

Revision of the Subgenus *Limbusa* MOORE, [1897] (Lepidoptera, Nymphalidae, Adoliadini) Part 2. Group division and descriptions of species (1)

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ABSTRACT — In part 2, morphological characteristics, early stages, and group division are discussed. Nine new taxa, i.e., *kuriyamai* sp. nov., *monastyrskiyi* sp. nov., *pseudomeia* sp. nov., *pseudonara* sp. nov., *dongvanensis* ssp. nov., *huangi* ssp. nov., *dalatensis* ssp. nov., *vietnamica* ssp. nov., and *xamneuana* ssp. nov., are described.

KEY WORDS: Rhopalocera, Nymphalidae, Limenitidinae, Adoliadini, *Euthalia*, *Limbusa*, *bunzoi*, *chayuana*, *colinsmithi*, *confucius*, *cooperi*, *curvifascia*, *dubernardi*, *guangdongensis*, *hayashii*, *hebe*, *iva*, *kardama*, *khama*, *khambounei*, *kosempona*, *lengba*, *linpingensis*, *malapana*, *masaokai*, *mingyiae*, *nara*, *narayana*, *occidentalis*, *omeia*, *pacifica*, *patala*, *pratti*, *pulchella*, *pyrrha*, *sahadeva*, *suprema*, *tsuchiyai*, *thawgawa*, *kuriyamai* sp. nov., *monastyrskiyi* sp. nov., *pseudomeia* sp. nov., *pseudonara* sp. nov., *dongvanensis* ssp. nov., *huangi* ssp. nov., *dalatensis* ssp. nov., *vietnamica* ssp. nov., *xamneuana* ssp. nov., early stages, ovum, larvae, pupae, antennae, venation, Oriental region, stat. nov., syn. nov., taxonomy.

7. MORPHOLOGICAL CHARACTERISTICS

Eyes: Naked.

Palpi: The length is around 3 mm, and the apex is pointed. However, it is not sharply pointed as seen in most species of the genus *Tanaecia*, which are members of Adoliadini.

Antennae: As with other Nymphalidae, the tip of the antennae swells out and is about 2/3 of the length of the forewing. Usually, the upperside is blackish-brown and the underside is light brown in most species of *Limbusa*. However, for example, *curvifascia* is entirely black, and *iva* has bright yellow at the tip. Furthermore, each of the five species *sahadeva*, *narayana*, *thawgawa*, *kosempona*, and *pyrrha* shows sexual dimorphism; in the case of *pyrrha*, the male underside is partially light yellow, whereas that of the female is mostly dark or blackish-brown.

Thorax: Compared with the genera *Tanaecia* and *Cynitia*, which are classified as Adoliadini, *Limbusa* has a solidly built body. Especially, *pratti* and its related species have a firmer thorax, similar to that of *Lexias*.

Wing Size: The forewing lengths of the male and female are generally 35–50 mm and 40–60 mm, respectively. The size

depends on the species.

Wing Shape: Forewing. The apex is generally pointed; the distal margin is straight or somewhat concave; the posterior margin is straight. Hindwing. The costal and posterior margin are moderately convex; the distal margin is convex and more or less apically protruded. Sometimes wing shape is used as a good key character to distinguish species with similar wing patterns, i.e., in *narayana* wing shape is rounder than that of *sahadeva*.

Wing Pattern: Generally, the ground color of the upperside is brown suffused with a peculiar bluish-green, whereas the ground color of the underside is usually brown, and some species show pale, dark, or dull bluish-green or silvery white. Black linear markings are conspicuous in the fore and hind cells on the upperside and hind cells on the underside. Cilia are white and stained with black beyond the veins on both wings. No red markings are apparent on either wing. For most *Limbusa*, the sexes are alike or similar, but sexual differences are species specific and may involve white or yellow spots through the discal or post-discal areas of both wings.

Venation: Usually cells on both wings are open in the subgenus *Euthalia*. But in the *patala* group (Fig. 1b), they are clearly

closed and are semi-closed in the *nara* group (Fig. 1a). In the *franciae* group (Fig. 1c), however, both of them are open. Variations in wing veins are often found; in *Euthalia omeia* (*nara* group), hindwing discocellular veins are variable; they can be faintly but completely present (Fig. 3b) or completely absent (Fig. 3c, d). The male forewing veins 9–12 are very close to each other at the middle; in *nara* (Fig. 2A), they run approximately beyond the cell and touch before the stalk point of (7–8) + 9, but are not anastomosed to each other. In *franciae* (Fig. 2c), vein 11 is broad and touched at the anterior end by 12 from the cell and posteriorly with 10 from its stalk point; in *patala* (Fig. 2b), veins 11 and 12 are anastomosed beyond the cell (arrow), but the apex of 12 is again slightly separated from 11. Regarding the female forewing vein of *patala* (Fig. 3a), vein 11 is anastomosed with 12 just beyond the cell and completely to the costal margin, and 10 is also anastomosed with 11 + 12 before the stalk point of 9 and (7 + 8). These character states have not been examined in detail and seem to be apomorphic characters for *Limbusa*. It might be difficult to find the common characters of venation in *Limbusa*, although I have not examined the venation of all species placed in this subgenus.

Male Genitalia (Fig. 116): The common characteristics of the male genitalia are as follows. The tegumen is large and stout, fenestrula more or less developed, appendix angularis well developed, vinculum rather low, saccus simple, and the uncus large and long, ending in an acute process. The gnathos is well developed and united ventrally, forming a complete semi-circular process. The juxta is v-shaped with a pair of processes laterally. The valva is narrow and long with apical spines in most species; its ventral portion bulges ventrally beyond the midline; dorsally, the costa and ampulla are fused to each other, as are the sacculus and harpe ventrally. The phallus is simple; the subzonal sheath is almost 1/2 of the phallus without coecum; the suprazonal sheath is membranous dorsally, while the apical portion of the aedeagus is pointed, and the cornuti have small spines. In addition to these common characteristics, the morphology of the uncus and valva and the phallus size depend on the species. Namely, the thickness of the uncus is used as a distinctive diagnosis. Most species have elongated valva, but in several species, for example, 10 species of the *nara* group and *curvifascia* have a small, short, and stout valva, and some species such as *staudingeri* and *yunnana* also have a stout valva. Because the shape of serration at the valva apex is an extremely good character state for the classification of this subgenus, an enlarged drawing of this area is provided in the figures of the male genitalia. Most species have a large and long phallus; for example, *pratti* has a large phallus as long as the valva. However, *nara* and some of its related species have a short and stout phallus.

Female Genitalia (Figs. 117, 118): Seventh abdominal sternum long, 2–3 x as long as 6th abdominal sternum; 8th abdominal

tergum long, 2–3 x as long as 7th abdominal tergum; lateral membranous region below 8th abdominal tergum more or less concaved; spiracle of 8th abdominal segment small but present. Ostium bursae broad and rather shallow with many wrinkles ventrally; lamella postvaginalis sclerotized plate varies in shape; ductus bursae moderate or short; corpus bursae large with signa composed of small spines; the shape of signa various; ductus seminalis often with bulged bulla seminalis; spermathecal duct with sclerotized narrow band surrounding it and twisted; von SIEBOLD's organ well developed, divided into two lobes apically. Papilla analis weakly sclerotized with long and short hairs not so densely; apophysis posteriores slender and long.

Combination of Male and Female Genitalia (Fig. 119): The space is present between 7th and 8th abdominal terga, especially at the anteroventral corner of 8th abdominal tergum. Probably the apical portion of male valva is inserted to the space during copulation, and each ventral portion of valva well corresponds with the distal margin of 7th abdominal membranous region.

8. EARLY STAGES

Clarifying life history is important for proper classification. However, under the present conditions, the life history of *Limbusa* has not yet been resolved completely. Mr. Motohiro HARADA has focused his field research on this group and uncovered new facts about their life histories, as follows.

Ovum (Fig. 4): As is often the case with Nymphalidae, the Euthalian ovum has some spines uniformly, and its apex bulges out like a club. The description of *malapana* ovum by UCHIDA (1991) is the first record in the subgenus *Limbusa*. Because the narrative contains several interesting facts and information related to the investigation of the life stages of *malapana*, I translate it to English,

“I could get all the eggs from the *malapana* female abdomens, which died in captivity. Each had 17–20 eggs and the number is fewer than those of allied species, *insulae* and *formosana* that have 60 eggs each on average. The diameter of egg is about 2 mm, which would be the largest among the known Nymphalid butterflies in Taiwan. The diameter of egg is about 1.2 mm in *formosana* and *insulae*. The rarity of *malapana* may depend on this shortness of eggs. The eggs of both *insulae* and *formosana* are pale yellow (Fig. 4). It is so close to the color of the underside of their food plants; *Quercus glauca*, *Q. gilva* and etc. that form excellent camouflage with its background. In contrast to them the egg is greenish on *malapana*. From this fact I infer the underside of the leaves of unknown host plant is similar green” (UCHIDA, l. c.: p. 152).

Larva (Fig. 5a, b): Larva is the so-called millipede shape, which has many dorsal spines along the subdorsal line

projecting horizontally. This character is entirely different from the Limenitiini, subfamily Limenitinae. The figured larva of *kardama* is depicted through the courtesy of Mr. M. HARADA.

Pupa (Fig. 6a, b, c): The pupal body is short and stout. The pupae have been known only from several species such as *insulae* from Taiwan. The pupa of *kardama* is also provided through the courtesy of Mr. M. HARADA, who took the pictures of the larva and pupa in Qingcheng Shan, Sichuan, China.

Foodplant: Though the foodplant of *Limbusa* is not yet clearly known, UCHIDA (1991) reported that the larvae of *insulae* fed on *Quercus* in captivity and that the female of *formosana* is observed to oviposit on *Mallotus*. The foodplant of *kardama* is *Trachycarpus* sp. (HARADA pers. comm.).

9. GROUP DIVISION

Limbusa is classified into the following three groups based on morphological characteristics.

I. *Nara* group (Fig. 120a)

This group consists of five species, *nara*, *omeia*, *pacifica*, *bunzoi*, and *masaokai*. The ground color of the underside is pale brown overall, without any glittery silver in *franciae*. It is markedly sexually dimorphic, with no correlation in wing pattern between male and female. In males, the forewing length is less than 40 mm, and it is rather small. The hindwing angle is rather pointed; a yellowish area spreads widely in space 7 (approximately 1/2 or more of the space) of the hindwing upperside (yellow spread type), while a median white spot in space 6 is absent. Submarginal white spots in spaces 8 and 6 of the forewing upperside are absent (appearing indistinct in *masaokai* without exception). The genitalia are smaller, or the valva is short and lacks serrations in its apex. The female is larger than the male, with conspicuous submarginal yellowish-white spots in spaces 8 and 6 of the forewing and a clear oblique discal white band. Females of the *nara* group are similar to some females in the *patala* group, such as *sahadeva*, *pyrrha*, *pratti*, and *hebe*.

II. *Patala* group (Fig. 120b)

Most species of *Limbusa* belong to this group. Like the *nara* group, the ground color of the underside is pale brown overall, without any glittery silver. In the male, the length of the forewing is generally more than 40 mm (with some exceptions with *curvifascia*, *strephon*, *khama*, etc.), and it is rather large compared to the *nara* group. The hindwing angle is not as pointed as that of the *nara* group, and the yellowish area does not spread into space 7 of the hindwing upperside. The pale yellow or white discal band (or trace) of the hindwing upperside runs from the costa to the dorsum. The median white spot in space 6 is clear, and the submarginal white spots in

spaces 8 and 6 of the forewing upperside are conspicuous.

Regarding the male genitalia, the valva is quite long and has serrations at its apex, except in the case of *curvifascia*. For example, the apex shape in *yasuyukii* is one of its typical morphological characters. The female is larger than the male, and sexual morphism depends on the species. However, it is dimorphic, as there are correlations in wing pattern between males and females. At this point, the *patala* group stands out as different from the *nara* group.

This group can be classified into the following A and B types based on the combination of hindwing spots in males.

Type A (Fig. 121a): Discal band (or trace) of hindwing runs from costa to dorsum, without being parallel to the termen (e.g., *kardama*, *thibetana*, *durga*, *bellula*, and *masumi*, etc.). Type A has the following three variations: (1) discal hindwing spots are close together and run almost straight from costa to dorsum (Fig. 122a); (2) discal hindwing spots are independent of each other and run almost straight from costa to dorsum (Fig. 122b); or (3) discal hindwing spots are independent of each other and zigzag from costa to dorsum (Fig. 122c).

