almost 1.1 mm in width; *vs*. distal veins, that branched from lateral veins, clearly oblique, and widest area in dorsal field almost 1.4 mm in width) and 14–15 branches of Sc in lateral field; hind wings reaching tegminal apices but practically not protruding beyond them; inner dorsal (longest) apical spur of hind tibia reaching apex of hind basitarsus; genital pate with insignificantly deeper and more angular apical notch (Fig. 53); ovipositor (Fig. 54) slightly longer (it almost 1.2 times as long as hind femur, but in *Ph.? signata* sp.n., this ratio 1.1).

Male unknown.

Length in mm. Body 12; body with wings 15.3; pronotum 3; tegmina 11.4; hind femora 12; ovipositor 14.5.

Comparison. The new species is most similar to *Ph.? signata* sp.n. (especially by the presence of a pair of small dark spots on the head rostrum) but distinguished by a less spotted head coloration as well as some other characters listed above. From all the other congeners, the new species differs in its characteristic body coloration, the tegmina smaller, the hind wings practically not protruding beyond the tegminal apices, and the ovipositor very long.

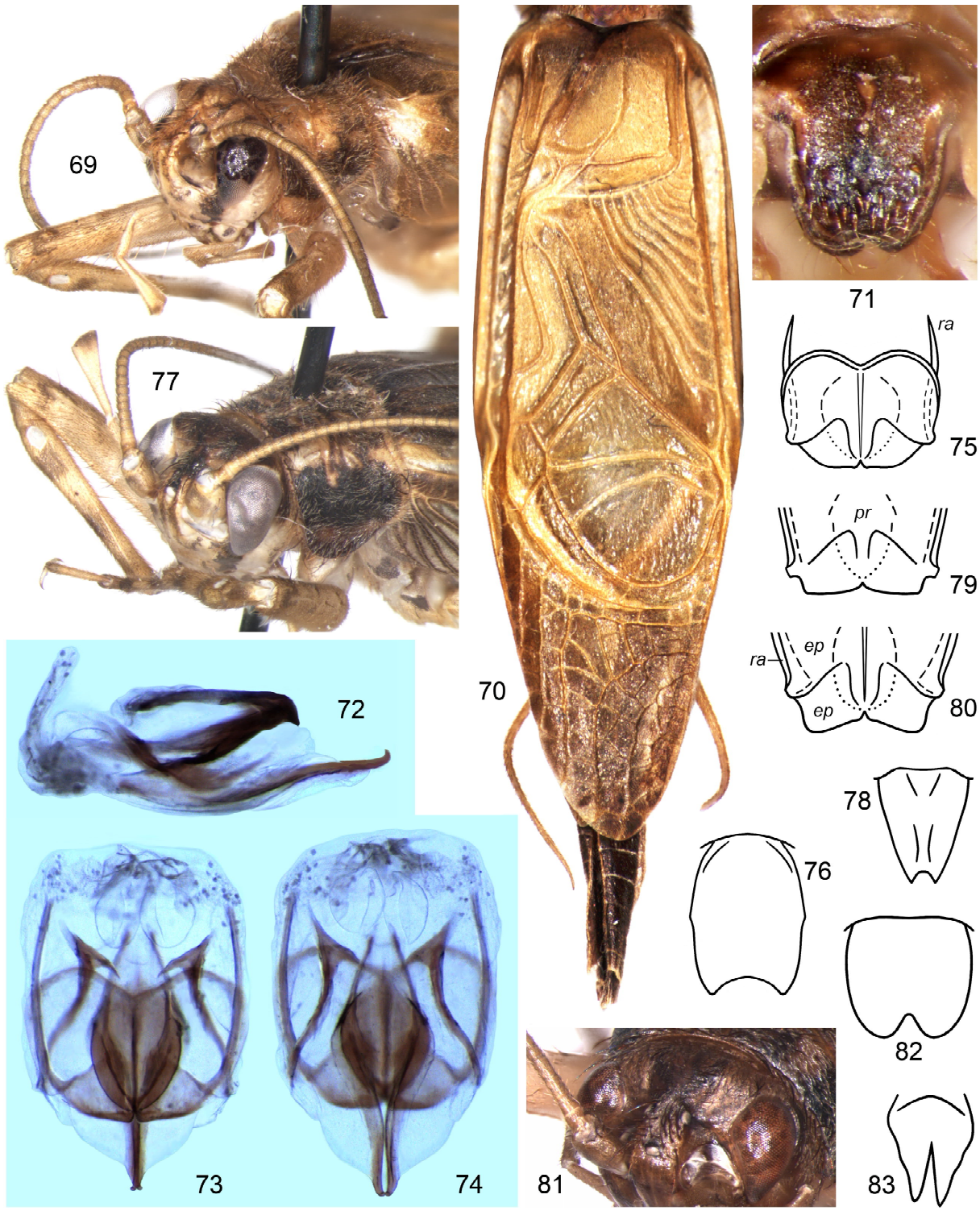
Etymology. This species name consists of the Latinized Greek prefix "para-" (near) and the species name «*signata*» due to a certain similarity of the new species to *Ph.? signata* sp.n.

