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TAXONOMY OF THE KATYDIDS (ORTHOPTERA: TETTIGONIIDAE) FROM EAST ASIA AND ADJACENT ISLANDS. COMMUNICATION 16

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Summary. The new material on the genus *Elbenia* Stål (Phaneropterinae: Holochlorini) is considered. This genus is divided into five subgenera: *Tamdaopteron* Gor., **stat. n.**; *Javapteron* **subgen. n.**; *Hemielbenia* **subgen. n.**; *Elbenia* s. str.; *Aequapteron* **subgen. n.** Ten new species from Vietnam, Indonesia and Malaysia are described: *E. (T.) ryabovi* **sp. n.**; *E. (T.) daedala* **sp. n.**; *E. (T.) subrecta* **sp. n.**; *E. (E.) carinata* **sp. n.**; *E. (E.) semicarinata* **sp. n.**; *E. (E.) apicata* **sp. n.**; *E. (E.) paradigitata* **sp. n.**; *E. (E.) eudigitata* **sp. n.**; *E. (E.) neodigitata* **sp. n.**; *E. (A.) appressa* **sp. n.** A previously unknown female of *E. (E.) serraticauda* Heb. is also described. Some new geographic localities for a few old species are indicated.

Key words: Orthoptera, Tettigoniidae, Phaneropterinae, Holochlorini, new taxa, South-East Asia.

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Резюме. Рассмотрен новый материал по роду *Elbenia* Stål (Phaneropterinae: Holochlorini). Этот род разделен на пять подродов: *Tamdaopteron* Gor., **stat. n.**; *Javapteron* **subgen. n.**; *Hemielbenia* **subgen. n.**; *Elbenia* s. str.; *Aequapteron* **subgen. n.** Из Вьетнама, Индонезии и Малайзии описано десять новых видов: *E. (T.) ryabovi* **sp. n.**; *E. (T.) daedala* **sp. n.**; *E. (T.) subrecta* **sp. n.**; *E. (E.) carinata* **sp. n.**; *E. (E.) semicarinata* **sp. n.**; *E. (E.) apicata* **sp. n.**; *E. (E.) paradigitata* **sp. n.**; *E. (E.) eudigitata* **sp. n.**; *E. (E.) neodigitata* **sp. n.**; *E. (A.) appressa* **sp. n.** Описана также ранее неизвестная самка *E. (E.) serraticauda* Heb. Указаны новые географические точки для некоторых старых видов.

INTRODUCTION

This paper is the sixteenth communication in a series of my papers on Indo-Malayan and Papuan Tettigoniidae. It is devoted to the genus *Elbenia* Stål from the tribe Holochlorini of the subfamily Phaneropterinae. The study is based on the material (including types of new taxa) deposited at the Zoological Institute of the Russian Academy of Sciences, Saint Petersburg (ZIN). This material is dry and pinned; it was collected by the Russian zoologists in different countries of South-East Asia and nearest islands. The internet catalogue Orthoptera Species File is here cited as OSF (Cigliano *et al.*, 2023).

NEW DATA ON TAXONOMY AND DISTRIBUTION

Subfamily Phaneropterinae

Tribe Holochlorini

Genus *Elbenia* Stål, 1876

NOTES. Up to now this genus contains 21 species distributed from Indochina (including South China) to the Philippines and Malay Archipelago but unknown in more eastern islands of this archipelago than Borneo and Java (OSF). Its general appearance is rather uniform: the body coloration is greenish with a brown to blackish area on the proximal part of the both dorsal tegminal fields (Figs 1, 2, 5–8, 11, 12, 80, 81, 84–87, 90–91, 121, 122, 141, 142); the upper rostral tubercle is rather narrow and not long but flattened dorsally and with a distinct dorsomedian groove; the pronotum is rather high, with a short hind lobe and not deep humeral notches; the tegmina are long and rather narrow, with a simple and moderately developed stridulatory apparatus (Figs 1–12, 80–91, 121, 122, 139–142); the hind wings are distinctly longer than the tegmina and clearly protruding beyond their apices; the legs are thin, moderately long, with small spines (the femora are almost without spines) and two tympana on each fore tibia (the tympanal region of this tibia is almost not thickened or not widened; the inner tympanum is slit-like and almost not inflated, but outer one open, oval). However, some sexual characters are diverse: the male last abdominal tergite has a pair of distinct posterior lobes, but sometimes, it has one posteromedian lobe or lacks any lobes (belonging of such species to this genus is problematic); the female last tergite usually has a pair of smaller lobes (female is known only for a few species; Figs 60, 96, 149); the male cerci are thin and rather long, arcuate or somewhat S-shaped, with more or less acute apices; the male genital plate is elongated or with long posterior lobes curved upwards, deeply or moderately notched (sometimes slightly notched or almost without posteromedian notch); the male genitalia are completely membranous; the female genital plate is small and lobule-like, but the female last sternite is often somewhat specialized (Figs 22, 23, 95, 96, 130, 131, 148, 149); the ovipositor is rather long, comparatively low and moderately arcuate as well as with small denticles along its ventral and sometimes dorsal edges (Figs 23, 96, 130, 149).

In relation to the male abdominal copulatory structures, this genus may be divided into a few subgenera which are described below (in a subgeneric key of *Elbenia* s. l.). Also, it is necessary to note that some species may belong to other genera: for example, *Elbenia makilingae* Hebard, 1922 was described from one female (Hebard, 1922), but its ovipositor is very dissimilar to those of all other known females of this genus (this species is here excluded from the genus studied); "*Elbenia*" *loliifolia* (Haan, 1843) possibly belongs to *Casigneta* Brunner-Wattenwyl, 1878 (Karny, 1926b; OSF); *Elbenia manilensis* Pictet, 1888 is insufficiently described for understanding its generic position (here this species is not included in any subgenus of *Elbenia* s. l.); *Elbenia fissa* Karny, 1923 (Malay Peninsula) and *Elbenia fusca* Karny, 1923 (Borneo: Sarawak) are tentatively attributed to the nominotypical subgenus, because their male genital plates and male cerci are somewhat similar to those of *Elbenia* s. str., but their original descriptions contain the words that their male "anal segment [last tergite]" is "truncate behind" and "slightly emarginated behind", respectively (Karny, 1923). Moreover, *Elbenia (Elbenia) bakeri* (Karny, 1921), **comb. nov.** previously included in the genus *Furnia* Stål, 1876 is here transferred to *Elbenia* s. str., as this species has all the male and female characters (including the ovipositor shape) according to the latter subgenus, but the type species of *Furnia* (judging by its holotype photograph in OSF) has the ovipositor distinctly shorter and strongly curved upwards.

For understanding these subgenera, the following preliminary hypothesis on the evolution of copulatory structures in this genus is proposed: (1) the general ancestor had the male last tergite with one posterior lobe, the male cerci arcuate (i.e. with their apical parts curved medially), and the male genital plate elongated but not long and not curved upwards as well as with a very small apical notch and without a pair of inner subapical denticles; (2) in one branch of its descendants, the male cerci acquired more or less S-shaped bend with their apical parts curved laterally (such cerci have a very dissimilar method of fixing female during copulation; *Javapteron* **subgen. n.**), and later the long posterior lobes of the male genital plate additionally developed (*Tamdaopteron* Gor.); (3) in another branch, these cerci retained arcuate, but the male genital plate acquired a pair of inner subapical denticles (*Aequapteron* **subgen. n.**) or began to acquire the long posterior lobes (parallelism to the previous branch; *Elbenia* s. str.); (4) in the third branch, only the long lobes of the male genital plate developed (also parallelism to the both previous branches), but all the other characters retained as in the general ancestor (*Hemielbenia* **subgen. n.**).

Key to subgenera of *Elbenia* s. l.