Further, type A can be classified into the following three subtypes:

(1) **Subtype A1** (Fig. 123a): line combined with the discal white spot in space 6 and post-discal white spot in space 3 of the forewing to an angle.

(2) **Subtype A2** (Fig. 123b): line combined with the discal white spot in space 6 and post-discal white spot in space 3 of the forewing towards the termen.

(3) **Subtype A3** (Fig. 123c): line combined with the discal white spot in space 6 and post-discal white spot in space 3 of the forewing towards the dorsum.

Type B (Fig. 121b): Post-discal band (or trace) of the hindwing runs from costa to dorsum, parallel to the termen (e.g., *strephon*).

III. *Franciae* group

Only *franciae* is included in this group. The underside is glittery silver, differing in this character from the *nara* and *patala* groups. Sexes are alike, and individuals are larger than members of the *nara* group. Wing shape is similar to that of the *patala* group. Yellowish-white spots in spaces 8 and 6 of the forewing are present, and the discal band of both wings is conspicuous. Application of wing pattern classification to *franciae* suggests that it corresponds to type A (subtype A3). In the male genitalia, the valva is long and slender, but the ventral lobe is not projected as is the case with the *nara* and *patala* groups. The phallus is stout and the uncus is shorter, without a curved and pointed apex, compared with the *patala* group.

Considering some characteristics, such as the color of the hindwing and male genitalia, the *franciae* group would be better separated from the other two as a subgenus *Chucapa* MOORE, 1897, in the future.

10. DISTRIBUTION

Limbusa is distributed in the broad-leaved forests of the temperate zone, and they usually fly under around 2500 m with *Quercus* flora. The distribution area is as follows (Fig. 7): Himalayan mountain foothills of northern India, Nepal, and Bhutan; southern China (including Formosa and Hainan) and southeastern Tibet; and Indochina (Myanmar, Thailand, Laos, and Vietnam). We have never seen a specimen from Cambodia, although it is likely to be distributed in the mountain areas of that country. Moreover, I correct here the dividing line shown in Fig. 7: The line along the southern Vietnam border should be longer toward the south to a latitude about 11° north, around the Bao Loc mountains (Fig. 124a); the line around Jiangsu should be altered toward the north to the Chang River estuary because the *Limbusa* distributes in Nanjing area (Fig. 124b).

11. LIST OF SPECIES AND SUBSPECIES (1)

Table 2 shows the key to the species based on males. In this chapter the species of the *nara* group (Table 2-1) and the first half of the *patala* group (Tables 2-2, 2-3) are described. The latter half of the *patala* group (subtype A3 and type B) and the complete *franciae* group will be discussed in part 3.

I. *Nara* group

A yellowish area spreads widely in space 7 (approximately 1/2 or more of the space) of the hindwing upperside (yellow spread type).

***Euthalia (Limbusa) nara* (MOORE, 1859)**

(Figs. 13, 50, 71, 72, 88, 215–222)

- Adolias nara* MOORE, 1859. Trans. ent. Soc. Lond. (2) 5: 78, pl. 8, fig. 1 ♀. Syntype(s) ♀, unknown [N. India] (BMNH) (Fig. 72), [examined].
- Adolias anyte* HEWITSON, 1862. Illustrations of new species of exotic Butterflies, 3: 59, pl. 30, fig. 5 ♂. Syntype(s), “E. India” (BMNH) (Fig. 13), [examined]. **syn. nov.**
- Euthalia nara shania* EVANS, 1924. J. Bombay nat. Hist. Soc. 29 (4): 905. Syntypes ♂ ♀, Myanmar: Loimwe (near Kyang Tong), E. Shan (BMNH) (Figs. 88, 219), [examined]. **syn. nov.**
- Euthalia nara nagaensis* TYTLER, 1940. J. Bombay nat. Hist. Soc. 42 (1): 114. Syntypes ♂ ♀, India: Jakama, Naga Hills (BMNH) (Figs. 71, 220), [examined]. **syn. nov.**
- Euthalia nara kalawrica* TYTLER, 1940. J. Bombay nat. Hist. Soc. 42 (1): 114. Syntypes ♂ ♀, Myanmar: Kalaw, S. Shan (BMNH) (Figs. 50, 221), [examined]. **syn. nov.**

Distribution (Fig. 125). N. E. India, S. China, Indochina.

Length of Forewing. ♂ 32–37 mm, ♀ 38–46 mm.

The 10 species of the *nara* group are quite similar to each other, so their morphological differences are summarized in Table 3. Although a detailed geography of *nara* remains unknown, as the original description indicates only “N. India” as *E. (L.) sahadeva*, it is expected to be around Sikkim. The type designation has been done only for the female (Fig. 72). In addition to *nara*, the following four taxa have been described from the areas of northeastern India and northern

Table 2-1. Key for the separation of the species in male of the subgenus *Limbusa* (*nara* group)

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- 1 (13) Phallus is stout
 - 2 (10) Discocellular marking of hindwing upperside is present
 - 3 (8) Yellow area of hindwing upperside is fuscous
 - 4 (5) Spot in space 3 of forewing underside is not dislocated to basal *E. (L.) nara*
 - 5 (6) Spot in space 3 of forewing underside is slight dislocated to basal
 - 6 (7) Wing size is rather small, and ground color of upperside is not tinged with green *E. (L.) chaywana* **stat. nov.**
 - 7 Wing size is rather large, and ground color of upperside is tinged with green *E. (L.) pseudonara* **sp. nov.**
 - 8 (9) Yellow area of hindwing upperside is tinged with orange *E. (L.) colinsmithi* **stat. nov.**
 - 9 Yellow area of hindwing upperside is pale *E. (L.) bunzoi*
 - 10 (11) Discocellular marking of hindwing upperside is absent or traced
 - 11 (12) Tip of antenna upperside is bright yellow; except that extreme tip is blackish brown *E. (L.) omeia*
 - 12 Tip and apical portion of antenna upperside are bright yellow; discal and basal portions are blackish brown *E. (L.) pseudomeia* **sp. nov.**
 - 13 (14) Phallus is slender
 - 14 (15) Basal ringed mark of hindwing underside is indistinct *E. (L.) pacifica*
 - 15 (16) Basal ringed mark of hindwing underside is distinct
 - 16 (17) Yellow area of hindwing upperside is fuscous *E. (L.) masaokai* **stat. nov.**
 - 17 Yellow area of hindwing upperside is tinged with orange *E. (L.) kuriyamai* **sp. nov.**
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Table 2-2. Key for the separation of the species in male of the subgenus *Limbusa* (Subtype A1 of the type A in *patala* group)

1	(16) Only tip of antenna upperside is bright yellow	
2	(3) A series of spots of bothwings upperside is pure white	<i>E. (L.) iva</i>
3	(4) A series of spots of bothwings upperside is not pure white	
4	(13) Spots in spaces 6, 5, and 4 of forewing upperside is large and conspicuous (spots are almost the same size)	
5	(6) Basal side of spot in space 6 of hindwing upperside is pointed cuneiformly	<i>E. (L.) malapana</i>
6	(7) Basal side of spot in space 6 of hindwing upperside is round	
7	(10) Wing shape is stout and round (termen of hindwing projected)	
8	(9) Discal spots in spaces 7 to around 1b of hindwing are large and conspicuous	<i>E. (L.) kosempona</i>
9	Discal spots in spaces 7 to 5 of hindwing are conspicuous; those of spaces 4 and below are to be traced	<i>E. (L.) narayana</i>
10	(11) Wing shape is rather slim and apex of forewing is pointed	
11	(12) Discal spots in spaces 7 to around 2 of hindwing are large and conspicuous	<i>E. (L.) sahadewa</i>
12	Discal spots in spaces 7 to 5 of hindwing are conspicuous, whereas those of spaces 4 and below are to be traced	<i>E. (L.) thawgawa stat. nov.</i>
13	(14) Spots in spaces 6, 5, and 4 of forewing upperside is conspicuous but it is rather small	
14	(15) A series of discal spots of hindwing is gradually smaller from costa to dorsum	<i>E. (L.) kardama</i>
15	A series of discal spots of hindwing is almost the same size	<i>E. (L.) mingyiae</i>
16	(21) Tip and apical portion of antenna upperside are blackish-brown	
17	(18) Discal band of hindwing is narrow and color is deep yellow; ground color of bothwings upperside is solid blackish-brown tinged with deep green	<i>E. (L.) tsuchiyai stat. nov.</i>
18	(19) Discal band of hindwing is wide and color is pale yellow	
19	(20) Inner margin of discal band of hindwing upperside is uneven	<i>E. (L.) hebe</i>
20	Inner margin of discal band of hindwing upperside is almost even	<i>E. (L.) pulchella</i>
21	(22) Antenna upperside is solid blackish-brown or black	
22	(23) Antenna underside is entirely black	<i>E. (L.) curvifascia</i>
23	(24) Tip and apical portion of antenna underside are blackish-brown	<i>E. (L.) suprema</i>
24	(25) Antenna underside is not applicable to 22 or 23	
25	(28) A series of discal spots of hindwing underside is running from space 7 to dorsum, appearing clearly in around space 2	
26	(27) Pale yellowish-area is appear in outside of discal spots of hindwing upperside	<i>E. (L.) pyrrha</i>
27	Pale yellowish-area is absent in outside of discal spots of hindwing upperside	<i>E. (L.) guangdongensis stat. nov.</i>
28	(29) A series of discal spots of hindwing underside is running from space 7 to dorsum, fading away in around spaces 5 or 4	
29	(37) Length of forewing is approximately over 45 mm	
30	(34) Spots in spaces 6, 5, 4, and 3 of hindwing upperside are large and conspicuous	
31	(32) Tornus side of spot in space 6 of hindwing upperside is almost flat; basal side is concave	<i>E. (L.) confucius</i>
32	(33) Tornus side of spot in space 6 of hindwing upperside is concave; basal side is almost flat	<i>E. (L.) patala</i>
33	Basal and tornus sides of spot in space 6 of hindwing upperside is almost flat	<i>E. (L.) lengba</i>
34	(35) Spots in spaces 6, 5, 4, and 3 of hindwing upperside are clear but rather small	
35	(36) Ground color of bothwings upperside is brown	<i>E. (L.) linpingensis</i>
36	Ground color of bothwings upperside is not brown (tinged with dark green)	<i>E. (L.) khambounei</i>
37	Length of forewing is approximately less 40 mm	
38	(41) Discal spots in spaces 7, 6, and 5 of hindwing upperside are large and conspicuous	
39	(40) Discal spots of hindwing upperside are pale whitish-yellow	<i>E. (L.) hayashii stat. nov.</i>
40	Discal spots of hindwing upperside are fuscous yellow	<i>E. (L.) khama</i>
41	Discal spots in spaces 7, 6, and 5 of hindwing upperside are conspicuous but rather small	<i>E. (L.) dubernardi</i>

Table 2-3. Key for the separation of the species in male of the subgenus *Limbusa* (Subtype A2 of the type A in *patala* group)

1	(4) Spot in space 5 of forewing upperside slants toward basal, compared with spots in spaces 6 and 4	
2	(3) Ground color of upperside is predominant in bluish-green	<i>E. (L.) pratti</i>
3	Ground color of upperside is predominant in brown	<i>E. (L.) occidentalis</i>
4	(5) Spot in space 5 of forewing upperside is located on a straight line to link spots in spaces 6 and 4	
5	(6) Spot in space 2 of forewing slants much towards outer margin	<i>E. (L.) cooperi</i>
6	Spot in space 2 of forewing slants slightly toward outside of spot in space 3	<i>E. (L.) monastyrskiyi sp. nov.</i>