Phaloria? enarotali Gorochov, **sp.n.**

Figs 55, 56, 67, 68.

Material. Holotype, ♀: **Indonesia, *New Guinea Island:*** Papua Prov., ~120 km SEE of Nabire Town, environs of Enarotali [Enaratoli] Vill. on Paniai Lake, ~2000 m a.s.l., primary forest, on leaf of small tree at night, 22–27.II.2012, A. Gorochov (ZIN). Paratype: 1♀, same data as for holotype (ZIN).

Description. Female (holotype). Body small and more or less similar to that of *Ph. (P.) curta* Gorochov, 1996 and *Ph. (P.) supiori* Gorochov, 2005 but with following characteristic features: head and pronotum greyish brown with light brown lower half of epicranium and a pair of short longitudinal stripes behind eyes as well as few spots on pronotal disc and sinuate longitudinal stripe on middle part of each pronotal lateral lobe, with yellowish mouthparts and antennae, and with rather numerous but small light brown spots on antennal flagellum (Figs 67, 68); tegmina with gryeish brown dorsal field, yellowish membranes of lateral field and light brown venation of this field (Fig. 68); visible parts of hind wings light brown; legs yellowish with brown to light brown moderately numerous spots on femora, tibiae and tarsi (hind femur also with very numerous brownish oblique lines on dorsal and outer surfaces), but spines and spurs of hind leg mainly yellowish; other bodyparts as in *Ph.? parasignata* sp.n. in coloration; structure of body also similar to that of this species, but tegmina distinctly protruding beyond abdominal apex and with clearly narrower dorsal field (this field with 11–12 longitudinal veins; all they



Figs 69–83. Details of Subtiloriini species: *Subtiloria ugandae* sp.n. (69–78), *S. succinea succinea* (Bol.), lectotype (79); *S. succinea korup* Gor., holotype (80), *Afrophaloria grishai* sp.n. (81–83); male (69–76, 79, 80), female (77, 78, 81–83). 69, 77 — head with pronotum and fore legs, dorsolateral and slightly frontal view; 70 — tegmina with cerci and hind wings from above; 71 — anal plate with paraprocts, posterodorsal view; 72 — genitalia from side; 73 — genitalia from above; 74 — genitalia from below; 75 — epiphallus with rami and posteromedian (upper) plate of rachis, dorsal view; 79, 80 — same without proximal parts; 76, 78, 82 — genital plate from below; 81 — upper half of head, dorsolateral and partly frontal view; 83 — copulatory papilla from below. Abbreviations: *ep*, sclerotized and membranous parts of epiphallus; *pr*, posteromedian plate of rachis visible through epiphallus and shown by interrupted and dotted lines; *ra*, ramus. Fig. 79 after Gorochov [1996].

barely oblique and almost parallel to each other) as well as with 15–16 branches of Sc in lateral field, hind wings slightly protruding beyond tegminal apices, hind tibia with dorsal spines 0.7–1.3 mm in length and with inner dorsal (longest) apical spur barely projecting beyond hind basitarsus, genital plate as in Fig. 55, and ovipositor (Fig. 56) distinctly shorter.

