

**New and little known katydids of the tribe Elimaeni
(Orthoptera, Tettigoniidae, Phaneropterinae)**

A.V. Gorochov

**Новые и малоизвестные кузнечики трибы Elimaeni
(Orthoptera, Tettigoniidae, Phaneropterinae)**

А.В. Горохов

Zoological Institute, Russian Academy of Sciences, St. Petersburg, 199034, Russia (Зоологический институт РАН, С.-Петербург, 199034, Россия). E-mail: orthopt@zin.ru

Abstract. Rich material on the katydid tribe Elimaeni (excepting genus *Hemielimaea*) from South-East and East Asia deposited in Zoological Institute (St. Petersburg) is revised. 52 new species and 3 new subgenera are described. The former subgenus *Orthelimaea* Karny is here considered a separate genus. Some subgenera of the genus *Elimaea* Stål are divided into several species groups characterized mainly by the structure of copulatory apparatus.

Key words. Orthoptera, Tettigoniidae, Phaneropterinae, Elimaeni, new taxa, South-East and East Asia.

Резюме. Ревизован богатый материал по кузнечикам трибы Elimaeni (кроме рода *Hemielimaea*) из Юго-Восточной и Восточной Азии, хранящийся в Зоологическом институте РАН. Описаны 52 новых вида и 3 новых подрода. Бывший подрод *Orthelimaea* Karny рассматривается здесь как отдельный род. Некоторые подроды рода *Elimaea* Stål подразделены на несколько групп, характеризующихся, главным образом, строением копулятивного аппарата.

Ключевые слова. Orthoptera, Tettigoniidae, Phaneropterinae, Elimaeni, новые таксоны, Юго-Восточная и Восточная Азия.

Introduction

In accordance to the recent views (Ingrisch, 1998; Gorochov, 2004; Ingrisch, Gorochov, 2007; Eades, Otte, 2009), the tribe Elimaeni Br.-W. includes 3 genera: *Elimaea* Stål, *Ectadia* Br.-W., and *Hemielimaea* Br.-W. Besides there is the very similar tribe Ducetiini Br.-W. which differs from Elimaeni only in the presence of both tympana open (*Ectadia* and *Elimaea* are with both tympana slit-like, and *Hemielimaea* has outer tympanum open and inner one slit-like). Gorochov & Kang (2002) wrote: “it is impossible to exclude that the origin of almost identical slit-like tympana in the different branches of Phaneropterinae is a result of convergence (or a result of secondary return to a primitive condition of tympana)”, and “in this case, the representatives of Ducetiini and Elimaeni may be included in the same tribe”. The new study presented here shows that the genus *Elimaea* is very diverse and must be divided into several subgenera and 2 or 3 genera (these genera are *Elimaea* and *Orthelimaea* Karny, stat. n.; and the subgenus *Schizelimaea* subgen. n. may turned out to be a separate genus). Moreover the genus *Ectadia* seems morphologically uniform, and its differences from *Elimaea* are more or less in limits of subgeneric differences of the latter genus. However more exact clarification of the status of *Ectadia* and

numerous groups inside some subgenera of *Elimaea* is in need of additional study. The question about synonymy of *Elimaeini* and *Ducetiini* is also open for additional investigations.

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Tribe *Elimaeini* Brunner-Wattenwyl, 1878

Genus *Ectadia* Brunner-Wattenwyl, 1878

Type species – *Ectadia pilosa* Brunner-Wattenwyl, 1878 (Kashmir).

Note. This genus includes 8 species: type species; rather widely distributed *E. fulva* Brunner-Wattenwyl, 1893; 4 species from Southern China (Xia, Liu, 1989; Liu et al, 2004); 2 new species from Northern Vietnam. *E. pilosa* is insufficiently studied, but all the other congeners are characterized by the following characters: upper part of fore coxa is without spine; fore femora are slightly curved and with low dorsal keel (as in many representatives of *Elimaea*); male cerci are depressed (yataghan-like), having the distinct longitudinal ventral concavity and thickened basal part (Fig. I: 6, 13, 20), but lacking medial denticles presented in *E. pilosa*; genital plate is curved in profile and with the long and narrow distal part which is deeply bifurcate and having the almost hooked apical part of lateral lobes (Fig. I: 7, 8, 14, 15, 21, 22); female genital plate is almost triangular and with the more or less rounded apex (Fig. I: 23); male genitalia are completely membranous; ovipositor is without distinct ventral tubercle or process on gonangulum and base of inferior valve. These characters present or may present in some representatives of the genus *Elimaea*; differences between these genera are not very distinct: in *Ectadia*, lateral lobes of pronotum are usually lower and with the more straight ventral edge, and hind humeral notches of pronotum are smaller (Fig. I: 1, 25); female of this genus has the tegmina and hind wings distinctly narrower and shorter than in male (however all these wings are usually longer than pterothorax and abdomen together, and distal part of hind wings is clearly exposed behind tegmina, as in male of this genus and in *Elimaea*), but in *Elimaea*, wings in both sexes of the same species is more or less equal in length and not shortened. From the other genera of *Elimaeini*, *Ectadia* differs in the both tympana slit-like (from *Hemielimaea*) or in the fore femora curved and ovipositor with very small denticles (from *Orthelimaea*).

Ectadia fulva Brunner-Wattenwyl, 1893 (Fig. I: 1–9)

Material. **Southern China**, Yunnan: 1 ♂, 1 ♀, «окр. Фохая, Нанношань», 1200–1300 m, 24–27.IV.1957, «Цзан Лин-чао» and «Лю Да-хуа»; 1 ♂, «765 км по дор. Куньмин–Дало», 1150 m, 26.IV.1957, «Хун Гуан-ди»; 1 ♀, «Сымао–Пувэнь», 950–1200 m, 11.V.1957, «Хун Гуан-ди». **Northern Vietnam**: 2 ♂, 1 ♀, prov. Vinh Phu, environs of vill. Tam Dao, 800–1000 m, 17.V–10.VI.1995, A. Gorochov; 1 ♂, prov. Hoa Binh, distr. Ky Son, vill. Cao Phong, 250 m, 24–29.X.1990, A. Gorochov; 11 ♂, 4 ♀, prov. Ha Tay, National park Ba Vi, 400 m, 21–24.XI.1990, A. Gorochov; 1 ♂, 2 ♀, prov. Son La, environs of vill. Song Ma, 400–600 m, 3–14.V.1986, A. Gorochov.

Note. This species is described from Burma (Brunner-Wattenwyl, 1893) and distributed also in Southern China (Bey-Bienko, 1962) and Northern Thailand (Ingrisch, 1998). At present it is indicated for Northern Vietnam. It was well described and redescribed by these authors. Its differences from all the other congeners (excepting 2 new species) are listed by Liu with coauthors (Liu et al, 2004).

***Ectadia mistshenkoi* sp. n.** (Fig. I: 10–16)

Holotype – ♂, **Northern Vietnam**, prov. Vinh Phu, environs of vill. Tam Dao, 800–1000 m, 9–18.XI.1990, A. Gorochov. *Paratypes*: 4 ♂, 5 ♀, same data, but all females and 2 males collected 17.V–10.VI.1995.

Description. Male (holotype). Structure of body similar to that of *E. fulva* and other congeners, but tegmina slightly more strongly inflated in basal part and with not short and not very narrow distal part, stridulatory apparatus as in Fig. I: 10–12, epiproct not wide and with roundly truncate and hardly notched apex, cerci and genital plate as in Fig. I: 13–15. Coloration yellowish green with brown eyes, light brown dorsal tegminal field (excepting its proximal part at lower tegmen which almost completely transparent) and a pair of longitudinal stripes on head dorsum and pronotal disc, and darker several small spots on lateral tegminal field; fore and middle femora partly brownish with numerous weakly distinct darkish dots (which presented also on hind femora), and tibiae and tarsi partly brown.

Variations. Sometimes stripes on head and pronotum darker (brown) or tarsi almost without brown marks.

Female. General appearance as in other females of *Ectadia*: pronotum with very weak humeral notches (somewhat weaker than in male), tegmina narrower and slightly shorter than in male, and hind wings distinctly shorter than in male, genital plate triangular and with narrowly rounded apex (similar to that shown in Fig. I: 23), ovipositor (Fig. I: 16) without lobules, processes, or distinct tubercles on gonangulum and base of inferior valve. Coloration lighter and more uniform than in male (almost without brown or brownish marks on pronotum, dorsal tegminal field, femora, and fore and middle tibiae).

Length in mm. Body: ♂ 19–22, ♀ 19–25; body with wings: ♂ 44–48, ♀ 36–39; pronotum: ♂ 4.2–4.4, ♀ 4.4–4.8; tegmina: ♂ 33–38, ♀ 26–28; hind femora: ♂ 23–25, ♀ 23–25; ovipositor 6.5–6.8.

Comparison. *E. mistshenkoi* is most similar to *E. sinuata* Liu, Kang et Liu, 2004, but distinguished from it by the longer area between stridulatory vein and nearest distal transverse vein of upper tegmen (Fig. I: 10), larger mirror and distinctly shorter cell «a» of lower tegmen (Fig. I: 11), and longer row of dense teeth on the ventral surface of stridulatory vein (Fig. I: 12). From *E. obsolescens* Liu, Kang et Liu, 2004, the new species differs in the clearly more convex posteroventral part of lateral pronotal lobes in profile, distinctly larger mirror of lower tegmen, strongly curved small basal part of MP in male tegmina (Fig. I: 10, 11), and clearly wider yataghan-like part of male cerci. From *E. fulva*, it differs in the larger body, distinctly larger mirror of lower tegmen, wider yataghan-like part of male cerci (Fig. I: 3, 4, 6, 11, 13), and from all the other known congeners, in the absence of medial denticles on male cerci and not short and not very narrow distal part of tegmina.

Etymology. The species is named in memory of L.L. Mistshenko.

***Ectadia angusta* sp. n.** (Fig. I: 17–24)

Holotype – ♂, **Northern Vietnam**, prov. Lao Cai, distr. Sa Pa, Mt. Fan Si Pan, 1900–2500 m, 20.IV–9.V.1999, N. Orlov. *Paratypes*: 2 ♂, 1 ♀, same data.

Description. Male (holotype). Structure of body similar to that of other congeners, but pronotum slightly shorter, tegmina practically not inflated and with not short and not very narrow distal part, stridulatory apparatus as in Fig. I: 17–19, epiproct not wide and with almost angular apex, cerci and genital plate as in Fig. I: 20–22. Coloration yellowish with brownish and brown marks as in *E. inflata*, but fore and middle femora as well as fore tibiae and all tarsi almost uniformly yellowish.

Variations. One of paratypes with rather wide and distinct brownish band along hind edge of vertex.

Female. Structure of body (including genital plate and ovipositor; Fig. I: 23, 24) and coloration almost identical to those of *E. mistshenkoi*, but pronotum slightly shorter.

Length in mm. Body: ♂ 17, ♀ 19; body with wings: ♂ 40–44, ♀ 36; pronotum: ♂ 3.4–3.6, ♀ 4; tegmina: ♂ 27–28, ♀ 26; hind femora: ♂ 20–22, ♀ 23; ovipositor 6.3.

Comparison. *E. angusta* is most similar to *E. obsolescens*, but distinguished from it by the distinctly narrower area between the secondary longitudinal vein «b» and anal edge of lower tegmen of male (Fig. I: 18), presence of 1 row of regular cells in this area [in *E. obsolescens*, this area is wider and with irregular (reticular) venation], and narrow male epiproct with the almost angular (not truncate) apical part. From *E. mistshenkoi*, the new species differs in the distinctly smaller mirror of lower tegmen and narrow dorsal tegminal field of male, from *E. fulva*, in the distinctly narrower dorsal tegminal field of male and almost angular apex of male epiproct, from *E. sinuata*, in the narrow dorsal tegminal field of male and longer row of dense teeth on the ventral surface of stridulatory vein, and from all the other congeners, in the same characters as *E. mistshenkoi*.

Genus *Elimaea* Stål, 1874

Type species – *Phaneroptera subcarinata* Stål, 1861 (Hongkong).

Note. This genus includes numerous species distributed in the enormous territory of East and South-East Asia (from southern part of Russian Far East to Java and from Southern India to Korea, Japan, Taiwan, Philippines, and Borneo). It is most similar to *Ectadia* including structure of fore femora (the differences between these genera are given above, in the note about *Ectadia*), but its body structure is more diverse: fore femora may be curved more strongly; upper part of fore coxae sometimes has a small spine; pronotum of some species is almost as in *Ectadia*; structure of male cerci, of male epiproct, of male and female genital plate, of male genitalia, and of ovipositor base is much more diverse than in *Ectadia*. From *Hemielimaea* and *Orthelimaea*, this genus differs in the same characters as *Ectadia*. Great morphological diversity of *Elimaea* forces me to divide this genus into 5 subgenera and numerous groups of species. It is possible that in future, it may be more reasonable to erect status of some of these subgenera and to use some of these species groups as subgenera.

Key to subgenera of *Elimaea*

1. Upper part of fore coxa without any spine. Male genital plate undivided or divided into 2 almost immovable (in relation to each other) hind lobes or spine-like processes by median notch not reaching base of this plate (this notch not deep or deep, reaching middle part or even proximal quarter of this plate). Female genital plate diverse.....2
- Upper part of fore coxa with distinct short spine. Male genital plate divided into 2 movable lateral parts by very deep median notch reaching base of this plate (Fig. VII: 5; XII: 5, 15, 23, 31, 39). Female genital plate simple: more or less triangular and with notched or almost rounded apex (Fig. XII: 9, 43, 45).....*Schizelimaea* subgen. n.
2. Male genital plate diverse; male genitalia with a pair of sclerites or weakly sclerotized structures (sometimes these genitalia with additional sclerites) (Fig. II; VIII: 3–27; XIII: 6, 7, 31–33). Female genital plate with a pair of hind lateral lobes which situated rather far from each other (Fig. I: 27; III: 8, 32, 34, 36, 38; IV: 18, 28, 29, 31; V: 14, 15, 31, 33; IX: 36; X: 26, 29, 32; XI: 10, 20; XIV: 75–79), but sometimes this plate almost triangular and with large apical notch (Fig. V: 23).....3
- Male genital plate divided into 2 hind lobes or spine-like processes by deep (or moderately deep) median notch (Fig. XI: 32, 37, 38; XIII: 10, 12, 21, 22; XIV: 17–19, 47–50); male genitalia completely membranous or with unpaired weakly sclerotized median structure (Fig. XIII: 17, 27–30). Female genital plate more or less triangular and with rounded or not deeply notched apex (Fig. XIII: 15, 24, 43, 44; XIV: 32–41, 63–70). [Female in one of subgenera unknown].....4
3. Male genital plate without apical hooks or with apical hook-like structures directed more or less laterally (Fig. III: 5, 14, 21, 28; IV: 8, 16, 24; V: 5, 11, 12, 21, 30; VI: 5, 7, 12–14, 19–21, 26–28, 33–35;

- VII: 11, 12, 20, 21, 27, 28; IX: 5, 6, 12, 13, 19, 20, 26, 27, 33, 34; X: 6, 7, 15, 16, 22, 23; XI: 5, 6; XIII: 4); male genitalia with a pair of denticulate sclerites (their denticles not very small; sometimes these denticles absent, or additional sclerites present (Fig. II; VIII: 3–27; XIII: 6, 7).....*Rhaebelimaea* Karny, 1926
- Male genital plate with apical hooks directed more or less medially (Fig. XI: 15–17, 24–26); male genitalia with a pair of semisclerotized structures having very small (almost indistinct) denticles (Fig. XIII: 31–33). [Female unknown].....*Pseudectadia* subgen. n.
4. Male genital plate with a pair of spine-like processes (Fig. XI: 32, 33, 37–39); male genitalia completely membranous. [Female unknown].....*Bornelimaea* subgen. n.
- Male genital plate with a pair of finger-like processes or of narrow lamellar lobes (Fig. XIII: 10–12, 21, 22; XIV: 17–19, 47–50); male genitalia with unpaired median semisclerotized structure (Fig. XIII: 17, 27–30). Female genital plate more or less triangular and with rounded or not deeply notched apex (Fig. XIII: 15, 24, 43, 44; XIV: 32–41, 63–70).....*Elimaea* s. str.

Subgenus *Rhaebelimaea* Karny, 1926

Type species – *Phaneroptera parumpunctata* Audinet-Serville, 1839 (Java).

Note. This subgenus is presented by numerous species which usually have very narrow areas and live in tropical forests. Structure of their body is rather diverse, but upper part of fore coxa is without spine, fore femora are slightly or moderately curved and with the low or moderately high dorsal keel, and male genital plate is with the hind median notch diverse in size (from small to very deep; in the latter case, this notch reaches the proximal quarter of this plate, but not deeper) and lateral lobes immovable in relation to each other. Male genitalia are with a pair of denticulate sclerites (Fig. II: 1–28, 34–37; VIII: 3–10, 24–27), but sometimes with 1–2 additional median sclerites (Fig. II: 29–33; VIII: 11–21; XIII: 6, 7) or with only a pair of small non-denticulate ones (Fig. VIII: 22, 23). Female genital plate is with a pair of diverse hind lateral lobes or processes situated rather far from each other, but sometimes each of these lobes is somewhat bifurcate, or (in one species) this plate is rather simple: narrowing to apex and with comparatively small hind median notch (Fig. V: 23).

Included taxa. At present, *Rhaebelimaea* seems consisting of several groups of species some of which may be distinct subgenera. 1) Javanese group: type species; *E. curvicercata* Brunner-Wattenwyl, 1891; *E. simulata* sp. n.; *E. fruhstorferi* sp. n.; possibly *E. kraussi* Karny, 1926. 2) Group from Sumatra: *E. bengkulu* sp. n.; *E. kerinci* sp. n.; *E. sumatrana* Karny, 1926. 3) Group from Sumatra and Malacca: *E. jambi* sp. n., *E. cognata* sp. n., and *E. hebaridi* Karny, 1926 (all from Sumatra); *E. apicata* Ingrisch, 1998 and *E. phetchaburi* sp. n. (both from Malacca); possibly *E. modiglianii* Ingrisch, 1998, *E. maninjauensis* Ingrisch, 1998 (both from Sumatra), and *E. mentaweei* Ingrisch, 1998 (Mentawai Islands). 4) Group from Borneo: *E. borneo* sp. n.; possibly *E. moultonii* Karny, 1923. 5) Group from Malacca: *E. pseudochloris* Ingrisch, 1998; *E. viridula* sp. n. 6) Group from Central Thailand: *E. separata* sp. n. 7) Group from Southern and Central Vietnam: *E. abramovi* sp. n. and *E. aphana* sp. n. 8) Group from Central and Northern Vietnam: *E. semitubulosa* sp. n. (Southern Vietnam); *E. bavi* sp. n. and *E. degressa* sp. n. (both from Northern Vietnam). 9–16) 5 groups distributed from Northern Vietnam to Southern China: 9) *E. vinhphu* sp. n.; 10) *E. obtusilota* Kang et Yang, 1992 (China: Guangxi), *E. maichau* sp. n., *E. tamdao* sp. n., *E. catba* sp. n., *E. abdita* sp. n., and possibly *E. cheni* Kang et Yang, 1992 (China: Hunan), *E. foliata* Fanghong, Tonli et Yuwen, 1999 (China: Fujian), and *E. megalopygmaea* Fanghong, Tonli et Yuwen, 1999 (China: Anhui); 11) *E. bona* sp. n., *E. recta* sp. n., *E. darevskyi* sp. n., *E. tuly* sp. n., and possibly *E. parva* Liu, 1993 (China: Fujian); 12) *E. maja* sp. n.; 13) *E. setifera* Bey-Bienko, 1962 (China: Yunnan). There are also species with unclear position which evidently or possibly belong to *Rhaebelimaea*: *Locusta poaefolia* Haan, 1842 (Java); *Phaneroptera aliena* Walker, 1869 (Bangladesh); *E. rosea* Brunner-Wattenwyl, 1878 (Borneo); *E. marmorata* Brunner-Wattenwyl, 1878 and *E. jacobsonii* Karny, 1926 (both from Sumatra) [5 these (above-listed) species are considered true or possible members of «*E. poaefolia*»

group» by Ingrisch (1998)]; *E. spinigera* Brunner-Wattenwyl, 1878 and *E. signata* Brunner-Wattenwyl, 1878 (both from Singapore); *E. longicercata* Brunner-Wattenwyl, 1891 (Borneo); *E. roseolata* Brunner-Wattenwyl, 1891, *E. signata* var. *adspersa* Dohrn, 1906, *E. willemsei* Karny, 1926, and *E. lampu* Ebner, 1934 (all from Sumatra); *E. schmidtii* Krausze, 1903 (Annam); *E. theopoldi* Krausze, 1903 (Tonkin); *Ph. tympanalis* Matsumura et Shiraki, 1908 and *E. schenklingi* Karny, 1915 (both from Taiwan); *E. bakeri* Hebard, 1922 and *E. filicauda* Hebard, 1922 (both from Philippines); *E. neglecta* Karny, 1926 (Malacca); *E. signata siamensis* Karny, 1926, *E. transversa* Ingrisch, 1990, and *E. pentaspina* Ingrisch, 1998 (all from Thailand); *E. lii* Kang et Yang, 1992 (China: Guangxi); *E. semicirculata* Kang et Yang, 1992 (China: Fujian); *E. hunanensis* Kang et Yang, 1992 (China: Hunan); *E. longifissa* Mu, He et Yuwen, 2002 (China: Jiangxi); *E. brevilamina* Mu, He et Yuwen, 2002 (China: Fujian); *E. yaeyamensis* Ichikawa, 2004 (Japan: Ryukyu); *E. modesta* sp. n.; *E. variegata* sp. n.; *E. suratthani* sp. n.; *E. gialai* sp. n.; *E. subita* sp. n.; *E. orlovi* sp. n.; *E. ryabovi* sp. n.; *E. junia* sp. n., *E. tenuiuscula* sp. n., and *E. alia* sp. n.