Table 3. Morphological differences of *nara* group

	<i>nara</i>	<i>chaynana</i>	<i>pseudonara</i>	<i>colinsmithi</i>	<i>buizoi</i>	<i>omeia</i>	<i>pseudomeia</i>	<i>paeificca</i>	<i>masakoi</i>	<i>kurayamai</i>
Wing shape in male	rather round; tomus slightly pointed	round; tomus not so pointed	round; tomus not so pointed	rather round; tomus pointed	slim; apex and tomus pointed	round; tomus pointed	rather round; tomus pointed	slim; apex and tomus pointed	rather round; tomus pointed	slim; apex pointed and tomus slightly pointed
Ground color of upperside	male: dull fuscous black with slightly dark green; female: brown tinged with dark green	male: dull fuscous black with out green; female: brown tinged with green	male: brownish-green	male: dull fuscous black with slightly dark green; female: brown with scare dark green	male: brown with slightly dark green; female: dark green with brown	male: brown with scare dark green; female: dark green with brown	male: brown with scare dark green	male: dark brown with brown tinged with dark green	male: blackish-brown with slightly dark green; female: dark brown with brown	male: brown with slightly dark green; female: greenish-brown
Pale yellow spot in space 3 of forewing upperside in male	indistinct or absent	indistinct	indistinct or absent	indistinct or absent	indistinct	absent	absent	indistinct	present or indistinct	present but indistinct
Color of yellow area of hindwing upperside in male	fuscous yellow	fuscous yellow	fuscous yellow	orange yellow but slight fuscous	pale yellow	light orange yellow	light orange yellow	orange yellow	fuscous yellow	orange yellow
Border of yellow area and dark area of hindwing upperside in male	indistinct	indistinct	indistinct	indistinct	indistinct	distinct	distinct	distinct	distinct	indistinct
Width of yellow area of hindwing upperside in male	spaces 7 and 6 (space 6 occasionally partial)	spaces 7 and a part of 6	spaces 7, 6, and a part of 5	spaces 7 and 6	spaces 7, 6, and 5	spaces 7, 6, 5, and 4	spaces 7, 6, 5, and 4	spaces 7 and 6	spaces 7 and a part of 6	not spread widely; each yellow area in spaces 7 and 6 divided into two speckles
Discal yellow spots in spaces 5, 4 and 3 of hindwing upperside in male	present but indistinct	absent or at most traced	present but indistinct	indistinct	indistinct at spaces 4 and 3	indistinct at space 4	absent at space 3	present	present at spaces 5 and 4; indistinct at space 3	absent
Disocellular marking of hindwing upperside	distinct	distinct	distinct in male	distinct	distinct	absent or trace	trace in male	present	present	male: distinct; female: indistinct
Ground color of underside	male: pale greenish-brown; female: light brown with green	male: greenish-brown; female: greyish blue	slightly glittery pale green tinged with yellow in male	male: yellowish-brown; female: basal and discal area grayish-blue; marginal and postdiscal area brown	male: pale-yellowish or bluish-green (differ between subspecies); female: light brown with green	male: fuscous yellow; female: light brown with green	pale yellow tinged with blue	male: pale yellowish-green; female: light brown with green	male: fuscous bluish-green; female: greyish-blue	male: greenish-yellow; female: greyish-green
Basal ringed mark of hindwing underside	distinct	distinct	distinct	distinct	distinct	distinct	distinct	obscure	distinct	distinct
Position of spot in space 3 of forewing underside in male	not dislocated	slight dislocated to basal	slight dislocated to basal	not dislocated	not dislocated	not dislocated	not dislocated	not dislocated	slight dislocated to basal	slight dislocated to basal
Antenna tip of upperside	blackish-brown	male: mostly blackish-brown (partially bright yellow in outside); female: bright yellow	bright yellow	generally bright yellow (but occasionally partially blackish in lateral side)	generally bright yellow (but occasionally partially blackish in lateral side)	bright yellow	bright yellow	generally bright yellow (but occasionally partially blackish in lateral side)	blackish-brown	blackish-brown
Phallus in male genitalia	stout	stout	stout	stout	stout	stout	stout	slender; apical portion of aedeagus sclerotized	slender; apical portion of aedeagus sclerotized	slender; apical portion of aedeagus sclerotized

Myanmar. (1) *anyte* (Fig. 13): Upperside ground color in the male is dark brown, and the underside is a rather dark yellow-green; the pale-yellowish area of the upperside hindwing is present in space 7 broadly and in space 6 partially; the female was not designated as types. (2) *shania* (Figs. 88, 219): The male upperside ground color is dominated by bluish-green, and the pale-yellowish area of the upperside hindwing is widely present in spaces 7 and 6; the male underside is bluish-green tinged with yellow while the female upperside is darker than that of *nara* and is also strong in bluish-green like the male; the female underside is slightly tinged with blue. (3) *nagaensis* (Figs. 71, 220): The pale-yellowish area of the male upperside hindwing is widely present in spaces 7 and 6; the male underside is similar to *shania*, but the pale-yellowish area in the outer margin of the underside hindwing is rather conspicuous. The female upperside is similar to *nara*, but white spots in spaces 7 and 6 of the upperside hindwing are obscured. (4) *kalawrica* (Figs. 50, 221): The pale-yellowish area of the male upperside hindwing is present in space 7 broadly and in space 6 partially as *anyte*; the black spots in the submargin of the upperside hindwing are rather large. The ground color of the upperside in the female is tinged with bluish-green, but it is not as dark as *shania*, and the underside is brighter than that of *nara*. The oblique white band of the forewing is wide, and white spots in spaces 7 and 6 are conspicuous. For the reasons stated above, *nara* shows several variations, and it is difficult to subdivide *nara* into subspecies. I consider *anyte*, *shania*, *nagaensis*, and *kalawrica* to be synonyms of *nara*. Incidentally, female material from the Kachin state of Myanmar (Fig. 222) suggests that the white spots of the forewing are small, especially being absent in space 2. This form has a unique character that does not accord with those described in (1)–(4) above. I have no idea whether this specimen belongs to *nara* or not and will wait for additional records.

Antenna. Upperside: Blackish-brown. Underside: The tip and the apical portion are light brown; the outside of the apical portion has a blackish speck; discal and basal portions are brown.

Male Genitalia (Figs. 162–166). Valva: Short and wide; apex is round, not twisted, and without serration. Phallus: Stout; length is almost the same as the valva. Uncus: The middle portion is swelling, and the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) chayuana* HUANG, 2001 stat. nov.**
(Figs. 22, 223–225)

Euthalia nara chayuana HUANG, 2001. Neue Entomologische Nachrichten 51: 88, pl. V, fig. 40 ♂. Holotype ♂, China: Tiyu, S. E. Xizang (HH) (Fig. 22), [paratype examined].

Distribution (Fig. 126). S. E. Xizang, Kachin.

Length of Forewing. ♂ 32–33 mm, ♀ 43–47 mm.

HUANG (2001) described *chayuana* as a subspecies of *nara*, but I assigned it to an independent species as discussed below. The type locality is Tiyu, southeastern Tibet. Messrs. Motoki SAITO and Tetsutaro SOE have captured two males in Naungmon, near Putao. The original description mentions that the female is unknown. This species is very similar to *nara*, but the differences between *chayuana* and *nara* in the male are as follows. (1) The wing size is smaller, and the hindwing is especially rounder. (2) Discal spots in spaces 5, 4, and 3 of the hindwing upperside are almost absent. (3) The spot in space 3 of the forewing underside is slightly dislocated basally. Further, Messrs. M. SAITO and T. SOE have also collected a female in the same area of Naungmon (Fig. 224) with the following characteristics. (1) Antenna upperside: The tip is bright yellow except that the extreme tip is blackish-brown; underside: almost dark brown. (2) The shape of the white spot in space 3 of the upperside forewing is concave on the apical and basal sides (just like a wedge shape). (3) The brown hemming of the discal white band in the hindwing underside stands out. (4) A brown stripe appears in the margin of the hindwing underside. In addition to this material, Mr. Hideyuki OZAWA has caught a female in Mongoe around Putao (Fig. 225). Its features are as follows. (1) Antenna upperside: The tip is bright yellow except that the extreme tip is blackish-brown; underside: The tip and apical portion are brown, discal and basal portions are dark brown. (2) Shape of the white spot in space 3 of the upperside forewing is concave on the apical side. (3) The brown hemming of the discal white band in the hindwing underside is obscured. (4) The brown stripe in the margin of the hindwing underside is obscured. (5) The size is large (LFW: 47 mm). The former female was captured in the same place where the *chayuana* males have been obtained, and the wing patterns do not correspond to any of the other nine species of the *nara* group. However, the antenna differs from the male, which is also the case in *kosempona* and its allied species. Consequently, it is impossible to deny that the former female is not at least *chayuana*. Possibly the latter female is another species, but that is not resolved. In this paper, I place both females in the species of *chayuana* for the time being. Further investigation and accumulation of materials are expected.

Antenna. This species may show differences in antenna characteristics between males and females. Male upperside: The tip is mostly blackish-brown (the outside is partially bright yellow), except that the extreme tip is blackish-brown. Male underside: The tip and apical portion are light brown; the outside of the apical portion has a blackish speck; discal and basal portions are brown. Female upperside: The tip is bright yellow except that the extreme tip is blackish-brown.

Male Genitalia (Fig. 167). Valva: Short and wide; apex is round, not twisted, and without serration. Phallus: Stout; length is almost the same as the valva. Uncus: The middle portion is

swelling, and the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) pseudonara* sp. nov.**

(Fig. 226)

Distribution (Fig. 127). N. Myanmar (Kachin).

Length of Forewing. ♂ 34–35 mm.

The common characteristics of the wing shape, pattern, and the male genitalia have been described in section 7. Male. Upperside forewing: Ground color is green tinged with brown; an obscure spot appears in space 3 of the post-discal area. Upperside hindwing: Ground color is the same as the forewing; a fuscous yellow area appears in the discal and post-discal areas of spaces 7 and 6; obscure and pale-yellowish spots appear in spaces 5, 4, and 3 of the discal and post-discal areas. Underside forewing: Ground color is slightly glittery pale green tinged with yellow; dirty white spots appear in the discal area of spaces 4, 3, 2, and 1b, and they are remarkable in spaces 3, 2, and 1b. Underside hindwing: Ground color is the same as the forewing; the contours of the spots are seen in the discal area in spaces 7 to 1b; a series of obscure dark band appears in the margin of spaces 7 to 1b. The female is unknown.

Holotype. ♂, Chudu Razi, Kachin, Myanmar, 24, May 2001, KMNH (KMNH IR 200,286).

Paratypes. 1♂, Chudu Razi, Kachin, Myanmar, 24, May 2001, preserved in T. YOKOCHI collection.

This new species is very similar to *nara*, but the color of the antenna is different; i.e., in *pseudonara*, around four segments from the tip are bright yellow on the upperside, whereas the upperside is almost blackish-brown in *nara*. The wing shape is rounder in *pseudonara*, and the termen of the hindwing is projected. The ground color on both sides is lighter, and the underside is slightly glittery.

Antenna. Upperside: The tip is bright yellow, except that the extreme tip is blackish-brown. Underside: The tip and the apical portion are bright yellow; the discal and the basal portions are brown.

Male Genitalia (Fig. 168). Valva: Short and wide; apex is round, not twisted, and without serration. Phallus: Stout; length is almost the same as the valva. Uncus: The middle portion is swelling, and the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) colinsmithi* HUANG, 1999 stat. nov.**

(Figs. 24, 227)

Euthalia nara colinsmithi HUANG, 1999. Lambillionea XCIX: 644, figs. 23 ♂, 32 ♂, 39 ♂, 40 ♂, 41 ♀. Holotype ♂, China: Tiyu, S. E. Xizang (HH), paratype (Figs. 24, 227) [examined].

Distribution (Fig. 128). S. E. Xizang.

Length of Forewing. ♂ 35–36 mm, ♀ 44 mm.

In 1999, *colinsmithi* was described from southeastern Tibet under the subspecies of *nara*, but here I classified it as an independent species. One of the most obvious differences between *nara* and *colinsmithi* is the color of antenna. In *colinsmithi*, the upperside of the tip is bright yellow, whereas it is blackish-brown in *nara*. Other characteristics in *colinsmithi* are as follows: (1) The color of the yellow area of the hindwing upperside in the male is orange yellow (*nara* is fuscous yellow); (2) the white spots of the forewing in the female are rather small; (3) the ground color of the underside in the female is two-tone, i.e., the basal and discal areas are grayish-blue, and the marginal and post-discal areas are brown (*nara* is almost a monotone of light brown with green). I have never seen any specimens except the type locality.

Antenna. Upperside: The tip is generally bright yellow (occasionally the lateral side is partly blackish), except that the extreme tip is blackish-brown. Underside: The tip is bright yellow; the outside of the apical portion has a blackish speck except that the extreme tip is brown.

Male Genitalia (Fig. 169). Valva: Short and wide; apex is round, not twisted, and without serration. Phallus: Stout; length is almost the same as the valva. Uncus: The middle portion is swelling, and the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) bunzoi* SUGIYAMA, 1996**

Distribution (Fig. 129). S. China, Vietnam.

