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New taxa of the cricket subfamily Pteroplistinae (Orthoptera: Gryllidae) from Indo-Malayan Region

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Abstract. New material on the cricket subfamily Pteroplistinae is considered. The following new taxa of this subfamily are described: *Pteroplistes (Eupteroplistes) tarbinskyi* **subgen. et sp. nov.** from Sumatra, *Malaysiola* **gen. nov.**, *M. tabulophila insularis* **subsp. nov.** from Tioman Island near Malay Peninsula, *Leuseriola* **gen. nov.**, *L. bohoroki* **sp. nov.** and *L. alasi* **sp. nov.** from Sumatra. Two species from Malay Peninsula and its environs are transferred from the genus *Kerinciola* Gorochov, 2004 to *Malaysiola* **gen. nov.**: *M. tabulophila* (Gorochov, 2018), **comb. nov.** and *M. similis* (Chopard, 1969), **comb. nov.**

Keywords: crickets, taxonomy, Indo-Malayan Region, Orthoptera, Gryllidae, Pteroplistinae, new taxa

Новые таксоны сверчков подсемейства Pteroplistinae (Orthoptera: Gryllidae) из Индо-Малайской области

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Аннотация. Рассмотрен новый материал по сверчкам подсемейства Pteroplistinae. Описаны следующие новые таксоны этого подсемейства: *Pteroplistes (Eupteroplistes) tarbinskyi* **subgen. et sp. nov.** из Суматры, *Malaysiola* **gen. nov.**, *M. tabulophila insularis* **subsp. nov.** с острова Тиоман у Малайского полуострова, *Leuseriola* **gen. nov.**, *L. bohoroki* **sp. nov.** и *L. alasi* **sp. nov.** из Суматры. Два вида с Малайского полуострова и окрестностей перенесены из рода *Kerinciola* Gorochov, 2004 в род *Malaysiola* **gen. nov.**: *M. tabulophila* (Gorochov, 2011), **comb. nov.** и *M. similis* (Chopard, 1969), **comb. nov.**

Ключевые слова: сверчки, таксономия, Индо-Малайская область, Orthoptera, Gryllidae, Pteroplistinae, новые таксоны

Introduction

The subfamily Pteroplistinae was established by L. Chopard (1936) for two genera: *Pteroplistes* Brunner-Wattenwyl, 1873 and *Trichogryllus* Chopard, 1936. The first genus was included by him in this subfamily under the name *Pteroplistus* — an unjustified emendation by H. Saussure (1877) — and contained the following taxa (in original binomen): *Gryllus platyxiphus* Haan, 1844 from Java; *Pteroplistus acinaceus* Saussure, 1877 from Malay Peninsula; *P. platycleis* Bolivar, 1900 from India. The generic and species names *Platyxiphus javanus*, proposed by F. Walker (1869) instead of *G. platyxiphus*, are not in complete accordance with the International Code of Zoological Nomenclature because he probably ascribed a subgeneric rank to the species name *platyxiphus* (although its species rank was clearly indicated in the original description; Haan 1844), changed this "subgenus" into a genus and added a new synonymous species name *javanus*. Walker's invalid names were synonymised with the names *Pteroplistes* and *platyxiphus* (Kirby 1906); this is correct for the species name but problematic for the generic one because *G. platyxiphus* was described from a female, but now females do not allow us to establish their generic position. The position of *P. platycleis* is also problematic as this species is known after a female and nymphs only (Jaiswara, Desutter-Grandcolas 2014). The fossil genus *Trichogryllus* (Eocene Baltic amber) was removed from Pteroplistinae (Gorochov 1995) as its ovipositor is less high in proximal half and has small ventral denticles (distinct from above) on the distal portion of each upper valve.

Since 1969 some other taxa of this subfamily have been described: eight additional (to *P. acinaceus*) species and subspecies of *Pteroplistes* from Sumatra, Borneo, Malay Peninsula and India; *Tramlapiola* Gorochov, 1990 with two species from Vietnam; *Crockeriola* Gorochov et Kostia, 1999 with one species from Borneo; *Kerinciola* Gorochov, 2004 with three species from Malay Peninsula and Sumatra; *Changiola* Gorochov, 2004 with four species from Malay Peninsula, Thailand and Borneo; *Pangrangiola* Gorochov, 2004 with two species from Java; *Tembelingiola* Gorochov, 2004 with two species from Malay Peninsula and Borneo; *Asymmetriola* Gorochov, 2010 with one species from Sumatra; *Singapuriola* Gorochov et Tan, 2012 with one species from Singapore (Chopard 1969; Gorochov 1990; 2004; 2010; 2011; 2018; Gorochov, Kostia 1999; Gorochov et Tan 2012; Jaiswara, Desutter-Grandcolas 2014; Tan et al. 2019; 2021). Most of these genera are currently monotypic or have only a few species, but this situation may be corrected after the discovery of numerous new species in South-East Asia and on the nearest islands, because at present there are no materials on these genera of Pteroplistinae from the most part of this vast region. Moreover, some of these genera may be divided into subgenera and separate genera on the basis of new material containing some new taxa and considered here.

The phylogenetic position of Pteroplitinae is rather problematic: in the first phylogenetic scheme of Gryllidae (Gorochov 1986) this position was still uncertain in connection with the unique ovipositor structure. Then this subfamily was united by D. Otte (1988) with the unrelated subfamily Landrevinae and divided into three tribes: Pteroplistini sensu Otte (= Pteroplistinae + two genera of Landrevini), Landrevini sensu Otte (= other genera of Landrevini + Prolandrevini) and Odontogryllini (Mello 1992; Otte 1994). But this union was based on a mistake corrected by Gorochov (1990; 2004). Besides, the Pteroplistinae was tentatively included into Phalangopsinae subfamily group as its primitive branch possibly distributed in Europe in Eocene and Paleocene (*Eneopterotrypus* Zeuner, 1937 and *Proeneopterotrypus* Gorochov, 2019) but now represented only in South-East Asia (Gorochov 1995; 2001; 2019). Recently, this subfamily was placed near the base of most other subfamilies of Gryllidae but outside of any subfamily group or family if such groups are considered as families (Chintauan-Marquier et al. 2016; Cigliano et al. 2022).