***Elimaea (Rhaebelimaea) parumpunctata* (Audinet-Serville, 1839)** (Fig. I: 25; II: 1–3; III: 1–9)

Material. Western Java: 13 ♂, 7 ♀, 20–25 km SE of Bogor, mts. Pangrango, 1000 m, environs of vill. Cemande, 27.XI–7.XII.1999, A. Gorochov; 1 ♂, 1 ♀, lake Situ Gunung near Sukabumi, nature reserve Gede Pangrango, 28.III–12.IV.2003, M. Berezin.

Note. This species was described for a single female from Java without indication of any more exact locality (Audinet-Serville, 1839). It is a reason that I determine these specimens in accordance to Ingrisch (1998) connecting this name with a species from Western Java.

***Elimaea (Rhaebelimaea) curvicercata* (Brunner-Wattenwyl, 1891)** (Fig. II: 4–6; III: 10–16)

Material. Java: 2 ♂, «Java», «*Elimaea curvicercata* Br.», «Brunner v. W. det.»; 1 ♀, **Eastern Java**, «Java orient., Montes Tengger, 4000', 1890», «№ 130-97», H. Fruhstorfer.

Note. *E. curvicercata* was described from Eastern Java (Brunner-Wattenwyl, 1891). Possibly the males studied are also from Eastern Java, as they correspond to the original description and to the redescription by Ingrisch (1998) based on material from Eastern Java also, and in Western Java, a very similar new species presents. Belonging of the above-mentioned female to this species is problematic and based mainly on its origin from Eastern Java. This female is similar to that of *E. parumpunctata*, but genital plate is almost without hind median projection, hind lateral processes of this plate are acute and somewhat curved, distal parts of these processes directed partly backwards and partly laterally (Fig. III: 36), ovipositor is with the gonangulum as in *E. parumpunctata* (see Ingrisch, 1998: Fig. 136), and lobule at base of each inferior valve of ovipositor is slightly longer and thinner (Fig. III: 36, 37). Coloration of male is described by Ingrisch (1998); it differs from that of this female in the more distinct dark ornament (similar differences in coloration of males and females are presented in *E. parumpunctata*); female coloration is uniformly yellowish, but with the light brown spots on the lateral surface of proximal part of antennal flagellum, sparse brownish spots on the middle part of this flagellum, a pair of weak light brown lines along the anterior halves of lateral edges of pronotal disc, sparse and very small dots on the pronotum (brown dots on disc and reddish dots on lateral lobes), weak darkish dots on the anal part of tegmina, very sparse similar dots on the median part of tegmina, uniformly rose dorsum of abdominal tergites, and very small rose dots on rest of these tergites.

***Elimaea (Rhaebelimaea) simulata* sp. n.** (Fig. II: 7, 8; III: 17–23)

Holotype – ♂, **Western Java**, «Java occident., Mons Gede, 4000', Aug. 1892», H. Fruhstorfer.

Description. Male (holotype). Structure of body similar to that of all other species of *Rhaebelimaea*, but fore femora moderately curved and with moderately high dorsal keel, stridulatory apparatus

almost as in *E. curvicercata* (Fig. III: 17–19), epiproct (small, not elongate, and with roundly truncate apex) and genital plate also similar to those of this species (Fig. III: 20, 21), cerci distinguished from those of this species only by apical hook with long and distinct ventral convexity (Fig. III: 22), and sclerites of genitalia as in Fig. II: 7, 8. Coloration yellowish with dark brown dots and a pair of narrow longitudinal stripes on pronotal disc as well as numerous spots on dorsolateral surface of antennal flagellum, brownish dorsal field of tegmina (excepting yellowish area between stridulatory vein and base of upper tegmen, and transparent stridulatory areas of lower tegmen) and dots on lateral field of tegmina (near dorsal field and between *RS* and *M*), brown small sparse spots on outer surface of both middle femur and base of middle tibia as well as spots on distal part of cerci (Fig. III: 20, 21, 23), darkened distal areas on fore tibiae, and rose dorsal part of metathoracic and abdominal tergites as well as venation of hind wings.

Female unknown.

Length in mm. Body 18; body with wings 37; pronotum 4.2; tegmina 25 (upper tegmen deformed); hind femora 20.

Comparison. The new species is very similar to *Ph. curvicercata*, but distinguished from it by the apical hook of male cerci with the long and distinct ventral convexity (Fig. III: 22) (in *Ph. curvicercata*, this convexity is short and almost indistinct: Fig. III: 15) and male genitalia with the larger sclerites which also have their distal (narrow) part clearly longer than their dorsal lobe (Fig. II: 8) (in *E. curvicercata*, this distal part is not longer than the dorsal lobe of genital sclerites: Fig. II: 6). From *E. parumpunctata* (another similar species from Western Java), it differs in the same characters as *E. curvicercata*: male cerci are somewhat shorter and with the apex of apical hook curved hardly forwards (backwards in *E. parumpunctata*); stridulatory vein of upper tegmen distinctly shorter (for comparison see Fig. III: 3 and 19).

***Elimaea (Rhaebelimaea) fruhstorferi* sp. n.** (Fig. II: 9, 10; III: 24–31)

Holotype – ♂, **Western Java**, «№ 130-97», «Java occident., Mons Gede, 4000', 1898», H. Fruhstorfer.

Description. Male (holotype). Structure of body and coloration as in *E. simulata*, but stridulatory apparatus more or less intermediate between those of *E. simulata* and *E. parumpunctata* (Fig. III: 24–26), cerci almost as in *E. parumpunctata* (however apex of their apical hook curved upwards more strongly, and this hook with longer hind convexity: Fig. III: 29, 30), apical notch of genital plate distinctly deeper (Fig. III: 27, 28), genital sclerites with much shorter dorsal lobe (Fig. II: 9, 10), distal part of fore tibiae and cerci lighter (Fig. III: 27, 28, 31), and lateral tegminal field with brownish dots near dorsal tegminal field and between *R* and *M*.

Female unknown.

Length in mm. Body 19; body with wings 42; pronotum 4.4; tegmina 31; hind femora 21.

Comparison. The new species is similar to *E. parumpunctata*, *E. curvicercata*, and *E. simulata*, but distinguished from them by the clearly deeper apical notch of male genital plate and distinctly shorter dorsal lobe of male genital sclerites.

Etymology. The species is named in memory of its collector.

***Elimaea (Rhaebelimaea) bengkulu* sp. n.** (Fig. II: 19, 20; IV: 19–28)

Holotype – ♂, **Southern Sumatra**, prov. Bengkulu, environs of town Curup (not far from city Bengkulu), 03°28–29' S, 102°31–38' E, 1000–1500 m, 24.IV–2.V.2009, A. Gorochoy, M. Berezin, E. Tkatsheva. *Paratype* – ♀, same data.

Description. Male (holotype). General appearance similar to that of *E. simulata*, but proximal half of tegmina somewhat wider than in all above-mentioned species of *Raebelimaea* and slightly inflated, stridulatory vein also longer than in all these species (Fig. IV: 19–21), cerci less arched than in these species (Fig. IV: 22–24) and with apex as in Fig. IV: 25, genital plate with rather deep notch (almost as in

E. fruhstorferi and deeper than in other previous congeners, however distal lobes of this plate slightly wider than in *E. fruhstorferi*: Fig. IV: 22, 24), genitalia with only narrow distal part of sclerites (Fig. II: 19, 20), body without distinct rose marks, 2 proximal antennal segments with dark spots, middle legs with only 1 darkened spot (at base of femur), distal part of hind tibiae with darkish spots, and cerci with longitudinal darkening only at middle part (Fig. IV: 26).

Female. Structure of body and coloration similar to those of male, but ornament on pronotum less distinct (dark stripes narrower and dark dots smaller), dorsal tegminal field lighter (with only small brownish dots between some of veinlets), and cerci without darkenings. Genital plate as in Fig. IV: 28; ovipositor (Fig. IV: 27) without lobules, processes, or distinct tubercles on gonangulum and base of inferior valve.

Length in mm. Body: ♂ 17, ♀ 21; body with wings: ♂ 42, ♀ 44; pronotum: ♂ 4.3, ♀ 4.1; tegmina: ♂ 34, ♀ 33; hind femora: ♂ 21, ♀ 22; ovipositor 6.4.

Comparison. The new species is most similar to the previous Javanese representatives and *E. pseudochloris* from Thailand. Differences between *E. bengkulu* and these Javanese species are given above, and from *E. pseudochloris*, the new species differs in the shorter and less curved male cerci, elongate and angular hind part of genital sclerites, and more spotted coloration of tegmina.

***Eilmaea (Rhaebelimaea) modesta* sp. n.** (Fig. III: 38, 39)

Holotype – ♀, **Southern Sumatra**, prov. Bengkulu, 25 km S of town Bintuan, environs of vill. Tanjung Baru Maje, 04°50.279' S, 103°28.071' E, ~100 m, 2–3.V.2009, A. Gorochochov, M. Berezin, E. Tkatsheva.

Description. Female (holotype). General appearance as in all previous congeners (including shape of fore femora), but genital plate with 3 short hind lobes (median lobe with bifurcate apex, and lateral lobes rounded; Fig. III: 38), ovipositor (Fig. III: 39) with gonangulum and base of inferior valve as in *E. bengkulu*, and coloration yellowish green with following marks: rostrum and dorsum of head rose; proximal part of antennae with brown lateral surface and rose dorsal longitudinal line; other parts of antennae brownish with sparse light spots; pronotum with brown longitudinal stripes along lateral edges of disc (these stripes not reaching hind edge of disc) and reddish dots between these stripes and on lateral lobes (dots near these stripes almost brown); tegmina with brown dots between veinlets of dorsal field and on anal part of lateral field as well as with sparse brown dots between *Sc* and *M* (this area and costal part of tegmina also with numerous slight rose dots); middle femora and middle and hind tibiae with brown spot near base; fore tibiae with slight darkening near tympana and more distinct one at distal part.

Male unknown.

Length in mm. Body 15; body with wings 44; pronotum 3.9; tegmina 34; hind femora 23; ovipositor 7.2.

Comparison. The new species differs from *E. willemsei* (also from Southern Sumatra) in the presence of distinct dark stripes on pronotum (in *E. willemsei*, pronotum with only 2 longitudinal groups of dark dots), and from all the other congeners, in the characteristic both coloration and shape of female genital plate.

***Eilmaea (Rhaebelimaea) hebaridi* (Karny, 1926)** (Fig. IV: 29, 30)

Material. 1 ♀, **Southern Sumatra**, prov. Lampung, National part Bukit Barisan Selatan, 20–30 km WNW of town Kotaagung, environs of vill. Sukaraja, 05°30–31' S, 104°25–27' E, ~600 m, 14–18.IV.2009, A. Gorochochov, M. Berezin, E. Tkatsheva.

Note. This specimen is in accordance to the descriptions by Hebard (1922: *E. roseo-alata*) and Karny (1926b). It is characterized by the ovipositor and genital plate similar to those of *E. bengkulu*, but posterolateral processes of the latter plate are directed partly laterally and partly backwards (in *E. bengkulu*, these processes are directed only backwards) (for comparison see Fig. IV: 28 and 29).

***Elimaea (Rhaebelimaesa) jambi* sp. n.** (Fig. II: 11, 12; IV: 1–8)

Holotype – ♂, **Central Sumatra**, prov. Jambi, 35 km N of town Sungaipenuh, environs of National park Kerinci-Seblat, Mt. Kerinci, 1500–2000 m, 18–22.XI.1999, A. Gorochoy.

Description. Male (holotype). General appearance similar to that of *E. simulata*, but width of proximal half of tegmina as in *E. bengkulu*, stridulatory apparatus as in Fig. IV: 1–3, abdominal apex distinguished from that of *E. hebaridi* only by slightly shorter and somewhat more strongly curved cerci with hardly less curved apical hook (if to see from above) as well as distinctly notched posteromedial edge of each hind lobe of genital plate (Fig. IV: 4–8), genital sclerites (Fig. II: 11, 12) with proximal part rather narrow in profile, and coloration yellowish green with following marks: eyes, a pair of narrow longitudinal stripes on pronotal disc (from anterior edge to almost hind edge), dots on upper part of lateral pronotal lobes and on lateral parts of hind pronotal lobe, interrupted line along hind edge of this lobe, a short longitudinal spot on outer surface of base of middle femora, and rather wide lateral spot on cerci dark brown (Fig. IV: 6, 7); spots on outer surface of antennae and on distal part of fore and hind tibiae, membranes of dorsal tegminal field (excepting light area between stridulatory vein and tegminal base in both tegmina, and transparent stridulatory areas in lower tegmen), and dots on lateral tegminal field (near dorsal field and between *Sc* and *M*) brown; rostrum of head and spots on 10th abdominal tergite rose.

Female unknown.

Length in mm. Body 20; body with wings 43; pronotum 4.1; tegmina 36; hind femora 21.

Comparison. The new species is most similar to *E. hebaridi*, but distinguished from it by the above-mentioned characters of male abdominal apex.

***Elimaea (Rhaebelimaesa) cognata* sp. n.** (Fig. II: 13, 14; IV: 9–18)

Holotype – ♂, **Central Sumatra**, prov. Jambi, 35 km N of town Sungaipenuh, environs of National park Kerinci-Seblat, Mt. Kerinci, 1500–2000 m, 18–22.XI.1999, A. Gorochoy. *Paratypes*: 5 ♀, same data.

Description. Male (holotype). Structure of body and coloration almost identical to those of *E. jambi* (Fig. IV: 9–11, 15), but cerci slightly longer (their length more or less as in *E. hebaridi*), lateral projection of each hind lobe of genital plate clearly longer (Fig. IV: 12–16), genital sclerites with more strongly curved apical (narrow) part and more widened middle part in profile (Fig. II: 14) as well as with less rounded lateral edge of proximal part (if to see from above: Fig. II: 13), dark longitudinal stripes of pronotal disc shorter (situated only on its anterior and middle parts), and dark spot on cerci shorter and distinctly narrower (Fig. IV: 14, 15).

Female. General appearance similar to male, but coloration lighter: tibiae and cerci without darkenings; dorsal tegminal field with only brownish dots between veinlets. Genital plate as in Fig. IV: 18; ovipositor (Fig. IV: 17) with short rounded (lobe-like) ventral convexity of gonangulum and small rounded lateral tubercle at base of inferior valve.

Length in mm. Body: ♂ 24, ♀ 18–22; body with wings: ♂ 45, ♀ 40–42; pronotum: ♂ 4.5, ♀ 3.5–4; tegmina: ♂ 36, ♀ 31–34; hind femora: ♂ 22, ♀ 22–24; ovipositor 6.5–7.1.

Comparison. The new species is most similar to *E. jambi* and *E. hebaridi*. It differs from the first species in the above-mentioned characters, and from second one, in the almost straight apical hook of male cerci, distinctly longer lateral projection of hind lobes of male genital plate, and hind paired processes of female genital plate longer and directed backwards (for comparison see Fig. IV: 18 and 29).

***Elimaea (Rhaebelimaesa) kerinci* sp. n.** (Fig. II: 21, 22; V: 17–24)

Holotype – ♂, **Central Sumatra**, prov. Jambi, 35 km N of town Sungaipenuh, environs of National park Kerinci-Seblat, Mt. Kerinci, 1500–2000 m, 18–22.XI.1999, A. Gorochoy. *Paratypes*: 4 ♂, 3 ♀, same data.

Description. Male (holotype). General appearance more or less similar to that of *E. simulata* (including structure of fore femora), but lower tegmen with mirror larger than in all species considered above (Fig. V: 18), stridulatory vein moderately long and with narrower part near middle (Fig. V: 17, 19), abdominal apex distinguished from that of *E. sumatrana* only by hardly less curved cerci with slightly longer hook and clearly less deep apical notch of genital plate (Fig. V: 20–22), genital sclerites distinguished from those of *E. bengkulu* only by distinctly smaller size (in comparison with size of other parts of genitalia: see Fig. II: 19, 20 and 21, 22), and coloration similar to that of *E. jambi* and *E. cognata* (however with almost black dorsal tegminal field, excepting light small basal area in both tegmina and transparent stridulatory areas of lower tegmen, as well as without darkenings on legs and cerci; Fig. V: 22).

Variations. Sometimes hind lateral lobes of genital plate slightly narrower, darkenings on antennae almost indistinct, ventral surface of stridulatory vein of upper tegmen very light, and rose spots on head and abdomen absent.

Female. General appearance somewhat similar to that of male, but wings clearly shorter and coloration slightly lighter: dark paired longitudinal stripes on pronotal disc interrupted, dorsal tegminal field brown with light both proximal part and partly venation. Genital plate as in Fig. V: 23; ovipositor (Fig. V: 24) without lobules, processes, or distinct tubercles on gonangulum, but with base of inferior valve as in *E. cognata*.

Length in mm. Body: ♂ 17–18, ♀ 17–19; body with wings: ♂ 42–44, ♀ 38–39; pronotum: ♂ 3.4–3.7, ♀ 3.3–3.5; tegmina: ♂ 33–34, ♀ 29–30; hind femora: ♂ 22–23, ♀ 21–22; ovipositor 6.2–6.4.

Comparison. The new species is very similar to *E. sumatrana*, but it differs in the above-mentioned characters of male abdominal apex.

***Elimaea (Rhaebelimaea) variegata* sp. n.** (Fig. I: 26, 27)

Holotype – ♀, **Central Sumatra**, prov. Jambi, 35 km N of town Sungaipenuh, environs of National park Kerinci-Seblat, Mt. Kerinci, 1500–2000 m, 18–22.XI.1999, A. Goročov.

Description. Female (holotype). Shape of body parts similar to that of other species of *Rhaebelimaea*, but fore femora moderately curved and with moderately high dorsal keel, posterolateral processes of genital plate angular and rather small, projection between them short and comparatively wide (Fig. I: 27), ovipositor (including gonangulum and base of inferior valve) similar to that of *E. bengkulu*, and coloration very variegate: yellowish green with rose rostrum of head, brownish eyes, pronotal disc, a pair of longitudinal stripes behind eyes, and spots on fore and hind femora and tibiae, dark brown lateral part of second antennal segments, a pair of arched stripes along lateral edges of pronotal disc (each of these stripes with longitudinal light interrupted line), V-shaped median spot on middle part of this disc, a distinct (not very small) spot at proximal half of area between tegminal *R* and *M*, and several distinct spots on outer surface of middle femora (Fig. I: 26), brown ring on apical part of each scape, spots on antennal flagellum and outer surface of middle tibiae, and large dots between veinlets of dorsal tegminal field (excepting light small basal area), and brownish rose dots between other veinlets of tegmina (distal part of wings and of ovipositor missing).

Male unknown.

Length in mm. Body 14.5; pronotum 4.2; hind femora 22.5.

Comparison. The new species is most similar to *E. adspersa* (Dohrn) in the spotted coloration of middle legs, but distinguished by the darkened pronotal disc, presence of blackish stripe along dorsal edge of lateral pronotal lobes, and absence of distinct dark dots on these lobes and of dark spot in the basal part of tegminal costal area. *E. variegata* differs from all the other representatives of *Rhaebelimaea* in the characteristic shape of female genital plate (Fig. I: 27) and variegate coloration: completely brownish pronotal disc, spotted legs (especially middle ones), and distinct (not very small) spot at proximal half of area between tegminal *R* and *M*.

***Elimaea (Rhaebelimaea) suratthani* sp. n.** (Fig. III: 32, 33)

Holotype – ♀, **Thailand (Central Malacca)**, prov. Surat Thani, ~40 km WSW of town Phanom, environs of National park Khao Sok, 100–200 m, 20–29.VII.1996, A. Gorochov.

Description. Female (holotype). General appearance similar to previous congeners, but epiproct hardly notched at apex, genital plate with only a pair of moderately long and acute (angular) hind lobes (Fig. III: 32), ovipositor (Fig. III: 33) with basal part similar to that of *E. bengkulu*, and coloration yellowish with following marks: head rostrum whitish; dorsolateral surface of proximal part of antennae brown; pronotum with brown stripes along lateral edges of disc (hind part of these stripes widened) and brownish hind part of disc between these stripes; dorsal tegminal field with very small darkish dots between veinlets; lateral tegminal field with numerous larger dark dots along dorsal field and more sparse ones between *RS* and *M* as well as with numerous weekly distinct reddish dots in middle and costal parts of tegmen; legs with brownish spines.

Male unknown.

Length in mm. Body 17; body with wings 41; pronotum 4.2; tegmina 33; hind femora 23; ovipositor 6.4.

Comparison. This species is similar to *E. neglecta*, *E. siamensis*, *E. hebaridi*, and *E. bengkulu* in the female genital plate lacking hind median lobe and having moderately long hind lateral lobes. From first of them, the new species is distinguished by these lateral lobes with not *S*-shaped lateral edge; from *E. siamensis*, by the narrower distal part of these lobes; from *E. hebaridi*, by these lobes directed almost only backwards, from *E. bengkulu*, by the absence of complete dark stripes on pronotum; from 2 the latter species (additionally), by the proximal part of this plate not inflated; and from all the other congeners, by the shorter or longer hind lateral lobes of this plate, absence of its hind median lobe, and characteristic coloration.

***Elimaea (Rhaebelimaea) apicata* Ingrisch, 1998** (Fig. II: 15, 16; V: 1–6)

Material. 1 ♂, **Thailand (Central Malacca)**, prov. Surat Thani, ~40 km WSW of town Phanom, environs of National park Khao Sok, 100–200 m, 20–29.VII.1996, A. Gorochov.