1. Male last tergite with a pair of distinct posterior lobes or spines (Figs 13, 17, 24, 29, 35, 38, 39, 43, 46, 52, 56, 57, 63, 69, 70, 75, 92, 98, 102, 105, 108, 112, 117, 118, 123, 132–134, 143, 150) 2
 - Male last tergite with one posteromedian lobe (Fig. 61). [Composition: only type species *Elbenia dyscrita* Karny, 1926 (Figs 61, 62) from Penang I. Etymology: from Latinized Greek prefix “hemi-” and generic name *Elbenia*, gender feminine.] subgenus ***Hemielbenia* Gorochov, subgen. n.**
2. Male cerci more or less S-shaped, with apical parts curved laterally (Figs 13, 16, 17, 24, 29, 34, 37, 39, 43, 46, 52, 56, 57) 3
 - Male cerci more or less arcuate, with apical parts directed medially (Figs 63, 69, 70, 75, 92, 98, 103, 105, 108, 112, 113, 114, 117, 118, 123, 127, 129, 134, 138, 144, 150) 4
3. Male genital plate long, i.e. with more or less long posterior lobes slightly or strongly curved upwards, and with posteromedian notch not shorter than half of length of this plate (Figs 14, 15, 18, 19, 25, 26, 30, 31, 33, 34, 40, 41, 44, 45, 47, 48, 51, 53, 54, 55). [Composition: type species *Tamdaopteron major* Gorochov, 2005 (Figs 22–28) from Vietnam; *Elbenia appendiculata* Brunner-Wattenwyl, 1898 (Figs 39–45) and *E. smedleyi* Karny, 1926 (Figs 54–56) from Sumatra; *E. robinsoni* Karny, 1926 (Figs 33–35) and *E. pendleburyi* Karny, 1926 (Figs 51–53) from Malay Peninsula; *T. minor* Gorochov, 2005 (Figs 17–21) from Vietnam; *E. (T.) ryabovi* **sp. n.**; *E. (T.) daedala* **sp. n.**; *E. (T.) subrecta* **sp. n.**; possibly *E. jacobsonii* Karny, 1926 (Figs 36–38) from Sumatra. Gender masculine.] subgenus ***Tamdaopteron* Gorochov, 2005, stat. n.**
 - Male genital plate rather short and almost straight in profile as well as with posteromedian notch distinctly shorter than half of length of this plate (Figs 58, 59). [Composition: only type species *Elbenia javanica* Karny, 1926 (Figs 57–60) from Java. Etymology: from Java I. and genus *Tamdaopteron*, gender masculine.] subgenus ***Javapteron* Gorochov, subgen. n.**
4. Male genital plate rather short and with short posteromedian notch as well as without distinct subapical denticles, or this plate long and with more or less long posterior lobes often curved upwards (Figs 64, 65, 69, 71, 72, 76, 77, 93, 94, 99–101, 103, 104, 106, 107, 109, 110, 111, 112, 115, 116, 119, 120, 125, 126, 135, 136). [Composition: type species *Elbenia nigrosignata* Stål, 1876 (possibly Fig. 69) from Malay Peninsula; *E. tenera* Brunner-Wattenwyl, 1878 (possibly Figs 123–132), *E. brevixipha* Brunner-Wattenwyl, 1898 (Figs 111, 112) and *E. borneensis* Karny, 1926 (Figs 133 and possibly

134–138) from Borneo; *E. modesta* Brunner-Wattenwyl, 1891 (Figs 108–110), *E. serraticauda* Hebard, 1922 (Figs 92–96) and *Furnia bakeri* Karny, 1926 (Figs 115–117) from Philippines; *Elbenia digitata* Karny, 1926 (Figs 118–120) from Sumatra; *E. (E.) carinata* **sp. n.**; *E. (E.) semicarinata* **sp. n.**; *E. (E.) apicata* **sp. n.**; *E. (E.) paradigitata* **sp. n.**; *E. (E.) eudigitata* **sp. n.**; *E. (E.) neodigitata* **sp. n.**; possibly *E. fusca* Karny, 1923 (Fig. 113) from Borneo (OSF) as well as *E. fissa* Karny, 1923 (Fig. 114) and *E. fraser* Tan, 2014 from Malay Peninsula. Gender feminine.] subgenus ***Elbenia* s. str.**
 – Male genital plate rather short, almost straight in profile, with posteromedian notch much shorter than half of length of this plate, and with a pair of distinct inner subapical denticles directed to each other (Figs 144–147, 151, 152). [Composition: type species *Elbenia (Aequapteron) appressa* **sp. n.** (Figs 140–149) from Borneo; *E. bispinosa* Karny, 1923 (Figs 150–152) from Malay Peninsula. Etymology: from “aequator” (equator) and generic name *Tamdaopteron*, gender masculine.] subgenus ***Aequapteron* Gorochoy, subgen. n.**

***Elbenia (Tamdaopteron) ryabovi* Gorochoy, sp. n.**

<https://zoobank.org/NomenclaturalActs/0068CD1E-6CAA-4224-B19F-DDC26353897A>

Figs 1–3, 13–16

MATERIAL. Holotype – ♂, **Vietnam:** Lao Cai Prov., Sa Pa Distr., Fan Si Pan Mt, 1400 m, V.2006, N. Orlov, S. Ryabov (ZIN).

DESCRIPTION. *Male* (holotype). General appearance very similar to that of *E. (T.) minor* and *E. (T.) major* from another locality of northern part of Vietnam. Coloration uniformly greenish with large dark brown to brown spot on basal area of each dorsal tegminal field, brown cell membranes around chords in this field and along anal edge of each lateral tegminal field, light brown stridulatory vein of left tegmen, almost transparent membranous areas in stridulatory apparatus of right tegmen and somewhat darkened distal parts of all spines. Structure of tegminal stridulatory apparatus as in Figs 1–3; last abdominal tergite slightly narrowing to apical part having a pair of moderately thick but almost spine-like processes arcuately curved backwards/downwards as well as acute at apices (these processes separated from each other by rather wide interspace and very small posteromedian notch; Figs 13, 15, 16); epiproct small and lobule-like (almost elongately oval), directed downwards/forwards and with dorsal (posteroventral) median groove; paraprocts very small and rounded; cerci almost as long as processes of last tergite, thin, slightly and arcuately curved laterally, and with apical part acute and hooked (i.e. more strongly curved laterally; Figs 13, 16); genital plate large and rather long, with very deep postromedian notch almost reaching proximal third of this plate, and with a pair of rather long lobes around this notch which strongly but arcuately curved upwards and having two apical spines on each of these lobes (medial spine shorter and directed upwards/forwards, and lateral one longer as well as directed upwards and laterally; Figs 13–16).

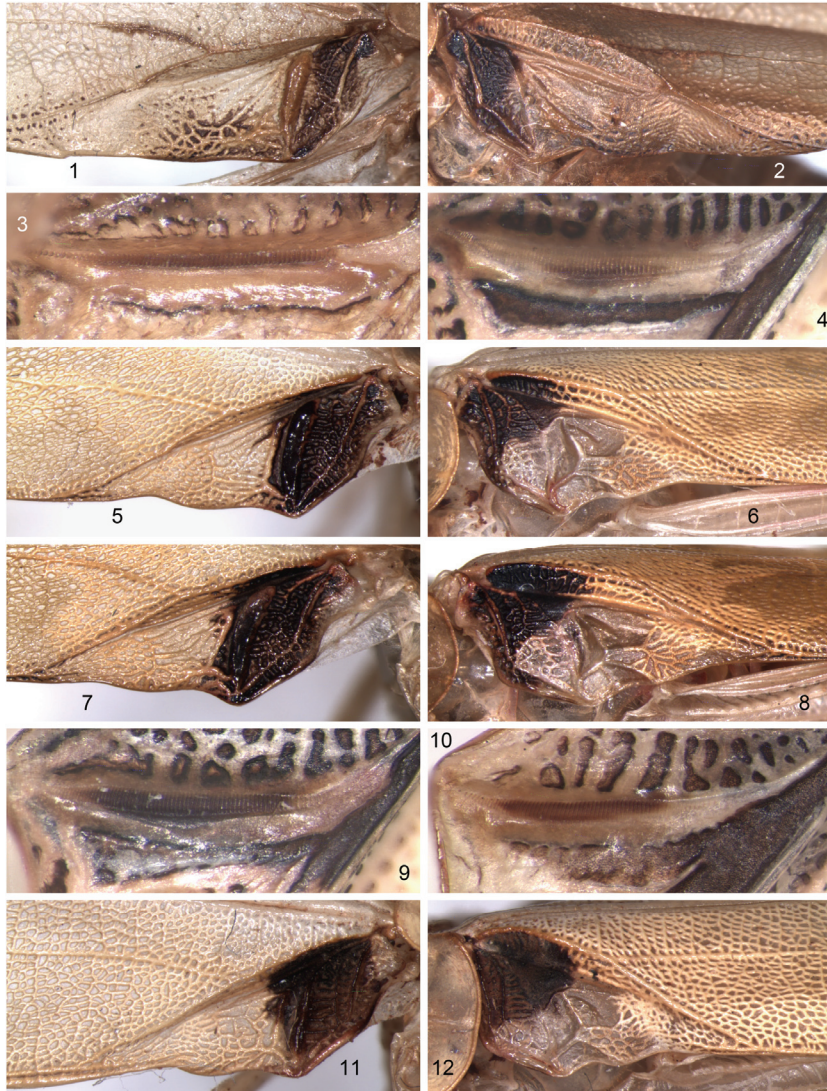
Female unknown.

Length (in mm). Body 27; body with wings 50; pronotum 5.7; tegmina 41; hind femora 22.5.