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Taxonomy

Genus ***Pteroplistes*** Brunner-Wattenwyl, 1873

Note. This genus includes seven species, one of which consists of two subspecies: *P. acinaceus* (type species) and *P. malaccanus* Gorochov, 2018 from Malay Peninsula; *Pteroplistes sumatranus* Gorochov, 2004 from Sumatra; *P. lagrecai* Gorochov, 2004, *P. borneoensis* Gorochov, 2004, *P. b. sabahi* Gorochov, 2018 and *P. bruneiensis* Tan, Gorochov et Wahab, 2019 from Borneo; *P. kervasae* Jaiswara, 2014 and *P. masinagudi* Jaiswara, 2014 from India. All these species are rather similar to each other in their general appearance and in the male genitalia structure. Here an additional species of *Pteroplistes* is described from Sumatra, but this species has some important morphological characters separating it from all the other congeners and allowing me to propose a new subgenus of this genus.

Subgenus ***Eupteroplistes*** Gorochov, **subgen. nov.**

Type species *Pteroplistes (Eupteroplistes) tarbinskyi* **sp. nov.**

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Diagnosis. Body very similar to that of nominotypical subgenus of this genus in external morphology (Fig. 1: *A, B*); however, male anal plate with large and rather high dorsomedian convexity almost vertically truncated posteriorly (Fig. 1: *C, D*) (*vs.* this plate with a pair of small dorsal hooks or denticles and usually with concavity between them). Male genitalia also somewhat similar to those of nominotypical subgenus but with some characteristic features: epiphallus more or less H-shaped and fused with rami having narrow posterior halves and subapical lamellar widenings in anterior halves (as in *Pteroplistes* s. str.; compare Figs. 2: *A, D* and 2: *E, F, H*), but anteromedian part of epiphallus distinctly sclerotised, curved downwards and separated from rest of epiphallus by membranous area (this part looking like isolated plate between epiphallus and rachis in caudal view; Figs. 2: *C, D*) (*vs.* this part not isolated from rest of epiphallus but sometimes semisclerotised or membranous; compare Figs. 2: *A* and 2: *F*); ectoparameres absent as well as in *Pteroplistes* s. str. (but in some species of nominotypical subgenus, posterolateral lobes of epiphallus partly separated from rest of epiphallus and looking almost like ectoparameres; Fig. 2: *F*); rachis consisting of two isolated sclerotised parts (dorsal and ventral ones) (*vs.* these parts fused with each other at base; compare Figs. 2: D and 2: *E, H*); dorsal part of rachis short, wide and almost horizontally lamellar but with not long spine-like posteromedian process (*vs.* this part clearly narrower and/or with a pair of apical hooks; compare Figs. 2: *A, B* and 2: *F, G*); ventral part of rachis similar to its dorsal part in shape but less lamellar and with semitubular posteromedian process (*vs.* this part much longer and more gradually widening to base; compare Figs. 2: *B, D* and 2: *E, G, H*); endoparameres looking like a pair of elongate sclerites clearly not contacting each other and widely separated from both pairs of anterior arcuate plates (*vs.* endoparameres almost contacting each other in short distance and articulated or fused with upper (first) of these arcuate plates; compare Figs. 2: *A, B* and 2: *F, G*).

Included species. Type species only.

Comparison. The new subgenus differs from the nominotypical subgenus in the characters listed above. From all the other genera of Pteroplistinae, it is distinguished by the body larger, tegmina longer, male anal plate with the morphological specialisation mentioned in the diagnosis (*vs.* this plate simple, i.e. without any distinct specialisation), and by the following important features of the male genitalia and male genital plate: from *Kerinciola* and *Tramlapiola*, by the rachis distinctly wider and with its dorsal and ventral parts isolated from each other; from *Tembelingiola*, *Changiola* and *Pangrangiola*, by the absence of ectoparameres and less simple structure of the rachis; from *Crockeriola*, by the same rachial structure and less complex shape of the posterolateral epiphallic lobes; from *Singapuriola*, by the rami much longer and rachis undivided into a pair of lateral sclerites; from *Asymmetriola*, in the male genitalia completely