Note. The male is in accordance to original description of this species and originates from its type locality (Ingrisch, 1998: “Surat Thani province, Khao Sok”). This species is sufficiently described and close related to a similar new species (see description and comparison below).

***Elimaea (Rhaebelimaea) phetchaburi* sp. n.** (Fig. II: 17, 18; V: 7–16)

Holotype – ♂, **Thailand (Northern Malacca)**, prov. Phetchaburi, ~50 km SW of city Phetchaburi, environs of main office of National park Kaeng Krachan (near reservoir), 400 m, 30.VII–1.VIII.1996, A. Gorochov. *Paratypes:* 1 ♂, 2 ♀, same data.

Description. Male (holotype). General appearance similar to that of all previous congeners, but stridulatory apparatus as in Fig. V: 7–9, abdominal apex almost as in *E. apicata* (however genital plate with hardly wider distal part; Fig. V: 10–13), genitalia with almost stick-like sclerites distinctly longer than in *E. apicata* (Fig. II: 17, 18), and coloration greenish with following marks: eyes and dorsolateral spots on antennae brownish; pronotum with 2 pairs of stripes consisting of dark brown dots along lateral edges of disc and along dorsal edge of lateral lobes; legs with sparse brownish dots on hind femora and dark brown spines of fore femora; dorsal tegminal field with brownish area around stridulatory vein on upper tegmen as well as with brown membranes between veinlets of both tegmina separated from previous area and from transparent stridulatory areas of lower tegmen by lighter area (Fig. V: 7, 8); lateral tegminal field with brown dots on anal half and several small spots on costal half (proximal spots situated between branches of *Sc*; and other spots, between *Sc* and *M*); majority of veins and crossveins of hind wings as well as dorsal part of abdomen rose; cerci with long dark outer spot (Fig. V: 11–13); genital plate with darkened apical part (Fig. V: 10, 11).

Variations. Paratype with almost completely brownish middle and distal parts of antennal flagellum.

Female. General appearance as in male, but antennae and tegmina with less distinct spots, and cerci uniformly light. Genital plate with short hind median lobe (as in *E. parumpunctata*), but with longer hind lateral processes directed partly laterally (Fig. V: 14, 15); ovipositor (Fig. V: 16) without lobules at base of inferior valve and with rather long and thin posteroventral process on gonangulum directed backwards.

Length in mm. Body: ♂ 18–21, ♀ 22–23; body with wings: ♂ 43–44, ♀ 45–47; pronotum: ♂ 4–4.1, ♀ 3.9–4; tegmina: ♂ 33.5–34, ♀ 35–36; hind femora: ♂ 24, ♀ 25–26; ovipositor 6.8–7.

Comparison. The new species is most similar to *E. apicata*, but it is well distinguished by the small details of male cercal apex (see above), distinctly longer (and more stick-like) male genital sclerites (for comparison see Fig. II: 15, 16 and 17, 18), and above-mentioned characters of female genital plate.

***Elimaea (Rhaebelimaesa) viridula* sp. n.** (Fig. II: 23, 24; VI: 1–7)

Holotype – ♂, **Thailand (Northern Malacca)**, prov. Phetchaburi, ~50 km SW of city Phetchaburi, environs of main office of National park Kaeng Krachan (near reservoir), 400 m, 30.VII–1.VIII.1996, A. Gorochochov.

Description. Male (holotype). Structure of body similar to that of all previous congeners, but stridulatory apparatus as in Fig. VI: 1–3, epiproct clearly longer and narrower (and with almost angular apex), cerci distinguished from those of *E. pseudochloris* only by wider curvature and by longer and narrower distal part of apical hook (Fig. VI: 4–6), genital plate (Fig. VI: 5, 7) distinguished from that of this species only by narrower middle part of distal half and almost acute apical parts of hind lobes (if to see from below), genital sclerites presented only by their distal (narrow) parts with completely denticulate posterodorsal edge clearly arched in profile (Fig. II: 23, 24), and coloration almost uniformly greenish (with only brownish eyes and apical cercal hooks, brown femoral spines and dots on upper part of pronotum, almost indistinct small darkish dots between Sc and anal edge of tegmen, and transparent stridulatory areas of lower tegmen).

Female unknown.

Length in mm. Body 21; body with wings 45; pronotum 4.3; tegmina 31; hind femora 23.

Comparison. The new species is most similar to *E. pseudochloris*, but it differs in the above-mentioned small details of male cerci and male genital plate as well as more denticulate genital sclerites [in *E. pseudochloris*, posterodorsal edge of these sclerites is denticulate only in proximal (dorsal) half].

***Elimaea (Rhaebelimaesa) separata* sp. n.** (Fig. II: 25, 26; V: 25–32)

Holotype – ♂, **Thailand (central part)**, prov. Nakhon Ratchasima, environs of National park Khao Yai, 500–1000 m, 26.X–4.XI.2000, A. Gorochochov, L. Anisyutkin. *Paratypes*: 1 ♂, 4 ♀, same data.

Description. Male (holotype). General appearance more or less similar to that of all previous congeners (including structure of fore femora), but stridulatory apparatus as in Fig. V: 25–27, 10th abdominal tergite with large hind convexity having roundly angular apex, cerci with characteristic apical part (Fig. V: 28, 29), genital plate comparatively short and with truncate hind part (Fig. V: 30), genitalia with small sclerites more or less similar to those of *E. viridula* and situated only at apical part of lateral membranous lobes (Fig. II: 25, 26), and coloration yellowish with following marks: rostrum of head, abdominal dorsum, venation of hind wings, and numerous small marks on costal half of tegmina rose; small spots on scape, dorsolateral surface of second antennal segment and of proximal part of antennal flagellum, a pair of stripes along lateral edges of pronotal disc, membranes of dorsal tegminal field (excepting light small basal part of both tegmina and transparent stridulatory areas of lower tegmen), and numerous dots on anal half of lateral tegminal field brown; eyes, hind half of pronotal disc, middle and distal parts of antennal flagellum (excepting short and very sparse light areas), proximal part of fore tibiae, dots on

middle part of hind femora, spines of legs, apical part of cerci, and hind edge of apex of genital plate light brown.

Variations. Paratype with light hind half of pronotal disc separated from its anterior half by dark V-shaped line and from lateral pronotal lobes by widened areas of hind half of dark longitudinal stripes.

Female. Structure of body and coloration similar to those of male, but dorsal tegminal field with dark brown membranes and light brown veinlets (excepting small basal part provided with light veinlets and brown dots between them). Genital plate as in Fig. V: 31; ovipositor (Fig. V: 32) with basal part similar to that of *E. bengkulu*.

Length in mm. Body: ♂ 20.5–21, ♀ 20–22; body with wings: ♂ 41, ♀ 40–42; pronotum: ♂ 4.1–4.3, ♀ 4–4.4; tegmina: ♂ 30–31, ♀ 32–33; hind femora: ♂ 21–22, ♀ 22–23; ovipositor 6.5–7.

Comparison. The new species differs from all the known congeners in the rather short male genital plate with the truncate hind part as well as in the characteristic shape of male cerci (Fig. 28–30) and of female genital plate (Fig. 31, 32).

***Elimaea (Rhaebelimaea) abramovi* sp. n.** (Fig. II: 29, 30; VI: 8–14; XIII: 7)

Holotype – ♂, **Southern Vietnam**, prov. Lam Dong, distr. Lac Duong, 5 km NE of vill. Long Lanh, nature reserve Bi Dup [Dou] – Nui Ba, 12°10.44' N, 108°40.44' E, 1400 m, V.2009, A. Abramov.

Description. Male (holotype). Structure of body similar to that of previous congeners, but tegmina with moderately narrow dorsal field and moderately short stridulatory vein, mirror of lower tegmen rather large (Fig. VI: 8–10), epiproct not large and with slightly widened and hardly notched (almost truncate) distal part (Fig. VI: 11, 13), cerci strongly curved in distal part and with awl-like apical spine directed medially and slightly forwards (Fig. VI: 11, 13), genital plate arched in profile and with rather narrow and not deep hind median notch (hind lobes of this plate slightly curved laterally; Fig. VI: 12–14), and genitalia distinguished from those of *E. bengkulu*, *E. kerinci*, *E. separata*, and *E. viridula* mainly by presence of elongate median structure with semisclerotized dorsal and ventral surfaces having rather numerous denticles in distal part (Fig. II: 29, 30; XIII: 7). Coloration yellowish with brown spots on dorsolateral surface of 3 proximal antennal segment, brownish dorsolateral surface of other segments of proximal antennal part, numerous dark dots on upper half of pronotum (excepting uniformly light median band) and on lateral tegminal field along dorsal field and between *RS* and *M*, reddish dots in other parts of lateral tegminal field, sparse light brown dots on dorsal tegminal field (excepting transparent stridulatory areas of lower tegmen), and darkish apical spine of cerci.

Female unknown.

Length in mm. Body 20; body with wings 39; pronotum 4; tegmina 29; hind femora 19.

Comparison. This species is more or less similar to *E. kraussi* in the shape of distal part of male cerci, but it is clearly distinguished from the latter species by the longer male cerci and shorter median notch of male genital plate. From all the other congeners, *E. abramovi* differs in the structure of stridulatory apparatus and male abdominal apex as well as in the characteristic coloration and male genitalia which have an additional weak median sclerite with denticles.

Etymology. The species is named in honour of its collector.

***Elimaea (Rhaebelimaea) aphana* sp. n.** (Fig. II: 31; XIII: 1–6)

Holotype – ♂, **Central Vietnam**, Central Highlands near border between prov. Kon Tum and prov. Quang Nam Da Nang, natural reserve Ngoc Linh, 2 km S of Lo Xo Pass, 15° 15' N, 107° 44' E, 800 m, 15.III–20.IV.2004, A. Abramov.

Description. Male (holotype). Structure of body and coloration as in *E. abramovi*, but medial edge of proximal part of dorsal field of upper tegmen hardly less angular (Fig. XIII: 1, 3), mirror of lower tegmen slightly narrower (Fig. XIII: 2), cerci more arcuate (in *E. abramovi*, distal part of these cerci curved almost angularly; for comparison see Fig. VI: 11, 12 and XIII: 4), epiproct narrower and with roundly truncate apex (in *E. abramovi*, apex of epiproct with rather wide notch; Fig. VI: 13; XIII: 5),

lateral sclerites of genitalia larger (Fig. II: 30, 31), and median genital sclerite somewhat shorter (Fig. XIII: 6, 7) and with almost straight ventral edge of its distal half (Fig. II: 30, 31).

Female unknown.

Length in mm. Body 21; body with wings 40; pronotum 4.1; tegmina 28; hind femora 20.5.

Comparison. The species is most similar to *E. abramovi*, but distinguished from it by the characters listed above.

***Elimaea (Rhaebelimaea) semitubulosa* sp. n.** (Fig. II: 34, 35; V: 33, 34; VI: 15–21)

Holotype – ♂, **Central Vietnam**, prov. Gia Lai, environs of town Kannack, 600 m, 14.XI.1988, A. Gorochov. *Paratypes*: 2 ♂, same data, but 9.XI.1988; 4 ♂, 4 ♀, same province, but 20 km N of Kannack, environs of vill. Buon Luoi, 700–800 m, 17–20.XI.1988 (1 ♂), 3–19.XI.1993 (3 ♂, 3 ♀), and 24–30.IV.1995 (1 ♀), A. Gorochov.

Description. Male (holotype). Shape of body parts and coloration similar to those of *E. viridula*, but stridulatory apparatus slightly smaller (Fig. VI: 15–17), cerci distinctly shorter and with S-shaped apical hook (Fig. VI: 18, 19), epiproct less long and with round apex (Fig. VI: 20), genital plate almost straight in profile and with deeper hind median notch (Fig. VI: 19, 21), genitalia with a pair of very characteristic sclerites (semitubular and with heavily sclerotized hind edge having numerous small denticles and almost lamellar less heavily sclerotized medial lobe directed backwards: Fig. II: 34, 35), and coloration distinguished from that of *E. viridula* only by presence of brown marks on dorsolateral surface of antennae, absence of dark dots on median part of pronotal disc, and larger and darker dots of lateral tegminal field situated near dorsal tegminal field.

Variations. Dorsal tegminal field sometimes with distinct dark dots along medial edge of proximal part.

Female. General appearance similar to that of male, but dorsal tegminal field almost completely light, costal area often with a few brown dots or several small brown spots, middle and hind tibiae with small brownish spots near base or sometimes with rather long brown spots on proximal part. Genital plate (Fig. V: 33) with 3 hind lobes (lateral ones longer and acute); ovipositor (Fig. V: 34) with distinct lobule at base of each inferior valve and short rounded (lobe-like) ventral projection of gonangulum.

Length in mm. Body: ♂ 22–23, ♀ 19–21; body with wings: ♂ 45–48, ♀ 45–47; pronotum: ♂ 4–4.2, ♀ 4–4.2; tegmina: ♂ 33–35, ♀ 32–34; hind femora: ♂ 23–25, ♀ 24–25; ovipositor 6.3–6.5.

Comparison. The new species differs from all the other congeners in the small stridulatory apparatus, rather short male cerci with the S-shaped apical hook, moderately bifurcate and not very narrow distal half of male genital plate, and very characteristic structure of male genital sclerites, female genital plate, and base of ovipositor.

***Elimaea (Rhaebelimaea) gialai* sp. n.** (Fig. III: 34, 35)

Holotype – ♀, **Central Vietnam**, prov. Gia Lai, 50–60 km N of town Kannack, Kon Cha Rang, 1000–1200 m, 14–20.IV.1995, A. Gorochov. *Paratype* – ♀, same province, but 20 km N of Kannack, environs of vill. Buon Luoi, 700–800 m, 3–11.XI.1993, A. Gorochov.

Description. Female (holotype). General appearance as in *E. semitubulosa*, but genital plate with only a pair of long angular hind lobes directed backwards (Fig. III: 34), ovipositor (Fig. III: 35) with short rounded ventral projection of gonangulum and small lobules at base of inferior valve, and coloration distinguished from that of *E. semitubulosa* only by following features: antennae and dorsal tegminal field almost uniformly light, darkish dots presented on all areas of pronotum (including median part of disc) and on costal area of tegmina, all femora with dark brown spines, and proximal part of middle and hind tibiae with small brownish spots.

Variations. Paratype with several brownish dots on outer surface of middle femora.

Male unknown.

Length in mm. Body 21–26; body with wings 48–54; pronotum 4.2–4.7; tegmina 37–41; hind femora 26–29; ovipositor 7.2–7.5.

Comparison. This species is more or less similar to *E. cognata*, *E. bengkulu*, *E. hebaridi*, *E. mentaweei*, *E. suratthani*, *E. neglecta*, *E. siamensis*, and *E. roseoalata* in the female genital plate with only 2 hind lobes which are long and angular. The new species differs from 4 the first species in the longer and not inflated proximal part of this plate; from *E. suratthani*, *E. neglecta*, and *E. siamensis*, in the longer hind lobes of this plate; and from *E. roseoalata*, in the wider proximal part of these lobes.

***Elimaea (Rhaebelimaea) subita* sp. n.** (Fig. XI: 19, 20)

Holotype – ♀, **Central Vietnam**, prov. Gia Lai, 20 km N of town Kannack, environs of vill. Buon-Luoi, 700–800 m, 3–11.XI.1993, A. Gorochov. Paratypes: 1 ♀, same data, but 6.V.1995; 1 ♀, same province, but 50–60 km N of Kannack, Kon Cha Rang, 1000–1200 m, 17.IV.1995, A. Gorochov.

Description. Female (holotype). Structure of body parts similar to that of *E. semitubulosa* and *E. gialai*, but fore femora weakly curved and with low dorsal keel, genital plate with 2 pairs of rather large lateral lobes directed more or less backwards (Fig. XI: 20), gonangulum of ovipositor with elongate finger-like process, and inferior valve of ovipositor with short and almost spine-like lobule at base (Fig. XI: 19, 20). Coloration of body yellowish green with following marks: antennae with a few brownish marks on dorsal surface of scape and with brown dorsolateral surface of proximal part of flagellum; pronotum with not very numerous dark brown dots on upper part of lateral lobes and on lateral parts of disc as well as with rather sparse reddish dots on rest of lateral lobes and of disc (excepting median stripe lacking marks); legs with light brown distal part of spines; tegmina with numerous dark brown dots and small spots on lateral field along dorsal field, numerous weakly distinct reddish dots and small spots on rest of lateral field, several brown dots on proximal part of dorsal field near lateral edge and between some veins of lateral field (between *RA* and *RS*, between branches of *RS*, and between *RS* and *M*); abdomen with sparse rose dots on tergites.

Variations. Paratypes with less distinct dots on costal half of tegmina and slightly wider outer lateral lobes of genital plate.

Male unknown.

Length in mm. Body 20–22; body with wings 41–46; pronotum 4.1–4.5; tegmina 30–34; hind femora 22–25; ovipositor 6.3–6.5.

Comparison. The new species is very similar to *E. pentaspina* in the shape of female genital plate, but distinguished by the outer and inner lateral lobes of this plate directed more or less backwards (in *E. pentaspina*, outer lateral lobes of this plate are directed mainly upwards).

***Elimaea (Rhaebelimaea) orlovi* sp. n.** (Fig. IV: 31, 32)

Holotype – ♂, **Central Vietnam**, prov. Quang Tri, distr. Huong Hoa, communa Huong Lap, XI.2007, N. Orlov.

Description. Female (holotype). General appearance similar to that of previous congeners, but fore femora similar to those of *E. subita*, proximal half of genital plate not inflated, distal half of this plate with short and widely angular hind median projection as well as with a pair of long and narrow hind lateral processes (Fig. IV: 31), ovipositor (Fig. IV: 32) without distinct lobules at base of inferior valve and with small ventral tubercle on gonangulum, coloration yellowish with following marks: dorsolateral surface of proximal antennal part with brownish spots on 2 basal segments and large brown spots on segments of flagellum; middle and distal parts of antennae more or less brownish with sparse lighter spots; pronotal disc with distinct dark brown dots (excepting narrow light median stripe); tegmina with dark numerous dots on lateral field along dorsal field and between *RS* and *M*, rather sparse weak light brown dots on other parts of this field, and a small dark spot at base of dorsal field; fore and hind femora with rather sparse very small darkish dots on outer surface.

Male unknown.

Length in mm. Body 19; body with wings 43; pronotum 4.5; tegmina 32; hind femora 27; ovipositor 6.

Comparison. The new species is similar to *E. parumpunctata*, *E. cheni*, *E. variegata*, and *E. separata* in the shape of female genital plate, but distinguished from them by the clearly longer hind lateral processes of this plate. *E. orlovi* differs from the other congeners in the characteristic structure of female genital plate and above-mentioned peculiarities of coloration.

Etymology. The species is named in honour of its collector.

***Elimaea (Rhaebelimaea) bavi* sp. n.** (Fig. II: 32, 33; VI: 22–28; XIV: 75)

Holotype – ♂, **Northern Vietnam**, prov. Ha Tay, National park Ba Vi, 400 m, 21–24.XI.1990, A. Gorochov. *Paratypes*: 1 ♂, 2 ♀, same data.

Description. Male (holotype). General appearance as in previous congeners, but fore femora almost as in *E. subita*, tegmina somewhat widened at proximal half and with rather wide dorsal field, membrane of mirror of lower tegmen partly sclerotized (Fig. VI: 22–24), epiproct moderately large and characteristic in shape (Fig. VI: 27), cerci strongly curved (almost S-shaped; Fig. VI: 25) and with apical hook directed partly downwards (Fig. VI: 27), genital plate strongly arched in profile and with rather narrow and long distal half divided into 2 narrow lobes by very narrow and moderately deep hind median notch (Fig. VI: 26, 28), genitalia distinguished from those of *E. semitubulosa* only by larger size of paired sclerites as well as absence of medial lobes of these sclerites and presence of 2 small additional median sclerites (for comparison see Fig. II: 32, 33 and 34, 35), and coloration greenish with following marks: eyes brown; dorsolateral surface of proximal part of antennae brownish (excepting 2 basal segments which only with small darkish spots); pronotum with rose median line and numerous darkened dots (disc with distinct dark brown dots, and lateral lobes with less distinct reddish ones); tegmina with brown some membranes of proximal part of dorsal field, more or less transparent membranes of proximal part of lower tegmen, small and moderately numerous brownish dots on distal part of dorsal field and on lateral field (along dorsal field and between *Sc* and *M*); legs with reddish tibial spines and dots on femora; abdomen (including epiproct) with reddish dorsum and dark apical hook of cerci.

Variations. In paratype, middle part of dorsal field of upper tegmen also with darkish dots.

Female. General appearance similar to that of male, but coloration of all parts of dorsal tegminal fields as that of distal part of these fields in male, rose median line of pronotum less distinct, and abdomen yellowish with reddish dots on tergites. Genital plate as in Fig. XIV: 75; ovipositor without lobules at base of inferior valve and with moderately small ventral tubercle on gonangulum.

Length in mm. Body: ♂ 22–24, ♀ 23–25; body with wings: ♂ 44–47, ♀ 45–47; pronotum: ♂ 4.7–5, ♀ 4.4–4.7; tegmina: ♂ 33–35, ♀ 34–35; hind femora: ♂ 27–28, ♀ 27–28; ovipositor 6.4–6.6.

Comparison. *E. bavi* is most similar to *E. semitubulosa* in the structure of male genital sclerites, but it is clearly distinguished from the latter species by the distinctly wider dorsal tegminal field and larger stridulatory apparatus. From *E. hunanensis* somewhat similar to *E. bavi* in the shape of female genital plate, the new species differs in the distinctly shorter hind lateral processes of this plate.