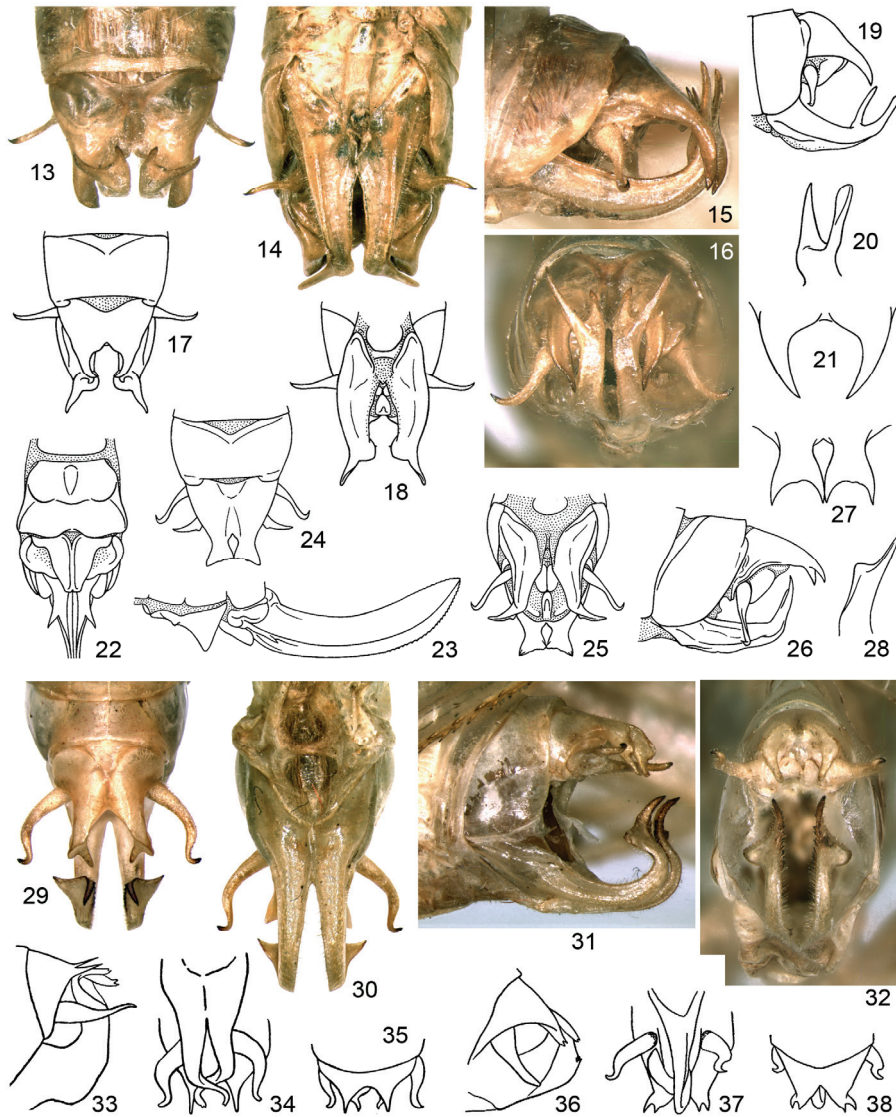
COMPARISON. The new species is most similar to *E. (T.) minor* but clearly distinguished from the latter by the male last tergite with somewhat wider processes, and the male genital plate with each lobe having a distinctly shorter medial apical spine as well as a not lamellar distal part of the lateral apical spine (compare Figs 13–16 and 17–21). From *E. (T.) major*, the new species differs in spine-like (not distally widened) processes of the male last

tergite and a clearly longer medial apical spine on each lobe of the male genital plate (see Figs 13–16 and 24–28). From other representatives of this subgenus, *E. (T.) ryabovi* sp. n. differs in the lobes of the male last tergite rather long and almost acute (but not short and not with rounded, truncated or bidenticulated apices; Figs 33–45, 51–56).

ETYMOLOGY. The new species is named after one of its collector.



Figs 1–12. *Elbenia*, male: 1–3 – *E. (T.) ryabovi* sp. n.; 4–6 – *E. (T.) daedala* sp. n.; 7–9 – *E. (T.) subrecta* sp. n.; 10–12 – *E. (Elbenia) carinata* sp. n. Stridulatory apparatus of left (1, 5, 7, 11) and right (2, 6, 8, 12) dorsal tegminal fields from above; teeth of stridulatory vein of left tegmen from below (3, 4, 9, 10).



Figs 13–38. *Elbenia (Tandaopteron)*: 13–16 – *E. (T.) ryabovi* sp. n.; 17–21 – *E. (T.) minor* (Gor.); 22–28 – *E. (T.) major* (Gor.); 29–32 – *E. (T.) daedala* sp. n.; 33–35 – *E. (T.) robinsoni* Karny; 36–38 – *E. (T.) jacobsonii* Karny. Male abdominal apex from above (13, 17, 24, 29, 35, 38), from below (14, 18, 25, 30, 34, 37), from side (15, 19, 26, 31, 33, 36) and from behind (16, 32); distal part of right lobe of male genital plate from behind and slightly below (20, 28); lobes of male last tergite from above and slightly behind (21, 27); female abdominal apex without most part of ovipositor from below (22), and this apex with ovipositor but without most part of upper structures from side (23). [17–28, after Gorochov (2005); 33–38, after Karny (1926a, b).]

***Elbenia (Tamdaopteron) major* (Gorochov, 2005)**

Figs 22–28

MATERIAL. Vietnam: 1 male, Cao Bang Prov., Phia Oac – Phia Den National Park, 22°37'41.8" N, 105°54'41.5" E, 900 m, 3–15.VI 2019, L. Anisyutkin (ZIN).

NOTE. This species was described from Vinh Phu Province of Vietnam (Gorochov, 2005) and recorded from South China (Kang *et al.*, 2013). Here it is indicated for another Vietnamese province.

***Elbenia (Tamdaopteron) daedala* Gorochov, sp. n.**

<https://zoobank.org/NomenclaturalActs/D231E1E7-13FE-4163-BE1E-B2F57D96A5EE>

Figs 4–6, 29–32

MATERIAL. Holotype – ♂, **Indonesia:** Sumatra I., Aceh Prov. not far from 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, primary forest, at light, 29.I–8.II 2023, A. Gorochov, M. Omelko, A. Fomitshev (ZIN). Paratypes: 1 ♂, same data as for holotype (ZIN); 1 ♂, same data but 15–24.IV 2018, A. Gorochov, M. Berezin, I. Kamskov, E. Tkatsheva (ZIN).

DESCRIPTION. *Male* (holotype). General appearance similar to that of *E. (T.) ryabovi* sp. n. Coloration also uniformly greenish, but basal area in left dorsal tegminal field as well as stridulatory vein of left tegmen blackish, basal area in right dorsal tegminal field with blackish two thirds, and all spines colored as in above-mentioned species. Structure of tegminal stridulatory apparatus as in Figs 4–6; last abdominal tergite similar to that of this species, but its apical processes less simple in shape (each with proximal two thirds thicker and having dorsal keel posteriorly changed into rounded but not large dorsolateral lobe, and with distal third thin and looking as spinule with narrowly rounded apex) as well as slightly curved downwards/medially, and interspace between them slightly narrower than in *E. (T.) ryabovi* sp. n. and without any additional notch (Figs 29, 31, 32); epiproct, paraprocts and cerci almost as in this species, but each cercus distinctly S-shaped (Figs 29, 30); genital plate with longer lobes S-shaped in profile, but each of these lobes with triangular subapical widening and thin and acute (spine-like) apical part directed backwards, as well as with a row of distinct denticles along medial edges of subapical widening and apical part (Figs 29–32).

Variations. Other males with less dark pattern on tegmina (stridulatory vein of left tegmen and venation of basal area in both tegminal dorsal fields light brown, but cell membranes in this area from light brown to brown).

Female unknown.

Length (in mm). Body 24–26; body with wings 49–49; pronotum 5.2–5.4; tegmina 35–36; hind femora 20.5–21.5.

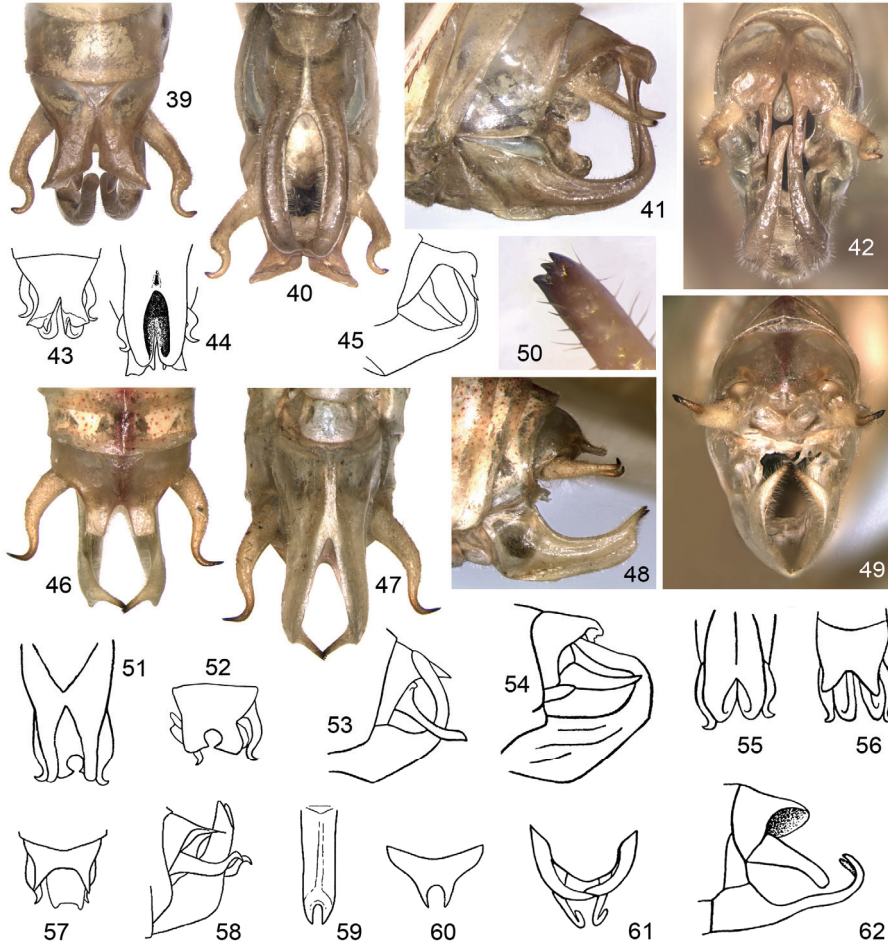
COMPARISON. The new species is most similar to *E. (T.) robinsoni* from Malay Peninsula in a clearly S-shaped male genital plate in profile, but it differs from the latter species in the processes of the male last tergite longer and different in shape, and the lobes of the male genital plate with subapical widenings and spine-like apical parts as well as denticles on the medial surfaces (*vs.* subapical widenings and medial denticles on these lobes are absent, and the apex of each this lobe with two teeth; Figs 33–35). From all other species of this subgenus, *E. (T.) daedala* sp. n. differs in the male genital plate clearly S-shaped in profile.