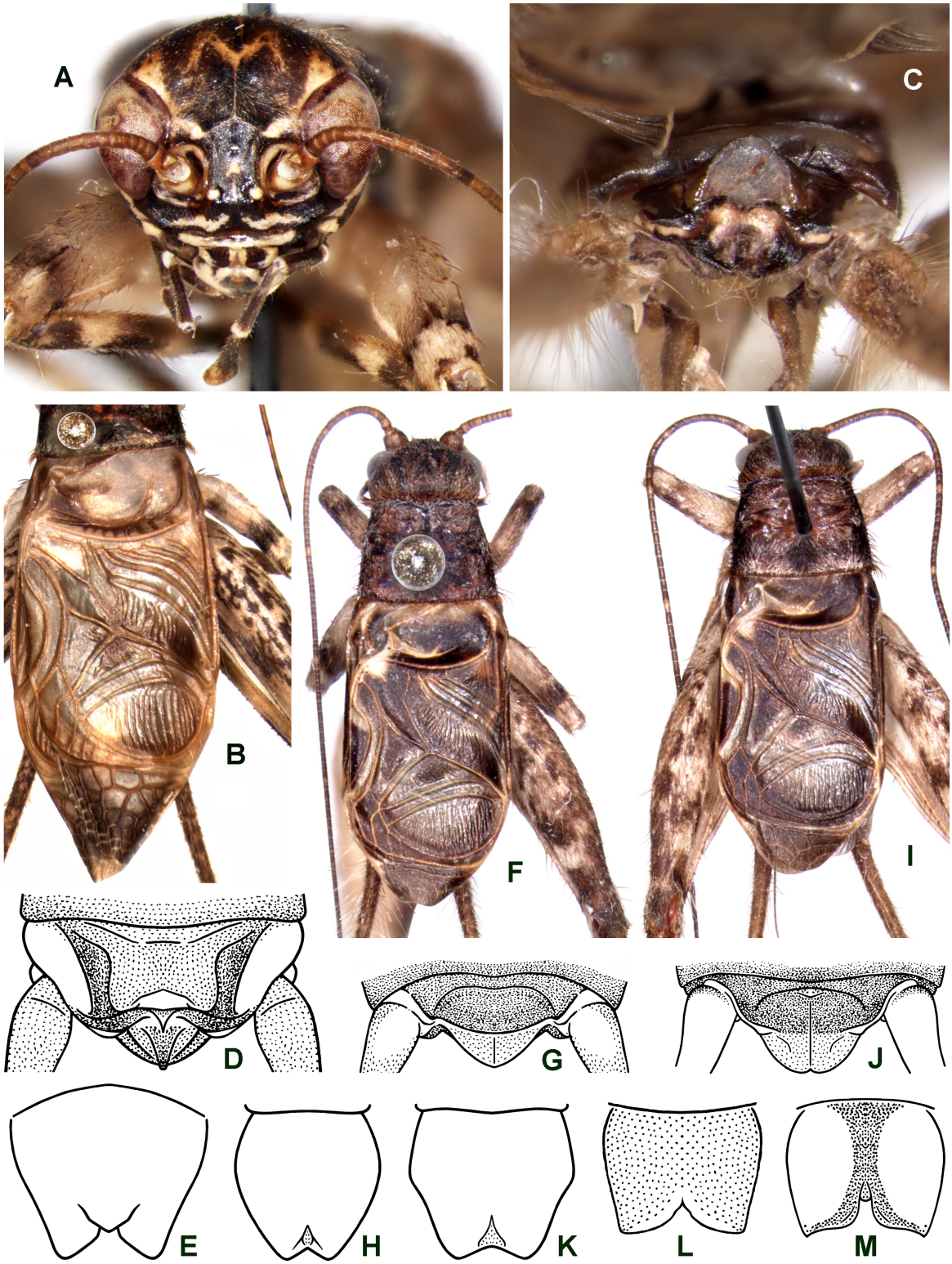

Рис. 1. *Pteroplistes* Br.-W., *Leuseriola* **gen. nov.** и *Malaysiola* **gen. nov.**, самец: *A–E — P. (Eupteroplistes) tarbinskyi* **subgen. et sp. nov.**; *F–H — L. bohoroki* **sp. nov.**; *I–K — L. alasi* **sp. nov.**; *L — M. tabulophila tabulophila* (Gor.); *M — M. t. insularis* **subsp. nov.** Голова спереди (*A*); надкрылья с ближайшими участками других частей тела (B) и также со всеми передними частями тела (*F, I*) сверху; вершина брюшка сзади (*C*); анальная пластинка с ближайшими участками других частей тела (*D, G, J*); генитальная пластинка снизу (*E, H, K–M*)

Fig. 1. *Pteroplistes* Br.-W., *Leuseriola* **gen. nov.** and *Malaysiola* **gen. nov.**, male: *A–E — P. (Eupteroplistes) tarbinskyi* **subgen. et sp. nov.**; *F–H — L. bohoroki* **sp. nov.**; *I–K — L. alasi* **sp. nov.**; *L — M. tabulophila tabulophila* (Gor.); *M — M. t. insularis* **subsp. nov.** Head in front (*A*); tegmina with nearest portions of other body parts (*B*) and also with all anterior parts of body (*F, I*) from above; abdominal apex from behind (C); anal plate with nearest portions of other body parts from above (*D, G, J*); genital plate from below (*E, H, K–M*)

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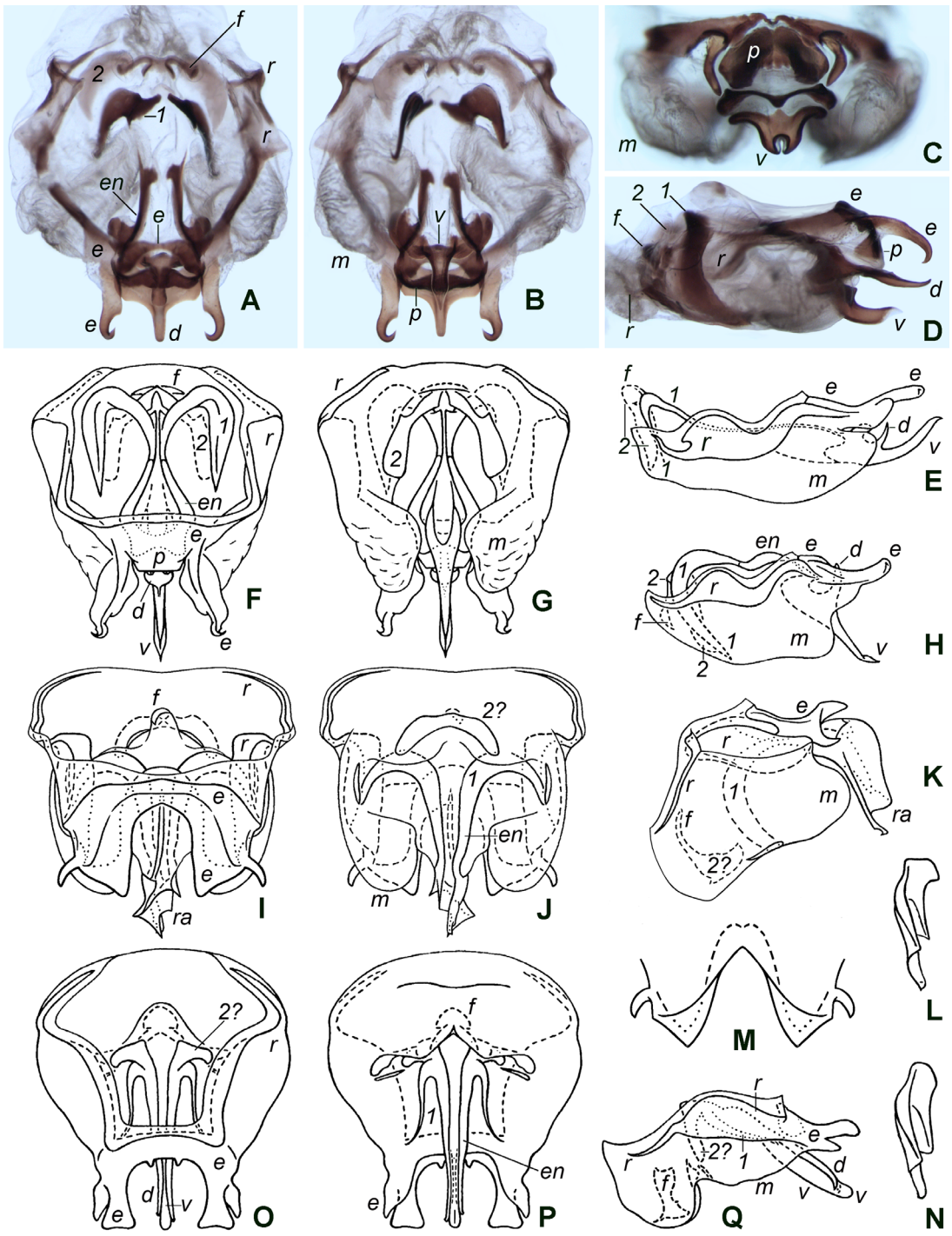