***Elimaea (Rhaebelimaea) maichau* sp. n.** (Fig. VII: 16–22; VIII: 11–13; XIV: 76)

Holotype – ♂, **Northern Vietnam**, prov. Hoa Binh, distr. Mai Chau, environs of town Mai Chau, 250 m, 30.X–4.XI.1990, A. Gorochov. *Paratypes*: 1 ♂, 1 ♀, same data, but ♂ collected by S. Belokobylskij.

Description. Male (holotype). Structure of body and coloration similar to those of *E. bavi*, but tegmina with slightly wider dorsal field and small differences in shape of mirror and nearest structures (Fig. VII: 16–18), epiproct distinctly larger (Fig. VII: 19, 21), cerci less strongly curved and with characteristic apical hook directed more or less medially (Fig. VII: 19, 20, 22), genital plate straight in

profile and with apical part curved upwards, its hind median notch less deep and with slightly widened proximal part, hind lobes of this plate somewhat wider (Fig. VII: 20, 21), genitalia with plate-like (almost stick-like) sclerites (which very different from those of *E. bavi*) and very long lateral membranous lobes (Fig. VIII: 11–13), and coloration with almost indistinct reddish dots on pronotum and femora as well as with weak brownish dots on distal half of costal tegminal area.

Variations. Paratype with darkening on inner surface of hind lobes of genital plate.

Female. General appearance similar to that of male, but pronotum with distinct sparse reddish dots on pronotal lobes and with almost brownish dots on distal half of hind femora. Genital plate as in Fig. XIV: 76; ovipositor without lobules at base of inferior valve and with moderately large ventral tubercle on gonangulum.

Length in mm. Body: ♂ 24, ♀ 27; body with wings: ♂ 52, ♀ 53; pronotum: ♂ 5.3, ♀ 4.9; tegmina: ♂ 39, ♀ 39; hind femora: ♂ 30, ♀ 30; ovipositor 7.

Comparison. This species is similar to *E. bavi*, but it differs from the latter species in the above-listed characters. *E. maichau* is similar also to *E. obtusilota* in the general shape of male genital plate and very long membranous lobes of male genitalia, but distinguished from it by the distal part of male cerci more strongly curved and hind lobes of male genital plate contacting with each other in distal part. From all the other congeners, the new species differs in the wide dorsal tegminal field, partly semisclerotized mirror, long and rather narrow male epiproct having distinct notch at the apex, and characteristic both coloration and structure of cerci, genital plate, and genitalia in male.

Elimaea (Rhaebelimaea) tamdao sp. n. (Fig. VII: 23–29; VIII: 14–16; XIV: 77)

Holotype – ♂, **Northern Vietnam**, prov. Vinh Phu, environs of vill. Tam Dao, 800–1000 m, 9–18.XI.1990, A. Gorochov. *Paratype* – ♀, same data.

Description. Male (holotype). Structure of body similar to that of *E. viridula* and *E. semitubulosa*, but fore femora similar to those of *E. subita*, tegmina with dorsal field very narrow and stridulatory apparatus as in Fig. VII: 23–25, cerci long and moderately arched, their apical hook small and almost S-shaped (Fig. VII: 26, 27, 29), epiproct and genital plate almost as in *E. maichau* (however proximal part of median notch of latter plate narrower; Fig. VII: 26–28), and genitalia distinguished from those of latter species only by presence of numerous very small tubercles and wrinkles on outer surface of sclerites (Fig. VIII: 14–16). Coloration similar to that of *E. bavi* and *E. maichau*, but dark part of proximal antennal segments (excepting 2 basal segments) larger (occupying more than half of their surface), pronotal lateral lobes and costal tegminal area with numerous distinct reddish dots, dorsal tegminal field with darker basal area (between stridulatory vein and base of tegmen), legs with reddish dots on femora (hind legs missing), and genital plate without darkenings.

Female. General appearance similar to that of male, but dark part of proximal antennal segments smaller (occupying only half of their surface), and dorsal tegminal field with brown membranes between veinlets in all its parts. Genital plate as in Fig. XIV: 77; ovipositor without lobules at base of inferior valve and with tubercle on gonangulum (size of this tubercle intermediate between those of *E. bavi* and *E. maichau*).

Length in mm. Body: ♂ 21, ♀ 26; body with wings: ♂ 43, ♀ 48; pronotum: ♂ 4.7, ♀ 4.7; tegmina: ♂ 32, ♀ 37; hind femora, ♀ 27; ovipositor 7.

Comparison. *E. tamdao* is similar to *E. maichau* and *E. obtusilota* in the general shape of male genital plate and very long membranous lobes of male genitalia, but distinguished from the first species by the narrower dorsal tegminal field and above-mentioned peculiarities of male genital sclerites, and from second one, by the apical hook of male cerci almost S-shaped and directed more or less backwards as well as by the male genital plate slightly arched in profile. The new species differs from all the other known congeners in the very narrow dorsal field of male tegmina, characteristic coloration, long male epiproct with distinctly notched apex, shape of male cerci and male genital plate, and structure of male genitalia.

***Elimaea (Rhaebelimaea) catba* sp. n.** (Fig. VIII: 17–19; IX: 29–35; XI: 11)

Holotype – ♂, **Northern Vietnam**, prov. Hai Phong, Cat Ba I., National park Cat Ba, IX. 2008, S. Ryabov, N. Orlov.

Description. Male (holotype). Structure of body parts as in *E. maichau*, but dorsal tegminal field slightly narrower, mirror of lower tegmen distinctly smaller, stridulatory teeth of upper tegmen less numerous (Fig. IX: 29–31), cerci somewhat longer (almost as in *E. tamdao*), narrow part of their apical hook distinguished from that of *E. maichau* only by less angular lateral edge (Fig. IX: 32, 33, 35; XI: 11), genital plate slightly less curved in profile and with sinuate medial edge of hind lateral lobes (Fig. IX: 33, 34), and genitalia with distal parts of lateral sclerites directed only backwards (these parts in *E. tamdao* directed slightly laterally) and with proximal median sclerite somewhat wider (longer) and shorter (narrower) than in *E. maichau* (Fig. VIII: 17–19). Coloration also similar to that of *E. maichau*, but darkened area of proximal part of antennal flagellum almost blackish, middle part of this flagellum completely dark brown, vertex with 2 small darkenings behind each eye, venation of middle and distal parts of tegminal dorsal field reddish, membranes between veinlets of this middle part partly darkened, and membranes of more distal part of dorsal tegminal field with darkish dots only along its medial and lateral edges.

Female unknown.

Length in mm. Body 21; body with wings 44; pronotum 4.6; tegmina 34; hind femora 27.

Comparison. This species is most similar to *E. maichau*, *E. tamdao*, and *E. obtusilota* in the male genitalia with the long lateral membranous lobes, but distinguished from the first species by the distinctly smaller mirror in male lower tegmen; from the second species, by the distinctly wider dorsal tegminal field in male; and from third one, by the clearly less deep notch of male epiproct and somewhat less angular shape of distal half of male genital plate in profile. From *E. foliata*, the new species differs in the narrower male epiproct having the small apical notch; from *E. megalopygmaea*, in the longer male epiproct and less arched male genital plate in profile; and from the other similar congeners, in the large male epiproct, wide dorsal field of male tegmina, characteristic structure of male cerci, male genital plate, and male genitalia, as well as above-mentioned peculiarities of coloration.

***Elimaea (Rhaebelimaea) abdita* sp. n.** (Fig. VIII: 20, 21; XI: 1–10)

Holotype – ♂, **Northern Vietnam**, prov. Quang Ninh, Bai Tu Long I., National park Bai Tu Long, X.2008, S. Ryabov, N. Orlov. *Paratype* – ♀, same data.

Description. Male (holotype). Structure of body very similar to that of *E. catba* (including structure of tegmina and epiproct; Fig. XI: 1–4, 6), but apical hook of cerci (Fig. XI: 7) slightly shorter and with distinctly more convex medial (anterior, if to see from above) edge (for comparison see Fig. XI: 8 and 11), genital plate somewhat shorter and with distinctly wider (higher) distal part in profile (Fig. XI: 5, 6), and genitalia with distinctly shorter lateral membranous lobes (however these lobes distinctly longer than in majority of other representatives of *Elimaea*; Fig. VIII: 20, 21). Coloration yellowish grey with following marks: 2 basal segments of antennae with dark brown lateral spots; proximal and middle parts of antennal flagellum blackish with brownish medial longitudinal stripe on proximal part; vertex with brown spot behind each eye; pronotal disc with a pair of wide bands (along lateral edges) consisting of numerous dark brown dots partly fused with each other; pronotal lateral lobes with somewhat more sparse dark dots near dorsal edge; fore femora with dark brown spines and with row of large dark dots along each ventral edge; fore tibiae with darkish area near tympana; middle and hind legs with almost light brown dots on distal part of femora and somewhat darker small spot near base of each spine of hind tibiae; proximal part of dorsal tegminal field with transparent areas and darkened marks as in Fig. XI: 1–3; rest of this field with rather numerous darkish dots; lateral tegminal field with numerous dark dots along dorsal field and with somewhat less numerous such dots situated between branches of *R* and between *RS* and *M*.

Female. General appearance more or less similar to that of male, but medial surface of proximal part of antennal flagellum light, pronotum with somewhat more sparse dark dots (not fused with each

other), dorsal tegminal field with numerous darkish dots on all its parts, and legs almost uniformly light. Genital plate more or less similar to that of *E. hunanensis*, *E. gialai*, and *E. curvicercata*, but with proximal part of hind median notch narrower than in first species and with hind lateral processes shorter than in second species and narrower than in third one (Fig. XI: 10); ovipositor (Fig. XI: 9) with basal part almost as in *E. maichau*.

Length in mm. Body: ♂ 23, ♀ 22; body with wings: ♂ 43, ♀ 47; pronotum: ♂ 4.7, ♀ 4.7; tegmina: ♂ 34, ♀ 37; hind femora: ♂ 28, ♀ 30; ovipositor 7.2.

Comparison. This species is similar to *E. maichau*, *E. tamdao*, *E. catba*, and *E. obtusilota* in the presence of long lateral membranous lobes in male genitalia, but these lobes are distinctly less long than in 4 the latter species. From *E. catba*, the new species additionally differs in the other above-mentioned characters; from *E. tamdao*, in the much wider dorsal tegminal field in male; from *E. maichau*, in the distinctly narrower male tegmina (their maximal width: 11 mm in *E. maichau* and 7 mm in *E. abdita*) with the almost straight anal edge (in *E. maichau*, this edge is distinctly convex); and from *E. obtusilota*, in the clearly wider (higher) distal part of male genital plate and less deep notch at the apex of male epiproct.

***Elimaea (Rhaebelimaea) degressa* sp. n.** (Fig. II: 36, 37; VI: 29–35)

Holotype – ♂, **Northern Vietnam**, prov. Hoa Binh, distr. Mai Chau, environs of town Mai Chau, 250 m, 30.X–4.XI.1990, A. Gorochov.

Description. Male (holotype). Structure of body similar to that of *E. tamdao*, but dorsal tegminal field slightly wider than in latter species and with stridulatory apparatus as in Fig. VI: 29–31, cerci strongly curved (almost S-shaped as in *E. bavi*; Fig. VI: 32) and with apical hook directed more or less medially (if to see from behind: Fig. VI: 33), epiproct rather narrow and with narrowly rounded apex (Fig. VI: 34), genital plate intermediate between genital plates of *E. bavi* and *E. tamdao* (Fig. VI: 32, 33, 35), and genitalia distinguished from those of *E. semitubulosa* only by less sclerotized sclerites lacking medial lobes (Fig. II: 36, 37). Coloration more or less similar to that of *E. bavi*, *E. maichau*, and *E. tamdao*, but antennal marks almost as in *E. tamdao*, pronotum and legs without distinct reddish dots, tegmina with dark marks on basal area of dorsal field less developed than in *E. tamdao* and with reddish dots in costal area, genital plate without distinct darkenings, and abdomen uniformly yellowish.

Female unknown.

Length in mm. Body 19; body with wings 43; pronotum 4.6; tegmina 32; hind femora 26.

Comparison. This species is similar to *E. bavi*, *E. maichau*, and *E. tamdao* in the coloration of pronotal disc, but distinguished from them and the other congeners by the narrower or wider male dorsal tegminal field, structure of male abdominal apex (shape of epiproct, cerci, and genital plate), male genitalia with only a pair of simple and narrow sclerites, and some peculiarities of coloration.

***Elimaea (Rhaebelimaea) vinhphu* sp. n.** (Fig. II: 27, 28; VII: 8–15)

Holotype – ♂, **Northern Vietnam**, prov. Vinh Phu, environs of vill. Tam Dao, 800–1000 m, 11–12.I.1994, E. Sugonyaev.

Description. Male (holotype). Structure of body similar to that of *E. bavi* and *E. maichau*, but tegmina with larger and completely membranous mirror of lower tegmen as well as with some differences in stridulatory apparatus of upper tegmen (Fig. VII: 8–10), epiproct rather large and with a pair of distinct proximal convexities and rounded apical lobe directed partly upwards (Fig. VII: 11, 13), cerci rather small and slightly curved (Fig. VII: 11, 12, 14), their apex as in Fig. VII: 15, genital plate as in Fig. VII: 12, and genital sclerites more or less similar to those of *E. viridula* (Fig. II: 27, 28). Coloration yellowish green with brownish marks on dorsolateral surface of antennal flagellum, dark brown dots on lateral parts of pronotal disc and upper part of pronotal lateral lobes, dark small spots on basal part of dorsal tegminal field and numerous dots on distal part of this field and on lateral tegminal field along dorsal field and

between *Sc* and *M*, a row of additional darkish dots on tegmina along distal half of costal edge, more or less brownish femoral spines, and brown dots on fore femora.

Female unknown.

Length in mm. Body 23; body with wings 53; pronotum 5.6; tegmina 42; hind femora 31.

Comparison. The new species is most similar to *E. bavi* and *E. maichau*, but distinguished from them in the uniformly light median part of pronotal disc, larger and completely membranous mirror of lower tegmen, distinctly smaller male cerci, characteristic male epiproct, and very different male genital sclerites. These sclerites are similar to those of *E. viridula* and partly to those of *E. degressa*, but both these species differ from *E. vinhphu* in the much narrower dorsal tegminal field.

***Elimaea (Rhaebelimaea) bona* sp. n.** (Fig. VIII: 3, 4; IX: 1–7; XIV: 78)

Holotype – ♂, **Northern Vietnam**, prov. Vinh Phu, environs of vill. Tam Dao, 800–1000 m, 9–18.XI.1990, A. Gorochochov. *Paratypes*: 2 ♂, 1 ♀, same data.

Description. Male (holotype). Structure of body as in *E. bavi*, *E. maichau*, and *E. vinhphu*, but stridulatory apparatus more similar to 2 first species (Fig. IX: 1–3), epiproct similar to that of *E. bavi* (Fig. IX: 4), general shape of cerci almost as in *E. maichau*, cercal apical hook directed partly upwards (Fig. IX: 4–7), genital plate similar to that of *E. maichau* (however, if to see from below, its distal half narrower and with narrower proximal part of median notch; Fig. IX: 5, 6), and genitalia different (they almost as in *E. bengkulu*, but with distinctly wider sclerotized parts having less arched (almost straight) dorsal edge: Fig. VIII: 3, 4). Coloration yellowish with rose rostrum of head, median line on pronotum, and abdominal dorsum (including dorsal surface of epiproct), numerous reddish dots on lateral lobes of pronotum, on other parts of thorax, on femora, and on abdominal tergites, less distinct reddish marks between branches of tegminal *Sc*, brown marks on dorsolateral surface of antennal flagellum and distinct dots on pronotal disc and between tegminal *Sc* and *M*, a few dark brown marks on proximal part of dorsal tegminal field, numerous small darkish dots on lateral tegminal field along dorsal field, and darkened distal part of cerci.

Variations. Paratypes with general coloration greenish (not yellowish), and one of them practically without median notch at apex of epiproct.

Female. General appearance similar to that of male, but head, thorax, and legs without rose and/or reddish marks, dorsal field of tegmina with dark membranes between veinlets, and cerci completely light. Genital plate as in Fig. XIV: 78; ovipositor with basal part almost as in *E. maichau*.

Length in mm. Body: ♂ 22–23, ♀ 24; body with wings: ♂ 46–48, ♀ 49; pronotum: ♂ 4.9–5, ♀ 4.8; tegmina: ♂ 34–37, ♀ 36; hind femora: ♂ 26–28, ♀ 27; ovipositor 6.5.

Comparison. This species is similar to *E. bavi*, *E. maichau*, and *E. vinhphu* in the wide dorsal field of male tegmina, but distinguished from them by the structure of male genital sclerites which are presented by a pair of thin and almost straight denticulate stripes. From *E. bengkulu*, the new species differs in the partly sclerotized mirror and distinctly less angular medial edge of proximal part of male dorsal tegminal field.

***Elimaea (Rhaebelimaea) recta* sp. n.** (Fig. VIII: 5, 6; IX: 8–14; XIV: 79)

Holotype – ♂, **Northern Vietnam**, prov. Hoa Binh, distr. Mai Chau, environs of town Mai Chau, 250 m, 30.X–4.XI.1990, A. Gorochochov. *Paratypes*: 1 ♂, 1 ♀, same data.

Description. Male (holotype). General appearance as in *E. bavi*, *E. maichau*, *E. vinhphu*, and *E. bona*, but stridulatory apparatus as in Fig. IX: 8–10; epiproct not large and with almost truncate hind part (Fig. IX: 11), cerci long and almost straight (very weakly arched) excepting apical part (Fig. IX: 11–13), apical hook of cerci short and directed medially and slightly downwards (Fig. IX: 14), genital plate distinguished from that of *E. bavi* only by less arched shape in profile (Fig. IX: 12, 13), genital sclerites with S-shaped medial edge (if to see from above) and with weakly distinct proximal semisclerotized part (Fig. VIII: 5, 6), S-shaped (distal) half of them more or less similar to that of *E. bona* in profile (Fig. VIII:

4, 6), and coloration almost as in *E. bona* (however abdominal dorsum and epiproct yellowish, reddish dots on pterothorax and lateral surface of abdominal tergites absent, and cercal apex almost not darkened).

Variations. Paratype greenish, with rose abdominal dorsum (including epiproct) and small angular notch at apex of epiproct.

Female. General appearance similar to that of male, but coloration as in female of *E. bona* excepting presence of sparse rose dots on lateral parts of abdominal tergites (these dots distinct in female of *E. recta*). Genital plate as in Fig. XIV: 79; ovipositor with basal part almost as in *E. maichau*.

Length in mm. Body: ♂ 26–28, ♀ 25; body with wings: ♂ 47–48, ♀ 50; pronotum: ♂ 4.9–5, ♀ 4.8; tegmina: ♂ 35–36, ♀ 37; hind femora: ♂ 27–28, ♀ 29; ovipositor 6.5.

Comparison. The new species is similar to the above-mentioned congeners, but it differs from them in the structure of male genitalia: lateral membranous lobes of genitalia much shorter than in *E. maichau*; genital sclerites much thinner than in *E. bavi*, distinctly less arched in profile than in *E. vinhphu*, and clearly more S-shaped (if to see from above) than in *E. bona*. From the latter species, *E. recta* is also distinguished by the distinctly longer and more straight cerci of male.

***Elimaea (Rhaebelimaea) darevskyi* sp. n.** (Fig. VIII: 7, 8; IX: 15–21)

Holotype – ♂, **Northern Vietnam**, prov. Quang Ninh, Dong Khoa I., at light, 23.III.1987, I. Darevskij.

Description. Male (holotype). Structure of body parts as in *E. recta*, but tegmina slightly wider, their dorsal field clearly wider, mirror of lower tegmen larger and completely membranous (Fig. IX: 15–17), epiproct with rounded apex, cerci shorter and with different apex (Fig. IX: 18–21), genital plate shorter and with widened distal part in profile (this part is even wider than in *E. bona*; Fig. IX: 19, 20), and proximal part of genital sclerites (weakly distinct and semisclerotized in *E. bona*) indistinct and possibly membranous (Fig. VIII: 7, 8). Coloration greenish and with marks as in *E. bona*, but without rose median line on pronotum and reddish dots on abdomen, with almost yellowish abdominal dorsum and epiproct, and with rather light distal part of cerci.

Female unknown.

Length in mm. Body 26; body with wings 47; pronotum 5.5; tegmina 35; hind femora 26.

Comparison. The new species is most similar to *E. recta* in the structure of male genitalia, but distinguished from it by the above-mentioned characters. From all the other similar species (*E. bavi*, *E. maichau*, *E. vinhphu*, and *E. bona*), *E. darevskyi* differs in the smaller male epiproct (from *E. vinhphu* only) or much larger and completely membranous mirror of lower tegmen (from 3 other species).

Etymology. The new species is named in memory of its collector.

***Elimaea (Rhaebelimaea) tuly* sp. n.** (Fig. VIII: 9, 10; IX: 22–28)

Holotype – ♂, **Northern Vietnam**, prov. Hoa Binh, distr. Da Bak, environs of vill. Tuly, 200 m, 16–23.X.1990, A. Goročov.

Description. Male (holotype). General appearance similar to that of *E. recta* including width of dorsal tegminal field, structure of stridulatory apparatus (Fig. IX: 22–24), and coloration, but following differences from latter species presented: epiproct somewhat narrower and longer, with narrowly rounded apex (Fig. IX: 25); cerci distinctly shorter and more arched (Fig. IX: 25–28); genital plate (Fig. IX: 26, 27) shorter and hardly less arched in profile, with slightly wider (in profile) apical part; genitalia with denticulate part of sclerites slightly arched, if to see from above (Fig. VIII: 9), and almost straight in profile (Fig. VIII: 10) as well as with semisclerotized proximal parts of these sclerites more or less fused with each other (Fig. VIII: 9, 10).

Female unknown.

Length in mm. Body 27; body with wings 48; pronotum 5; tegmina 36; hind femora 29.