Length of Forewing. ♂ 33–38 mm, ♀ 41–48 mm.

The male *bunzoi* is distinguishable from the others by the yellowish area in the upperside of the hindwing being rather pale and subdued yellowish-white (Table 3). In drawer Rh11786 of the BMNH collection, this species is classified as *nara* (*E. (L.) omeia*).

Antenna. Upperside: The tip is generally bright yellow (occasionally the lateral side is partly blackish), except that the extreme tip is blackish-brown. Underside: The tip is bright yellow; the outside of the apical portion has a blackish speck except that the extreme tip is brown.

Male Genitalia (Figs. 170, 171). Valva: Short and wide; apex is round, not twisted, and without serration. Phallus: Stout; length is almost the same as the valva. Uncus: The middle portion is swelling, and the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) bunzoi bunzoi* SUGIYAMA, 1996**

(Figs. 20, 228, 229)

Euthalia nara bunzoi SUGIYAMA, 1996. Pallarge 5: 6, figs. 9, 10 ♂, 11, 12 ♀. Holotype ♂, China: Dayao Mts., Guangxi

(HS), (Fig. 20) [examined].

Euthalia bunzoi SUGIYAMA, 1996; Koiwaya, 1996. Studies of Chenese [sic] butterflies vol. 3: 249, Figs. 1094–1097, 1102–1104, 1108, 1110–1113, 1118–1120, 1367.

Distribution. Guangxi, Guangdong, Jiangxi, Fujian, Yunnan. The type locality is Dayao shan, and the holotype (Fig. 20) is male. At first, it was described as a subspecies of *nara*, which has a widespread pale-yellowish area in the upperside hindwing in males, but KOIWAYA (1996) described it as an independent species.

***Euthalia (Limbusa) bunzoi tayiensis* YOSHINO, 1997**
(Figs. 98, 230, 231)

Euthalia [sic] *bunzoi tayiensis* YOSHINO, 1997. Neo Lepidoptera 2-2: 5, figs. 37, 38, 75. Holotype ♀, China: Tayi (Dayi), Sichuan (MNHAH), (Fig. 98) [examined].

Distribution. Sichuan, S. Gansu, Hunan. The female characteristics are given in the original description as follows, “post-discal streak less developed, submarginal dark band less developed; ground color of underside more greenish”. Some materials that are similar to *tayiensis* have been collected from Jiangxi and central Yunnan, in addition to the type locality area. The specimen from the area of western China including Tayi can be distinguishable from the nominotypical subspecies, so there is no doubt that *tayiensis* should be classified as a subspecies. I classified the Emei-shan material as *tayiensis*; however, the description mentioned, “Specimens from Mt. Omei Shan as well as the Guangxi (type locality of the nominate race), Jiangxi, and Fujian populations belong to the nominate race” (YOSHINO, 1997: p. 5). In the male, there is no difference between the nominotypical subspecies and *tayiensis*.

***Euthalia (Limbusa) bunzoi vietnamica* ssp. nov.**
(Figs. 171, 232, 233)

Distribution. N. Vietnam.

Length of Forewing. ♂ 34–37 mm; ♀ 43–47 mm.

This new subspecies *vietnamica* is distinguishable from the nominotypical subspecies in the following points: (1) The yellow area of the forewing upperside in the male is smaller, and the discocellular marking of the hindwing upperside is distinct but is hidden in the dark area; (2) the ground color of the underside in the male is tinged with bluish-green; (3) the ground color of the bothsides in the female is darker.

Holotype. ♂, Dong Van, Ha Giang Prov., Vietnam, Jul. 2007, KMNH (KMNH IR 200,287).

Paratypes. 2♂, Jul. 2007; 2♂, May–Jul. 2008; 4♂, 25, Jun. –2, Jul. 2006 (same locality as the holotype), preserved in

T. YOKOCHI collection. 4♂, Jul. 2002; 1♂, Jul. 2003 (Sapa, Lao Cai Prov., Vietnam), preserved in T. YOKOCHI collection. 1♂, 23, Jun. 2007, Dong Van, Ha Giang Prov., Vietnam; 1♂, Jun. 2005, Ha Giang Prov., Vietnam, preserved in K. SAITO collection. 5♀, Jul. 2007; 1♀, Jul. 2005; 1♀, Jun. 2006; 1♀, 16, Jul. 2007; 3♀, May–Jul. 2008; 4♀, 25, Jun. –2, Jul. 2006 (same locality as the holotype), preserved in T. YOKOCHI collection. 1♀, 10, Jul. 2006, Dong Van, Ha Giang Prov., Vietnam; 1♀, Jul. 2005, Ha Giang Prov., Vietnam, preserved in T. & K. SAITO collection.

***Euthalia (Limbusa) omeia* LEECH, 1891**

Distribution (Fig. 130). S. China, N. Laos.

Length of Forewing. ♂ 30–34 mm, ♀ 38–45 mm.

The clear distinction points from other species in the male is that the yellow area of the upperside hindwing is broad and a strong yellow and that the double-line marking is absent in the middle space of the upperside hindwing. LEECH (1891) described *omeia* (the types are all males) and *consobrina* (the types are all females) in the same periodical book of the same page 29, but OBERTHÜR (1907) reported that they were the same species and cited *omeia* as a species (the first reviser of *omeia*). Therefore, *consobrina* should be a synonym of *omeia*. Based on this fact, the label that is shown as “*consobrina*, syn. *omeia*” in drawer Rh11786 of BMNH is not correct. Further, *omeia* is so similar to *nara* that it has been sometimes classified as a subspecies of *nara*. Among 30 Chinese males classified as *nara* in the BMNH drawers, the true *nara* consist of only two males from Yunnan, and the others, one male type (Fig. 78) in Rh37228 and 22 males (including eight types) in Rh11786 are *omeia*; five males from Sichuan are *bunzoi*. Of the females, 33 specimens, a type (Fig. 26) in Rh37228 and 32 (including seven types) in Rh11786, are all *omeia*. The taxon *alutoya* has been described as a subspecies of *nara*, but it is a synonym of *omeia* as MELL (1935) pointed out. Though HUANG (2001) reported that *alutoya* was a synonym of *bunzoi*, this is incorrect. The reason is that the type specimen of *alutoya* does not have the linear spot in the middle space of the upperside hindwing. Furthermore, a new subspecies of *omeia* from Laos is described below.

Antenna. Upperside: The tip is bright yellow, except that the extreme tip is blackish-brown. Underside: The tip and the apical portion are bright yellow; the discal and the basal portions are brown.

Male Genitalia (Fig. 172). Valva: Short and wide; apex is round, not twisted, and without serration. Phallus: Stout; length is almost the same as the valva. Uncus: The middle portion is swelling, and the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) omeia omeia* LEECH, 1891**
(Figs. 10, 26, 78, 234, 235)

Euthalia consobrina LEECH, 1891. Entomologist 24 (Suppl.): 29. Syntypes ♀, China: Omei-Shan, Sichuan (BMNH) (Fig. 26), [synonymised by OBERTHÜR, 1907: 260] [examined].

Euthalia omeia LEECH, 1891. Entomologist 24 (Suppl.): 29. Syntypes ♂, China: Omei-Shan, Sichuan (BMNH) (Fig. 78), [examined].

Euthalia nara alutoya FRUHSTORFER, 1913. Die Gross-Schmetterlinge der Erde, 9: 682. Syntype(s), ♀, [China: Sichuan] (MNHN) (Fig. 10), [synonymised by MELL, 1935: 242] [examined].

Distribution. Sichuan, Yunnan, Guangxi, Fujian.

***Euthalia (Limbusa) omeia xamneua* ssp. nov.**
(Figs. 236, 237)

Distribution. N. Laos.

Length of Forewing. ♂ 33–34 mm; ♀ 41 mm.

This new subspecies, *xamneua*, from Laos is distinguishable from the nominotypical subspecies in the following characteristics: (1) The dark area in the male upperside is deeper; (2) the ground color of the upperside in the female is darker.

Holotype. ♂, Xamneua, Laos, 15, May 2002, KMNH (KMNH IR 200,288).

Paratypes. 1♂, Jun. –Aug. 2000; 1♂, 26, May 2002; 1♂, 4, Jun. 2002; 2♂, 2, Jun. 2006; 1♂, 8, Jun. 2006; 1♀, 6, Jun. 2006 (same locality as the holotype), preserved in T. YOKOCHI collection.

***Euthalia (Limbusa) pseudomeia* sp. nov.**
(Fig. 238)

Distribution (Fig. 131). C. Vietnam (Kon Tum).

Length of Forewing. ♂ 36 mm.

The common characteristics of the wing shape, pattern, and the male genitalia have been described in section 7. Male. Upperside forewing. The ground color is brown; an obscure band appears in the post-discal area. Upperside hindwing. A yellow area appears in spaces 7, 6, 5, and 4; dark brown tinged with bluish-green appears in space 3 to the tornus and dorsum; an indistinct line appears in the middle space. Underside forewing. The ground color is pale yellow slightly tinged with blue; a fuscous and indistinct band appears in the post-discal area and is remarkable in spaces 3, 2, and 1b. Underside hindwing. The pale-yellowish area appears in spaces 7, 6, 5, and 4; pale bluish-green appears in space 3 to the tornus and dorsum; a series of obscure dark bands appears in the margin

of spaces 7 to 1b. The female is unknown.

Holotype. ♂, Sa Thay, Kon Tum Prov. Vietnam. Jul. 2008, KMNH (KMNH IR 200,289).

This new species is very similar to *omeia*, but the color of the antenna is different, i.e., in *pseudomeia*, over 10 segments from the tip are bright yellow on bothsides, whereas around four segments from the tip are bright yellow on the upperside in *omeia*. The yellow area of the hindwing upperside is paler than that of *omeia*, and the ground color of the underside is lighter and not as yellowish as *omeia*. The dark area of the hindwing upperside is tinged a deep brown with bluish-green (brown in *omeia*). The female is unknown.

Antenna. Upperside and underside: The tip and the apical portion are bright yellow; the discal and the basal portions are blackish-brown.

Male Genitalia (Fig. 173). Valva: Short and wide; apex is round, not twisted, and without serration. Phallus: Stout; length is almost the same as the valva. Uncus: The middle portion is swelling, and the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) pacifica* MELL, 1935**
(Figs. 79, 110, 239, 240)

Euthalia nara pacifica MELL, 1935. Deut. ent. Zeit. 1934: 243, pl. 2 ♂. Holotype ♂, China: Chekiang, Zhejiang (ZFMK) (Fig. 79), [examined].

Eutharia [sic] *pacifica xilingensis* YOSHINO, 1997. Neo Lepidoptera 2-2: 5, figs. 35, 36, 74. Holotype ♀, China: Tayi, Sichuan (MNHAH) (Fig. 110) [synonymised by HUANG, 1999: 645] [examined].

Distribution (Fig. 132). Zhejiang, Hunan, Fujian, Sichuan, S. Gansu, Guangxi, Guizhou, Yunnan.

Length of Forewing. ♂ 35–38 mm, ♀ 42–49 mm.

The male of *pacifica* is distinguishable from the others by the following characteristics. The apex of the forewing is pointed; the undersides of bothwings are pale and hazy in color. Though MELL (1935) described *pacifica* in his revision of the *nara* group, it has since been forgotten for many years. KOIWAYA (1996) made reference to MELL's paper and revised the classification of *nara*, treating *pacifica* as an independent species once more. The holotype of *pacifica* (Fig. 79), which has been described from Chekiang, Zhejiang, China, is now preserved in ZFMK, Bonn. The type locality of *xilingensis* is Tayi, Sichuan, China, and the holotype (Fig. 110) is female. The original description is of a "post-discal streak less developed" (YOSHINO, 1997: p. 5) in female, but I cannot find the differences between *xilingensis* and the nominotypical subspecies from Zhejiang. I recognize *xilingensis* as a synonym of *pacifica*, as HUANG (1999) mentioned. The taxon *masakai*, which was described as a subspecies of *pacifica*, is treated as

an independent species (see *E. (L.) masaokai*).

Antenna. Upperside: The tip is generally bright yellow (but occasionally the lateral side is partly blackish), except that the tip is blackish-brown. Underside: The tip is bright yellow; the outside of the apical portion has a blackish speck, except that the tip is brown.