ETYMOLOGY. The new species name is the Latinized Greek word “daedala” (intricate, bizarre) due to the bizarre shape of the male copulatory structures.

Elbenia (Tamdaopteron) appendiculata Brunner-Wattenwyl, 1898

Figs 39–45

MATERIAL. Indonesia: 1 ♂, Sumatra I., 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, 300–400 m, secondary forest, at light, 16–22.II.2023, A. Gorochoy, M. Omelko, A. Fomitshev (ZIN).



Figs 39–62. *Elbenia*: 39–45 – *E. (Tamdaopteron) appendiculata* Karny; 46–50 – *E. (T.) subrecta* sp. n.; 51–53 – *E. (T.) pendleburyi* Karny; 54–56 – *E. (T.) smedleyi* Karny; 57–60 – *E. (Javapteron) javanica* Karny; 61, 62 – *E. (Hemielbenia) dyscrita* Karny. Male abdominal apex from above (39, 43, 46, 52, 56, 57, 61), from below (40, 44, 47, 51, 55), from side (41, 45, 48, 53, 54, 58, 62) and from behind (42, 49); apical part of right lobe of male genital plate from behind (50); male genital plate from below (59); female last tergite from above (60). [43–45, 51–62, after Karny (1923, 1926a, b).]

NOTE. This species was described from “Sumatra” (Brunner-Wattenwyl, 1898) and recorded from a Sumatran locality to south of Medan City (Karny, 1926b: “Sibolangit”). Here it is indicated for a close but different locality of Sumatra.

***Elbenia (Tandaopteron) subrecta* Gorochov, sp. n.**

<https://zoobank.org/NomenclaturalActs/E5AB284F-4E38-4D31-B968-E30028771633>

Figs 7–9, 46–50

MATERIAL. Holotype – ♂, **Indonesia**: Sumatra I., Aceh Prov. not far from North Sumatra Prov., environs of Kedah Lodge on Angkasan River near Gunung Leuser National Park (Mr. Jali’s Bungalows, 3.97 N, 97.25 E), 1000–1500 m, primary forest, at light, 9–15.II 2023, A. Gorochov, M. Omelko, A. Fomitshev (ZIN). Paratypes: 3 ♂, same data as for holotype (ZIN).

DESCRIPTION. *Male* (holotype). General appearance similar to that of *E. (T.) ryabovi* sp. n. and *E. (T.) daedala* sp. n. Coloration uniformly greenish with basal area of each dorsal tegminal field as in latter species, but stridulatory vein of left tegmen bicolorous (its medial half dark brown, and its lateral half brown to almost light brown; Figs 7, 8), and other marks as in above-mentioned congeners. Structure of tegminal stridulatory apparatus as in Figs 7–9; last abdominal tergite similar to that of these species but having distinctly shorter apical lobes which almost dorsoventrally lamellar and apically truncated (notch between these lobes narrower than in these species and with rounded anterior part, and each of these lobes with angular posterolateral corner and rounded posteromedial one; Figs 46, 48); other structures approximately as in *E. (T.) daedala* sp. n., except for genital plate which with similar proximal half (including depth of posteromedian notch) but with somewhat less long and almost straight lobes having thin spine-like process at each apex (this process directed upwards/backwards and somewhat medially, and with three small apical denticles; Figs 46–50).

Variations. Coloration of dorsal tegminal fields varied from that as in holotype to that as in lightest paratype of *E. (T.) daedala* sp. n. and sometimes with additional brownish marks near apex of widened part of each of these fields; posterolateral and posteromedial corners of each apical lobe of last tergite less angular and/or less rounded, respectively.

Female unknown.

Length (in mm). Body 22–25; body with wings 48–51; pronotum 5–5.3; tegmina 36–38; hind femora 19–20.

COMPARISON. The new species is most similar to *E. (T.) pendleburyi* from Malay Peninsula in truncated apices of the apical lobes of the male last tergite, but it differs from the latter species in a more or less rounded (but not distinctly angular) posteromedial corner of each apical lobe of the male last tergite as well as the lobes of the male genital plate shorter, almost straight and with a spine-like apical process at each apex (*vs.* these lobes are clearly longer, strongly curved upwards and without any spine-like apical processes; compare Figs 46–48 and 51–53). From all other species of *Tandaopteron*, it is distinguished by clearly truncated apices of the apical lobes of the male last tergite as well as an almost straight male genital plate in profile (Figs 13–21, 24–45, 54–56).

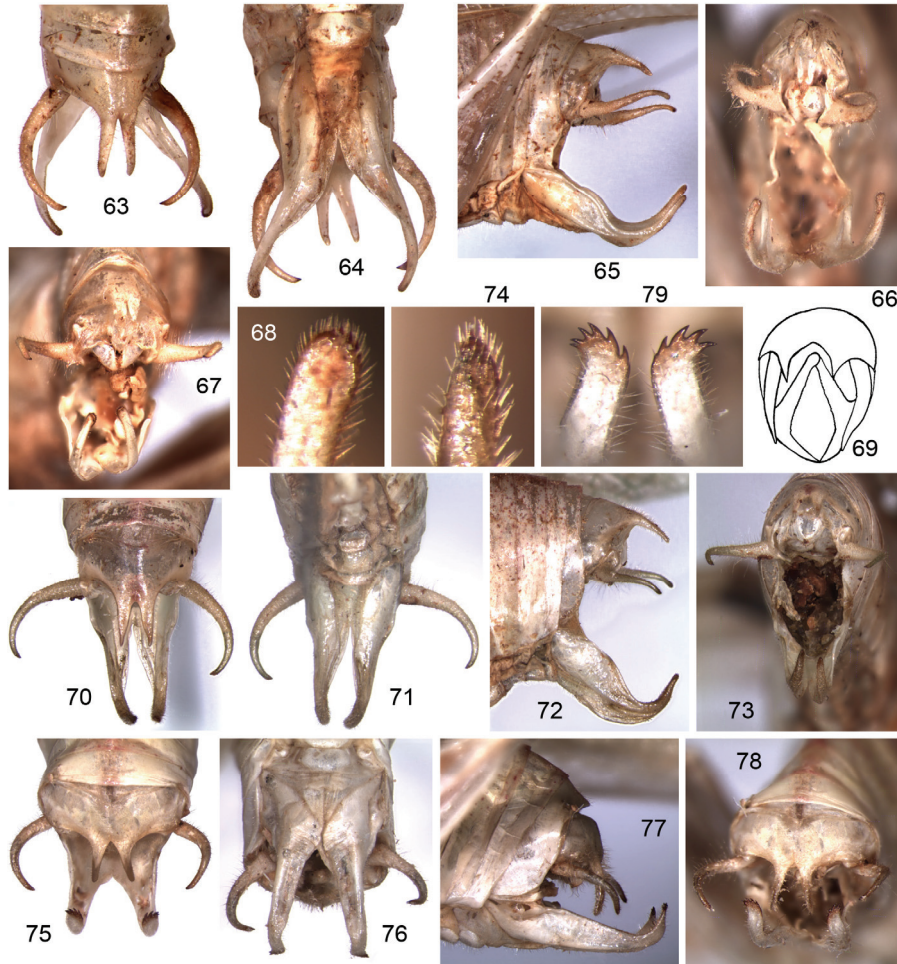
ETYMOLOGY. This species name originates from the Latin prefix “sub-“ (under, near) and the Latin word “recta” (straight) due to the male genital plate shape.

Elbenia (Elbenia) carinata Gorochov, sp. n.