Comparison. This species is similar to *E. recta*, *E. darevskyi*, and *E. bona*, but distinguished from the first species by the differences listed above; from *E. darevskyi*, by the narrower male dorsal tegminal field, smaller mirror, narrower male epiproct, longer male cerci, narrower distal part of male genital plate in profile, and not S-shaped denticulate part of male genital sclerites; and from *E. bona*, by the larger mirror, narrow and rounded distal part of male epiproct, and shorter denticulate part of male genital sclerites.

***Elimaea (Rhaebelimaea) ryabovi* sp. n.** (Fig. IX: 36, 37)

Holotype – ♀, **Northern Vietnam**, prov. Cao Bang, distr. Trung Khanh, nature reserve Trung Khanh, 5–11.IX.2008, S. Ryabov, N. Orlov.

Description. Female (holotype). General appearance similar to that of previous congeners (shape of pronotum almost as in Fig. X: 1, 9, 25, 31), but fore femora similar to those of *E. subita*, genital plate with rounded hind median projection and a pair of long (spine-like) hind lateral processes, these processes directed partly backwards and partly laterally, each of them with wide rounded lobe at base of dorsal edge (Fig. IX: 36, 37), ovipositor strongly curved in profile and with very small tubercle at ventral apex of gonangulum as well as without basal lobules on inferior valve (Fig. IX: 37), and coloration yellowish with following marks: head with brown spot behind each eye, brownish lateral spots on 2 proximal antennal segments, blackish lateral surface of proximal part of antennal flagellum, and dark brown middle part of this flagellum; pronotum with numerous blackish dots on disc and upper part of lateral lobes; legs with brown spines of fore and middle femora as well as with brownish spines of all tibiae; tegmina with numerous brown dots along and near anal edge, less numerous brown dots between *R* and *M*, a row of numerous brownish dots between bases of *Sc* branches, and sparse light brown dots on median part of costal area.

Male unknown.

Length in mm. Body 16; body with wings 42; pronotum 4; tegmina 30; hind femora 26; ovipositor 5.6.

Comparison. *E. ryabovi* differs from the similar congeners in the characteristic shape of female genital plate (see description), strongly curved ovipositor, presence of only small tubercle on its gonangulum, absence of basal lobules of inferior valves of ovipositor, and above-mentioned peculiarities of coloration.

Etymology. The new species is named in honour of its collector.

***Elimaea (Rhaebelimaea) maja* sp. n.** (Fig. VIII: 26, 27; X: 1–8)

Holotype – ♂, **Southern China**, prov. Yunnan, «окр. Цзиньпина», 1700 m, at light, 14.V.1956, «Хуан Кэ-жень и др.». *Paratype* – ♂, same data, but 1500–1700 m and 11.V.1956.

Description. Male (holotype). Structure of body similar to that of previous congeners, but fore femora more or less similar to those of *E. subita*, dorsal tegminal field moderately wide and with not large and completely transparent mirror (Fig. X: 2–4), epiproct moderately elongate and with narrowly rounded apex (Fig. X: 5), cerci long and narrow, their proximal and middle parts weakly arched, distal part of cerci distinctly curved and with apical hook small and directed partly backwards and partly medially (Fig. X: 5–8), genital plate distinctly arched in profile and with narrow distal half, this half with narrow (but not very deep) median notch and with weak subapical widening visible in profile (Fig. X: 6, 7), and genitalia with a pair of curved denticulate sclerites situated at apex of membranous lobes (Fig. VIII: 26, 27). Coloration as in *E. bona*, but with slightly darker middle and distal parts of dorsal field of upper tegmen as well as without distinct reddish marks.

Variations. Paratype with reddish dots on pronotum, legs, and tegmina (as in holotype of *E. bona*), as well as on dorsal part of abdominal tergites.

Female unknown.

Length in mm. Body 25–26; body with wings 49–51; pronotum 5.5–5.6; tegmina 38–39; hind femora 26.5.

Comparison. This species differs from *E. obtusilota* and *E. cheni* in the smaller male epiproct (which is not bifurcate at apex) and arched male genital plate in profile; from *E. lii* and *E. brevilaminata*, in the distinctly longer and thinner male cerci; from *E. semicirculata*, in the distinctly less curved male cerci; from *E. longifissa*, in the male genital plate not projected beyond cercal apex and with not blunt apical part; from *E. foliata*, in the smaller male epiproct; from *E. megalopygmaea*, in the male epiproct lacking apical notch; and from *E. parva*, in the longer and less curved male cerci. Differences between *E. maja* and *E. hunanensis* (described only for females from prov. Hunan) are unclear. From all the other similar congeners, the new species differs in the rather wide dorsal field in male tegmina, not large mirror, characteristic coloration, and some above-mentioned peculiarities of male abdominal apex and male genitalia.

***Elimaea (Rhaebelimaea) junia* sp. n.** (Fig. X: 25–27)

Holotype – ♀, **Southern China**, prov. Yunnan, «устье Наньцихэ», 200 m, 8.VI.1956, «Хуан Кэ-жень и др.».

Description. Female (holotype). General appearance similar to that of majority of other species of *Rhaebelimaea* including pronotum which moderately high in profile (as in *E. maja*, *E. setifera*, and *E. cheni*; Fig. X: 25), but fore femora similar to those of *E. subita*, genital plate distinguished from that of *E. cheni* only by somewhat shorter hind (narrowing) part of this plate and distinctly wider distance between its hind lateral processes (Fig. X: 26), ovipositor (Fig. X: 27) without distinct lobules on inferior valve and with small angular projection at ventral apex of gonangulum, and coloration greenish with following marks: eyes, lateral surface of proximal part of antennal flagellum, and numerous dots on pronotal disc and between veinlets of dorsal tegminal field brown; middle part of antennal flagellum darkened with sparse lightish spots; numerous small dots on lateral tegminal field along dorsal field and somewhat more sparse dots between *Sc* and *M* brownish; lateral pronotal lobes and fore and middle femora (hind legs missing) with rather numerous reddish and reddish brown dots; costal area of tegmina with small and weak rose spots.

Male unknown.

Length in mm. Body 25; body with wings 48; pronotum 4.5; tegmina 36; ovipositor 7.

Comparison. This species is most similar to *E. cheni*, but distinguished by the above-mentioned characters. From some other similar species, the new species differs in the peculiarities of coloration listed above; and from the congeners with known female, in the shape of female genital plate (almost lacking hind median projection and with short and acute hind lateral processes situated rather far from each other) and gonangulum (Fig. X: 26, 27).

***Elimaea (Rhaebelimaea) tenuiuscula* sp. n.** (Fig. X: 28–30)

Holotype – ♀, **Southern China**, prov. Yunnan, «окр. Чэли, Шигуяо», 700 m, 27.IV.1957, «Ван Шу-юн».

Description. Female (holotype). General appearance more or less similar to that of *E. junia*, but pronotum with rather low lateral lobes (almost as in genus *Ectadia*; Fig. X: 28), tegmina very narrow, genital plate distinguished from that of *E. hunanensis* only by longer hind (narrowing) part of this plate and presence of distinct median lobe between long and spine-like hind lateral processes (these processes clearly curved: Fig. X: 29), ovipositor less strongly curved and without both basal lobule on each inferior valve and projection or process on each gonangulum (Fig. X: 30), and coloration with following differences (from *E. junia*): base of antennal flagellum almost uniformly yellowish; rest of this flagellum brownish; dorsal tegminal field slightly lighter; each of areas of lateral tegminal field (between *RA* and *RS*, between *R+RS* and *M*, and between *M* and dorsal field) with a row of characteristic short longitudinal strokes consisting of darkish dots.

Male unknown.

Length in mm. Body 24; body with wings 47; pronotum 4.5; tegmina 36; hind femora 27; ovipositor 8.

Comparison. This species differs from the other congeners in the low pronotum, very narrow female tegmina, characteristic shape of female genital plate, less strongly curved ovipositor, and coloration with 3 rows of distinct darkish strokes on the lateral field of female tegmina.

***Elimaea (Rhaebelimaea) alia* sp. n.** (Fig. X: 31–33)

Holotype – ♀, **Southern China**, prov. Yunnan, «Ганланба», 570 m, 19.IV.1957, «Ван Шу-юн».

Description. Female (holotype). Structure of body parts and coloration similar to those of *E. junia* (Fig. X: 31), but genital plate with each hind lateral lobe divided into 2 parts (long acute medial process and shorter angular lateral one: Fig. X: 32), ovipositor (Fig. X: 33) without lobules at base of inferior valve and with almost finger-like projection at ventral apex of gonangulum, and coloration with slightly lighter proximal part of antennal flagellum and larger rose spots on tegminal costal area.

Male unknown.

Length in mm. Body 21; body with wings 48; pronotum 4.9; tegmina 37; ovipositor 6.8.

Comparison. This species is most similar to *E. semicirculata* in the female genital plate with the bifurcate hind lateral lobes, but in *E. alia*, these lobes are with the distinctly longer processes. From the other similar congeners, the new species differs in the same characters as *E. junia* and characteristic shape of female genital plate.

***Elimaea (Rhaebelimaea) setifera* Bey-Bienko, 1962** (Fig. VIII: 22, 23; X: 9–17)

Holotype – ♂, **Southern China**, prov. Yunnan, «Бинбянь, Давейшань», 1350 m, 18.VI.1956, D. Panfilov.

Note. The species was well described by Bey-Bienko (1962) for a single male. Structure of its body is similar to that of some previous congeners from Northern Vietnam and China having the wide dorsal tegminal field and large mirror of lower tegmen in male (Fig. X: 11–13). This similarity is also supported by the coloration of pronotum (Fig. X: 9, 10). However *E. setifera* is distinctly distinguished from all the other congeners by the characteristic genital plate of male provided with the very deep hind median notch (reaching proximal quarter of this plate) and widened (in profile) distal parts having numerous small spine-like setae (Fig. X: 14–16). Another characteristic feature of this species is the absence of denticulate sclerites in male genitalia (there is only a pair of small asymmetrical sclerotizations at the apex of lateral membranous lobes: Fig. VIII: 22, 23).

***Elimaea (Rhaebelimaea) borneo* sp. n.** (Fig. VIII: 24, 25; X: 18–24)

Holotype – ♂, **Northern Borneo**, «Nord-Borneo, ex coll. Fruhstorfer».

Description. Male (holotype). Structure of body similar to that of previous congeners, but fore femora moderately curved and with moderately high dorsal keel, dorsal tegminal field moderately narrow and with rather small mirror on lower tegmen (Fig. X: 18–20), abdominal tergites without lobes and projections, epiproct almost round and with hardly notched apex (Fig. X: 21), cerci rather long and arched, their distal part with subapical inflation and almost S-shaped (if to see from behind) apical hook (Fig. X: 21–24), genital plate with not long and almost straight distal half having somewhat curved apical part (if to see from side: Fig. X: 23), this half with deep notch (reaching almost middle of genital plate) and apical parts directed partly laterally (if to see from below: Fig. X: 22), and sclerites of genitalia characteristically curved in profile and having rather long denticulate part (Fig. VIII: 24, 25). Coloration

yellowish with following marks: lateral surface of proximal antennal part, narrow stripes along lateral edges of disc, stridulatory vein and membranes of dorsal field of upper tegmen situated behind this vein, membranes of distal half of dorsal field of lower tegmen, and dots on lateral pronotal lobes along dorsal edge of these lobes and between *Sc* and dorsal field in tegmina brown; rest of antennae moderately darkened (middle antennal part with sparse lightish spots); distal part of cerci darkish; dots on most part of lateral pronotal lobes (under brownish dots) reddish, and dots in costal area of tegmina rose.

Female unknown.

Length in mm. Body 24; body with wings 46; pronotum 4.7; tegmina 36; hind femora 24.

Comparison. This species is similar to *E. moultonii* Karny, 1923 in the general appearance, but distinguished by the less dark dots on tegmina and distinctly more sloping proximal branches of tegminal RS (Eades, Otte, 2009). From the other congeners, *E. borneo* differs in the characteristic coloration and structure of male stridulatory apparatus, of male abdominal apex, and of male genital sclerites.

Subgenus *Pseudectadia* subgen. n.

Type species – *Elimaea (Pseudectadia) sonora* sp. n.

Diagnosis. Structure of body similar to that of *Rhaebelimaeta* (including both absence of any spine at upper part of fore coxa and normal structure of basal part of male genital plate; Fig. XI: 16, 25), fore femora moderately curved and with moderately high longitudinal keel on dorsal surface, male genital plate with apical parts of hind lateral lobes almost as in *Ectadia* (these apical parts hooked, more or less acute, and directed medially; Fig. XI: 15–17, 24–26), and male genitalia with a pair of small and very weakly sclerotized (almost membranous) longitudinal lobes situated near each other and having numerous very small denticles (Fig. XIII: 31–33) (female unknown).

Included species: type species; *E. grata* sp. n.

***Elimaea (Pseudectadia) sonora* sp. n. (Fig. XI: 12–18; XIII: 33)**

Holotype – ♂, **Central Vietnam**, prov. Gia Lai, 20 km N of town Kannack, environs of vill. Buon Luoi, 700–800 m, 24–30.IV.1995, A. Gorochov. *Paratypes:* 5 ♂, same data, but 6.IV–10.V.1995 (4 ♂) and 3–11.XI.1993 (1 ♂); 1 ♂, same province, but 50–60 km N of Kannack, Kon Cha Rang, 1000–1200 m, 17.IV.1995, A. Gorochov.

Description. Male (holotype). General shape of body somewhat similar to that of *Ectadia fulva*, but pronotum more similar to that of majority of representatives of *Rhaebelimaeta*, wings distinctly longer, tegmina with wider distal half (however their proximal part distinctly wider than distal one), base of tegminal RS situated behind middle part of tegmina, dorsal tegminal field wide, stridulatory apparatus large (Fig. XI: 12–14), epiproct rather large and characteristic in shape (Fig. XI: 15), cerci rather short and with apical hook as in Fig. XI: 15–18, genital plate with very deep hind median notch and rather thin hind lateral lobes (Fig. XI: 16, 17), and genitalia as in Fig. XIII: 33. Coloration greenish with following marks: rostrum and dots on pronotal disc reddish; proximal part of antennae with brownish spots on lateral surface and reddish longitudinal line on dorsal surface of flagellum; lateral pronotal lobes with numerous blackish dots along dorsal edge; legs with dark brown spines of femora and hind tibiae, sparse outer dots on middle femora, and short ventral stroke on basal part of latter femora; upper tegmen with more or less brown proximal part of dorsal field and membranes of middle and distal parts of this field; lower tegmen with transparent most part of dorsal field; both tegmina with brownish dots on lateral field along dorsal field and between *RS* and *M*.

Variations. Some males with light brown or yellowish membranes in distal part of dorsal field of upper tegmen; sometimes antennae somewhat darker than in holotype.

Female unknown.

Length in mm. Body 19–24; body with wings 38–44; pronotum 3.7–4.1; tegmina 29–33; hind femora 21–23.

***Elimaea (Pseudectadia) grata* sp. n.** (Fig. XI: 21–27; XIII: 31, 32)

Holotype – ♂, **Southern Vietnam**, prov. Lam Dong, environs of city Dalat, “Dalat – Lang Bian”, 1500 m, 17.IV.1995, P. Pacholatko. *Paratypes*: 1 ♂, same data; 2 ♂, same province, distr. Lac Duong, 5 km NE of vill. Long Lanh, nature reserve Bi Dup [Doup] – Nui Ba, 12°10.44' N, 108°40.44' E, 1400 m, V.2009, A. Abramov.

Description. Male (holotype). External structure of body more or less similar to that of *E. sonora*, but tegmina with narrower proximal half (which almost equal to distal one in width), base of tegminal RS situated somewhat before middle of tegmina, dorsal tegminal field narrow, stridulatory apparatus not large (Fig. XI: 21–23), epiproct smaller and with not widened apex (Fig. XI: 24), cerci slightly shorter and thicker (Fig. XI: 24, 25), their apex as in Fig. XI: 27, and genital plate with somewhat thicker hind lateral lobes (Fig. XI: 24–26). Genitalia almost indistinguishable from those of *E. sonora* (Fig. XIII: 31, 32). Coloration yellowish with following marks: proximal part of antennae with brownish lateral surface; pronotum with a pair of small longitudinal brown strokes along anterior part of lateral edges of disc and dark brown stripe along hind edge of disc; tegmina with light brown dorsal field in upper tegmen and middle and distal parts of this field in lower tegmen (veinlets of middle and distal parts of these fields light) as well as numerous brownish dots on anal part of lateral field of both tegmina; abdomen with rose dorsum of 2nd–9th tergites.

Variations. Sometimes proximal part of dorsal field of upper tegmen separated from middle one by rather narrow yellowish area.

Female unknown.

Length in mm. Body 18–23; body with wings 39–42; pronotum 4–4.2; tegmina 30–32; hind femora 18.5–20.

Comparison. The new species differs from *E. sonora* in the above-mentioned characters. Its differences from *E. pentaspina* described from Thailand (only females of the latter species are known) are unclear.

Subgenus *Bornelimaea* subgen. n.

Type species – *Elimaea (Bornelimaea) levi* sp. n.

Diagnosis. Structure of body similar to that of *Rhaebelimaea* (including absence of any spine at upper part of fore coxa, normal structure of basal part of male genital plate, and absence of apical hooks on hind lobes of this plate; Fig. XI: 32, 33, 37–39), but fore femora moderately curved, their outer dorsal keel moderately high, and male genitalia completely membranous (female unknown).

Included species. Type species; *E. sympatrica* sp. n.; possibly *E. atrata* Carl, 1914 (Tonkin).

***Elimaea (Bornelimaea) levi* sp. n.** (Fig. XI: 28–34)

Holotype – ♂, **Northern Borneo**, Sabah, mt. Trus Madi, ~1000 m, partly primary/partly secondary forest, at light, 13–25.V.2007, A. Gorochoy. *Paratypes*: 2 ♂, same data.

Description. Male (holotype). Structure of body more or less similar to that of previous congeners, but tegmina moderately narrow and hardly widened in proximal half, dorsal tegminal field also rather narrow and with moderately small mirror of lower tegmen (Fig. XI: 28, 29), stridulatory vein as in Fig. XI: 30, abdominal tergites without sexual specializations, epiproct moderately large, its apex almost truncate (with only very short rounded notch: Fig. XI: 31), cerci with plate-like apical hook directed mainly backwards (Fig. XI: 34), genital plate rather short and with a pair of thin (spine-like) hind processes situated rather far from each other (Fig. XI: 32, 33), these processes not long, and hind edge of genital plate between them roundly concave (almost straight). Coloration yellowish with following marks: head with rose rostrum, large brown spots on lateral surface of proximal antennal part, dark brown middle antennal part, and blackish distal one (2 latter part with very sparse lightish spots); pronotum with rose anterior part of disc, a pair of narrow brown stripes along lateral and hind edges of disc, numerous brown

dots near these stripes (on disc and on lateral lobes), and numerous reddish dots on rest of lateral lobes; legs with blackish spines of fore femora and brownish all other spines, dark brown longitudinal spot on lower part of middle femora, and brownish basal and distal parts of fore tibiae; dorsal field of tegmina with small blackish marks at base, dark brown most part of this field in upper tegmen (from stridulatory vein to apex of this field) and distal half of this field in lower tegmen (these darkened areas with light brown stridulatory vein of upper tegmen and numerous yellowish veinlets in both tegmina), light brownish membranes of stridulatory apparatus in lower tegmen, and weak greyish dots in distal part of basal area of upper tegmen; lateral tegminal field with numerous dark dots along dorsal field and several slightly larger dots between *RS* and *M* as well as with numerous rose dots on costal area and between *R* and *M*; hind wings with rose venation; abdomen with rose dorsum of tergites and long dark spot on ventral half of each cercus (Fig. XI: 32, 34).

Variations. One paratype with completely yellowish abdominal tergites, but another paratype with greenish tinge in coloration of tegmina, brownish grey hind part of pronotal disc, hardly more angular mediobasal corner of mirror in lower tegmen, slightly narrower distal part of cell between this mirror and medial edge of tegmen, slightly longer hind processes of genital plate, and presence of very small median projection on hind edge of this plate.

Female unknown.

Length in mm. Body 23–26; body with wings 49–51; pronotum 4.7–4.9; tegmina 38–40; hind femora 23–24.

Comparison. This species is slightly similar to *E. atrata*, but mirror of lower tegmen is different in shape, male cerci are with the less curved apex, and coloration is less variegate.

Etymology. This species is named in memory of Lev L. Mistshenko.

Elimaea (Bornelimaea) sympatrica sp. n. (Fig. XI: 35–40)

Holotype – ♂, **Northern Borneo**, Sabah, mt. Trus Madi, ~1000 m, partly primary/partly secondary forest, at light, 13–25.V.2007, A. Gorochoy.

Description. Male (holotype). General appearance as in *E. levi*, but mirror of lower tegmen with almost straight proximal edge and practically without traces of its lateral vein (in *E. levi*, mirror with almost round proximal edge and with less reduced lateral vein), distal part of cell between this mirror and medial edge of tegmen distinctly wider (Fig. XI: 36), epiproct distinctly smaller and with almost round apex (Fig. XI: 37), plate-like apical hook of cerci curved upwards (Fig. XI: 40), genital plate with hind lobes situated distinctly less far from each other and with almost angular notch between them (Fig. XI: 37–39), and coloration with transparent membranes of stridulatory apparatus, brownish all spines of legs, and uniformly yellowish middle femora and cerci.

Female unknown.

Length in mm. Body 22; body with wings 44; pronotum 4.4; tegmina 34; hind femora 21.

Comparison. The differences of this species from *E. levi* are listed above. From *E. atrata* the new species differs in the same characters as *E. levi* (excepting shape of male cercal apex).