Male Genitalia (Fig. 174). Valva: Short and wide; apex is round, not twisted, and without serration. Phallus: Slender; apical portion of the aedeagus is sclerotized; length is almost the same as the valva. Uncus: The middle portion is swelling, and the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) masaokai* YOKOCHI, 2005 stat. nov.**
(Figs. 64, 241–243)

Euthalia (Limbusa) pacifica masaokai YOKOCHI, 2005b. Trans. lepid. Soc. Jap. 56 (1): 9, figs. 5, 6 ♂, 7, 8 ♀. Holotype ♂, N. Laos: Xamneua (TY) (Fig. 64), [examined].

Distribution (Fig. 133). N. Laos.

Length of Forewing. ♂ 37–39 mm, ♀ 45–50 mm.

In the first description of *masaokai*, I described it as a subspecies of *pacifica*, but here I correct that and classify it as an independent species (stat. nov.). Because few male specimens of *masaokai* have been collected with a lot of *nara* in the type locality Xam Neua, it must be a fairly rare species. One female (Fig. 243) that was captured by Mr. Kiyoshi MIURA was also recorded from Oudomxay, Laos. Though the material is rather old and broken, it has the typical characteristics of *masaokai*.

Antenna. Upperside: Blackish-brown. Underside: The tip and the apical portion are light brown; the outside of the apical portion has a blackish-speck; the discal and the basal portions are brown.

Male Genitalia (Fig. 175). Valva: Short and wide; apex is round, not twisted, and without serration. Phallus: Slender; apical portion of the aedeagus is sclerotized; length is almost the same as the valva. Uncus: The middle portion is swelling, and the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) kuriyamai* sp. nov.**
(Figs. 244–246)

Distribution (Fig. 134). Vietnam.

Length of Forewing. ♂ 39 mm, ♀ 51 mm.

The common characteristics of the wing shape, pattern, and the male genitalia have been described in section 7. Male. Upperside forewing. The ground color is brown slightly tinged with green; an obscure spot appears in space 3 of the post-discal areas, and a series of obscure black spots appears in the

margin. Upperside hindwing. The ground color is the same as the forewing; an orange-yellow area appears in the discal and post-discal parts of spaces 7 and 6, and each is divided into two areas by a dark brown band; a series of obscure black bands appears in the margins of spaces 7 to 1b. Underside forewing. The ground color is greenish-yellow; pale-yellowish spots appear in spaces 4 to 1b of the discal area, and the spot in space 2 is the largest; the spot in space 3 is slightly dislocated to basal compared to spots in spaces 2 and 4. Underside hindwing. The ground color is the same as the forewing; discal spots appear in spaces 7 to 2 (spots in spaces 7 and 6 are pale yellow and conspicuous, whereas spots in spaces 5 to 2 are seen only in contour); a series of obscure black bands appears in the margins of spaces 7 to 1b. Female. Upperside forewing. The ground color is brown; a series of white spots appears in spaces 7–2; the costa is not eroded by pale yellowish-white scales; a spot in space 3 is not convex on the basal side but convex on the outside; white spots appear in spaces 8 and 6. Upperside hindwing. The ground color is the same as the forewing; pale-yellowish spots with an obscure margin appear in the discal areas of spaces 7 and 6; a broad and obscure band with green appears in the post-discal area. Underside forewing. The ground color is greenish-brown, except for bluish-green in the basal area; clear white spots appear in spaces 6–2 (the spot in space 7 is obscure); white spots appear in spaces 8 and 6. Underside hindwing. The ground color is bluish-green; pale yellowish-white spots appear in the discal areas of spaces 7–3 (clear in spaces 7 and 6; obscure in spaces 5–2); a series of obscure black bands appears in the margin of spaces 7 to 1b.

Holotype. ♂, Di Linh, Lam Dong Prov., Vietnam, Apr. –May. 2008, KMNH (KMNH IR 200,290).

Paratypes. 1♀, Nghe An, Vietnam, 17, Aug. 2007, preserved in T. & K. SAITO collection; 1♀, Jul. 2008, Sa Thay, Kon Tum Prov., Vietnam, preserved in T. YOKOCHI collection.

Etymology. The new species name *kuriyamai* is dedicated to Mr. Sadamu KURIYAMA, a Japanese amateur butterfly researcher. This species is very similar to *E. (L.) masaokai* from northern Laos, but there are the following differences. (1) The apex of the forewing in the male is strongly pointed in *kuriyamai*. (2) The yellowish area of the upperside hindwing in the male is tinged with orange (fuscous yellow in *masaokai*). (3) The border of yellow and the dark area on the hindwing upperside in the male are indistinct (they are distinct in *masaokai*). (4) The discal yellow spots in spaces 5, 4, and 3 of the hindwing upperside in the male are absent (in *masaokai*, they are present at spaces 5 and 4 and indistinct at space 3). (5) The spot in space 3 of the forewing in the female is not convex on the basal side but convex on the outside (in *masaokai*, the basal is convex, and the outside is concave). The antenna is similar to *E. (L.) masaokai*.

Antenna. Upperside: Blackish-brown. Underside: The tip and the apical portion are light brown; the outside of the apical

portion has a blackish-speck; the discal and the basal portions are brown.

Male Genitalia (Fig. 176). Valva: Short and wide; apex is round, not twisted, and without serration. Phallus: Slender; apical portion of the aedeagus is sclerotized; length is almost the same as the valva. Uncus: The middle portion is swelling, and the apex is pointed and gently curved toward the abdominal side.

II. *Patala* group

The yellowish area does not spread into space 7 of the hindwing upperside. This group can be classified into the following A and B types based on the combination of hindwing spots in males.

Type A

Discal band (or trace) of hindwing runs from costa to dorsum, without being parallel to the termen. Type A can be divided into three subtypes, A1, A2, and A3.

Subtype A1

Line combined with the discal white spot in space 6 and post-discal white spot in space 3 of the forewing to an angle.

Euthalia (Limbusa) iva (MOORE, [1858])

Distribution (Fig. 135). N. E. India, N. Myanmar, N. Indochina.

Length of Forewing. ♂ 40–50 mm, ♀ 47–58 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. Sexes are similar. Because the tip of the antenna is bright orange and the spots of bothwings are pure white, this material is easy to distinguish from the other species.

Antenna. Upperside: The tip is bright brown; except that the extreme tip is blackish-brown. Underside: The tip and the apical portion are bright yellow; the outside of the apical portion has a blackish-speck; the discal and basal portions are brown.

Male Genitalia (Fig. 177). Valva: Slender; the apex is rather pointed, not twisted, and with around 10 short serrations. Phallus: Thin; length is about 2/3 of the valva. Uncus: The middle portion is swelling, and the apex is pointed and gently curved toward the abdominal side.

Euthalia (Limbusa) iva iva (MOORE, [1858]) (Figs. 48, 247–250)

Adolias iva MOORE, [1858]. Cat. lep. Ins. Mus. E. I. C. (1): 195. Holotype ♂, India: Darjeeling, W. Bengal (BMNH) (Fig. 48), [examined].

Distribution. Sikkim, Bhutan, Manipur, Kachin, Sagain, S. E. Xizang.

The Indian specimens with which I am familiar are three males and three females (including the holotype male) in BMNH (male in Fig. 247; female in Fig. 248) and one male that the late Mr. John N. ELIOT captured around Darjeeling. The ELIOT material is now preserved in Tochigi Prefectural Museum, Tochigi, Japan, through the personal collection of Mr. Kazuhiko MORISHITA. The specimens around the type locality (Darjeeling) are few in number because the host plants were reduced by the development of tea plantations and because this was already originally a rare species. As with *E. (L.) durga* (mentioned in part 3), it seems that new records around this area would be difficult to acquire. The materials from the Kachin state of Myanmar are rather smaller than those of Darjeeling, but there is no difference in wing pattern, so I include the Kachin specimen as a nominotypical subspecies.

Euthalia (Limbusa) iva buensis MONASTYRSKII, NGUYEN & YOKOCHI, 2000 (Figs. 19, 251, 252)

Euthalia (Limbusa) iva buensis MONASTYRSKII, NGUYEN & YOKOCHI, 2000. Bull. Soc. ent. Fr., 105 (2): 209, Figs. 1♂, 3 (male genitalia). Holotype ♂, Vietnam: Nghe An province (MNHN) (Fig. 19), [examined].

Distribution. N. Vietnam, C. Vietnam.

The ground color of the upperside is more conspicuous in bluish-green, and the white spots of the hindwing are clearer than in the nominotypical subspecies. In the female, the oblique white band of the forewing is large and conspicuous. The subspecies is distributed in northern and central Vietnam.

Euthalia (Limbusa) malapana SHIRÔZU & CHUNG, 1958 (Figs. 63, 253, 254)

Euthalia malapana SHIRÔZU & CHUNG, 1958. Trans. lepid. Soc. Jap. 9 (2): 17, figs. 1, 3 ♂, 2, 4 ♀. Holotype ♀, China: Malapa, Taiwan (GSKU) (Fig. 63), [examined].

Distribution (Fig. 136). Taiwan.

Length of Forewing. ♂ 39–41 mm, ♀ 48–50 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. Sexes are similar. As the late Prof. Takashi SHIRÔZU described *malapana*, it is very popular with Japanese researchers, but few specimens are housed because of its rarity. Recently, a certain number have been captured, but because of environmental change where it occurs, it is still hard to acquire. This species is similar to *E. (L.) pratti*, but *malapana* have large white spots in the upperwing and two conspicuous white spots in space 1b of the forewing. The other differences

Table 4. Morphological differences among *malapana*, *pratti*, *occidentalis*, *cooperi*, and *monastyrskiyi*

	<i>malapana</i>	<i>pratti</i>	<i>occidentalis</i>	<i>cooperi</i>	<i>monastyrskiyi</i>
Wing shape	Termen of forewing slightly concave; end of vein 2 of forewing projects slightly	Termen of forewing slightly concave; end of vein 2 of forewing projects slightly	Termen of forewing slightly concave; end of vein 2 of forewing projects slightly	Costa of forewing round; termen of forewing slightly concave	Termen of forewing slightly concave; end of vein 2 of forewing projects slightly
Ground color of upperside	brown tinged with bluish-green	brown with glittery bluish-green	brown (bluish-green not strong)	brown tinged with bluish-green	brown tinged with bluish-green
line combined with discal white spot in space 6 and postdiscal white spot in space 3 of forewing	to angle (subtype A1)	towards termen (subtype A2)	towards termen (subtype A2)	towards termen (subtype A2)	towards termen (subtype A2)
Line up of spots in spaces 6, 5, and 4 of forewing	form a straight line	spot in space 5 slightly out of line to basal	spot in space 5 slightly out of line to basal	form a straight line	form a straight line
Position of spot in space 2 of forewing	around below of spot in space 3	displace slightly to termen	displace slightly to termen	much displace to termen	displace slightly to termen
White spot in space 1b of forewing	present (two spots)	absent	absent	absent	absent
Ground color of underside	brown tinged with yellowish-green	brown tinged with yellowish-green	brown tinged with yellowish-green	brown tinged with yellow, green and bluish-white	brown tinged with yellow, green and bluish-white

with *pratti* are the lesser number of serrations in the valva apex and the longer phallus (almost the same length as the valva) (Table 4). The left bottom in Fig. 4 is the ovum of *malapana* reported in UCHIDA (1991). UCHIDA (1991) studied the habitat and ecology of *malapana* in detail. The description was in Japanese, so I quote the translation here:

“Habitat: This species was seen and collected around Shishanxi in 1988 and 1989. Judging from former records *malapana* seems to be distributed in the area of Mt. Baxianshan, at an altitude of about 1,000 m high. Biology: As the acute apex of forewing shows it flies more swiftly than *insulae* and *formosana*. This species retains among the jungle and seldom visits on open land as well as *kosempona*. Sometimes they are seen feeding on overripe fruits (or pineapple soaked in several kinds of fruits) on open area. They fly from the middle of July to the beginning of October, later than *insulae* and allied species” (UCHIDA, l. c.: p. 152).

Antenna. Upperside: The tip is bright brown except that the extreme tip is blackish-brown. Underside: bright brown; outside of apical portion is a blackish speck.

Male Genitalia (Fig. 178). Valva: Slender and extremely long; the apex is rather pointed, not twisted, and with several large serrations. Phallus: Large and stout; length is almost the same as the valva. Uncus: The middle portion has a swelling; the apex is pointed and gently curved toward the abdominal side.

Euthalia (Limbusa) kosempona FRUHSTORFER, 1908

Distribution (Fig. 137). S. China, Taiwan, N. Indochina.