<https://zoobank.org/NomenclaturalActs/DD4C6923-8D47-4D5F-8631-F844E9BCD000>

Figs 10–12, 63–68

MATERIAL. Holotype – ♂, **Malaysia**: Borneo I., Sabah State, Trus Madi Mt, ~1000 m, primary/secondary forest, at light, 13–25.V 2007, A. Gorochov (ZIN). Paratypes: 2 ♂, same data as for holotype (ZIN).



Figs 63–79. *Elbenia (Elbenia)*, male: 63–68 – *E. (E.) carinata* sp. n.; 69 – *E. (E.) nigrosignata* (Stål); 70–74 – *E. (E.) apicata* sp. n.; 75–79 – *E. (E.) semicarinata* sp. n. Male abdominal apex from above (63, 70, 75), from below (64, 71, 76), from side (65, 72, 77) and from behind (66, 67, 69, 73, 78); left lobe (68, 74) or both lobes (79) of genital plate from behind. [69, after Karny (1923).]

DESCRIPTION. *Male* (holotype). General appearance similar to that of all species previously described here, but dorsal tegminal field with characteristic venation: in left tegmen, stridulatory vein, 1A and 2A in basal area as well as short portion of vein near stridulatory one (but after it) with dorsal parts distinctly keel-like and more or less lamellar (dorsal parts of crossveins in this area also similar in structure but lower; Fig. 11); in right tegmen, stridulatory vein and these crossveins more or less simple (Fig. 12). Coloration uniformly greenish with dark brown proximal half of widened part of left dorsal tegminal field and most part of such half in right tegminal field (medial third of latter half light), semitransparent membranes of mirror and cells around it in right tegmen as well as brown to light brown apical parts of spines, claws, apices of cerci and of genital plate lobes. Tegminal stridulatory apparatus as in Figs 10–12; last tergite with a pair of spine-like posterior lobes having their bases located near each other (Figs 63, 65, 66); epiproct and paraprocts more or less similar to those of *E. (T.) ryabovi* **sp. n.**; cerci rather long and thin, gradually thinning to acute apices, evenly arcuate as well as with apical parts directed medially and slightly downwards (Figs 63, 65, 66); genital plate rather large, with posterior lobes slightly longer than half of this plate length, with notch between them narrowly angular in proximal part, and with most part of these lobes curved upwards and gradually narrowing to very narrowly rounded apices (these apices lacking any denticles or teeth; Figs 64–66, 68).

Variations. Paratypes with lobes of last tergite and of genital plate having less widely divergent apices (these lobes possibly more or less movable; Fig. 67).

Female unknown.

Length (in mm). Body 19–20; body with wings 43–46; pronotum 4.7–4.9; tegmina 36–38; hind femora 18–19.5.

COMPARISON. The new species is most similar to *E. (E.) nigrosignata* in the shape of the male last tergite lobes and of the male cerci as well as in the structure of the male genital plate lobes, but it differs from this species in the space between the male last tergite lobes probably narrower (compare Figs 63, 66, 67 and 69), and the apical parts of the male genital plate lobes clearly narrower (see photographs of *E. nigrosignata* holotype in OSF). From all other species of this subgenus, *E. (E.) carinata* **sp. n.** is distinguished by the lobes of the male last tergite thinner (spine-like) and located more near each other, the male cerci with their distal parts not more strongly curved than the other parts, and the male genital plate lobes longer as well as with their curved upwards distal parts higher and medially or apically non-denticulated (*vs.* Figs 92, 94, 108–120, 123, 126–129, 132–134, 137).

ETYMOLOGY. The new species name is the Latin word “carinata” (carinated, with keels) due to the keel-like dorsal parts of some tegminal veins.

***Elbenia (Elbenia) semicarinata* Gorochov, sp. n.**

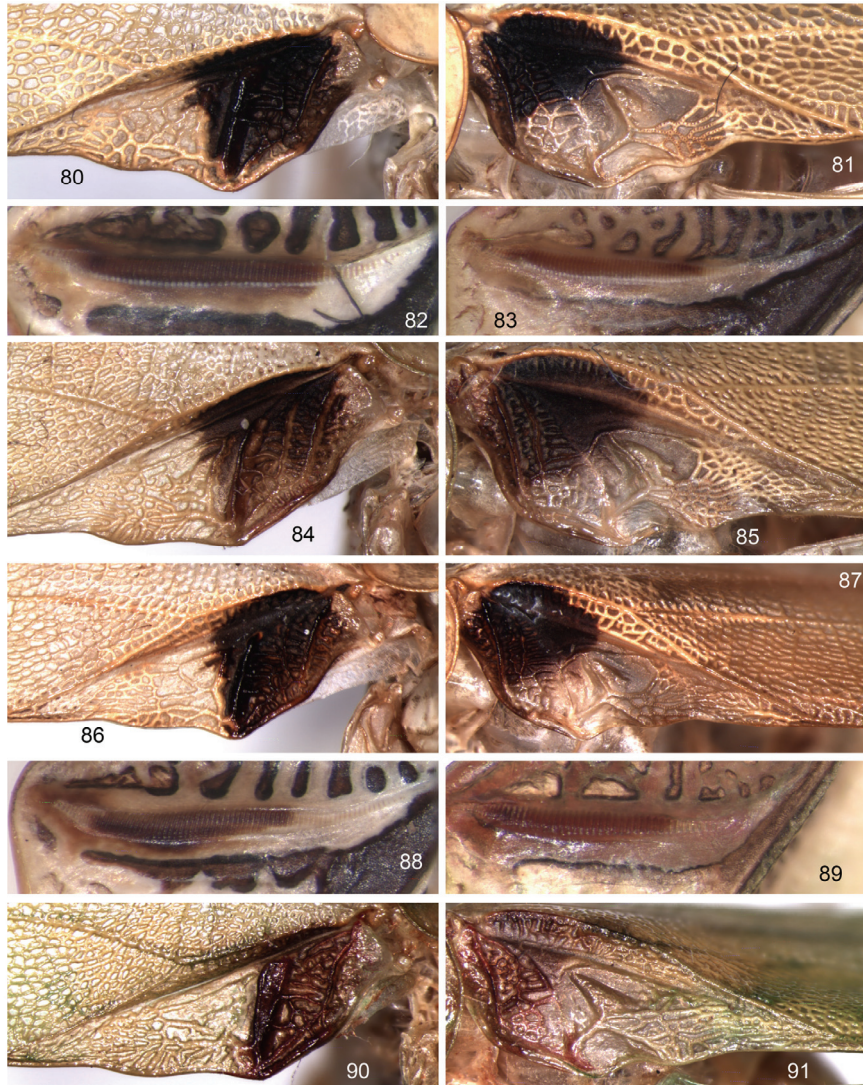
<https://zoobank.org/NomenclaturalActs/D8C50474-A87F-4DF4-9F9F-6056A1C1025D>

Figs 75–82

MATERIAL. Holotype – ♂, **Indonesia**: Sumatra I., Aceh Prov. not far from 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, primary forest, at light, 29.I–8.II 2023, A. Gorochov, M. Omelko, A. Fomitshev (ZIN). Paratypes: 1 ♂, same data as for holotype (ZIN); 1 ♂, same data but, 15–24.IV 2018, A. Gorochov, M. Berezin, I. Kamskov, E. Tkatsheva (ZIN).

DESCRIPTION. *Male* (holotype). General appearance similar to that of *E. (E.) carinata* **sp. n.** Coloration uniformly greenish with large blackish spot on proximal portion of left dorsal tegminal field (this spot including following parts: stridulatory vein, short stripe along this vein but after it, most part of basal area before this vein as well as part of M-Cu area

near these blackish marks; Fig. 80), somewhat smaller blackish spot on right dorsal tegminal field (this spot not including medial halves of above-listed parts of dorsal field except for latter one; Fig. 81), semitransparent membranes of mirror and of cells around it in right tegmen, and light brown to brown marks on other body parts as in this species.



Figs 80–91. *Elbenia* (*Elbenia*), male: 80–82 – *E. (E.) semicarinata* sp. n.; 83–85 – *E. (E.) apicata* sp. n.; 86–88 – *E. (Elbenia) paradigitata* sp. n.; 89–91 – *E. (E.) neodigitata* sp. n. Stridulatory apparatus of left (80, 84, 86, 90) and right (81, 85, 87, 91) dorsal tegminal fields from above; teeth of stridulatory vein of left tegmen from below (82, 83, 88, 89).

Tegminal stridulatory apparatus as in Figs 80–82; dorsal part of left stridulatory vein very convex (almost keel-like but not lamellar); basal area with keel-like (lamellar) dorsal parts of 1A and 2A in both tegmina as well as with similar majority of crossveins in left tegmen (Figs 80, 81). Last abdominal tergite, epiproct, paraprocts and cerci almost as in *E. (E.) carinata* **sp. n.**, but cerci shorter and more strongly curved (Figs 75, 77, 78); genital plate rather large, with a pair of long posterior lobes which slightly longer than half of this plate and straight in proximal two thirds as well as with apical thirds strongly curved upwards (these apical parts almost lamellar in transversely vertical plane as well as having 4–5 distinct teeth directed upwards and somewhat laterally; Figs 76–78).