Variations. Paratype with light stripe on each lateral pronotal lobe interrupted, i.e. divided into 2–3 spots only.

Male unknown.

Length in mm. Body 11–12; body with wings 14–14.5; pronotum 2.3–2.5; tegmina 10–10.8; hind femora 9–9.7; ovipositor 6.3–6.7.

Comparison. The new species is similar to *Ph. (P.) curta* from New Guinea Island and *Ph. (P.) supiori* from Supiori Island near New Guinea in having a small body and rather dark coloration. However, it differs from the first congener in the less uniform coloration of the antennal flagellum, pronotal lateral lobes and legs as well as in the longer outer apical spur of the hind tibia, and from *Ph. supiori*, in distinctly shorter hind wings and somewhat shorter dorsal spines of the hind tibia (in *Ph. supiori*, these spines 0.9–1.8 mm in length).

Subtiloriini

Subtiloria Gorochov, 1999

Type species: *Heterotrypus subtilis* Gorochov, 1996.

Notes. This genus was established for 5 species [Gorochov, 1999], including *S. succinea* (Bolivar, 1910), comb. resurr., originally described from Equatorial Guinea as a representative of the genus *Heterotrypus* Saussure, 1878 [Bolivar, 1910]. Recently, the latter species was returned to *Heterotrypus* without any understandable explanations, and its subspecies (*S. succinea korup* Gorochov, 2018, comb. resurr.) from Cameroon was mentioned as a subspecies of *Ornebius succineus* Bolivar, 1912 [Cigliano et al., 2022]. However, it is a mistake, because these two Bolivar's species were originally described in different genera (*Heterotrypus* from Gryllidae, and *Ornebius* from Mogoplistidae), from different localities (Africa and Seychelles) and in different years (1910 and 1912), but they have identical species names only. Moreover, *S. succinea* is very similar to the type species of *Subtiloria* (the male genitalia and other structures of *S. succinea* lectotype were studied and illustrated; Gorochov [1996, 1999]). Another African species, described in 2018 and originally attributed to *Subtiloria*, is below transferred to the genus *Shizotrypus* Chopard, 1954. Thus, *Subtiloria* contains the following species: type species (Nigeria); *S. succinea* with 2 subspecies; *S. angusta* Chopard, 1958 (Sao Tome Island in Gulf of Guinea); *S. villosa* (Chopard, 1967) from Congo; *S. stena* Gorochov, 1999 (Principe Island in Gulf of Guinea); *S. ugandae* sp.n.

Subtiloria ugandae Gorochov, **sp.n.**

Figs 69–78.

Material. Holotype, ♂: **Uganda, *southwestern part*:** Bushenyi Distr., environs of Kalinzu Nature Reserve, ~1000 m a.s.l., primary forest, on leaf of bush at night, 23–28.II.2020, A. Gorochov, G. Irisov (ZIN). Paratype: 1♀, same data as for holotype (ZIN).