Length of Forewing. ♂ 35–39 mm, ♀ 40–44 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. This species is seemingly sexually dimorphic, but the wing pattern is similar between the sexes. It was reported as a subspecies of *sahadeva* in the original description, but it is an independent species. The differential diagnoses among the five allied species (*kosempona*, *narayana*, *sahadeva*, *thawgawa*, and *pyrrha*) are indicated in Table 5.

Antenna. This species shows differences in the characteristics of the antenna between the male and female. Male upperside: The tip is bright yellow, except that the extreme tip is blackish-brown. Male underside: The tip and the apical and discal portions are bright yellow; the basal portion is brown. Female upperside: The tip is bright yellow, except that the extreme tip is blackish-brown. Female underside: The tip is light brown; the apical portion is blackish-brown; the discal and basal portions are brown.

Male Genitalia (Figs. 179, 180). Valva: Long and slender; the apex is round, not twisted, and with around 10 short serrations. Phallus: Slender; length is about 1/2 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

Table 5. Morphological differences among *kosempona*, *narayana*, *sahadeva*, and *pyrrha*

	<i>kosempona</i>	<i>narayana</i>	<i>sahadeva</i>	<i>thawgawa</i>	<i>pyrrha</i>
Wing shape (both sexes)	round and termen of hindwing projected	round but termen of hindwing not so projected	slim and apex of forewing rather pointed	slimmer and apex of forewing more pointed compared with <i>sahadeva</i>	round but termen of hindwing not so projected
Color of oblique spots of forewing	fuscous yellow or pale yellow in male; white or pale cream-yellow in female	creamish-white in male; white or pale cream-yellow in female	fuscous yellow in male; white in female	pale yellow in male; white or cream-yellow in female	fuscous yellow in male; white or cream-yellow in female
Oblique spots of forewing in male	conspicuous in spaces 6 to 1b	conspicuous and large in spaces 6 to 2; absent in space 1b	conspicuous and large in spaces 6 to 1b	conspicuous and large in spaces 6 to 2; absent in space 1b	conspicuous in spaces 6 to 3; accentuated in circumference of space 3; appear but margin obscured in spaces 2 and 1b
Discal spots of hindwing in male	conspicuous in spaces 7 to 1b; spot in space 4 displace towards basal	appear in spaces 7 to 5; obscure in spaces 4 and below	conspicuous in spaces 7 to 2	appear in spaces 7 to 5; obscure in spaces 4 and below	appear in spaces 7 to 2; slight small in space 4
Ground color of underside in male	fuscous yellow	greenish-yellow	fuscous greenish-yellow	greenish-yellow	fuscous yellow tinged with green

***Euthalia (Limbusa) kosempona kosempona* FRUHSTORFER, 1908**

(Figs. 58, 90, 255, 256)

Euthalia sahadeva kosempona FRUHSTORFER, 1908b. Ent. Zeit., Stuttgart 22 (29): 118. Syntypes ♀, China: Kosempo, Taiwan (MNHN) (Fig. 58), [examined].

Euthalia hebe shinnin FRUHSTORFER, 1908b. Ent. Zeit., Stuttgart 22 (29): 119. Syntypes ♂, China: Kanshirei, Taiwan (MNHN) (Fig. 90), [Synonymised by MELL, 1935: 245] [examined].

Euthalia pyrrha var. *daitoensis* MATSUMURA, 1919. Ent. Zeit., Stuttgart 23 (19): 572. Holotype ♀, China: Daito, Taiwan, [not located].

Distribution. Taiwan.

This Taiwanese subspecies has a wide and deep yellowish band in bothwings of the male and has a pale-yellowish oblique band in the forewing of the female. The taxon *shinnin* was described as a subspecies of *hebe*, but MELL classified it as a synonym of *kosempona*. MATSUMURA (1919) mentioned that *ditoensis* was a variety of *pyrrha*, but the depicted specimen was “*Limenitis dudu*” in truth (see pages 24–25 in part 1). Though the taxonomic name that was used in MATSUMURA (1919) was shown as “*Euthalia shinshin* FRUHS.”, FRUHSTORFER had never described the name “*shinshin*”. “*Shinshin*” must be a misspelling of “*shinnin*”.

***Euthalia (Limbusa) kosempona albescens* MELL, 1923**

(Figs. 8, 257, 258)

Euthalia shinnin albescens MELL, 1923. Deut. ent. Zeit. 1923: 158. Lectotype ♂, China: N. Guangdong (ZMHU) (Fig. 8), [lectotype designated by YOKOCHI, 1999: 177] [examined].

Distribution. Guangdong, Fujian, Guangxi, Hubei, Hunan, Sichuan, S. Shaanxi, Yunnan, N. Vietnam.

MELL’s *albescens* that is distributed widely in southern China has a narrow and pale-yellowish band in bothwings in the male, compared with the nominotypical subspecies. The oblique band of the forewing in the female is pure white, and I have never seen a yellowish one as the nominotypical subspecies. One male was designated as the lectotype (Fig. 8) in YOKOCHI (1999).

***Euthalia (Limbusa) narayana* GROSE-SMITH & KIRBY, 1891**

Distribution (Fig. 138). N. E. India, N. Myanmar, S. China, Indochina.

Length of Forewing. ♂ 34–41 mm, ♀ 43–46 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. Sexes are similar, but the female is larger. At first, *narayana* was described as an independent species, but it has been treated as a subspecies of *sahadeva* until recently.

Here I classify it as a species again. This species *narayana* is different from *sahadeva* in the shape of wing, i.e., *narayana* is rounder than *sahadeva* and is deeper bluish-green in the upperside ground color in both sexes (brown tinged with green in *sahadeva*) (Table 5).

Antenna. This species shows differences in the characteristics of the antenna between the male and female. Male upperside: The tip is bright yellow, except that the extreme tip is blackish-brown. Male underside: The tip and the apical portion are bright yellow; the discal and basal portions are brown. Female upperside: The tip is bright yellow, except that the extreme tip is blackish-brown. Female underside: The tip is brown; except that the extreme tip is blackish-brown.

Male Genitalia (Figs. 181, 182). Valva: Long and slender; the apex is round, not twisted, and with around 10 short serrations. Phallus: Slender; length is about 1/2 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) narayana narayana* GROSE-SMITH & KIRBY, 1891**
(Figs. 70, 73, 259–263)

Euthalia narayana GROSE-SMITH & KIRBY, 1891. *Rhopalocera Exotica*, 1: *Euthalia*, 6, pl. *Euthalia* II, figs. 4, 5 ♀. Syntype(s) ♀, Myanmar: Ruby Mines (Mogok), Mandalay (BMNH) (Fig. 73), [examined].

Euthalia sahadeva nadaka FRUHSTORFER, 1913. *Die Gross-Schmetterlinge der Erde*, 9: 682, pl. 130c, *sahadeva* ♂. Syntypes ♂ ♀, India: Khasi Hills, Meghalaya (MNHN) (Fig. 70), [examined]. **syn. nov.**

Distribution. Khasi Hills, Sikkim, Kachin, Sagain, Shan, Chin, Mandalay, N. Thailand, N. Laos, S. Yunnan.

This subspecies is from Ruby Mines, in the suburbs of Mogok, northern Mandalay, Myanmar, and distributes widely from northern India to Indochina. The northeastern Indian material has been designated as *nadaka* (type locality is Khasi Hill), but it is difficult to find differences between *nadaka* and *narayana*, so I treat *nadaka* as a synonym of *narayana*. As is often the case with the subgenus *Limbusa*, the fresh color of the wings, especially the bluish-green, is paler and browns easily as time passes. Almost all specimens of *nadaka* preserved in a museum collection have been there for more than 100 years, so I have never seen a fresh-colored one. It is a pity that political issues preclude our entering the habitat area.

***Euthalia (Limbusa) narayana yanagisawai* SUGIYAMA, 1996 stat. nov.**
(Figs. 111, 264–267)

Euthalia yanagisawai SUGIYAMA, 1996. *Pallarge* 5: 2, figs. 3, 4

♂, 19A ♂ genitalia. Holotype ♂, China: Xichang, Sichuan (HS) (Fig. 111), [examined].

Distribution. S. Sichuan, Yunnan, Fujian.

The oblique-running white spots of the upperside forewing are wide in both sexes. Here I treat it as a subspecies of *narayana*; however, it was described as an independent species. In drawer Rh11782 in BMNH, two males and four females of *yanagisawai* from southwestern China (W. Yunnan: Mo Sy Mien, Ta Tsien Lou, Tse Kou, and Siao Lou) are preserved (Figs. 265, 266), but they are not arranged in taxonomic order. One female were captured in Fujian, China (Fig. 267). Recently, two new discoveries have been brought in from N. Vietnam and S. Vietnam, respectively. Especially, the locality in S. Vietnam is far from the main range of *narayana* distribution. Two new subspecies of *narayana* from N. and S. Vietnam are described below.

***Euthalia (Limbusa) narayana dongvanensis* ssp. nov.**
(Figs. 268, 269)

Distribution. N. Vietnam.

Length of Forewing. ♂ 35–41 mm; ♀ 43–46 mm.

This new subspecies *dongvanensis* from N. Vietnam is distinguishable from the other subspecies in the following characteristics. (1) The size in the male is comparatively larger than *narayana* and *yanagisawai*. (2) The light-yellow oblique band of the forewing upperside in the male is as large as that of *yanagisawai*, but paler (more yellowish in *yanagisawai*). (3) The ground color of the upperside in the male is more bluish-green compared with *narayana* and *yanagisawai*. (4) The oblique band of the forewing upperside in the female is large and pale yellow (in all the materials that I compared).

Holotype. ♂, Dong Van, Ha Giang Prov., Vietnam, May 2008, KMNH (KMNH IR 200,291).

Paratypes. 1♂, Ha Giang, Jun. –Jul. 2002; 2♂, Ha Giang, Jul. 2003; 2♂, Ha Giang, Jul. 2005; 2♂, Dong Van, 25, Jun. –2, Jul. 2006; 1♂, Dong Van, Jun. –Jul. 2008; 3♀, Dong Van, Aug. 2004; 1♀, Dong Van, 25, Jun. –2, Jul. 2006. Paratypes are preserved in T. YOKOCHI collection.

***Euthalia (Limbusa) narayana dalatensis* ssp. nov.**
(Figs. 270, 271)

Distribution. S. Vietnam.

Length of Forewing. ♂ 39 mm; ♀ 43–46 mm.

This new subspecies *dalatensis* from S. Vietnam is distinguishable from the other subspecies in the following characteristics. (1) Size in the male is comparatively larger than *narayana* and *yanagisawai*. (2) The light-yellow oblique band of the forewing upperside in the male is as large as that of *yanagisawai*, but paler (more yellowish in *yanagisawai*).

(3) The ground color of the upperside in the male is a stronger blue compared with *dongvanensis*. (4) The oblique band of the forewing upperside in the female is large and white (in all of the materials that I compared). (5) The ground color of the upperside in the female is a stronger blue compared with the other subspecies.

Holotype. ♂, Ta Nung, near Dalat, LamDong, Vietnam, 14, Aug. 2008, KMNH (KMNH IR 200,292).

Paratypes. 1♂, Tiger Falls, near Dalat, 14, Aug. 2004; 1♂1♀, Nong Trai, near Dalat, 17, Aug. 2004; 1♀, Tiger Falls, near Dalat, 15, Aug. 2004; 1♀, Ta Nung, near Dalat, 16, Aug. 2004; 1♀, Tiger Falls, near Dalat, 17, Aug. 2004. Paratypes are preserved in T. & K. SAITO collection.

***Euthalia (Limbusa) sahadeva* (MOORE, 1859)**

(Figs. 86, 272, 273)

Adolias sahadeva MOORE, 1859. Trans. ent. Soc. Lond. (2) 5: 80, pl. 8, fig. 3♂. Syntype(s) ♂, “N. India” (BMNH) (Fig. 86), [examined].

Distribution (Fig. 139). Nepal, Sikkim, Bhutan, Khasi Hills, S. E. Xizang.

Length of Forewing. ♂ 40–42 mm, ♀ 48 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. This species is seemingly sexually dimorphic, but the wing pattern is similar between the sexes. The female is larger, and the shape of the wings is rounder than in the male. In the past, this species has been thought to be distributed widely from northern India to China and Indochina, but it should be distributed only in northeastern India and southeastern Tibet. However, it is possible that *sahadeva* will be discovered in the northern area of Myanmar in the future. The upperside ground color in the male is pale greenish-brown, and the fuscous yellow spots of the upperside forewing are large. This species *sahadeva* can be distinguished from *narayana* and *thawgawa* by the large and conspicuous discal spots of the hindwing (Table 5).