Variations. In paratypes, posterior lobes of last tergite almost pressed to each other, apices of posterior lobes of genital plate located more near each other than in holotype (Fig. 79), number of teeth on apices of these lobes varied from 4 to 6, and dark spots on dorsal tegminal fields dark brown to almost brown.

Female unknown.

Length (mm). Body 19–21; body with wings 44–47; pronotum 5–5.2; tegmina 34–36; hind femora 20–21.5.

COMPARISON. The new species is similar to *E. (E.) nigrosignata* in the structure of the male last abdominal tergite (including length and shape of its posterior lobes) as well as the shape of the male cerci, but it differs from the latter species in the lobes of the male genital plate having their distal (curved upwards) parts lower and directed only upwards (*vs.* these parts are clearly higher and directed upwards/forwards). From *E. (E.) carinata* **sp. n.**, the new species is distinguished by the stridulatory vein of the left tegmen with its dorsal part less keel-like and not lamellar, and by the distal portions of the posterior lobes of the male genital plate distinctly less narrow and less high as well as more flattened and with apical teeth (compare Figs 65, 68 and 77, 79). From all other species of this subgenus, *E. (E.) semicarinata* **sp. n.** differs in the male last tergite lobes spine-like (not thickened, not widened and with more or less acute apices) and/or located more near each other, the male cerci evenly arcuate (but not with more strongly curved distal parts), and the male genital plate lobes longer, non-denticulated medially, with distal parts curved upwards but not high, or with rather strong and more numerous teeth at the apices (in *E. brevixipha*, each of these apices with two thinner and longer teeth; Figs 111, 112).

ETYMOLOGY. This species name originates from the species name “carinata” with the Latin prefix “semi-” (half, partly) due to similarities between the two species.

***Elbenia (Elbenia) apicata* Gorochov, sp. n.**

<https://zoobank.org/NomenclaturalActs/6C24FC17-6F2D-4255-92D4-BD290B7F16C0>

Figs 70–74, 83–85

MATERIAL. Holotype – ♂, **Malaysia:** Borneo I., Sabah State, Trus Madi Mt, ~1000 m, primary/secondary forest, at light, 13–25.V 2007, A. Gorochov (ZIN).

DESCRIPTION. *Male* (holotype). General appearance very similar to that of *E. (E.) carinata* **sp. n.** including venation of proximal halves of both dorsal tegminal fields (Figs 84, 85). Coloration greenish with brown proximal half of left dorsal tegminal field (but medial part of this darkened area almost light brown), dark brown lateral two thirds of proximal half of right dorsal tegminal field, semitransparent membranes of mirror and some nearest cells in right tegmen, and light brown same marks on other bodyparts as in *E. (E.) carinata* **sp. n.** and *E. (E.) semicarinata* **sp. n.** Tegminal stridulatory apparatus as in Figs 83–85; abdominal

apex almost as in *E. (E.) carinata* **sp. n.**, but cerci practically intermediate between those of this species and *E. (E.) semicarinata* **sp. n.**, and genital plate with curved upwards distal parts of posterior lobes clearly shorter as well as directed slightly forwards in rest position and more or less spine-like (i.e. with almost acute apices; Figs 70–74).

Female unknown.

Length (in mm). Body 22.5; body with wings 45; pronotum 5; tegmina 27; hind femora 19.5.

COMPARISON. The new species differs from the most similar species *E. (E.) carinata* **sp. n.** in the characters of the male genital plate listed above, and from all other species of *Elbenia* s. str., it is distinguished by the same features as *E. (E.) carinata* **sp. n.**

ETYMOLOGY. The new species name is the Latin word “apicata” (with anything at the top: for example, with a cap on the head) due to the presence of an almost spine-like apical part on each lobe of the male genital plate.

***Elbenia (Elbenia) serraticauda* Hebard, 1922**

Figs 92–96

MATERIAL. **Philippines:** 1 ♂, 1 ♀, Palawan I., southern part, environs of Quezon Town on western coast, secondary forest, at light, 4–5.III 2004, A. Gorochov (ZIN).

DESCRIPTION. *Female* (nov.). General appearance similar to that of other species of this genus. Coloration uniformly greenish (without any darker spots on tegmina) but with light brown apices of spines on legs. Tegmina with dorsal fields having dense and almost uniformly reticular venation; last tergite with rather wide but moderately short posteromedian angular projection having a pair of thin and short spinules (these spinules significantly smaller than in male: Fig. 96); epiproct and paraprocts almost as in male of all species previously described here; cerci much smaller than in male and simple (not specialized, fusiform and with very thin and acute apical parts); last abdominal sternite with distinct roundly angular posteromedian notch (Fig. 95); genital plate small and almost oval-rhombic but with narrowly truncated apex (Fig. 95, 96); ovipositor as in Fig. 96.

Length (in mm). Body 25; body with wings 47; pronotum 5.4; tegmina 36; hind femora 21; ovipositor 10.

REMARK. The above-mentioned male (Figs 92–94) is practically identical to the original description of this species (Hebard 1922: “Puerto Princesa” in Palawan I.). Here this species is recorded from another locality on the same island.

***Elbenia (Elbenia) paradigmata* Gorochov, sp. n.**

<https://zoobank.org/NomenclaturalActs/38C1EC5E-2738-4E0D-BE1F-9E6CD79468F3>

Figs 86–88, 97–101

MATERIAL. Holotype – ♂, **Malaysia**, Borneo I., Sabah State, Trus Madi Mt, ~1000 m, primary/secondary forest, at light, 13–25.V 2007, A. Gorochov (ZIN). Paratypes: 2 ♂, same data as for holotype (ZIN).

DESCRIPTION. *Male* (holotype). General appearance very similar to that of *E. (E.) carinata* **sp. n.** and *E. (E.) apicata* **sp. n.** Coloration uniformly greenish with dark brown spots on tegmina and light brown to brown marks on legs and cerci as in *E. (E.) carinata* **sp. n.** Tegminal stridulatory apparatus as in Figs 86–88; last tergite with a pair of rather long (almost spine-like) posterior lobes situated very near each other and directed backwards in parallel; epiproct, paraprocts and cerci also as in these species, but very small apical cercal



Figs 92–120. *Elbenia* (*Elbenia*): 92–96 – *E. (E.) serraticauda* Heb.; 97–101 – *E. (E.) paradigitata* sp. n.; 102–104 – *E. (E.) eudigitata* sp. n.; 105–107 – *E. (E.) neodigitata* sp. n.; 108–110 – *E. (E.) modesta* Br.-W.; 111, 112 – *E. (E.) brevixipha* Br.-W.; 113 – *E. (?E.) fusca* Karny; 114 – *E. (?E.) fissa* Karny; 115–117 – *E. (E.) bakeri* (Karny); 118–120 – *E. (E.) digitata* Karny. Male abdominal apex from above (92, 98, 102, 105, 117, 118), from below (93, 99, 101, 103, 106, 109, 113, 116, 119), from side (94, 100, 104, 107, 110, 111, 115, 120) and from more or less behind (97, 108, 112); last sternite and genital plate of female from below (95); female abdominal apex with ovipositor from side (96); genital plate and cerci of male from below (114). [108–112, after Brunner-Wattenwyl (1898); 113–120, after Karny (1923, 1926b).]

parts slightly curved upwards (Figs 97–100); genital plate not very long but gradually narrowing to very narrow apical portion having moderately high lateral lamellar parts of characteristic shape in profile (Figs 97, 99, 100): this apical portion with a pair of rather small and rounded (lobule-like) posterodorsal projections, a pair of shorter but more widely rounded posteroventral lobes, and comparatively short posteromedian notch (in artificially flattened genital plate, this notch rather wide and having sinuate edges; as in Fig. 101).

Variations. Paratypes with darker (blackish) spot on both tegmina or on only right tegmen; one male with genital plate artificially flattened, i.e. having lateral parts spread (Fig. 101).

Female unknown.

Length (in mm). Body 23–27; body with wings 55–57; pronotum 5–5.5; tegmina 41–43; hind femora 21–22.5.

COMPARISON. The new species is similar to *E. (E.) bakeri*, *E. (E.) digitata*, *E. (E.) modesta*, *E. (E.) fusca* and *E. (E.) fissa* in a rather short male genital plate almost not protruding beyond the cercal apices as well as lacking elongated and curved upwards appendices, but it is distinguished from them by the presence of distinct spine-like posterior lobes on the male last tergite (from *E. fusca* and *E. fissa*), or by a narrower interspace between the posterior lobes of the male last tergite (from *E. bakeri*, *E. digitata* and *E. modesta*; compare Figs 98–101 and 108–110, 115–120). From *E. (E.) carinata* **sp. n.**, *E. (E.) semicarinata* **sp. n.**, *E. (E.) apicata* **sp. n.**, *E. (E.) nigrosignata*, *E. (E.) brevixipha*, *E. (E.) tenera*, *E. (E.) borneensis* and *E. (E.) fraser*, the new species differs in the male genital plate with short (but not more or less long) posterior lobes.