Subgenus *Schizelimaea* subgen. n.

Type species – *Elimaea (Schizelimaea) mira* sp. n.

Diagnosis. Structure of body more or less similar to that of *Rhaebelimaea*, but upper part of each fore coxa with short spine, fore femora strongly or moderately curved and with high or moderately high dorsal keel, male genital plate with hind median notch reaching almost proximal edge of this plate, and each of its lateral parts more or less movable in relation to each other (Fig. VII: 5; XII: 5, 15, 23, 31, 39). Male genitalia almost completely membranous or with denticulate sclerotized areas (Fig. VIII: 1, 2; XIII: 34–37, 46, 47). Female genital plate narrowing to apex; its hind part truncate or with small hind median notch (almost as in subgenus *Elimaea* or in *E. kerinci* from *Rhaebelimaea*; Fig. XII: 9, 43, 45).

Included species. This subgenus (possibly a separate genus) is divided into 3 groups (maybe subgenera). 1) type species and possibly *E. malayica* Karny, 1920 (Borneo). 2) *Locusta* (*Phaneroptera*) *caricifolia* Haan, 1842 (Borneo); *E. bella* sp. n.; *E. lata* sp. n.; *E. ampla* sp. n.; *E. trusmadi* sp. n.; possibly *E. femorata* Brunner-Wattenwyl, 1878 (Borneo) synonymized with *E. caricifolia* by Dohrn (1906) and *E. lamellipes* Hebard, 1922 (Borneo). 3) *E. (S.) pulchra* sp. n.; possibly *E. sinuata* Ingrisch, 1998 (Mentawai Islands), *E. (S.) ranau* sp. n., and *E. (S.) ulla* sp. n.

***Elimaea (Schizelimaea) mira* sp. n.** (Fig. XII: 1–10; XIII: 46, 47)

Holotype – ♂, Northern Borneo, Sabah, mt. Trus Madi, ~1000 m, partly primary/partly secondary forest, at light, 13–25.V.2007, A. Gorochoy. *Paratypes*: 4 ♂, 1 ♀, same data.

Description. Male (holotype). Structure of body more or less similar to that of previous congeners, but fore femora strongly curved and with high dorsal keel, dorsal tegminal field narrow (especially its middle and distal parts which very narrow: Fig. XII: 1, 2), proximal lobe of this field in upper tegmen weakly shortened and with round medial edge (Fig. XII: 3), abdominal tergites without distinct specializations, epiproct moderately small and with rounded apex (Fig. XII: 8), cerci rather long and characteristically curved, their distal part with subapical globular inflation having distinct hind concavity and curved apical hook (Fig. XII: 4–6, 8), genital plate with not very long distal parts which slightly curved and directed partly upwards and partly laterally (Fig. XII: 5–7), genitalia with small median sclerotizations and a pair of large lateral membranous lobes having moderately large denticulate sclerite at apex (Fig. XIII: 46, 47). Coloration yellow with following marks: spots on lateral surface of proximal antennal part, narrow longitudinal stripe behind each eye, band from numerous dots on lateral pronotal lobes along their dorsal edge, small dots on fore and hind femora, larger dots on middle femora and tibiae as well as on basal part of hind tibiae, numerous small dots on lateral tegminal field along dorsal field, a few spots (consisting of dots) in median part of tegmina, and distal half of cerci brown (almost dark brown); eyes, distal half of fore femora, fore tibiae, stridulatory vein of upper tegmen, small area around this vein, and a few spots consisting of dots and situated in distal part of tegmina light brown; mirror of lower tegmen transparent; pterothoracic and abdominal dorsum, epiproct, and many of veins in hind wings rose or reddish.

Variations. Sometimes abdominal tergites and epiproct completely yellowish, dark dots on middle femora almost blackish and partly fused with each other, tegmina with greenish tinge, and small area around stridulatory vein rather dark.

Female. General appearance as in male, but dorsal tegminal field completely yellowish and without any proximal lobe, and spots on lateral tegminal field clearly lighter (weakly distinct). Genital plate as in Fig. XII: 9; ovipositor (Fig. XII: 10) without lobules at base of inferior valve and with small finger-like posteroventral process on gonangulum (this process directed downwards).

Length in mm. Body: ♂ 20–23, ♀ 18; body with wings: ♂ 44–47, ♀ 50; pronotum: ♂ 4.4–4.6, ♀ 4.8; tegmina: ♂ 34–36, ♀ 38; hind femora: ♂ 19–21, ♀ 21; ovipositor 6.8.

Comparison. The new species is most similar to *E. malayica* in the shape of male tegmina, but distinguished by the more proximal position of base of tegminal *RS* as well as longer and less angular proximal lobe of dorsal field of male upper tegmen (Fig. XII: 1, 3; Brunner-Wattenwyl, 1878: Fig. 10e).

***Elimaea (Schizelimaea) bella* sp. n.** (Fig. XII: 11–18; XIII: 34)

Holotype – ♂, Northern Borneo, Sabah, mt. Trus Madi, ~1000 m, partly primary/partly secondary forest, at light, 13–25.V.2007, A. Gorochoy. *Paratypes*: 3 ♂, same data.

Description. Male (holotype). Structure of head, thorax, legs, and most part of abdomen similar to that of *E. mira*, but tegmina distinctly wider and with moderately widened all parts of dorsal field, their stridulatory vein and mirror as in Fig. XII: 11–13, middle and distal parts of this dorsal field with rather irregular net of veinlets, base of *RS* situated in proximal half of tegmina, this half weakly widened, interradiial tegminal area not widened, area between tegminal *M* and dorsal field with weakly oblique

crossveins, cerci and epiproct as in Fig. XII: 14–18, genital plate with a pair of thin and very long hind lateral processes (these processes almost straight: Fig. XII: 15, 16), and genitalia with a pair of plate-like sclerites having dorsal edge almost straight, more sclerotized, and distinctly denticulate (around each of larger denticle, numerous very small denticles presented; Fig. XIII: 34). Coloration yellowish green with following marks: lateral surface of scapes, dots on each lateral pronotal lobe (situated along its dorsal edge), spines of all femora, a row of outer dots on middle femora, and longitudinal ventral stroke on basal part of latter femora dark brown; small longitudinal stroke behind each eye, most surface of proximal part of dorsal field of upper tegmen, and numerous dots on anal part of lateral tegminal field moderately brown; spots on dorsolateral surface of proximal part of antennal flagellum, distal part of fore femora, and outer stripe along ventral edge of these femora light brown; mirror of lower tegmen transparent; veins of hind wings from greenish to yellowish; 3rd–9th abdominal tergites with rose median part.

Variations. Some paratypes with a row of brownish dots instead light brown outer stripe along ventral edge of fore femora.

Female unknown.

Length in mm. Body 23–25; body with wings 43–46; pronotum 4.4–4.6; tegmina 33–35; hind femora 19–21.

Comparison. *E. bella* is somewhat similar to *E. caricifolia*, but distinguished by the narrower proximal half of male tegmina as well as their dorsal field, presence of irregular net of veinlets in middle and distal parts of this field, longer both proximal (darkened) part of dorsal field of male upper tegmen and apical (opaque) part of hind wings, and shorter hind lateral processes of male genital plate. From *E. lamellipes*, the new species differs in the somewhat narrower distal part of area between tegminal *RS* and *M*; from *E. mira* and *E. malayica*, in the wider dorsal field of male tegmina; and from *E. mira* and *E. sinuata*, in the longer processes of male genital plate.

***Elimaea (Schizelimaea) lata* sp. n.** (Fig. XII: 19–26; XIII: 35)

Holotype – ♂, **Northern Borneo**, Sabah, mt. Trus Madi, ~1000 m, partly primary/partly secondary forest, at light, 13–25.V.2007, A. Gorochov.

Description. Male (holotype). General appearance similar to that of *E. bella*, but proximal half of tegmina clearly wider, distal one slightly narrower, dorsal tegminal field distinctly widened and with almost regular transverse crossveins in its middle and distal parts, base of tegminal *RS* situated near middle of tegmina, area between tegminal *M* and dorsal field with strongly oblique (sloping) crossveins, stridulatory apparatus as in Fig. XII: 19–21, abdominal apex (Fig. XII: 22–26) with narrower (less lamellar) apical hook of cerci, genitalia with 2 pairs of weak sclerites (a medial pair with denticulate dorsal edge, and a lateral pair with much smaller denticles: Fig. XIII: 35), and coloration distinguished from that of *E. bella* only by reddish rostrum and strokes behind eyes as well as absence of darkenings on distal part of fore femora and on ventral surface of middle femora.

Female unknown.

Length in mm. Body 23; body with wings 42; pronotum 4.9; tegmina 32; hind femora 18.5.

Comparison. *E. lata* is most similar to *E. caricifolia* (characters of this species see in Eades & Otte, 2009), but distinguished by the less regular branches of tegminal *Sc*, distinctly more oblique (more sloping) crossveins between tegminal *M* and dorsal field, and clearly shorter hind lateral processes of male genital plate. From *E. lamellipes*, the new species differs in the distinctly shorter tegminal *RS* with more numerous branches (4–5 instead 2–3); and from *E. mira*, *E. malayica*, and *E. sinuata*, in the same characters as *E. bella*.

***Elimaea (Schizelimaea) ampla* sp. n.** (Fig. XII: 27–34; XIII: 36)

Holotype – ♂, **Northern Borneo**, Sabah, mt. Trus Madi, ~1000 m, partly primary/partly secondary forest, at light, 13–25.V.2007, A. Gorochov.

Description. Male (holotype). General appearance as in *E. bella*, but tegmina with interradian area clearly wider, stridulatory apparatus as in Fig. XII: 27–29, anal plate with more round apex (Fig. XII: 33), cercal apex as in Fig. XII: 34, genital plate with hind lateral processes strongly S-shaped in middle part and having small spine-like setae in distal part (Fig. XII: 30–32), genitalia almost completely membranous [with only weak semisclerotized structure (lacking denticles) at middle; Fig. XIII: 36], and coloration of fore legs and abdomen different: femora with light distal half having a row of light brown dots near each ventral edge; tibiae with brown ventroproximal spot; abdominal dorsum uniformly yellowish; distal part of hind lateral processes of genital plate brownish.

Female unknown.

Length in mm. Body 26; body with wings 52; pronotum 5.1; tegmina 39; hind femora 23.

Comparison. *E. ampla* differs from *E. bella* in the above-mentioned characters; from *E. lata* and *E. caricifolia*, in the narrower dorsal tegminal field of male, presence of irregular net of veinlets in middle and distal parts of this field, and characteristically curved processes of male genital plate; from *E. lamellipes*, in the clearly wider interradian area of tegmina; and from *E. mira*, *E. malayica*, and *E. sinuata*, in the same characters as *E. bella*.

Elimaea (Schizelimaea) trusmadi sp. n. (Fig. XII: 35–42; XIII: 37)

Holotype – ♂, **Northern Borneo**, Sabah, mt. Trus Madi, ~1000 m, partly primary/partly secondary forest, at light, 13–25.V.2007, A. Gorochov.

Description. Male (holotype). Structure of body parts similar to that of *E. bella*, but proximal half of tegmina hardly narrower than distal one, dorsal tegminal field narrow (but slightly less narrow than in *E. mira*), stridulatory apparatus as in Fig. XII: 35–37, epiproct wider (Fig. XII: 41), cerci with apical hook as in Fig. XII: 42, genital plate with middle part of hind lateral processes arched (if to see from above or from below) and distal part of these processes as in *E. ampla* (Fig. XII: 38–40), and genitalia with a pair of plate-like sclerites having dorsal edge denticulate and slightly arched in profile (Fig. XIII: 37). Coloration greenish with following marks: lateral surface of proximal antennal part with light brown spots; pronotum with dark dots as in *E. bella*; tegmina with small hardly darkened spot near stridulatory vein of upper tegmen, numerous dark brown dots in anal part of lateral field, and several small brown spots between *R* and *M* as well as between *RA* and *RS*; legs with brown spines on all femora and fore tibiae, dark brown line on proximal half of ventral surface of middle femora, and a row of light brown dots on outer surface of these femora; abdominal dorsum with rose tinge (almost as in *E. bella*); distal part of hind lateral processes of genital plate light brown.

Female unknown.

Length in mm. Body 22; body with wings 47; pronotum 4.3; tegmina 34; hind femora 21.

Comparison. *E. trusmadi* differs from all the previous representatives of *Schizelimaea* in the clearly narrower dorsal tegminal field of male or distinctly longer processes of male genital plate. From *E. caricifolia*, *E. mira*, and *E. malayica*, the new species differs in the narrower dorsal tegminal field of male, longer processes of male genital plate, or less angular medial projection of proximal lobe of dorsal field in the upper male tegmen; and from *E. lamellipes*, in the same characters as *E. bella*.

Elimaea (Schizelimaea) ranau sp. n. (Fig. XII: 43, 44)

Holotype – ♀, **Southern Sumatra**, prov. Sumatera Selatan, environs of vill. Banding Agung near lake Ranau (Danau Ranau), 04°48.695' S, 103°55.289' E, 600–700 m, 19–22.IV.2009, A. Gorochov, M. Berezin, E. Tkatsheva.

Description. Female (holotype). General appearance similar to that of *E. bella*, *E. lata*, *E. ampla*, and *E. trusmadi*, but tegmina slightly and gradually widened in distal half, tegminal interradian area widened in middle part (as in *E. ampla*) and moderately narrow in proximal part (as in 3 other species),

and coloration yellowish green with following marks: head with light brown longitudinal line behind each eye and slight brownish marks on lateral surface of proximal antennal part; pronotum with a row of brown dots along dorsal edge of each lateral lobe; legs with dark brown short longitudinal stripe on outer surface of base of fore femora and on ventral surface of base of middle femora as well as with a few brown dots on outer surface of these femora near above-mentioned stripes; tegmina with very small and numerous dark dots in middle and distal parts of dorsal field as well as in anal half of lateral field. Genital plate rounded, but with very small (hardly distinct) hind median notch (Fig. XII: 43); ovipositor without basal lobules on inferior valve and with short rounded ventral projection of gonangulum (Fig. XII: 44).

Male unknown.

Length in mm. Body 22; body with wings 57; pronotum 5; tegmina 43; hind femora 27; ovipositor 8.3.

Comparison. This species is similar to *E. sinuata*, but distinguished by the absence of dark spots in the interradiial tegminal area and longer tegmina. From *E. mira*, the new species differs in the distinctly wider tegmina; from *E. caricifolia*, in the longer opaque apical part of hind wings; from *E. lamellipes*, in the shorter tegminal *RS* having more numerous distal branches; and from the other representatives of this subgenus, in the characters listed in the description.

***Elimaea (Schizelimaea) ulla* sp. n.** (Fig. XII: 45, 46)

Holotype – ♀, **Central Sumatra**, prov. Sumatera Barat [West Sumatra], 20 km E of town Sasak, environs of National park Harau Valley, equator, 600 m, 24–26.XI.1999, A. Gorochoy.

Description. Female (holotype). Structure of body as in *E. ranau*, but tegmina with somewhat narrower middle part of interradiial area, genital plate moderately narrowing to apex and with distinct and almost angular hind median notch (Fig. XII: 45), and ovipositor (Fig. XII: 46) without lobules, processes, and distinct tubercles at base of inferior valve and on gonangulum. Coloration uniformly yellowish with following marks: lateral surface of 2 antennal segments with distinct brownish spots; lateral surface of other proximal antennal segments with weak darkenings; pronotal disc with narrow stripes from comparatively sparse brown dots along lateral edges; lateral tegminal field with numerous very small brown dots along dorsal field and sparse groups of such dots between *Sc* and *M*; outer surface of femora and proximal part of middle tibiae with brown dots (dots on middle femora slightly larger).

Male unknown.

Length in mm. Body 22; body with wings 55; pronotum 5.1; tegmina 41; hind femora 24; ovipositor 7.5.

Comparison. This species is somewhat similar to *E. signata* (from Singapore) in the shape of female genital plate, but this plate in *E. ulla* is with the more angular (not rounded) hind median notch, and coloration of the new species is more uniform. From *E. sinuata*, the new species differs in the presence of dark dots on femora and absence of distinct dark spots in radial area of tegmina; from *E. lamellipes*, in the longer branches of tegminal *RS* as well as narrower areas between these branches and between proximal of them and distal part of *M*; from *E. caricifolia*, in the distinctly longer opaque apical part of hind wings; from *E. ampla*, in the narrower tegminal interradiial area, and from *E. mira* and *E. ranau*, in the different shape of female genital plate. Differences of *E. ulla* from *E. bella* and *E. lata* described for only males from Sabah are unclear.

***Elimaea (Schizelimaea) pulchra* sp. n.** (Fig. VII: 1–7; VIII: 1, 2)

Holotype – ♂, **Central Vietnam**, prov. Quang Tri, distr. Huong Hoa, communa Huong Lap, vill. Ban Kup, 400 m, V.2005, N. Orlov.

Description. Male (holotype). Structure of body similar to that of all previous congeners, but fore femora moderately curved and with moderately high dorsal keel, tegmina with structure of *R* unique for

genus *Elimaea* (*R* of left tegmen with 6 branches; proximal halves of 2 most proximal branches of this *R* fused with each other; this general branch and 2 nearest branches of *R* long and with bases situated near middle part of tegmen; *R* of right tegmen distinguished from that of left one only by absence of partial fusion of 2 most proximal branches) and inflate proximal half, stridulatory vein long, mirror of lower tegmen very large (Fig. VII: 1–3), epiproct with almost truncate apex, cerci slightly arched and with apex as in Fig. VII: 4–6, genital plate strongly curved in profile and not very long, distal part of its lateral halves moderately narrow (not very thin) and vertically lamellar, apex of this part with a row of denticles (Fig. VII: 5–7), and genital sclerites as in Fig. VIII: 1, 2. Coloration yellowish green with following marks: head with brown spots behind eyes and on dorsolateral surface of proximal part of antennae; middle and distal parts of antennae brownish with sparse lighter and darker spots; pronotum with dark brown short stripes along anterior part of lateral edges of disc and along their posterior part (latter stripes fused with dark stripe along hind edge of disc); dorsal field of upper tegmen brown (excepting 2 dark brown spots at base and near medial edge of stridulatory vein as well as light narrow stripe and small areas at more distal part of this field; Fig. VII: 1); dorsal field of lower tegmen transparent with light venation (excepting small brown distal part); lateral field of both tegmina with dark very numerous small spots along dorsal field and rather sparse dots between these spots and *Sc*; fore and middle femora partly darkened; all femora with dark spines; hind femora with small dark apical spot; fore tibiae with brownish proximal part and brown apical one; middle and hind tibiae with small proximal and distal darkenings (proximal darkening of middle tibiae moderately long); tarsi and cerci partly dark (Fig. VII: 4–6).

Female unknown.

Length in mm. Body 22; body with wings 46; pronotum 5; tegmina 34; hind femora 24.

Comparison. The new species is distinguished from all the other known congeners by the above-mentioned peculiarities of coloration, unique (for the genus *Elimaea*) structure of tegminal *R*, large size of mirror of lower tegmen, and characteristic shape of male cerci, of male genital plate, and of male genital sclerites.

Subgenus *Elimaea* s. str.

Note. This subgenus is presented by several species living in ecotones as well as in tropical and subtropical forests. It differs from all the other subgenera of this genus in the following combination of characters: upper part of fore coxa is without spine; fore femora are slightly or moderately curved and with the low or moderately high dorsal keel; male genital plate with a pair of finger-like processes or of lamellar lobes (Fig. XIII: 10–12, 21, 22; XIV: 17–19, 47–50); male genitalia with a single median semisclerotized structure (Fig. XIII: 17, 27–30); female genital plate more or less triangular and with rounded or not deeply notched apex (Fig. XIII: 15, 24, 43, 44; XIV: 32–41, 63–70).

Included taxa. The subgenus consists of 2 groups of species. 1) *Phaneroptera melanocantha* Walker, 1869 synonymized with *E. carinata* Brunner-Wattenwyl, 1878 by Uvarov (1927) (both described from Sri Lanka); possibly *Steiroidon lanceolata* Walker, 1869 synonymized with *Ph. rufonotata* Walker, 1869 (both from Sri Lanka) by Kirby (1906), *E. bidentata* Brunner-Wattenwyl, 1878 and *E. nigrosignata* Bolivar, 1900 (both from Southern India). 2) *Ph. chloris* Haan, 1842 (Java); *Ph. subcarinata* Stål, 1861 (Hongkong); *Ph. punctifera* Walker, 1869 and *Ph. diversa* Walker, 1869 (both from Bangladesh) synonymized with each other by Uvarov (1927); *E. appendiculata* Brunner-Wattenwyl, 1878 (Indochina) synonymized with *E. subcarinata* by Ingrisch (1998); *E. rubicunda* Krausze, 1903 (Tonkin) synonymized with *E. subcarinata* by Dohrn (1906); *Ph. grandis* Matsumura et Shiraki, 1908 (Taiwan); *E. hoozanensis* Karny, 1915 (Taiwan); *E. annamensis* Hebard, 1922 (Annam); *E. fallax* Bey-Bienko, 1951 (Russia near Vladivostok); *E. berezovskii* Bey-Bienko, 1951 (China: Sichuan); *E. terminalis* Liu, 1993 (China: Fujian); *E. thaili* Ingrisch, 1998 (Northern Thailand); *E. nautica* Ingrisch, 1998 (Thailand near Bangkok); *E. segregata* sp. n. There are also 2 species (their males are unknown) which possibly belong to this subgenus: *E. brunneri* Dohrn, 1906 (Philippines); *E. curta* sp. n.

Elimaea (Elimaea) melanocantha (Walker, 1869) (Fig. XIII: 8–17)

Material. **Southern India**, Kerala: 1 ♂, «Amarambalam Forest, 500–1500', Malabar», 20.IX. 1938, «B.M. – C.M. Expedn. to South India»; 1 ♀, «Thekkadi, Periyar Dam, Travancore», 6–10.V.1937, «B.M. – C.M. Expedn. to South India».