Antenna. This species shows differences in the characteristics of the antenna between the male and female. Male upperside: The tip is bright yellow, except that the extreme tip is blackish-brown. Male underside: The tip is bright yellow, except that the extreme tip is brown, but around the segments 5 to 15 of the outside is blackish-brown. Female upperside: The tip is bright yellow, except that the extreme tip is blackish-brown. Female underside: The tip is brown; except that the extreme tip is blackish-brown.

Male Genitalia (Fig. 183). Valva: Long and slender; the apex is round, not twisted, and with around 10 short serrations. Phallus: Slender; length is about 1/2 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) thawgawa* TYTLER, 1940 stat. nov.**

(Figs. 99, 274–277)

Euthalia sahadeva thawgawa TYTLER, 1940. J. Bombay nat. Hist. Soc. 42 (1): 115. Syntypes ♂ ♀, Myanmar: Hthawgaw, Kachin (BMNH) (Fig. 99), [examined].

Distribution (Fig. 140). Kachin, Sagain, Naga Hills, S. Laos.

Length of Forewing. ♂ 38–41 mm, ♀ 44–48 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. This species also is seemingly sexually dimorphic, but the wing pattern is similar. The female is larger. In the past, this species has been thought to be a subspecies of *sahadeva*, but here I give it as an independent species (stat. nov.). It has a rather small size, the apex of the forewing is pointed, and the discal spots of the hindwing that disappear around spaces 4, 3, and 2 are a peculiarity of the species *thawgawa* compared with *sahadeva*. The ground color of the upperside is a dark greenish-brown. We have a chance to obtain a *thawgawa* specimen from northern Myanmar (Kachin state), but it is distributed in the Naga Hills. The material is now preserved in BMNH (Rh11783) (Fig. 277). This species and *narayana* live together in the Naga Hills. It is difficult to distinguish the female among the allied species, but the apex of the forewing is more pointed and the wing shape is much more slender in *thawgawa*. The color of the forewing spots in the female is generally white, but some materials are pale yellow (Fig. 276, Table 5).

Antenna. This species shows differences in the characteristics of the antenna between the male and female. Male upperside: The tip is bright yellow, except that the extreme tip is blackish-brown. Male underside: The tip is bright yellow, except that the extreme tip is brown, but around the segments 5 to 15 of the outside is blackish-brown. Female upperside: The tip is bright yellow, except that the extreme tip is blackish-brown. Female underside: The tip is brown; except that the extreme tip is blackish-brown.

Male Genitalia (Fig. 184). Valva: Long and slender; the apex is round, not twisted, and with around 10 short serrations. Phallus: Slender; length is about 1/2 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) kardama* (MOORE, 1859)**

(Figs. 15, 52, 67, 278, 279)

Adolias kardama MOORE, 1859. Trans. ent. Soc. Lond. (2) 5: 80, pl. 9, fig. 3 ♂, ♀. Syntypes ♂ ♀, “China” (OXUM) (Fig. 52), [examined].

Adolias armandiana POUJADE, 1885. Bull. Soc. ent. Fr. (6) 5: 216. Holotype ♀, China: Mou-Pin, Sichuan (MNHN) (Fig. 15), [synonymised by STICHEL, 1908: 191] [examined].

Euthalia kardama miao SUGIYAMA, 1996. Pallarge 5: 4, figs. 5, 6 ♂. Holotype ♂, China: W. Mt. Miaola, Guangxi (HS) (Fig. 67), [examined]. **syn. nov.**

Distribution (Fig. 141). Sichuan, S. Gansu, S. Shaanxi, Yunnan, Hubei, Guangxi, Zhejiang, Fujian.

Length of Forewing. ♂ 41–44 mm, ♀ 52–54 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. Sexes are similar. This species seems to be a common species in the localities. The characteristic of the wing shape is that the edge at vein 4 (M3) of the hindwing termen is pointed in both sexes. The ground color is generally pale greenish-brown, but there are some exceptions. Especially, the color tone in the submarginal hindwing varies with bluish-white, bluish-green, and greenish-white; however, they come from the same locality. The underside ground color is usually bright greenish-yellow, but it is sometimes tinged with blue. The morphological differences with related species *mingyiae* are summarized in Table 6. The larva and pupa figures shown in Figs. 5 and 6 are depicted through the courtesy of Mr. Motohiro HARADA. A pair of *kardama* syntypes is preserved in OXUM (Fig. 52) and the tone of the color has changed to pale brownish over time. The detailed type locality is unknown, as the original description mentioned only “China”. Judging from the day and age, it would be proper to suppose that the real type locality is not far from one of the five ports of Shanghai, Fuzhou, Xiamen, Ningbo, and Guangzhou, which were opened to foreign ships for trade by the Nanjing Treaty, concluded in 1842. I suspect that it would be around Guangdong or Fujian. The holotype of *armandiana* (Fig. 15) is now housed in MNHN, and it is a synonym of *kardama* as STICHEL (1908) pointed out. The type specimen has also been damaged by exposure over a long period to ultraviolet rays.

The taxon *miao* from Guangxi is treated here as a synonym of the nominotypical subspecies. As mentioned, the reason is that this species shows various wing colors even though they live in the same place.

Antenna. Upperside: The tip is bright yellow except that the extreme tip is blackish-brown. Underside: The tip is bright yellow; the apical portion is blackish-brown; the discal and basal portions are brown.

Male Genitalia (Fig. 185). Valva: Long and slight stout; the apex is not round, not twisted, and with around 10 rough serrations. Phallus: Rather stout; length is about 2/3 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

Euthalia (Limbusa) mingyiae HUANG, 2002

(Figs. 68, 280)

Euthalia (Limbusa) mingyiae HUANG, 2002. Atalanta 33 (3/4): 349–350, pl. XV, figs. 6, 8 ♂; fig. 10 (male genitalia). Holotype ♂, China: Nadadan, Nujiang valley, N. W. Yunnan (HH) (Fig. 68), [paratype examined].

Distribution (Fig. 142). N. W. Yunnan.

Length of Forewing. ♂ 40–42 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. This is a very rare species that has only been discovered in the far northern district of Yunnan, China. It is quite similar to *E. (L.) kardama*, but the most conspicuous difference is that the median series of spots of the upperside hindwing is almost the same size towards the dorsum, whereas in *kardama*, the spots become smaller. Other characteristics of this species are as follows: The forewing apex is rather round and less pointed, and the forewing termen is rather concave at

Table 6. Morphological differences between *kardama* and *mingyiae*

	<i>kardama</i>	<i>mingyiae</i>
Wing shape	apex of forewing rather pointed; termen of forewing almost in straight	apex of forewing rather round and less pointed; termen of forewing concave at vein 4
Ground color of upperside	green with brown	darker and deeper green with brown
Line up of spots in spaces 6, 5, 4, and 3 of forewing	form a straight line	spot in space 4 slightly out of line to basal
Spot in space 1a of forewing	obscure or absent	large and conspicuous
Discal band of hindwing	form a line with a gentle arc, and getting narrower towards space 1b	form a straight line towards space 1b with the same width
Ground color of underside	faded brown tinged with bluish-green	faded brown with yellowish-green

vein 4; the upperside ground color is dark and deep green; the forewing discal spots in spaces 6, 5, and 4 are not in a smooth line with spots in spaces 3 and 2, but apparently shifted-in, directed to the dorsum well before the tornus. The female is unknown, but it is supposed that the sexes are similar. According to Mr. Hao HUANG, *mingyiae* is so rare that only a few male materials including type series of two males (one paratype preserved in BMNH drawer Rh11783) have ever been captured. I quote here the habitat description of *mingyiae* from the original text: "In its habitat, *mingyiae* flies together with *nujiangensis* and *sakota*. It likes to perch on the shrubs or lower branches of the trees on the roadside and often flies rapidly along the path." In the future, it might be discovered from southeastern Tibet or northern Myanmar.

Antenna. Upperside: The tip is bright yellow except that the extreme tip is blackish-brown. Underside: The tip and apical portion are bright brown; the discal and basal portions are dark brown.

Male Genitalia (Fig. 186). Valva: Long and slight stout; the apex is not round, not twisted, and with around 10 rough serrations. Phallus: Rather stout; length is about 2/3 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) tsuchiyai* YOKOCHI, 2005 stat. nov.**
(Figs. 104, 281, 282)

Euthalia (Limbusa) hebe tsuchiyai YOKOCHI, 2005b. Trans. lepid. Soc. Jap. 56 (1): 12, figs. 14, 15 ♂, 16, 17 ♀. Holotype ♂, Laos: Xamneua (JU) (Fig. 104), [examined].

Distribution (Fig. 143). N. Laos, N. Vietnam.

Length of Forewing. ♂ 40–43 mm, ♀ 46–50 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. Sexes are similar, but the discal band of the hindwing that is present in the male is decreased in the female. Currently, the northern part of Laos and Vietnam are the only localities. At first I described this taxon as a subspecies of *E. (L.) hebe*, but it should be listed as an independent species. The ground color of the upperside is deep green in both sexes; the underside is bluish-green tinged with silver in the male, and bluish-green without silver in the female. The discal band through both wings is cream-yellow in the male, and that of the female is more deeply colored than the male. Table 7 shows the differences among the four similar species (*guangdongensis*, *tsuchiyai*, *hebe*, and *pulchella*).

Antenna. Upperside and underside: The tip and the apical portion are black; the discal and basal portions are brown.

Male Genitalia (Fig. 187). Valva: Long and slender; the apex is not pointed, not twisted, and with several stout and

Table 7. Morphological differences among *guangdongensis*, *tsuchiyai*, *hebe*, and *pulchella*

	<i>guangdongensis</i>	<i>tsuchiyai</i>	<i>hebe</i>	<i>pulchella</i>
Wing shape	round; less pointed in apex of forewing; slight pointed at each vein	slight pointed in apex of forewing; not pointed at each vein	rather round; slight pointed in apex of forewing; not pointed at each vein	pointed in apex of forewing; not pointed at each vein
Ground color of upperside in male	dark greenish-brown	almost solid color; blackish-brown tinged with dark green	mottled color; dark brown with green	mottled color; dark brown with green
Ground color of upperside in female	brown tinged with green	dark brown with deep green	brown	dark brown with deep green
color of discal band of hindwing in male	pale yellow	deep yellow	pale yellow	pale yellow
Discal band of hindwing in male	rather narrow	rather narrow	wide	wide
inner margin of discal band of upperside hindwing	uneven	almost even	uneven	almost even
Antenna	upperside entirely blackish-brown; underside bright brown	tip and apical portion black; discal and basal portions brown (blackish in tip and apical portion impressive).	same as <i>tsuchiyai</i>	same as <i>tsuchiyai</i>

long serrations. Phallus: Not as stout; length is about 1/3 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) hebe* LEECH, 1891**
(Figs. 42, 283, 284)

Euthalia hebe LEECH, 1891. Entomologist 24 (Suppl.): 4. Syntypes, 2♂, China: Chang-Yang, Hubei (BMNH) (Fig. 42), [examined].

Distribution (Fig. 144). Hubei, Sichuan, Yunnan.

Length of Forewing. ♂ 38 mm, ♀ 46 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. This species appears to be sexually dimorphic, but the wing pattern is similar. Most species recorded in the nineteenth century are generally common, but this species *hebe* is very rare; however, it was described in 1891. One syntype from Hubei and five males from Sichuan are preserved in BMNH. In addition to these, the only other specimens that I have seen are two males in the SAITO collection and my material consisting of one pair. The female is extremely rare, and the male is very rare. I have never seen any female material except the one female in my collection. The male is similar to that of *E. (L.) kosempona*, but it is not difficult to distinguish them from one another: (1) The wing shape of *hebe* is not as round as *kosempona*; (2) the discal bands through bothwings are pale yellow in *hebe*; (3) the ground color of the underside in *hebe* is not as yellowish as in *kosempona*; and (4) the tip of the antenna is totally black in *hebe*. The female is so similar to those of the *nara* group that it is very difficult to distinguish them from each other. The plainest point of difference is the color tone of the antenna tip. As is the case with the male, the antenna tip is noticeably black. The other characteristics are as follows. (1) The spots of the forewing are strong in yellow. (2) The apical and subapical areas are dark brown (Table 7).

Antenna. Upperside and underside: The tip and the apical portion are black; the discal and basal portions are brown.