Рис. 2. *Pteroplistes* Br.-W., *Malaysiola* **gen. nov.** и *Kerinciola* Gor., самец: *A–D — P. (Eupteroplistes) tarbinskyi* **subgen. et sp. nov.**; *E — P. (Pteroplistes) borneoensis borneoensis* Gor.; *F–H — P. (P.) lagrecai* Gor.; *I–L — M. tabulophila tabulophila* (Gor.); *M, N — M. t. insularis* **subsp. nov.**; *O–Q — K. sonora* Gor. Гениталии сверху (*A, F, I, O*), снизу (*B, G, J, P*), сзади (*C*) и сбоку (*D, E, H, K, Q*); задняя часть эпифаллуса сверху (*M*); рахис сзади и слегка сбоку (*L, N*). Сокращения: *1, 2* — первая и вторая передние дуговидные пластинки; *d* — дорсальная часть рахиса; *e* — эпифаллус; *en* — эндопарамер; *f* — формула; *m* — вентральная мембранозная вальва; *p* — заднесрединная часть эпифаллуса; *r* — рамус; *ra* — рахис; *v* — вентральная часть рахиса

Fig. 2. *Pteroplistes* Br.-W., *Malaysiola* **gen. nov.** and *Kerinciola* Gor., male: *A–D — P. (Eupteroplistes) tarbinskyi* **subgen. et sp. nov.**; *E — P. (Pteroplistes) borneoensis borneoensis* Gor.; *F–H — P. (Pteroplistes) lagrecai* Gor.; *I–L — M. tabulophila tabulophila* (Gor.); *M, N — M. t. insularis* **subsp. nov.**; *O–Q — K. sonora* Gor. Genitalia from above (*A, F, I, O*), from below (*B, G, J, P*), from behind (*C*) and from side (*D, E, H, K, Q*); posterior part of epiphallus from above (*M*); rachis from behind and slightly from side (*L, N*). Abbreviations: *1, 2* — first and second anterior arcuate plates; *d* — dorsal part of rachis; *e* — epiphallus; *en* — endoparamere; *f* — formula; *m* — ventral membranous valve; *p* — posteromedian part of epiphallus; *r* — ramus; *ra* — rachis; *v* — ventral part of rachis

symmetrical and male genital plate without spines.

Etymology. The new subgeneric name consists of the generic name *Pteroplistes* and the Latinised Greek prefix "eu-" (true), because the general appearance of this subgenus is very similar to that of *Pteroplistes* s. str.

Pteroplistes (Eupteroplistes) tarbinskyi Gorochov, **sp. nov.**

(Figs. 1: *A–E*; 2: *A–D*)

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Material. Holotype — ♂, Indonesia, Sumatra Island, North Sumatra Prov., ~80 km W of Medan, environs of Bukit Lawang vill. on the Bohorok River near Gunung Leuser National Park, 3°32–33′N, 98°6–7′E, 200–300 m, 6–14.04.2018, A. Gorochov, M. Berezin, I. Kamskov, E. Tkatsheva (ZIN).

Description. Male (holotype). Body colouration moderately variegate: head dark brown with light brown M-shaped spot on dorsum between distal halves of eyes, most part of each antenna and apical parts of palpi, with yellowish lateral ocelli and numerous small marks on other parts (a pair of longitudinal spots between aforementioned M-shaped spot and eyes; stripe along posterior edge of each eye contacting previous spot dorsally and with yellowish mark on lower part of gena ventrally; stripe along medial edge of each eye contacting aforementioned longitudinal spot dorsally and lateral ocellus ventrally; three dots under median ocellus; two pairs of transverse lines under antennal bases; transverse stripe on upper clypeal part contacting three more ventral but vertical and very short stripes of same colour on lower clypeal part; one spot on each subgena and on apex of each preapical segment of palpi; most part of labrum and of scape), and with moderately dark (greyish brown) rest of palpi, small spots on scape and on antennal flagellum (latter spots rather sparse) as well as on base of mandible (Fig. 1, *A*); pronotum brown with dark brown lateral lobes and few small light brown to reddish brown marks on disc; tegmina light greyish with yellowish tinge, almost transparent majority of membranes, light brown to light greyish brown venation, and few greyish brown areas in dorsal field (near plectrum and along 1A in basal area, between mirror and lateral part of distal oblique vein, on distal half of apical area; Fig. 1: *B*); hind wings with visible parts greyish brown; legs yellowish with two greyish brown spots on fore and middle femora (small one on dorsoproximal part and larger one on subapical part), large dark brown to greyish brown area on distal part of hind femur, numerous brown oblique lines on more proximal parts of dorsal and outer surfaces of this femur, two large greyish brown areas on fore and middle tibiae as well as one similar area on fore and middle basitarsi, and more or less similar spots on hind tibia and tarsus (but these spots smaller, tibia with three spots, its armament partly darkened); abdominal tergites and anal plate dark brown to brown with light brown median and lateral areas on last tergites as well as light brown to yellowish lateral parts of anal plate and spots on its posterior part (Fig. 1: *C, D*); paraprocts light brown; body venter and genital plate yellowish with greyish tinge; cerci greyish with two or three longitudinal yellowish stripes in proximal portion and very small and dense almost yellowish marks in more distal portions. Body moderately flattened dorsoventrally; head with rather widely rounded (not angular) rostrum in profile, moderately long (for this genus) mouthparts, moderately small round lateral ocelli, very small transverse median ocellus, and space between antennal cavities almost as wide as scape (Fig. 1: *A*); pronotum slightly narrowing to head and with almost straight anterior and posterior edges of disc. Tegmina slightly protruding beyond apices of hind femora and with dorsal field as in Fig. 1, *B*; their lateral field significantly narrower, having moderately widened R-M area, rather sparse crossveins almost only in this area, very narrow Sc-R area as well as numerous (rather dense) and somewhat obliquely parallel branches of Sc; apices of hind wings reaching tegminal apices. Legs with almost round but not large inner tympanum only, 3 outer and 1 inner very short and articulated dorsal spines on distal part of hind tibia, numerous smaller and denticle-like

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other dorsal spines of this tibia, and 6 very short to moderately short apical spurs of this tibia (middle inner spur longest and reaching about middle of hind basitarsus). Anal plate as in Fig. 1: *C, D*; genital plate distinctly larger than anal plate but rather short, with distal half slightly narrowed as well as having three apical lobules (small median one separated from a pair of larger and roundly angular lobules by a pair of small oblique folds; Fig. 1, *E*); cerci very long (almost 24 mm in length). Genitalia: median part of epiphallic sclerite very short (narrow) (Fig. 2: *A*); posteromedian epiphallic plate as in Fig. 2: *C, D*; posterolateral epiphallic lobes narrow, widely hooked in distal half and with almost angular medial projection in middle part (Fig. 2: *A, B*); ventral rachial plate with moderately wide spine-like process having semimembranous and acute apical part (Fig. 2: *B, D*); first pair of arcuate anterior plates heavily sclerotised, but second one semisclerotised; formula small and transverse as well as characteristic in shape (Fig. 2: *A, B*).