Note. These specimens are determined by Dr. D.R. Ragge. They were received by the Zoological Institute (St. Petersburg) as a result of exchange with the Natural History Museum (London) organized by L.L. Mistshenko and his colleagues from the both institutions. These specimens are in accordance to the original descriptions of this species and of *E. carinata* (probable synonym of *E. melanocantha*) as well as to photographs of their types (from Sri Lanka) presented by Eades & Otte (2009) and Ingrisch (2009). *E. melanocantha* is similar to *Pseudectadia* in the general appearance including shape of fore femora, of male cerci, and of male genital plate (Fig. XIII: 8–13), but distinguished by the absence of apical hook on hind lobes of this plate, presence of unpaired median “sclerite” (small semisclerotized median structure covered with dense hairs) in the male genitalia (Fig. XIII: 17), and simple shape of the female genital plate (Fig. XIII: 15).

Species complex *subcarinata-chloris* (Fig. XIII: 28, 29; XIV: 1–46)

Material. Numerous specimens from different localities of following regions: **Southern China** (provinces Guangdong, Hainan, and Yunnan); **Northern Vietnam** (provinces Bac Thai, Vinh Phu, Ha Tay, and Hoa Binh); **Central Vietnam** (provinces Quang Nam Da Nang, Kon Tum, and Gia Lai); **Southern Vietnam** (provinces Dac Lak, Khanh Hoa, and Kien Giang, Con Dao I.); **Cambodia** (Elefan Mts and environs of town Sihanoukville near Siam Bay); **Myanmar** (Yangon [=Rangoon]); **Thailand** (provinces Trat, Ranong, Krabi, and Surat Thani); **Malaysia** (Pahang in Malacca and Penang I. between Malacca and Sumatra); **Southern Sumatra** (prov. Lampung); **Java** (western and eastern parts).

Note. This complex is distinguished from all the other similar representatives of *Elimaea* s. str. by the following characters: pronotal disc is with the small or very small dark or darkish dots on the lateral parts (sometimes it is almost without such dots); stridulatory vein with circa 5–16 large and moderately large (distinctly visible) teeth which are rather sparse (Fig. XIV: 1–16); hind median notch of male genital plate is shorter than median part of this plate: Fig. XIV: 17–19); ovipositor gonangulum is with the more or less thick process (Fig. XIV: 42–46). Ingrisch (1998) divided this complex into 2 species: *E. subcarinata* from Hongkong (type locality), Sumatra, Malacca, and Thailand near Bangkok. He indicated that these species differs from each other in the following characters: *E. subcarinata* has 6–9 large [including moderately large] teeth and the apex of female genital plate “only faintly excised in middle”; *E. chloris* has 14–16 such teeth and the apex of this plate “terminating into 2 subacute to subobtusate lobes which are only narrowly separated from each other”. The specimens studied show the significant variability in coloration and body structure: almost in each of the above-mentioned regions, there are the specimens with the more or less uniformly green coloration, with the rose or brown median stripe (from narrow to wide) on the pronotal disc, and with the rose or brownish stripe along the costal edge and/or anal edge of tegmina; size of body, length of wings, width of tegmina, position of base of tegminal RS, density of tegminal crossveins, size of gonangulum process (Fig. XIV: 42–46) and of hind median notch of male genital plate (Fig. XIV: 17–19), and shape of male cercal apex (Fig. XIV: 20–31) and of apex of female genital plate (Fig. XIV: 32–41) are distinctly varied. For example, in majority of these specimens, number of stridulatory teeth gradually increases from China and Northern Vietnam to Malacca and Java (Fig. XIV: 2–14), but a specimen from Southern Malacca (Pahang) is with these teeth not numerous (6 more or less large teeth: Fig. XIV: 1), and a few specimens from Yunnan and Northern Vietnam (Hoa Binh) has these teeth more numerous (11–14 more or less large teeth: Fig. XIV: 15, 16) than in majority of specimens from the same regions. Moreover the latter specimens (from Yunnan and Hoa Binh) have the comparatively deep hind notch of male genital plate which is only hardly shorter than the median part of

this plate (Fig. XIV: 19); in all the other males studied, this part is 1.3–1.5 times as long as this notch (Fig. XIV: 17, 18). Some males are with the distinctly different shape of cercal apex (Fig. XIV: 26, 27), and apex of female genital plate may be distinctly diverse in the specimens from the same locality (Fig. XIV: 32–41). However genitalia in all the males studied are almost identical (Fig. XIII: 28, 29). So, this material (richer than the material studied by Ingrisch) forces me to suppose that these specimens may belong to a complex of close-related species which has not clear morphological characters for their determination (this situation may be similar to that in the acridid genus *Chorthippus* Fieb.). Distribution of these specimens mainly in the different ecotones (many specimens very collected among grasses near water, on citrus plantations, and in mangrove swamp) supports this supposition, as the representatives living mainly in tropical forests usually have the very narrow areas and more distinct species characters.

Species complex *fallax-thaii* (Fig. XIII: 30; XIV: 47–74)

Material. Numerous specimens from different localities of following regions: **Far East of Russia** (environs of city Vladivostok including holotype and paratype of *E. fallax*, environs of lake Khanka); **Northern Korea**; **Northern China** (Manchuria [=Manzhou] including 3 paratypes of *E. fallax*); **Southern China** (provinces Sichuan including holotype and paratype of *E. berezovskii*, Yunnan, Guangdong, and Zhejiang); **Northern Vietnam** (provinces Cao Bang, Bac Thai, Vinh Phu, Hai Phong, Ha Tay, Hoa Binh, and Thanh Hoa); **Northern Thailand** (provinces Chiang Mai and Mae Hong Son); **Hawaii**.

Note. This complex is similar to previous one in the coloration and structure of body parts including male genitalia (Fig. XIII: 30), but distinguished from it by the following characters: pronotal disc is with the more or less large and numerous dark dots on its lateral parts and usually on its median part; stridulatory vein with circa 30–40 large and moderately large (distinctly visible) teeth which are rather dense (Fig. XIV: 51–57); hind median notch of male genital plate is deeper (this notch is longer than median part of this plate: Fig. XIV: 47–50); ovipositor gonangulum is with the more or less thin process (Fig. XIV: 71–74). Shape of male cerci and of apex of female genital plate is varied in different representatives from the same regions (almost as in the species complex *subcarinata-chloris*; Fig. XIV: 58–70). The specimens studied are divided into 4 morphological forms (close-related species and/or sub-species) which are geographically separated from each other: (1) specimens from Russia, Korea, and Northern China have the slightly shortened wings (tegmina are less than 1.5 times as long as hind femora, but distal parts of hind wings are distinctly exposed as in majority of representatives of *Elimaea*) and long hind median notch of male genital plate (this notch is clearly longer than the more proximal part of this plate: Fig. XIV: 50) [*E. fallax*]; (2) specimens from Sichuan, Yunnan, and majority of the above-listed Vietnamese provinces are with the longer wings (tegmina are more than 1.5 times as long as hind femora) and shorter hind median notch of male genital plate (this notch is not longer than the more proximal part of this plate: Fig. XIV: 47, 48) [*E. berezovskii*]; (3) specimens from Guangdong and Hai Phong (provinces near sea) differs from *E. berezovskii* only in the hind median notch of male genital plate much longer than the more proximal part of this plate (Fig. XIV: 49) [there are 4 species names supposed for the specimens from adjacent territories (3 of them have the very long hind lobes of this plate): *E. major* and *E. hoozanensis* (both from Taiwan), *E. annamensis* (Central Vietnam), and *E. terminalis* (Chinese province Fujian)]; (4) specimens from Northern Thailand are distinguished from the latter specimens and *E. fallax* by the male genital plate as in *E. berezovskii*, and from *E. berezovskii*, by the narrower tegmina (their length / their width = 6–7, but in *E. berezovskii*, this ratio is smaller) and presence of more or less distinct reddish stripes along ventral edge of fore and middle femora [*E. thaii*]. A single female from Hawaii may belong to *E. punctifera* indicated for these islands by Hebard (1922) or to *E. nautica* recorded for them by Ingrisch (1998). So, 2 these species may be additionally included in this species complex; *E. punctifera* differs from all the specimens studied in the more numerous stridulatory teeth (Ingrisch indicated about 53 large teeth for this species), but differences of *E. nautica* from these specimens (excepting *E. fallax* having somewhat shorter wings) are insufficiently clear.

***Elimaea (Elimaea) segregata* sp. n.** (Fig. XIII: 18–27)

Holotype – ♂, **Northern Vietnam**, prov. Hoa Binh, distr. Mai Chau, environs of town Mai Chau, 250 m, 30.X–4.XI.1990, A. Gorochov. *Paratypes*: 1 ♀, same data; 1 ♀, same province, but distr. Ky Son, environs of vill. Cao Phong, 24–29.X.1990, A. Gorochov; 1 ♀, same province, but distr. Da Bak, vill. Tuly, 200 m, 16–23.X.1990, A. Gorochov.

Description. Male (holotype). General appearance similar to that of representatives of genus *Hemielimaea* Br.-W., but fore femora weakly curved and with low dorsal keel, tympana typical of genus *Elimaea*, tegmina (including stridulatory apparatus) typical of *Elimaea* s. str. (Fig. XIII: 18, 19), stridulatory vein with 25 large and 4 somewhat smaller teeth (Fig. XIII: 20), epiproct rather small and with narrow and acute apex, cerci with almost disc-like distal widening (this widening with shallow posteromedial notch and angular apex: Fig. XIII: 21, 23), genital plate with deep hind median notch distinctly longer than median part of this plate in length (Fig. XIII: 22), and genital «sclerite» with narrow and rather long proximal lateral arms (Fig. XIII: 27). Coloration yellowish green with following marks: head with light brown rostrum as well as dark brown eyes and dorsum behind rostrum and eyes; antennae brown with dark brown lateral surface of proximal part of flagellum and sparse whitish spots on middle part of flagellum; pronotum with dark brown disc and a few small dark dots on lateral lobes near this disc; tegmina with brown middle and distal parts of dorsal field, dark brown both proximal part of this field in upper tegmen and base of latter part in lower tegmen, light brown stridulatory apparatus of lower tegmen having partly transparent mirror, light line along lateral edge of middle and distal parts of dorsal fields, light spot along lateral edge of proximal part of these fields, large dark spots on lateral fields situated along dorsal fields and in radial and interradian areas, and reddish brown stripe along costal edge of tegmina; hind wings with partly rose venation; legs with brownish lower parts of fore and middle femora, blackish spines of all femora, and brown distal half of hind tibial spines; abdomen with rose dorsum (excepting epiproct) and reddish dots on lateral part of tergites.

Female. Body and coloration similar to those of male, but head dorsum and pronotal disc as well as dorsal field of both tegmina from dark brown to light brown, fore and middle femora with less distinct darkenings and with brown or light brown spines, spines of hind tibiae rather light, and abdomen almost completely yellowish. Genital plate as in Fig. XIII: 24; ovipositor (Fig. XIII: 25) with gonangulum and base of inferior valve lacking distinct lobules or processes, however apex of short ventroproximal projection of gonangulum (presented in all species of *Elimaeini* for articulation with inferior valve) directed inside proximal part of rather wide longitudinal concavity at base of inferior valve (Fig. XIII: 26).

Length in mm. Body: ♂ 27, ♀ 25–27; body with wings: ♂ 50, ♀ 51–54; pronotum: ♂ 4.4, ♀ 4.6–5; tegmina: ♂ 36, ♀ 37–39; hind femora: ♂ 25, ♀ 26–28; ovipositor 6.6–6.8.

Comparison. The new species differs from all the other species of the second group of *Elimaea* s. str. in the disc-like shape of distal part of male cerci, long hind lateral arms of «sclerite» in male genitalia, short ventral process of ovipositor gonangulum, and presence of characteristic lateral concavity in the proximal part of inferior valves of ovipositor.

***Elimaea (Elimaea) curta* sp. n.** (Fig. XIII: 43–45)

Holotype – ♀, **Northern Vietnam**, prov. Vinh Phu, environs of vill. Tam Dao, 800–1000 m, 9–18.XI.1990, A. Gorochov. *Paratype* – ♀, same data.

Description. Female (holotype). General appearance as in other representatives of *Elimaea* s. str., but pronotum with rather high lateral lobes, base of tegminal *RS* situated distinctly behind middle of tegmina, genital plate short and triangular, its apex with moderately small hind median notch, lobes around this notch rounded (Fig. XIII: 43), ovipositor with rather wide distal part (Fig. XIII: 45), structures of proximal part of ovipositor similar to those of *E. segregata* (but ventroproximal projection of gonangulum slightly thicker, apex of this projection directed inside distinctly narrower concavity between bases of anterior and inferior valves, and inferior valve with almost spine-like tubercle near distal edge of this concavity; Fig. XIII: 43), and coloration yellow with following marks: head with rose rostrum, brown

eyes, and dark brown lateral spots on scape and second segment of antennae; antennal flagellum dark brown with yellow medial surface of proximal part and sparse lightish spots on middle part; pronotum with interrupted dark brown stripe along each lateral edge of disc, very light lines along outer edge of these stripes, and large dark dots on upper part of lateral lobes; tegmina with brown membranes between veinlets of dorsal field, large dark dots in lateral field (these dots following: a few dots between bases of *Sc* branches, somewhat more numerous dots in areas *RA–RS* and *R–M*, and very numerous ones between *M* and dorsal field), and interrupted dark brown stripe along distal third of costal edge; legs with dark brown spines of fore femora and spot on fore tibiae (near outer tympana), brownish other spines, and small reddish dots on hind femora.

Variations. Paratype with slight greenish tinge and whitish rostrum of head, almost without dots between branches of tegminal *Sc*, and with shorter and rounded (not almost spine-like) tubercle at base of each inferior valve of ovipositor (Fig. XIII: 44).

Male unknown.

Length in mm. Body 20–24; body with wings 46–50; pronotum 4.4–4.7; tegmina 36–39; hind femora 25; ovipositor 6.3–6.5.

Comparison. This species differs from all the other congeners in the characteristic shape of both female genital plate and ovipositor gonangulum, presence of distinct tubercles at base of ovipositor, and above-listed peculiarities of coloration.

Genus *Orthelimaea* Karny, 1926, stat. n.

Type species – *Elimaea leeuwenii* Karny, 1926 (Thailand).

Note. This genus was described as a subgenus of the genus *Elimaea* (Karny, 1926a). Its representatives are characterized by the straight fore femora. However these femora in all species of the other subgenera of *Elimaea* and in all members of the genus *Ectadia* are more or less curved (their possible synapomorphy). Moreover ovipositors of the latter taxa are similar, but in the type species of *Orthelimaea*, ovipositor has much larger denticles which are very dissimilar to those of the previous taxa. So, *Orthelimaea* must be considered a separate genus of the tribe Elimaeini. Ingrisch (1998) published the following list of possible species of *Orthelimaea*: type species; *Phaneroptera insignis* Walker, 1869 (Bangladesh) synonymized by Kirby (1906) and Uvarov (1927) with *Ph. notabilis* Walker, 1869 (Bangladesh) and *Elimaea annulata* Brunner-Wattenwyl, 1878 («Hinter-Indien» and «Calcutta»); *E. flavolineata* Brunner-Wattenwyl, 1878 (Sri Lanka); *E. securigera* Brunner-Wattenwyl, 1878 («Ostindien, Simla»); *E. minor* Brunner-Wattenwyl, 1891 (Java); *E. inversa* Brunner-Wattenwyl, 1891 (Sulawesi); *E. klinghardti* Krausze, 1903 (Northern Vietnam); *E. himalayana* Ingrisch, 1990 (Nepal); *E. hunanensis* Kang et Yang, 1992 (Southern China). In the same year, this list was supplemented by *E. carispina* Ingrisch et Shishodia, 1998 (Southern India). Ingrisch traced *Orthelimaea* as a subgenus of *Elimaea* and wrote that belonging of majority of these species to «this subgenus» is unclear. I also think that this list of species is in need of revision. For example: *E. hunanensis* (from Southern China) is transferred by me to the subgenus *Rhaebelimaea* of the genus *Elimaea*; the enigmatic species *E. klinghardti* (from Northern Vietnam) possibly belongs to the genus *Elimaea* also, as all the other species from this list are distributed in the more western or more southern regions; generic position of Sulawesi representatives (*O.? inversa* and a new species described below) is unclear, as their females are unknown.

Orthelimaea? sulawesi sp. n. (Fig. XIII: 38–42)

Holotype – ♂, **Southern Sulawesi**, 35–40 km N of city Makassar [=Ujung Pandang], National part Bantimurung, ~500 m, 29–30.X.2004, A. Goročov.

Description. Male (holotype). General appearance somewhat similar to that of representatives of *Schizelimaea* (subgenus of *Elimaea*), but upper part of fore coxae without spine, fore femora practically straight, wings slightly shortened (apical part of hind wings weakly exposed in rest position), tegmina

slightly widened and with rather numerous (dense) crossveins, tegminal *RS* with 5 distinct branches in distal half, proximal part of dorsal field of upper tegmen with angular medial edge (Fig. XIII: 38), lower tegmen with rather large and slightly transverse mirror (Fig. XIII: 39), middle part of dorsal field of both tegmina distinctly widened (Fig. XIII: 38, 39), epiproct very widened at apex (Fig. XIII: 40), cerci weakly arcuate and rather short (Fig. XIII: 40–42), their apical hook thin and moderately long (hardly *S*-shaped, if to see from below and slightly from behind), genital plate with lamellar lobes moderately long and having rounded apex, notch between these lobes as in Fig. XIII: 41, and genitalia completely membranous. Coloration yellowish with following marks: head with light rose rostrum, dorsal part of scapes, and wide longitudinal bands behind eyes (these rose parts with following whitish marks: line along dorsal edge of antennal cavities, 3 longitudinal lines on each scape, and 3 longitudinal lines on vertex behind rostrum and eyes); pronotum with short whitish line along anterior part of each lateral edge of disc, large dark brown dots on upper part of lateral lobes, and small reddish dots on disc and on other parts of lateral lobes (latter dots very sparse and situated mainly on hind part of these lobes); tegmina with large brown spot on proximal part of dorsal field of upper tegmen, between some of veinlets in middle part of this field and in distal part of dorsal field of both tegmina, more or less transparent proximal and middle parts of dorsal field of lower tegmen (Fig. XIII: 38, 39), numerous brownish dots in medial area, sparse ones in radial and interradiar areas as well as between branches of *RS*.

Female unknown.

Length in mm. Body 20; body with wings 38; pronotum 4.5; tegmina 31; hind femora 23.

Comparison. This species is most similar to *O.?* *inversa*, but distinguished by the angular (not rounded) medial edge of proximal part of dorsal field in the male upper tegmen, distal position of branches of tegminal *RS*, somewhat wider mirror in the lower tegmen, and slightly less deep notch of male genital plate.

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Fig. 1: 1-9, *Ectadia* and *Elimaea*: 1-9, *Ec. fulva* Br.-W.; 10-16, *Ec. mistshenkoi* sp. n.; 17-24, *Ec. angusta* sp. n.; 25, *El. parumpunctata* (A.-Serv.); 26, 27, *El. variegata* sp. n. Anterior part of body from side (1, 25); proximal half of dorsal field of male upper (2, 10, 17) and lower (3, 4, 11, 18) tegmina; stridulatory vein of upper tegmen from below and slightly behind (5, 12, 19); male abdominal apex from above (6, 13, 20), more or less from behind (7, 14, 22), and from side (8, 15, 21); female abdominal apex from side (9, 16, 24), and it without most part of ovipositor from below (23); middle femur from side (26); female genital plate from below (27).