Description. Male (holotype). General appearance typical of this genus. Body rather slender. Coloration yellowish with following marks: eyes brownish grey to greyish; epicranium with 4 short brown longitudinal lines on posterior half of dorsum, a pair of almost dark brown spots located around lateral ocelli as well as between them and eyes, a pair of greyish brown vertical but slightly oblique stripes under eyes, few small darkish marks between these stripes as well as near and under median ocellus; mouthparts with a pair of darkish dots on bases of mandibles and greyish spots on upper part of clypeus; pronotum with light brown disc and brown lateral lobes having yellowish stripe along each ventral edge (Fig. 69); tegmen with not large light brown to greyish brown area at base of dorsal field, greyish membranes in mirror and around it, almost brownish grey membranes in apical area, and transparent membranes in lateral field; visible part of hind wings brownish grey but darker than membranes of apical tegminal area (Fig. 70); legs with 3–4 slight light brown spots on each of anterior and middle tibiae, 1 area in middle part of each of fore and middle tarsi, poorly distinct darkish spots on hind femur, and several darker (brownish grey to dark brown) marks on dorsal part of hind tibia; last abdominal tergite light brown; anal plate and visible parts of paraprocts brown but with almost dark brown apical area of above mentioned plate. Head higher than wide; eyes clearly vertical; ocelli moderately large, but median one almost round and approximately equal to each lateral ocellus in height, and lateral ocelli elongately oval (space between latter ocelli approximately twice as wide as height of each of them); scape almost 1.4 times as wide as rostrum between antennal cavities; pronotum distinctly but not strongly widening to tegmina, rather high and with slightly oblique ventral edge of each lateral lobe (Fig. 69); tegmina with dorsal field as in Fig. 70, and with lateral field having rather narrow R-M area and very narrow Sc-R area as well as 19–20 branches of Sc and sparse crossveins only in Sc-R area and in distal half of R-M area; hind wings distinctly protruding beyond tegminal apices (Fig. 70); legs with clearly but not strongly thickened tympanal region having moderately small and oval inner tympanum as well as somewhat longer and narrow (slit–like) outer tympanum, and with inner dorsal (longest) apical spur of hind tibia insignificantly not reaching apex of hind basitarsus; anal plate slightly elongate but with widely rounded (almost truncate) apex and several small dorsal spinules on distal part (Fig. 71); genital plate almost elongate rectangular with widely rounded but not very deep posteromedian notch (Fig. 76). Genitalia (Figs 72–74) similar to those of *S. succinea* but with following characteristic features: epiphallus with truncate posterior edge having small median notch and widely rounded lateral corners (these corners not in shape of short and almost angular projections directed more or less posterolaterally; compare Figs 75 and 79, 80); rachis with somewhat longer posterolateral sclerotized parts directed medially and

Рис. 69–83. Детали строения видов трибы Subtiloriini: *Subtiloria ugandae* sp.n. (69–78), *S. succinea succinea* (Bol.), lectotype (79); *S. succinea korup* Gor., holotype (80), *Afrophaloria grishai* sp.n. (81–83); самец (69–76, 79, 80), самка (77, 78, 81–83). 69, 77 — Голова с переднеспинкой и передними ногами, верхнебоковой и слегка передний вид (69, 77); 70 — надкрылья с церками и задними крыльями сверху; 71 — анальная пластинка с парапроктами, вид сзади сверху; 72 — гениталии сбоку; 73 — гениталии сверху; 74 — гениталии снизу; 75 — эпифаллус с рамусами и заднесрединной (верхней) пластинкой рахиса, вид сверху; 79, 80 — то же, без проксимальных частей; 76, 78, 82 — генитальная пластинка снизу; 81 — верхняя половина головы, верхнебоковой и частично передний вид; 83 — копулятивная папилла снизу. Сокращения: *ep*, склеротизованные и мембранозные части эпифаллуса; *pr*, заднесрединная пластинка рахиса, видимая сквозь эпифаллус и показанная прерванными линиями и точками; *ra*, рамус. Рис. 79 по Горохову [1996].

then backwards near each other, and with posteromedian (upper) plate almost oval in shape but clearly wider in middle part (see Figs 75 and 79, 80); formula absent or partly reduced, i.e. possibly consisting of a pair of thin sclerotized ribbons fused with base of rachis (in *S. succinea*, formula distinct and with a pair of lamellar proximal lobules directed anterolaterally).

Female. Structure of body similar to that of male, but coloration different: head with dark brown to brown dorsum and upper parts of genae as well as with a pair of brownish vertical lines between antennal cavities; pronotum with spotted disc and with dark brown lateral lobes having brown band along each ventral edge (Fig. 77); tegmen with greyish brown dorsal field having narrow greyish lateral (humeral) stripe, and with greyish to almost transparent lateral field having greyish brown Sc-R area and distal half of R-M area as well as brown to light brown Sc and its branches; fore and middle femora with small and sparse darkened dots; hind femur and tibia with darker and larger marks; hind basitarsus with 2–3 darkened spots; outer tympanum somewhat wider (slightly less slit–like); dorsal tegminal field with 9 longitudinal veins and moderately sparse and regular crossveins; lateral tegminal field with similar crossveins in Sc-R area and in distal half of R-M area as well as between some Sc branches, and with 10–11 almost longitudinal (slightly oblique) branches of Sc; genital plate as in Fig. 78; ovipositor typical of this genus.