Length in mm. Body 12; body with wings 17; pronotum 3.3; tegmina 12; hind femora 10.7.

Female unknown.

Comparison. The species is distinguished from all the other representatives of Pteroplistinae by the characters given in *Eupteroplistes* diagnosis.

Etymology. This species is named in memory of the well-known Soviet orthopterist Sergei P. Tarbinsky and in honor of his 120th birthday.

Genus ***Malaysiola*** Gorochov, **gen. n.**

Type species *Kerinciola tabulophila* Gorochov, 2011

https://zoobank.org/NomenclaturalActs/AAD0400E-FD14-4C1D-B819-3C04020A0D23

Diagnosis. Body similar to that of *Kerinciola* in external morphology, including simple structure of male anal plate; however, male genitalia clearly different: epiphallus with wide posterolateral lobes having almost angular apices and small hook-like lateral spine near each of them (*vs.* these lobes distinctly narrower, apically truncate and with straighter and thicker lateral processes; compare Figs. 2: *I, M* and 2: *O*); rachis strongly asymmetrical and curved downwards, with a pair of rather high lamellar keels on its posterodorsal surface (these keels probably homologous to dorsal rachial parts in *Kerinciola* and the majority of other Pteroplistinae genera but in one species of *Malaysiola* **gen. nov.**, judging by the picture of its genitalia, rachis possibly symmetrical and somewhat different in structure; Chopard 1969: Fig. 151) (in *Kerinciola*, rachis symmetrical, more or less straight and with a pair of long spines homologous to dorsal rachial parts and running along ventral rachial part almost in contact with this part and with each other; compare Figs. 2: *I–K* and 2: *O–Q*); rachial sclerites in new genus and in *Kerinciola* fused with endoparameres which are also fused with first anterior arcuate plates (left endoparamere and left of these plates clearly isolated from right ones in both genera), but second anterior arcuate plates in *Malaysiola* **gen. nov.** probably fused with formula (in *Kerinciola*, they possibly isolated from formula and partly fused with previous arcuate plates; compare Figs. 2: *I, J* and 2: *O, P*).

Included species. Type species and *Pteroplistes similis* Chopard, 1969 (both from Malay Peninsula). The latter species was previously transferred to *Kerinciola* (Gorochov 2004).

Comparison. The new genus differs from *Kerinciola* in the characters named above. From *Pteroplistes* s. l., it differs in a simple male anal plate, much wider posterolateral epiphallic lobes, and a strongly curved rachis having a pair of lamellar keels instead of dorsal processes or a process. From *Tramlapiola* and *Crockeriola*, it is distinguished by the simpler shape of the epiphallus, a strongly curved rachis and a normal structure of the first anterior arcuate plates fused with the endoparameres; from *Singapuriola* and *Asymmetriola* — by the same characters (except epiphallic ones) or by all sclerites (except rachis) symmetrical and less fused with each other, respectively; and from all other Pteroplistinae genera — by the absence of ectoparameres.

Etymology. The new genus is named after the country Malaysia and the generic name *Kerinciola* due to its geographic distribution and

morphological similarity to the genus *Kerinciola*.

Malaysiola tabulophila insularis Gorochov, **subsp. nov.**

(Figs. 1: *M*; 2: *M, N*)

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Material. Holotype — ♂: Malaysia, Pahang State, Tioman Island near Malay Peninsula (not far from Mersing in Johor State), environs of Juara vill. on eastern coast, 6–14.04.2010, A. Gorochov, M. Berezin, E. Tkatsheva (ZIN).

Description. Male (holotype). Size, colouration and structure of body very similar to those of *M. t. tabulophila* (Gorochov, 2011), **comb. nov.** but with following characters: head with light brown dorsum having almost whitish ocelli and distinct stripes and spots between greyish brown eyes (*vs.* this dorsum almost uniformly light brown but ocelli also whitish), with brown lower part of epicranium under rostral apex as well as subgenae and mandibles (*vs.* subgenae light), with yellowish to whitish labrum and area on each gena, and with more or less spotted clypeus and palpi as well as antennae; pronotum with brown lateral lobes and yellowish disc having few brown spots (*vs.* disc light brown with less distinct darkenings); legs and tegmina also spotted, but hind femur somewhat darker (almost brown, not more or less light brown) than in nominotypical subspecies, and tegmina with whitish areas between two lateral chords and between dividing veins of mirror as well as between R and Cu veins (*vs.* these areas almost transparent to yellowish); abdomen with more or less greyish brown tergites and anal plate, light greyish brown cerci as well as light brown sternites and genital plate, but latter plate with brown median stripe bifurcated along edges of posteromedian notch and running along posterior edges of posterolateral lobules (*vs.* this plate completely light brown but with whitish stripe along entire posterior edge; compare Figs. 1: *L* and 1: *M*); shape of genital plate in these subspecies also not identical, posteriorly more sinuate in new subspecies and simpler in nominotypical one (see Figs. 1: *L* and 1: *M*); genitalia with epiphallus having almost angular [not rounded] posteromedian notch and more distinct short lateral projection near each subapical hook (compare Figs. 2: *I* and 2: *M*), and with rachis having lower and obtuse proximal lobe on right posterodorsal keel (*vs.* this keel with clearly higher proximal lobe having almost acute-angled distal projection; compare Figs. 2: *L* and 2: *N*).

Length in mm. Body 12; body with wings 13.5; pronotum 2.8; tegmina 9; hind femora 8.5.

Female unknown.

Comparison. The new subspecies is distinguished from *M. t. tabulophila*, found in the Malay Peninsula mountains, by the characters listed above (in its description).

Etymology. The new subspecies name is the Latin word *insularis* ("insular") due to the type locality of this subspecies.