ETYMOLOGY. The new species name originates from the Latinized Greek prefix “para-” (near) and the species name “digitata” due to the similarity of the male genital plate to that of *E. digitata*.

***Elbenia (Elbenia) eudigitata* Gorochoy, sp. n.**

<https://zoobank.org/NomenclaturalActs/1077A597-F8C2-46D8-95F0-C1125D164816>

Figs 102–104, 121, 122, 139

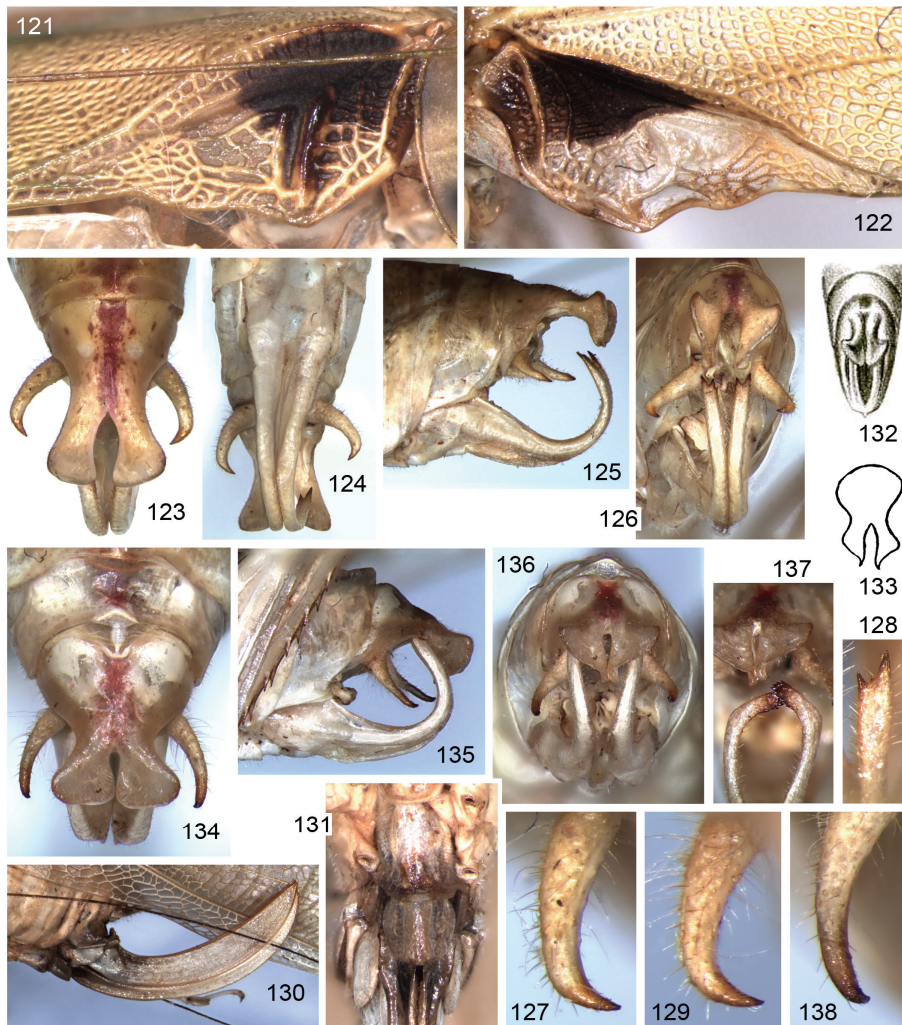
MATERIAL. Holotype – ♂, **Indonesia**, Sumatra I., West Sumatra Prov., ~20 km E of Sasak Town, equator, 100 m, environs of Harau Valley National Park, primary/secondary forest, at light, 24–26.XI 1999, A. Gorochoy (ZIN).

DESCRIPTION. *Male* (holotype). Coloration and structure of body very similar to those of *E. (E.) paradigitata* **sp. n.** but with following differences: dorsal tegminal fields with dark brown lateral halves of basal areas, similar lateroproximal spot in rest part of each dorsal field fused with previous dark portion, brown to light brown stridulatory vein in left tegmen and brownish grey small area before 2A (this vein yellowish) in both tegmina (Figs 121, 122, 139); apical parts of cerci not curved upwards (Figs 102–104); genital plate with higher apical lateral (lamellar) parts having rounded posterior edges and almost angular dorsal projections, as well as with similar posteromedian notch having non-sinuate edges (Figs 103, 104).

Female unknown.

Length (in mm). Body 21; body with wings 48; pronotum 5.2; tegmina 38; hind femora 21.

COMPARISON. Differences between the new species and *E. (E.) paradigitata* **sp. n.** are listed above. From *E. (E.) digitata*, *E. (E.) fusca* and *E. (E.) fissa*, the new species differs in the apical lobes of the male genital plate not subdivided into a pair of medial lobules and a pair of lateral ones, and from all other species of *Elbenia* s. str., it is distinguished by the same characters as *E. (E.) paradigitata* **sp. n.**



Figs 121–138. *Elbenia* (*Elbenia*): 121, 122 – *E. (E.) eudigitata* sp. n.; 123–132 – *E. (E.) ?tenera* Br.-W. (123–127, Kinabalu Mt; 128–131, Trus Madi Mt); 133 – *E. (E.) borneensis* Karny; 134–138 – *E. (E.) ?borneensis*. Left (121) and right (122) dorsal fields of male tegmina from above; male abdominal apex from above (123, 134), from below (124), from side (125, 135), from above and slightly behind (132), and from behind but with genital plate lobes completely visible (126) or partly covered by male last tergite lobes (136); male cercus from above (127, 129, 138); distal half (128) or both distal halves (137) of completely visible lobes of male genital plate from behind; female abdominal apex with ovipositor from side (130); last sternite and genital plate of female from below (131); male last tergite from above/behind (133). [132, after Brunner-Wattenwyl (1898); 133, after Karny (1926a).]

ETYMOLOGY. The new species name consists of the Latinized Greek prefix “eu-” (true) and the species name “digitata” due to the similarity of the male genital plates.

***Elbenia (Elbenia) neodigitata* Gorochov, sp. n.**

<https://zoobank.org/NomenclaturalActs/09F5052D-2ECD-4024-B3AE-8B48F61438A7>

Figs 89–91, 105–107

MATERIAL. Holotype – ♂, **Malaysia**, Borneo I., Sabah State, Trus Madi Mt, ~1000 m, primary/secondary forest, at light, 13–25.V 2007, A. Gorochov (ZIN).

DESCRIPTION. *Male* (holotype). Coloration and structure of body similar to those of *E. (E.) eudigitata* sp. n. but with following characteristic features: dorsal tegminal fields with light brown most part of basal area, but stridulatory vein and two veins along (near) plectrum in left tegmen brown with reddish tinge, and small distomedial part of basal area in right tegmen as well as mirror and membrane between chords in this tegmen yellowish and more or less semitransparent (Figs 90, 91); structure of tegminal stridulatory apparatus as in Figs 89–91, with stridulatory vein in left tegmen very convex but dorsally flattened (not keel-like contrary to that of *E. eudigitata* sp. n.); last tergite with posterior spine-like lobes parallel, located near each other, directed backwards, with subapical parts barely widened, and with apical ones slightly curved downwards (Figs 105, 107); cerci with apical parts intermediate between those of this species and *E. (E.) paradigitata* sp. n. (Figs 105–107); genital plate slightly not reaching cercal apices, with moderately short and angular posteromedian notch which very narrow in normal condition and having barely S-shaped lateral edges in spread condition, as well as with posterolateral lobes narrower (lower) than in both aforementioned congeners and *E. (E.) digitata* but in profile more similar to those of latter species (see Figs 107 and 120).

Female unknown.

Length (in mm). Body 20; body with wings 41; pronotum 5.1; tegmina 33; hind femora 16.7.

COMPARISON. The new species is similar to *E. (E.) paradigitata* sp. n., *E. (E.) eudigitata* sp. n., *E. (E.) digitata* and *E. (E.) bakeri* in a rather short male genital plate, but it differs from them in a dorsally flattened (not keel-like) stridulatory vein of the left tegmen and the above-listed characters of the male abdominal apex (from the two first species), as well as a distinctly narrower interspace between the male last tergite lobes and a narrower (lower) male genital plate in profile (from the two other species). From *E. (E.) fraseri* with a somewhat similar shape of the latter plate in profile, *E. (E.) neodigitata* sp. n. is distinguished by this plate clearly shorter and not protruding beyond the cercal apices (*vs.* distinctly protruding beyond them), and from all the other species of this genus, by the different structure of the male last tergite and/or of the male genital plate.

***Elbenia (Elbenia) ?tenera* Brunner-Wattenwyl, 1878**

Figs 123–132

MATERIAL. **Malaysia**, Borneo I., Sabah State: 1 ♂, southern part of Kinabalu National Park, 1500–2000 m, primary forest, at light, 26.IV–2.V 2013, A. Gorochov, M. Berezin, V. Gorochova, E. Tkatsheva (ZIN); 23 ♂, 3 ♀, Trus Madi Mt, ~1000 m, primary/secondary forest, at light, 13–25.V 2007, A. Gorochov (ZIN).