Comparison. The new species is most similar to *S. succinea* but differs in a somewhat larger body, clearly smaller ocelli (especially lateral ones), a narrower slit–like part of the male outer tympanum, and the characters of the male genitalia listed above. From *S. subtilis*, the new species differs in the larger male tegmina, smaller spinules on the male anal plate, epiphallus posteriorly truncate (not distinctly concave), sclerotized part of each ectoparamere not reaching the epiphallic apex, rachis with longer posterolateral sclerotized parts and a much wider posteromedian (upper) plate, as well as an absent or partly reduced formula in the male genitalia (*vs*. this formula is almost as in *S. succinea*). From *S. stena* and *S. villosa*, the new species is distinguished by much shorter rami or by ectoparameres not protruding beyond the epiphallic apex, respectively; and from *S. angusta*, by a distinctly deeper posteromedian notch of the male genital plate.

Etymology. This species is named after the country where it was collected.

Schizotrypus Chopard, 1954

Type species: *Schizotrypus variegatus* Chopard, 1954.

Notes. This genus as well as the type species of the genus *Heterotrypus* were described from females collected in Guinea and Sudan, respectively. However, the female characters do not allow us to give any sufficiently exact diagnoses for Subtiloriini genera. It was a reason that Gorochov [1999] proposed the more or less tentative inclusion of some other African species of Subtiloriini with known males in these genera: in *Schizotrypus*, he included *Sch. conradti* (Gorochov, 1996) and *Sch. modestus* (Gorochov, 1996), comb. resurr. from Cameroon as well as *Sch. planus* Gorochov, 1999 from Nigeria; in *Heterotrypus*, only *H. laqueatus* Karsch, 1893 from West Tropical Africa was placed. All the other species included in *Heterotrypus* by Cigliano et al. [2022], except for its type species (*H. africanus* Saussure, 1878), do not belong to this genus: *H. elegans* Chopard, 1936 from Sri Lanka probably belongs to *Ceyloria* Gorochov, 1996; *H. funambulus* Saussure, 1878 from New Guinea, to the genus *Phaloria*; «*H. modestus*» and «*H. succineus*» were transferred to *Schizotrypus* and *Subtiloria*, respectively (above, they are returned to the latter genera).

Schizotrypus semotus (Gorochov, 2018), **comb.n.**

Notes. This species was originally described as a possible primitive representative of *Subtiloria* (Gorochov [2018]: *"S. semota"*), because it has the general appearance similar to that of *Subtiloria* type species, and its male genitalia are almost intermediate between those of these genera. However, the rachis of these genitalia in *Sch. semota* is more similar to that of the other *Schizotrypus* representatives: its lateral sclerotized parts are thin but directed posterolaterally (in *Subtiloria*, they are directed posteromedially, i.e. their distal portions are located not near each other), and its posteromedian lobe is rather small and not forming a characteristic large and oval upper plate. Also the male anal plate of this species lacks any spinules, but these spinules are rather numerous in all *Subtiloria* species, and even 1–4 such spinules are present in two *Schizotrypus* species (these two species have the rachis more typical of this genus). Possibly, some similarity between *Sch. semotus* and *Subtiloria* is the result of convergence.

Afrophaloria Desutter-Grandcolas, 2015

Type species: *Afrophaloria amani* Desutter-Grandcolas, 2015.