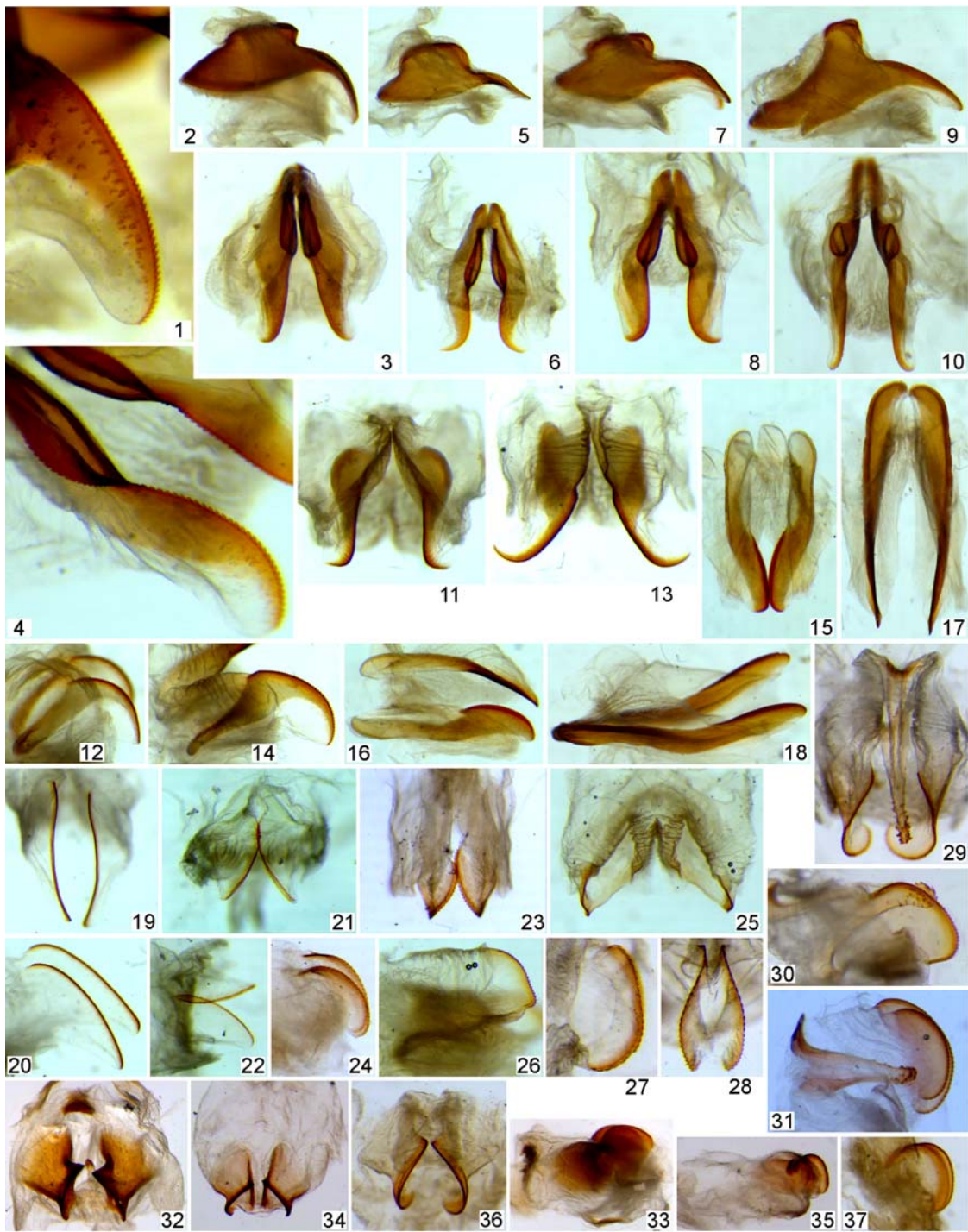


Fig. II: 1-37. *Elimaea*, male genital sclerites: 1-3, *E. parumpunctata* (A.-Serv.); 4-6, *E. curvicercata* Br.-W.; 7, 8, *E. simulata* sp. n.; 9, 10, *E. fruhstorferi* sp. n.; 11, 12, *E. jambi* sp. n.; 13, 14, *E. cognata* sp. n.; 15, 16, *E. apicata* Ingr.; 17, 18, *E. phetchaburi* sp. n.; 19, 20, *E. bengkulu* sp. n.; 21, 22, *E. kerinci* sp. n.; 23, 24, *E. viridula* sp. n.; 25, 26, *E. separata* sp. n.; 27, 28, *E. vinhphu* sp. n.; 29, 30, *E. abramovi* sp. n.; 31, *E. aphana* sp. n.; 32, 33, *E. bavi* sp. n.; 34, 35, *E. semitubulosa* sp. n.; 36, 37, *E. degressa* sp. n. Distal part from side (1); middle and distal parts of left sclerite from above (4); complete sclerites from side (2, 5, 7, 9, 12, 14, 16, 18, 20, 22, 24, 26, 27, 30, 31, 33, 35, 37), from behind and slightly above (28), and from above (3, 6, 8, 10, 11, 13, 15, 17, 19, 21, 23, 25, 29, 32, 34, 36).



Fig. III: 1-9, *E. parumpunctata* (A.-Serv.); 10-16, *E. curvicercata* Br.-W.; 17-23, *E. simulata* sp. n.; 24-31, *E. fruhstorferi* sp. n.; 32, 33, *E. suratthani* sp. n.; 34, 35, *E. gialai* sp. n.; 36, 37, *E. ?curvicercata*; 38, 39, *E. modesta* sp. n. Proximal half of dorsal field of male upper (1, 10, 17, 24) and lower (2, 11, 18, 25) tegmina; stridulatory vein of upper tegmen from below and slightly from behind (3, 12, 19, 26); male abdominal apex from above (4, 13, 20, 27) and from below (5, 14, 21, 28); apical part of male cercus from behind (6, 15, 22, 29) and from above (30); male cercus from side (7, 16, 23, 31); female abdominal apex from side (9, 33, 35, 37, 39), and it without most part of ovipositor from below (8, 32, 34, 36); female genital plate from below (38).



Fig. IV: 1-32. *Elimaea*: 1-8, *E. jambi* sp. n.; 9-18, *E. cognata* sp. n.; 19-28, *E. bengkulu* sp. n.; 29, 30, *E. hebaridi* sp. n.; 31, 32, *E. orlovi* sp. n. Proximal half of dorsal field of male upper (1, 9, 19) and lower (2, 10, 20) tegmina; stridulatory vein of upper tegmen from below and slightly from behind (3, 11, 21); male abdominal apex from above (4, 12, 22) and from below (5, 13, 24); apical part of male cercus from behind (6, 14, 25); male cercus from side (7, 15, 26) as well as from above and slightly from side (23); apex of male genital plate from below and slightly from behind (8, 16); female abdominal apex from side (17, 27, 30, 32), and it without most part of ovipositor from below (18, 28, 29, 31).



Fig. V: 1-6, *E. apicata* Ingr.; 7-16, *E. phetchaburi* sp. n.; 17-24, *E. kerinci* sp. n.; 25-32, *E. separata* sp. n.; 33, 34, *E. semitubulosa* sp. n. Proximal half of dorsal field of male upper (1, 7, 17, 25) and lower (2, 8, 18, 26) tegmina; stridulatory vein of upper tegmen from below and slightly from behind (3, 9, 19, 27); male abdominal apex from above (4, 10, 20, 28), from behind (29), from below (5, 11, 21, 30), and from side (12); apical part of male cercus from behind (6, 13, 22); female abdominal apex from side (16, 24, 32, 34), and it without most part of ovipositor from below (14, 15, 23, 31, 33).



Fig. VI: 1-35. *Elimaea*, male: 1-7, *E. viridula* sp. n.; 8-14, *E. abramovi* sp. n.; 15-21, *E. semitubulosa* sp. n.; 22-28, *E. bavi* sp. n.; 29-35, *E. degressa* sp. n. Proximal half of dorsal field of upper (1, 8, 15, 22, 30) and lower (2, 9, 16, 23, 31) tegmina; stridulatory vein of upper tegmen from below and slightly from behind (3, 10, 17, 24, 29); abdominal apex from above (4, 11, 18, 25, 32), from below (5, 12, 19), from behind (6, 13, 20, 27, 34), from side (7, 14, 21, 28, 35), and from behind and slightly from below (26, 33).



Fig. VII: 1-29. *Elimaea*, male: 1-7, *E. pulchra* sp. n.; 8-15, *E. vinhphu* sp. n.; 16-22, *E. maichau* sp. n.; 23-29, *E. tamdao* sp. n. Proximal half of dorsal field of upper (1, 8, 16, 23) and lower (2, 9, 17, 24) tegmina; stridulatory vein of upper tegmen from below and slightly from behind (3, 10, 18, 25); abdominal apex from above (4, 11, 19, 26), from below (5, 12, 20, 27), from behind (6), and from side (7, 21, 28); epiproct from behind (13); cercus from side (14), and its apex from above (15, 22, 29).



Fig. VIII: 1-27. *Elimaea*, male: 1, 2, *E. pulchra* sp. n.; 3, 4, *E. bona* sp. n.; 5, 6, *E. recta* sp. n.; 7, 8, *E. darevskiyi* sp. n.; 9, 10, *E. tuly* sp. n.; 11-13, *E. maichau* sp. n.; 14-16, *E. tamdao* sp. n.; 17-19, *E. catba* sp. n.; 20, 21, *E. abdita* sp. n.; 22, 23, *E. setifera* B.-Bien.; 24, 25, *E. borneo* sp. n.; 26, 27, *E. maja* sp. n. Genitalia from above (1, 3, 5, 7, 9, 11, 14, 17, 20, 22, 24, 26) and from side (2, 4, 6, 8, 10, 13, 16, 19, 23, 25, 27); their sclerotized parts from above (12, 15, 18, 21).

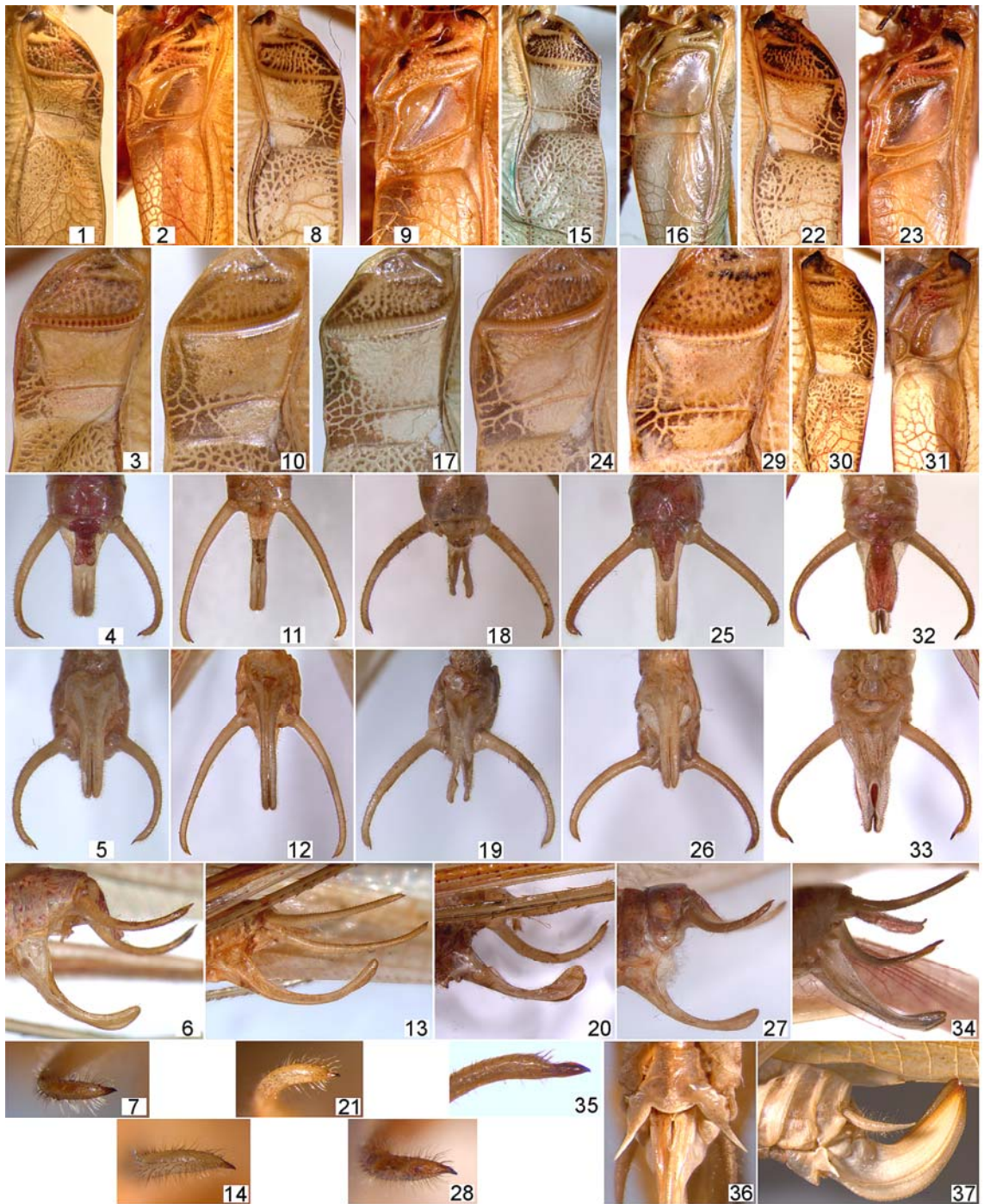


Fig. IX: 1-7, *E. bona* sp. n.; 8-14, *E. recta* sp. n.; 15-21, *E. darevskiy* sp. n.; 22-28, *E. tuly* sp. n.; 29-35, *E. catba* sp. n.; 36, 37, *E. ryabovi* sp. n. Proximal half of dorsal field of male upper (1, 8, 15, 22, 30) and lower (2, 9, 16, 23, 31) tegmina; stridulatory vein of upper tegmen from below and slightly from behind (3, 10, 17, 24, 29); male abdominal apex from above (4, 11, 18, 25, 32), from below (5, 12, 19, 26, 33), and from side (6, 13, 20, 27, 34); male cercal apex from behind (7, 14, 21, 28) and from above (35); female abdominal apex from side (37), and it without distal half of ovipositor from below (36).



Fig. X: 1-33. *Elimaea*: 1-8, *E. maja* sp. n.; 9-17, *E. setifera* B.-Bien.; 18-24, *E. borneo* sp. n.; 25-27, *E. junia* sp. n.; 28-30, *E. tenuiuscula* sp. n.; 31-33, *E. alia* sp. n. Pronotum from side (1, 9, 25, 28, 31) and from above (10); proximal half of dorsal field of male upper (2, 11, 18) and lower (3, 12, 19) tegmina; stridulatory vein of upper tegmen from below (4, 13, 20); male abdominal apex from above (5, 14, 21), from below (6, 15, 22), and from side (7, 16, 23); male cercal apex (8, 24), and male cercus with epiproct (17) from behind; female abdominal apex from side (27, 30, 33), and it without most part of ovipositor from below (26, 29, 32).



Fig. XI: 1-40. *Elimaea*: 1-10, *E. abdita* sp. n.; 11, *E. catba* sp. n.; 12-18, *E. sonora* sp. n.; 19, 20, *E. subita* sp. n.; 21-27, *E. grata* sp. n.; 28-34, *E. levi* sp. n.; 35-40, *E. sympatrica* sp. n. Proximal half of dorsal field of male upper (1, 12, 21, 28, 35) and lower (2, 13, 22, 29, 36) tegmina; stridulatory vein of upper tegmen from below (3, 14, 23, 30); male abdominal apex from above (4, 15, 24, 31, 37), from below (5, 16, 25, 32, 38), and from side (6, 17, 26, 33, 39); male cercus from side (34, 40); its apex from behind (7, 18, 27) and from above (8, 11); female abdominal apex from side (9, 19), and it without most part of ovipositor from below (10, 20).

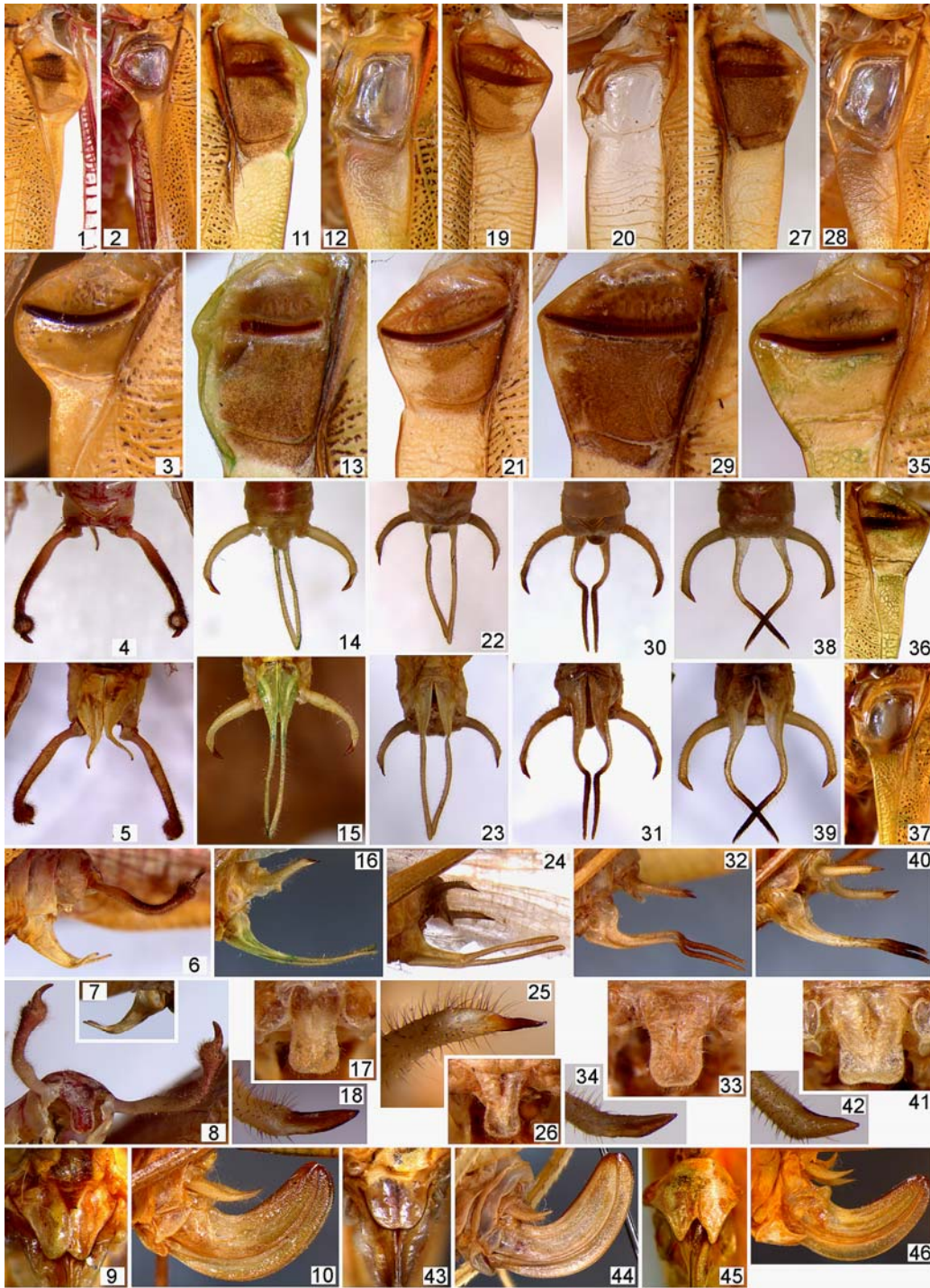


Fig. XII: 1-46. *Elimaea*: 1-10, *E. mira* sp. n.; 11-18, *E. bella* sp. n.; 19-26, *E. lata* sp. n.; 27-34, *E. ampla* sp. n.; 35-42, *E. trusmadi* sp. n.; 43, 44, *E. ranau* sp. n.; 45, 46, *E. ulla* sp. n. Proximal half of dorsal field of male upper (1, 11, 19, 27, 36) and lower (2, 12, 20, 28, 37) tegmina; stridulatory vein of upper tegmen from below (3, 13, 21, 29, 35); male abdominal apex from above (4, 14, 22, 30, 38), from below (5, 15, 23, 31, 39), and from side (6, 16, 24, 32, 40); it without genital plate from side and slightly behind (8); male genital plate from side (7); male epiproct from behind (17, 26, 33, 41); male cercal apex from above (18, 34, 42) and from side and slightly behind (25); female abdominal apex from side (10, 44, 46), and it without most part of ovipositor from below (9, 43, 45).



Fig. XIII: 1-47. *Elimaea* and *Orthelimaea*: 1-6, *E. aphana* sp. n.; 7, *E. abramovi* sp. n.; 8-17, *E. melanocantha* (Walk.); 18-27, *E. segregata* sp. n.; 28, 29, *E. ?subcarinata* (Stål) [Guangdong]; 30, *E. ?berezovskii* B.-Bien. [Yunnan]; 31, 32, *E. grata* sp. n.; 33, *E. sonora* sp. n.; 34, *E. bella* sp. n.; 35, *E. lata* sp. n.; 36, *E. ampla* sp. n.; 37, *E. trusmadi* sp. n.; 38-42, *O. sulawesi* sp. n.; 43-45, *E. curta* sp. n.; 46, 47, *E. mira* sp. n. Proximal half of dorsal field of male upper (1, 8, 18, 38) and lower (2, 9, 19, 39) tegmina; stridulatory vein of upper tegmen from below (3) and from behind and slightly below (20); male abdominal apex from above (4, 12, 21, 40), from behind (5), from below (10, 22, 41), and from side (11, 42); male genitalia (6, 7, 28, 31, 46) and their sclerotized parts (17, 27, 29, 30, 32-37) from above; male cercus from above (13, 23); male epiproct from behind (14); female genital plate and base of ovipositor from below (15, 24, 43, 44) and from side (26); ovipositor from side (16, 25, 45); apical sclerite of male genitalia from side (47).



Fig. XIV: 1-79. *Elimaea*: 1-46, species complex *subcarinata-chloris*; 47-74, species complex *fallax-thaii*; 75, *E. bavi* sp. n.; 76, *E. maichau* sp. n.; 77, *E. tamdao* sp. n.; 78, *E. bona* sp. n.; 79, *E. recta* sp. n. Stridulatory vein from behind and slightly below (1-16, 53-57) and from below (51, 52); male abdominal apex from below (17-19, 47-50); male cercus without base from side and slightly above (20-31, 58-62); female genital plate (75-79) and its apex (32-41, 63-70) from below; hind part of ovipositor gonangulum from side (42-46, 71-74). [1, 30, S. Malacca; 2, 17, 20, 49, 53, Guangdong; 3, 15, 21, 47, 54, 69, 70, 74, Yunnan; 4, 32, 33, 42, Hainan; 5, 6, 16, 19, 22, 23, 55-60, 67, 68, 73, N. Vietnam; 7, 27, E. Thailand, Siam Bay; 8, 9, 24, 34, 35, 43, C. Vietnam; 10, 11, 25, 26, S. Vietnam; 12, 28, Myanmar, Yangon; 13, 29, 36, 37, 44, C. Malacca; 14, 31, 40, 41, 46, Java; 38, 39, Penang I.; 45, Sumatra; 48, 52, 62, 65, 66, 72, Sichuan (48, 52, 62, holotype of *E. berezovskii* B.-Bien.); 50, 51, 61, N. China; 63, Korea; 64, 71, Russia (holotype of *E. fallax* B.-Bien.)].