Genus ***Leuseriola*** Gorochov, **gen. nov.**

Type species *Leuseriola bohoroki* **sp. nov.**

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Diagnosis. Body (Fig. 1: *F, I*) rather small for Pteroplistinae, most similar to *Changiola* in structure but with some characteristic features. Ocelli small, distinct (practically indistinct in *Changiola*); male tegmina with chords and mirror slightly shorter (mirror clearly but not strongly transverse in new genus and almost round in *Changiola*); outer tympanum moderately small, somewhat smaller than inner one (*vs.* outer tympanum sometimes almost obliterated); male anal plate simple (Fig. 1: *G, J*); male genital plate with rather small posteromedian notch which smaller than in *Eupteroplistes* **subgen. nov.** and *Malaysiola* **gen. nov.** (see Figs. 1: *E, H, K–M*), but in *Changiola,* this notch distinctly shorter than in new genus or almost absent. Male genitalia (Fig. 3: *A–J*): epiphallus with short (narrow) median part and a pair of posterolateral lobes (as in *Changiola*); a pair of semisclerotised anterior plates also slightly similar to that of *Changiola* in shape and partly but distinctly fused with formula (in *Changiola*

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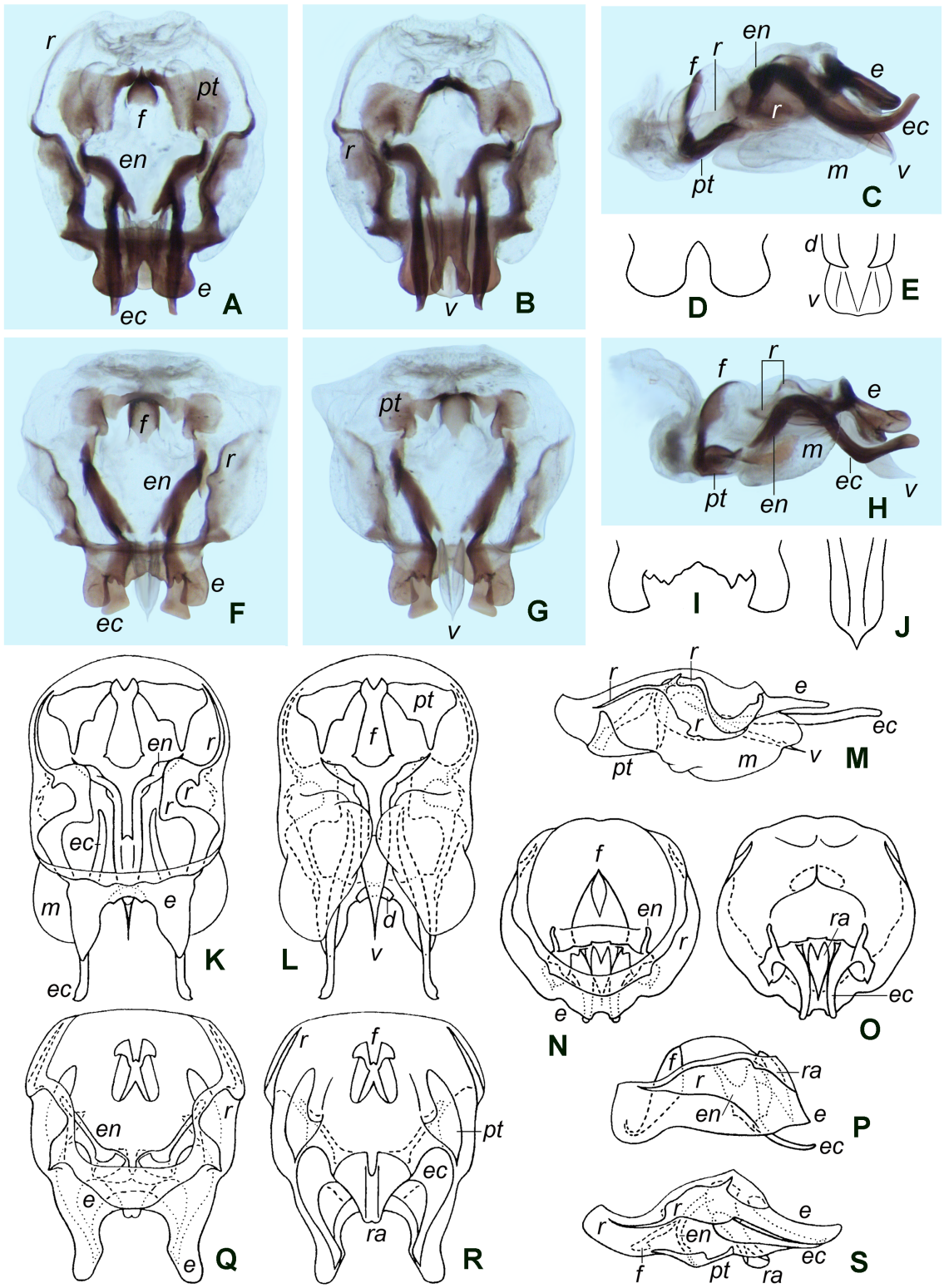

Рис. 3. *Leuseriola* **gen. nov.**, *Changiola* Gor., *Pangrangiola* Gor. и *Tembelingiola* Gor., самец: *A–E — L. bohoroki* **sp. nov.**; *F–J — L. alasi* **sp. nov.**; *K–M — Ch. subita* Gor.; *N–P — P. bona* Gor.; *Q–S — T. plana* Gor. Гениталии сверху (*A, F, K, N, Q*), снизу (*B, G, L, O, R*) и сбоку (*C, H, M, P, S*); задняя часть эпифаллуса сверху (*D, I*); дистальный участок рахиса, вид сзади-сверху (*E, J*). Сокращения: *ec* — эктопарамер; *pt* — полусклеротизованная пластинка; другие — как на рис. 2

Fig. 3. *Leuseriola* **gen. nov.**, *Changiola* Gor., *Pangrangiola* Gor. and *Tembelingiola* Gor., male: *A–E — L. bohoroki* **sp. nov.**; *F–J — L. alasi* **sp. nov.**; *K–M — Ch. subita* Gor.; *N–P — P. bona* Gor.; *Q–S — T. plana* Gor. Genitalia from above (*A, F, K, N, Q*), from below (*B, G, L, O, R*) and from side (*C, H, M, P, S*); posterior part of epiphallus from above (*D, I*); distal portion of rachis, posterodorsal view (*E, J*). Abbreviations: *ec* — ectoparamere; *pt* — semisclerotised plate; others — as in Fig. 2

(Fig. 3: *K–M*), these plates not fused or almost not fused with formula; compare Figs. 3: *A, F* and 3: *K*); ecto-parameres basally fused with endoparameres (*vs.* ectoparameres not fused with endoparameres or articulated with them; compare Figs. 3: *B, G* and 3: *K, L*); rachis isolated from endoparameres or articulated with them (*vs.* rachis clearly fused with endoparameres; compare Figs. 3: *B, G* and 3: *K, L*).