NOTE. The specimens from Trus Madi Mt are in accordance to the original descriptions of *E. (E.) tenera* and *E. triangularis* Brunner-Wattenwyl, 1898 which are now considered as synonyms to each other (OSF). Their type localities were mentioned as “Borneo” (Brunner-Wattenwyl, 1878) and “Kina Balu [Kinabalu Mt] in ins. Borneo” (Brunner-Wattenwyl, 1898), but my male from Kinabalu Mt is distinguished from the males from Trus Madi Mt as well as from the figure of *E. triangularis* given in the latter publication by a wider interspace between the male last tergite lobes (compare Figs 123, 126 with 132); however, the picture of this tergite given in the first description of *E. (E.) borneensis* from Sarawak State (Karny, 1926a) is very similar to my male from Kinabalu Mt (see Figs 123, 126 and 133). Moreover, all my males from Trus Madi Mt have all the other characters practically indistinguishable from those of the latter male. Thus, such differences in the structure of this tergite may be individual variations, but I have only one male from Kinabalu Mt, and it is a reason that my determination of this species is problematic.

***Elbenia (Elbenia) ?borneensis* Karny, 1926**

Figs 134–138

MATERIAL. **Malaysia**, Borneo I., Sarawak State: 1 ♂, 80–90 km NWW of Kuching City, Gunung Gading National Park, 100–300 m, primary forest, at light, 12–26.X 2016, A. Gorochoy, M. Berezin, E. Tkatsheva, I. Kamskov (ZIN).

NOTE. This male is very similar to my males of *E. (E.) ?tenera* from Trus Madi Mt (Sabah) including the structure of its last tergite, but its cerci are less strongly curved in their subapical parts and with the very small apical parts curved medially (*vs.* these apical parts are not curved; compare Figs 127, 129 and 138), and its genital plate lobes are different: in *E. (E.) ?tenera*, they are straight and with two rather long denticles at each apex (sometimes one additional small denticle is developed between these denticles or near one of them; Figs 126, 128); but in my male of *E. (E.) ?borneensis*, these lobes are distinctly curved medially in their subapical parts and with 7 short denticles along edges of each apical part (Fig. 137). Differences between the structure of the male last tergite lobes in my male from Sarawak State and the picture of *E. (E.) borneensis* holotype by Karny (1926a) allow me to give only a questionable determination of this species (see Figs 133 and 134, 136).

***Elbenia (Aequapteron) appressa* Gorochoy, sp. n.**

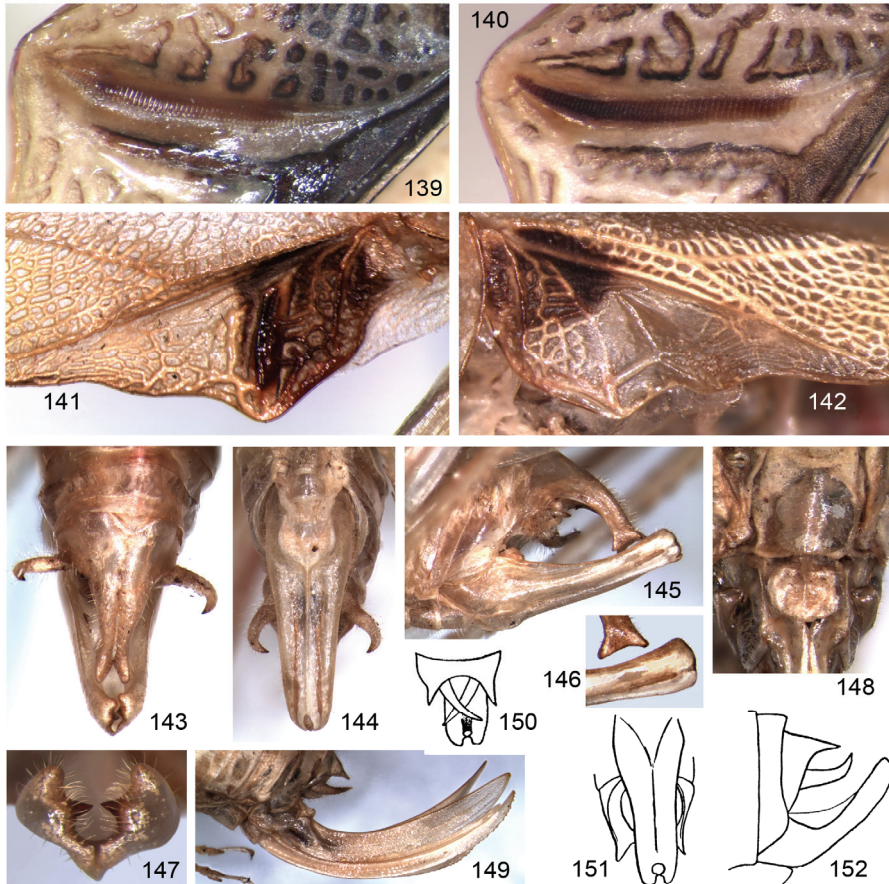
<https://zoobank.org/NomenclaturalActs/CD071663-C0B3-4799-9832-5F15AF9897D4>

Figs 140–149

MATERIAL. Holotype – ♂, **Malaysia**, Borneo I., Sabah State, environs of Sepilok Town, forest, 1–6.II.2014, M. Berezin (ZIN). Paratypes: 1 ♂, 1 ♀, same data as for holotype (ZIN).

DESCRIPTION. *Male* (holotype). General appearance similar to all species previously described here. Coloration uniformly greenish but having partly light brown basal areas in both dorsal tegminal fields (this area in left tegmen with brown most part of stridulatory vein and almost yellowish small medial part of this vein, but in right tegmen, this basal area with yellowish rose distomedial part and brown distolateral part), semitransparent membranes in mirror of right tegmen and in cells around this mirror, light brown to brown apices of some spines as well as apical parts of claws and cerci, and almost dark brown inner denticles of

genital plate (Figs 141–147). Structure of tegminal stridulatory apparatus as in Figs 140–142; last tergite with a pair of long and moderately thin posterior lobes which somewhat curved downwards, almost pressed to each other from bases to apical parts and with two short and angular (almost conical) projections at each apex (dorsoapical projection directed more or less backwards, but ventroapical one directed downwards/forwards; Figs 143, 145, 146); epiproct very small, triangularly oval, located between cercal bases; paraprocts barely larger, roundly plate-like; cerci short, rather strongly curved (hook-like) and with acute apices



Figs 139–152. *Elbenia*: 139 – *E. (Elbenia) eudigitata* sp. n.; 140–149 – *E. (Aequapteron) appressa* sp. n.; 150–152 – *E. (Ae.) bispinosa* Karny. Teeth of left male stridulatory vein from below (139, 140); left (141) and right (142) dorsal fields of male tegmina; male abdominal apex from above (143, 150), from below (144, 151), from side and slightly below (145), and from side (152); distal parts of male last tergite lobes and male genital plate from side (146); apex of latter plate from behind (147); female last tergite with genital plate from below (148); female abdominal apex with ovipositor from side (149). [150–152, after Karny (1926a).]

directed medially (Figs 143, 144); genital plate rather simple, elongate (but not long), straight, slightly and gradually narrowing to rather narrowly rounded apex having distinct but short and very narrow posteromedian notch as well as a pair of vertically flattened and rather low posterolateral lobes (each lobe with posterior edge sinuate, i.e. having three very short apical lobules, and with strong acute denticle located on inner surface of this lobe near its apex and directed medially; Figs 143–147).

Variations. Paratype male with two yellowish marks on darkened part of left tegmen: small one on base of stridulatory vein dorsum, and somewhat larger spot near plectrum.

Female. Coloration and structure of body as in males but with following differences: darkened marks on tegmina and cerci absent; dorsal tegminal fields and abdominal apex (Figs 148, 149) almost as in *E. (E.) serraticauda* in structure, but last sternite with more or less straight (not concave) posterior edge similar to that of *E. (E.) ?tenera* (however, latter species with relatively shorter ovipositor: *E. ?tenera* and new species having hind femur approximately 2.4 and 2 times as long as ovipositor, respectively).

Length (in mm). Body: ♂ 16–17, ♀ 21; body with wings: ♂ 37–39, ♀ 40; pronotum: ♂ 4–4.2, ♀ 4.4; tegmina: ♂ 28.5–30, ♀ 30; hind femora: ♂ 16.5–17.8, ♀ 18; ovipositor 9.

COMPARISON. The new species is very similar to the second species of this subgenus *E. (A.) bispinosa* but distinguished from it by the male last tergite lobes longer and almost pressed to each other (*vs.* these lobes are shorter and very widely separated from each other), and the male cerci more hooked (compare Figs 143–145 and 150–152).

ETYMOLOGY. This species name is the Latin word “*appressa*” (pressed) due to the structure of the male last tergite lobes.

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