Notes. This genus together with some other African genera (*Phasmagryllus* Desutter-Grandcolas, 2015 and *Upupagryllus* Desutter-Grandcoolas, 2015) are included in the tribe Phaloriini by Cigliano et al. [2022]. However, the ovipositor of *Afrophaloria* as well as the structure of its rachis are typical of Subtiloriini (the ovipositor is not drilling but with the distal portion almost vertically lamellar, and the rachis is wide and fused with the formula), i.e. this genus undoubtedly belongs to Subtiloriini [Gorochov, 2018]. Positions of *Phasmagryllus* and *Upupagryllus* are less understandable; however, their ovipositor is more similar in the structure to that of Subtiloriini than to that of Phaloriini, and these genera should be also included in Subtiloriini, if they really belong to Phaloriinae.

Afrophaloria grishai Gorochov, **sp.n.**

Figs 81–83.

Material. Holotype, ♀: **Uganda,** ***western part:*** Karabole Distr., environs of Kibale National Park, ~1500 m a.s.l., secondary forest, on leaf of bush at night, 6–11.III.2020, A. Gorochov, G. Irisov (ZIN). Paratype: 1♀, same data as for holotype (ZIN).

Description. Female (holotype). Body moderately small, completely apterous. Coloration light brown with following pattern: head with poorly distinct brown longitudinal stripes on dorsum behind lateral ocelli and on upper part of genae behind eyes (Fig. 81) as well as with a pair of darekened oblique areas under antennal cavities; pronotum greyish brown with barely lighter large anterior area on disc; other tergites also greyish brown with almost indistinct barely lighter bands along anterior edge of 3 anterior ones; legs light greyish brown with several small brown spots along dorsal part of fore and middle femora, few slight brown areas on distal part of hind femur, numerous darkish oblique lines on dorsal part of this femur, 4 brown to dark brown spots on fore and middle tibiae, 4 darkened marks on dorsal part of hind tibia (2 brown spots on proximal half, distal of them distinctly longer than proximal one; 2 dark brown marks on distal half, proximal of them much longer than distal one as well as narrower and with additional spots on dorsal spines but not on apical spurs), and 2 dark spots on each tarsus; anal plate and all sternites light greyish brown; paraprocts barely darker than this plate; genital plate and ovipositor light brown to yellowish with narrow brown stripe

along median line of each lateral half of ovipositor. Shape of head similar to that of *S. ugandae* sp.n., but rostrum between antennal cavities almost as wide as scape, ocelli almost round (barely oval) and slightly smaller as well as almost equal to each other in size (space between lateral ocelli approximately 2 times as wide as height of each of these ocelli; Fig. 81); pronotum slightly widening to mesonotum; visible part of mesonotum rather short, much shorter than metanotum and proximal abdominal tergites; legs without traces of tympana and with 4 pairs of rather short dorsal spines on hind tibia (these spines 0.9–1.2 mm in length, but apical spurs of this tibia partly reduced due to possible damaging in nymph); anal plate flat, with clearly narrower distal half having rather widely rounded apical part; genital plate as in Fig. 82; ovipositor with distal part typical of this genus; copulatory papilla almost membranous, with a pair of long and almost spine–like apical lobules as well as with very narrow and deep notch between them (Fig. 83).

Variations. Second female with somewhat darkened median part of head dorsum and with insignificantly smaller ocelli; apical spurs of its hind tibia normal for *Afrophaloria*, with inner dorsal (longest) spur slightly not reaching apex of hind basitarsus (copulatory papilla strongly damaged).

Male unknown.

Length in mm. Body 10.5–13; pronotum 2.3–2.5; hind femora 10.3–10.7; ovipositor 11.5–12.

Comparison. The new species is most similar to *A. dja* Gorochov, 2018 from Cameroon in the absence of tympana, similar shape of the female genital plate and long apical lobules of the copulatory papilla. However, this species differs from the latter one in larger ocelli (in *A. dja*, the space between the lateral ocelli is 2.5 times as wide as the height of each of these ocelli) and some distinct features of the copulatory papilla (it is less sclerotized; its distal lobules are slightly longer, narrower and with almost acute apical parts; the notch between these lobules narrower, deeper and not rounded). From all the other congeners, *A. grishai* sp.n. differs in the absence of tympana or clearly longer distal lobules of the copulatory papilla.

Etymology. This species is named in memory of my friend and field companion Grigorij [Grisha] Irisov.

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