Included species. Type species and *L. alasi* **sp. nov.**

Comparison. The new genus differs from the most related genus *Changiola* in the characters listed above, but I cannot exclude the possibility that this taxon may be only a subgenus of the latter genus. From *Tembelingiola* and *Pangrangiola*, which also have male genitalia with distinct ectoparameres, it is distinguished by ectoparameres fused with endoparameres and distinctly protruding beyond the epiphallic posterolateral lobes (from *Tembelingiola*) or by clearly longer epiphallic posterolateral lobes and ectoparameres (from *Pangrangiola*) (in *Tembelingiola* ectoparameres do not protrude beyond epiphallic lobes, and in *Pangrangiola* they barely protrude beyond short epiphallic lobes; see Fig. 3: *A–C, F–H, N–S*). From all other Pteroplistinae genera *Leuseriola* **gen. nov.** differs in the presence of distinct ectoparameres.

Etymology. The new genus is named after the Gunung Leuser National Park which extends near the type localities of both its species.

Leuseriola bohoroki Gorochov, **sp. nov.**

(Figs. 1: *F–H*; 3: *A–E*)

https://zoobank.org/NomenclaturalActs/3BB21BEB-3115-4204-AFCF-4B8F4036B343

Material. Holotype — ♂, Indonesia, Sumatra Island, North Sumatra Prov., ~80 km W of Medan, environs of Bukit Lawang vill. on the Bohorok River near Gunung Leuser National Park, 3°32–33′N, 98°6–7′E, 200–300 m, 6–14.04.2018, A. Gorochov, M. Berezin, I. Kamskov, E. Tkatsheva (ZIN).

Description. Male (holotype). Colouration dark brown with following pattern: eyes greyish brown; ocelli and antennae light brown with brown ring on apex of each scape and on each pedicel; mouthparts brown to light brown with almost yellowish apex of labrum and most part of each palpus (but maxillary palpus with brown area on apical segment as well as smaller and less distinct marks on other segments); tegmina brown with light brown to yellowish short basal part of dorsal field as well as spot and transverse stripe near plectrum, with greyish (almost transparent) membranes in regions of chords and oblique veins as well as in mirror and in ventroproximal part of lateral field, and with some light veins and veinlets in dorsal field and near it (Fig. 1: *F*); hind wings light greyish brown; legs light brown to yellowish with brown to dark brown spots; venter of prothorax yellowish, but that of pterothorax light brown to brown with yellowish lateral parts; abdomen with brown sternites, genital plate, paraprocts and posterior half of anal plate, as well as with light brown to yellowish transverse line on middle part of anal plate and large areas on basal part of cercus and near it (Fig. 1: *G*). Rostrum of head almost rounded in profile; space between antennal cavities almost as wide as each scape; pronotum low and slightly widening to tegmina; tegmina not widened, insignificantly protruding beyond apical apex, with numerous Sc branches (crossveins between them absent), very narrow Sc-R area, widened R-M area (having sparse and oblique crossveins), rather short apical area of dorsal field, and venation of this field as in Fig. 1: F; hind wings slightly not reaching tegminal apices; armament of hind legs as in *P. (E.) tarbinskyi* **sp. nov.** but with 2 outer articulated dorsal spines on distal part of hind tibia (instead 3); anal and genital plates as in Fig. 1: *G, H*; cerci about 18.5 mm in length. Genitalia (Fig. 3: *A–E*): epiphallus with posterior lobes rather wide and located near each other (Fig. 3: *D*); ectoparameres stick-like with rather narrow distal parts curved upwards (Fig. 3: *B, C*); endoparameres practically articulated with rachis (Fig. 3: *A, B*); ventral part of rachis with widened subapical part as well as short semimembranous and spine-like apical part curved downwards (Fig. 3: *B, C*), but dorsal

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parts of rachis developed and visible as a pair of small semitransparent and elongate plates with slightly hooked apices (Fig. 3: *E*); anterior semisclerotised plates, located around formula, large (Fig. 3: *A*).

Length in mm. Body 9; body with wings 10.5; pronotum 2.3; tegmina 7; hind femora 7.4.

Female unknown.

Comparison. Differences of the new species from all species of the related genus *Changiola* and from other representatives of Pteroplistinae are given in the generic description.

Etymology. The new species is named after the Bohorok River near its type locality.

Leuseriola alasi Gorochov, **sp. nov.**
(Figs. 1: *I–K*; 3: *F–J*)

https://zoobank.org/NomenclaturalActs/19FFE174-EF71-4B37-89D7-5258412A8346

Material. Holotype — ♂, Indonesia, Sumatra Island, Aceh Prov. not far from border with North Sumatra Prov., environs of Ketambe vill. on the Alas River near Gunung Leuser National Park, 3°41–42′N, 97°38–39′E, 300–500 m, 15–24.04.2018, A. Gorochov, M. Berezin, I. Kamskov, E. Tkatsheva (ZIN).

Description. Male (holotype). Colouration and structure of body very similar to those of *L. bohoroki* **sp. nov.** but with following differences: large darkened subapical spot on fore femur somewhat lighter, and tegminal mirror insignificantly less transverse (compare Figs. 1: *F* and 1: *I*); anal and genital plates as in Figs. 1: J, K; genitalia (Fig. 3: *F–J*) distinguished from those of *L. bohoroki* **sp. nov.** by epiphallus with slightly narrower posterior lobes and distinctly wider notch between them (edge of this notch with few smaller and somewhat asymmetrical lobules; Fig. 3: I), ectoparameres with clearly wider distal parts (Fig. 3: *F, G*), endoparameres isolated from rachis (Fig. 3: *G*), rachis lacking any distinct plate-like dorsal parts as well as with slightly narrower subapical part and with longer apical part directed mainly backwards (Fig. 3: *H, J*), and semisclerotised anterior plates around formula distinctly smaller (Fig. 3: *F*).

Length in mm. Body 8.5; body with wings 10; pronotum 2.3; tegmina 7; hind femora 7.5.

Female unknown.

Comparison. Differences of the new species from *L. bohoroki* **sp. nov.** are given above, in its description.

Etymology. The new species is named after the Alas River near its type locality.

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References

Chintauan-Marquier, I. C., Legendre, F., Hugel, S. et al. (2016) Laying the foundations of evolutionary and systematic studies in crickets (Insecta, Orthoptera): A multilocus phylogenetic analysis. *Cladistics*, vol. 32, no. 1, pp. 54–81. https://doi.org/10.1111/cla.12114 (In English)

Chopard, L. (1936) Orthoptères fossiles et subfossiles de l'ambre et du copal. *Annales de la Société entomologique de France*, vol. 105, pp. 375–386. (In French)

Chopard, L. (1969) *The fauna of India and the adjacent countries. Orthoptera. Vol. 2. Grylloidea.* Calcutta: Baptist Mission Press, 421 p. (In English)

Cigliano, M. M., Braun, H., Eades, D. C., Otte, D. (2022) *Orthoptera species file online.* [Online]. Available at: http://orthoptera.speciesfile.org (accessed 28.07.2022). (In English)

Gorochov, A. V. (1986) System and morphological evolution of crickets from the family Gryllidae (Orthoptera) with description of new taxa. Communication 2. *Zoologicheskij zhurnal*, vol. 65, no. 6, pp. 851–858. (In Russian)

Gorochov, A. V. (1990) New and little known crickets (Orthoptera, Gryllidae) from Vietnam and some other territories. *Trudy Zoologitscheskogo Instituta AN SSSR — Proceedings of the Zoological Institute AS USSR*, vol. 209, pp. 3–28. (In Russian)

Gorochov, A. V. (1995) Sistema I evolyutsiya pryamokrylykh podotryada Ensifera (Orthoptera) [System and evolution of the suborder Ensifera (Orthoptera)]. Pt. 2. *Trudy Zoologitscheskogo Instituta RAN — Proceedings of the Zoological Institute RAS*, vol. 260, pp. 1–213. (In Russian)

Gorochov, A. V. (2001) Preliminary notes on the history of South American Ensifera (Orthoptera). *Acta Geologica Leopoldensia*, vol. 24, no. 52/53, pp. 81–86. (In English)

Gorochov, A. V. (2004) Review of the subfamily Pteroplistinae (Orthoptera Gryllidae). *Memorie della Società entomologica italiana*, vol. 82, no. 2, pp. 379–396. (In English)

Gorochov, A. V. (2010) New cricket taxa of the subfamilies Phaloriinae and Pteroplistinae (Orthoptera: Gryllidae) from South-East Asia. *Proceedings of the Zoological Institute RAS*, vol. 314, no. 2, pp. 184–190. (In English)

Gorochov, A. V. (2011) Crickets of the subfamily Pteroplistinae (Orthoptera: Gryllidae) from Malacca. *Proceedings of the Zoological Institute RAS*, vol. 315, no. 2, pp. 176–180. (In English)

Gorochov, A. V. (2018) Taxonomic studies on the cricket subfamilies Pteroplistinae, Phaloriinae and Cacoplistinae (Orthoptera: Gryllidae) from the Old World. *Zoosystematica Rossica*, vol. 27, no. 1, pp. 40–76. (In English)

Gorochov, A. V. (2019) Crickets and grasshoppers (Orthoptera) from the latest Eocene of the Isle of Wight, southern England, UK. *Earth and Environmental Science Transactions of the Royal Society of Edinburgh*, vol. 110, no. 3–4: The fauna and flora of the Insect Limestone (late Eocene), Isle of Wight, UK, vol. 2, pp. 317–329. https://doi.org/10.1017/S1755691018000889 (In English)

Gorochov, A. V., Kostia, D. (1999) New crickets (Orthoptera: Gryllidae) from Indo-Malayan region. *Acta zoologica cracoviensia*, vol. 42, no. 2, pp. 271–273. (In English)

Gorochov, A. V., Tan, M. K. (2012) New crickets of the subfamilies Phaloriinae and Pteroplistinae (Orthoptera: Gryllidae) from Singapore. *Zootaxa*, vol. 3525, no. 1, pp. 18–34. https://doi.org/10.11646/zootaxa.3525.1.2 (In English)

Haan, W. (1844) Bijdragen tot de kennis der Orthoptera. In: C. I. Temminck (ed.). *Verhandelingen over de Natuurlijke Geschiedenis der Nederlansche Overzeesche Bezittingen, de Leden der Natuurkundige Comissie in Indië en andere Schrijvers, 24*. Leiden, pp. 229–248. (In Dutch and Latin)

Jaiswara, R., Desutter-Grandcolas, L. (2014) Revision of the genus *Pteroplistes* in India, with the description of two new species *Pteroplistes kervasae* Jaiswara, n. sp. and *Pteroplistes masinagudi* Jaiswara, n. sp. (Orthoptera, Grylloidea, Pteroplistinae). *Zootaxa*, vol. 3814, no. 1, pp. 96–108. http://dx.doi.org/10.11646/zootaxa.3814.1.5 (In English)

Kirby, W. F. (1906) *A synonymic catalogue of Orthoptera. Vol 2. Orthoptera Saltatoria. Pt 1*. London: British Museum of Natural History Publ., 562 p. (In English)

Mello, F. A. G. (1992) Five new Brazilian crickets and a new tribe for the Neotropical members of the subfamily Pteroplistinae (Orthoptera: Gryllidae: Pteroplistinae: Odontogryllini). *Transactions of the American Entomological Society*, vol. 118, no. 1, pp. 147–158. (In English)

Otte, D. (1988) Bark crickets of the Western Pacific Region (Gryllidae: Pteroplistinae). *Proceedings of the Academy of Natural Sciences of Philadelphia*, vol. 140, no. 2, pp. 281–334. (In English)

Otte, D. (1994) *Orthoptera species file: Crickets (Grylloidea). A systematic catalog.* Philadelphia: Orthopterists' Society Publ., 120 p. (In English)

Saussure, H. (1877) Gryllides. *Mémoires de la Société de physique et d'histoire naturelle de Genève*, vol. 25, no. 1, pp. 1–352. (In French and Latin)

Tan, M. K., Gorochov, A. V., Wahab, R. B. H. A. et al. (2019) New taxa of crickets (Orthoptera: Grylloidea: Gryllinae, Phaloriinae and Pteroplistinae) from northern Borneo (Belait and Sandakan). *Zootaxa*, vol. 4661, no. 1, pp. 101–117. https://doi.org/10.11646/zootaxa.4661.1.4 (In English)

Tan, M. K., Muhammad, A. A., Robillard, T. (2021) A review of the genus *Changiola* (Orthoptera: Grylloidea: Pteroplistinae) and description of the first species from Borneo. *Zootaxa*, vol. 4941, no. 1, pp. 101–114. https://doi.org/10.11646/zootaxa.4941.1.6 (In English)

Walker, F. (1869) *Catalogue of the specimens of Dermaptera Saltatoria and supplement to the Blattariae in the collection of the British Museum. Pt 1*. London: British Museum of Natural History Publ., 224 p. (In English)

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