Male Genitalia (Fig. 188). Valva: Long and slender; the apex is not pointed, not twisted, and with several stout and long serrations. Phallus: Not as stout; length is about 1/3 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) pulchella* (LEE, 1979)**

Distribution (Fig. 145). N. Myanmar, N. W. Yunnan, S. E. Tibet.

Length of Forewing. ♂ 35–43 mm, ♀ 39–50 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. This species is seemingly sexually dimorphic,

but the wing pattern is similar between the sexes. The ground color of the upperside is dark brown tinged with bluish-green. The wing pattern in the male is basically similar to that of *E. (L.) hebe*, but it differs from *hebe* in the female, i.e., a conspicuous whitish band is present in the hindwing. Though a female in which the band was almost vanished was captured in Kachin state, Myanmar (Fig. 287), I consider it as a form of the spot-reduced type (Table 7). HUANG (2001) described the habitat of *pulchella* in detail, so I will quote it here: “The male has a very rapid and high flight on the tips of the trees, seldom down to the path. (It) often flies up and down the forest slope and never stops on the shrubs or lower branches of a tree, being very alert to the collector ... (omitted) ... The female is less alert and sometimes perches on the lower branches and shrubs” (HUANG, l. c: p. 105). **Antenna.** Upperside and underside: The tip and apical portion are black; the discal and basal portions are brown.

Male Genitalia (Fig. 189). Valva: Long and slender; the apex is not pointed, not twisted, and with several stout and long serrations. Phallus: Not as stout; length is about 1/3 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) pulchella pulchella* (LEE, 1979)**
(Figs. 74, 285–287)

Dophla pulchella LEE, 1979. Acta Zootaxonomica sinica 4 (1): 35, pl. 1, figs. 1, 2 ♀. Holotype ♀, China: Chayü, S. E. Xizang (IZCAS), [not examined].

Euthalia (Limbusa) hebe niwai YOKOCHI, 2005b. Trans. lepid. Soc. Jap. 56 (1): 12, figs. 18, 19 ♀, 20, 21 ♀. Holotype ♀, Myanmar: N. Kachin (TY) (Fig. 74), [examined]. **syn. nov.**

Distribution. S. E. Xizang, Kachin.

Lee (1979) described it from southeastern Tibet as an independent species. The photos given in the original paper were monochrome and indistinct, but I was able to check the clear pictures by courtesy of Dr. Songyun LANG in IZCAS, Beijing. Though I described *niwai* as a subspecies of *hebe*, I recognize here that it is a synonym of *pulchella*.

***Euthalia (Limbusa) pulchella ebbe* YOSHINO, 2002**
(Figs. 35, 288, 289)

Euthalia pulchella ebbe YOSHINO, 2002. Futao 40: 3, figs. 13, 14 ♂, 14, 15 ♀. Holotype ♂, China: Zhongdian, N. Yunnan (MNHAH) (Fig. 35), [examined].

Distribution. N. W. Yunnan.

This subspecies is recorded from northwestern Yunnan, China. It is similar to nominotypical subspecies, but a clear yellow spot appears in *ebbe*. There is no difference in the female.

***Euthalia (Limbusa) curvifascia* (TYTLER, 1915)**

Distribution (Fig. 146). N. E. India, N. Myanmar.

Length of Forewing. ♂ 36–38 mm, ♀ 41–42 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. This species is rather small compared with other species in the *patala* group. Sexes are similar. At first glance, it is similar to *E. (L.) khama* and *E. (L.) dubernardi*, but they can be distinguished by the following features: (1) The discal band of the upperside hindwing is clear and strong yellow in *curvifascia*. (2) The antenna is entirely black in *curvifascia*. (3) The ground color is brown tinged with slight green in the upperside and is bright bluish-green on the underside (especially conspicuous on the hindwing). (4) The yellowish-white band does not reach to the hind margin.

Antenna. Upperside and underside: Entirely black.

Male Genitalia (Figs. 190–192). Valva: Short and wide; the apex is round, not twisted, and without serration. Phallus: Slender; length is almost the same as the valva. Uncus: The middle portion is extremely swelling; the apex is pointed.

***Euthalia (Limbusa) curvifascia curvifascia* (TYTLER, 1915)**

(Figs. 12, 29, 290, 291)

Dophla curvifascia TYTLER, 1915. J. Bombay nat. Hist. Soc. 23 (3): 505, pl. 2, fig. 13 ♂. Syntypes, 6♂ 3♀, India: Yakama and Phesima in Naga Hills, Kabur Peak in Manipur (BMNH) (Fig. 29), [examined].

Euthalia (Dophla) anaea NIEPELT, 1927. Int. ent. Zeit. 21 (7): 52, fig. 6 ♂. Holotype ♂, India: Naga Hills, Assam (BMNH) (Fig. 12), [examined]. **syn. nov.**

Distribution. Naga Hills.

Three males and two females are preserved in BMNH (Rh37232 and Rh11785). The holotype of *anaea*, the newly designated synonym of *curvifascia*, is also housed in BMNH (Rh37228). This specimen is recorded from the highlands of northeastern India, Nagaland, and Manipur, but the materials are limited. At present, these areas are difficult to enter because of political issues.

***Euthalia (Limbusa) curvifascia nosei* YOKOCHI, 2000 stat. nov.**

(Figs. 75, 292, 293)

Euthalia (Limbusa) nosei YOKOCHI, 2000. Notes on Eurasian Insects 3: 24, figs. 1, 2 ♂; 3, 4 ♀; 18 (♂ genitalia). Holotype ♂, Myanmar: Nitadi, Kachin (YN) (Fig. 75), [examined].

Distribution. Kachin.

I described *nosei* as an independent species, but it is suitable

to cite as a subspecies of *curvifascia*, with the yellow band of the upperside hindwing stronger especially in spaces 7, 6, and 5 based on a later reexamination. This subspecies is also rare, and only a few materials are kept as scientific specimens. Recently, many kinds of butterflies have been imported to Japan, but I have never seen *nosei* except the types.

***Euthalia (Limbusa) suprema* UEHARA & YOKOCHI, 2001**

(Figs. 96, 294, 295)

Euthalia (Limbusa) suprema UEHARA & YOKOCHI, 2001. Trans. lepid. Soc. Jap. 52 (4): 240, figs. 5, 6 ♂, 7, 8 ♀, 16 (♂ genitalia). Holotype ♂, Laos: Xamneua, Houa Phan (JU) (Fig. 96), [examined].

Distribution (Fig. 147). N. Laos.

Length of Forewing. ♂ 41 mm, ♀ 53 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. This species appears to be sexually dimorphic, but the wing pattern is similar. With the initial discovery of *E. (L.) byakko* (discussed in part 3) in Laos by Japanese researchers Messrs. Jiro UEHARA and Toyokazu YOSHIDA, it was quite surprising that so many large new species, such as *khambounei* and *suprema*, were found one after another. This phenomenon provides a good example of how investigation in the Indochina area has not advanced. It has been found only from the type locality Xam Neua in northern Laos, which is the same place as *E. (L.) khambounei*. Another species, *E. (L.) pyrrha*, also distributes in Xam Neua. The discriminating points between *pyrrha* and *suprema* in the male are summarized as follows. Wing shape is similar between them, but the terminal dentation in the hindwing is stronger in *pyrrha*. A discal white band on the forewing is larger in *suprema*, and the wedge-shaped marks in spaces 4 and 3 edging the white spots are not so obvious. The white spot in space 5 of the hindwing is outwardly convex in both species, but the outer black wedge-shaped and white wedge-shaped marks are more conspicuous in *suprema*. In the female, the white spot in space 3 of the forewing is outwardly convex in *suprema*.

Antenna. Upperside: Entirely black. Underside: The tip and the apical portion are black; the discal and the basal portions are brown.

Male Genitalia (Fig. 193). Valva: Long and slender, with curved toward the dorsal side; the apex is not pointed, not twisted, and with around 10 rough and round serrations. Phallus: Extremely slender; length is about 2/3 of the valva. Uncus: The apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) pyrrrha* LEECH, 1892**

Distribution (Fig. 148). S. China, N. Indochina.

Length of Forewing. ♂ 34–38 mm, ♀ 41–45 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. This species appears to be sexually dimorphic, but the wing pattern is similar between the sexes (Table 5).

Antenna. This species shows differences in the characteristics of the antenna between the male and female. Male upperside: Entirely blackish-brown. Male underside: The tip is bright yellow, except that the extreme tip is brown, but around the segments 5 to 10 of the outside is blackish-brown. Female upperside: Entirely blackish-brown. Female underside: the tip and the apical portion are blackish-brown; the discal and the basal portions are dark brown.

Male Genitalia (Fig. 194). Valva: Long and slender; the apex is round, not twisted, and with around 10 short serrations. Phallus: Slender; length is about 1/2 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) pyrrrha* LEECH, 1892**

(Figs. 59, 82, 296, 297)

Euthalia pyrrrha LEECH, 1892. Butterflies from China, Japan and Korea: 137, pl. 21, fig. 4♀. Syntypes ♀, 5♀, China: Kwei-chow; Moupin; Omei-Shan, Sichuan (BMNH) (Fig. 82), [examined].

Euthalia leechi OBERTHÜR, 1907. Bull. Soc. ent. Fr. 1907 (15): 259. Syntypes ♂, 4♂, China: Moupin; Siao-lou, Sichuan (BMNH) (Fig. 59), [synonymised by UEHARA & YOKOCHI, 2001: 242] [examined].

Distribution. Sichuan, Fujian.

Because the Chinese nominotypical subspecies is very rare, the only records that I know are from Sichuan (Omeishan) and Fujian. However, it would be broadly distributed in southern China. The female taxon of *pyrrrha* that was described by LEECH (1892) and the male of *leechi* by OBERTHÜR (1907) are the same species.

***Euthalia (Limbusa) pyrrrha ueharai* YOKOCHI, 2005**

(Figs. 106, 298–300)

Euthalia (Limbusa) pyrrrha ueharai YOKOCHI, 2005b. Trans. lepid. Soc. Jap. 56 (1): 12–13, figs. 22, 23♂, 24, 25♀. Holotype ♂, N. Laos: Xamneua (JU) (Fig. 106), [examined].

Distribution. N. Laos, N. Vietnam.

It is distinguishable from the nominotypical subspecies in the

following characters. The male ground color is darker and the markings on the wings are distinct. The female is larger, and the ground color is stronger in dark green. There are two types in the discal row of spots of the forewing; one is white (Fig. 299), and the other is pale yellow (Fig. 300).

***Euthalia (Limbusa) guangdongensis* WU, 1994**

Distribution (Fig. 149). S. China.

Length of Forewing. ♂ 35–40 mm, ♀ 46–50 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. Sexes are dimorphic. It is similar to the mentioned *E. (L.) hebe*, but the color of the antenna tip is different: In *guangdongensis*, the upperside is blackish-brown and the underside is a bright brown, whereas in *hebe*, the bothsides are black (Table 7). In the female, I cannot find differences with *hebe* except for the color of the antenna, as I have not had the opportunity to examine enough specimens.

Antenna. Upperside: Entirely blackish-brown. Underside: Entirely bright brown.

Male Genitalia (Fig. 195). Valva: Long and slender; the apex is not pointed, not twisted, and with several stout and long serrations. Phallus: Slender; length is about 1/2–1/3 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) guangdongensis guangdongensis* WU, 1994**

(Figs. 17, 109, 301, 302)

Euthalia patala guangdongensis WU, 1994. Monographia Rhopalocerorum Sinensium: 493, 763, figs. ♀ (UP, UN). Holotype ♀, China: Fengkai, Guangdong (ZUG), [not examined].

Euthalia behe SUGIYAMA, 1996. Pallarge 5: 4, figs. 7, 8 ♂, 20A ♂ genitalia. Holotype ♂, China: Dayao Mts., Guangxi (HS) (Fig. 17), [examined]. **syn. nov.**

Euthalia behe wuyishana KOIWAYA, 1996. Studies of Chinese Butterflies, III: 247, figs. 1076, 1086 ♀. Holotype ♀, China: Wuyishan, Fujian (KMNH IR 200,293) (Fig. 109), [examined]. **syn. nov.**

Distribution. Guangdong, Guangxi, Fujian.

Although an old male specimen (Sichuan: de Tsien lou a Moupin) is housed in drawer Rh11771 in BMNH, a harmful insect bit the abdomen, and it is impossible to examine the genitalia (BMNH genitalia slide No. 29832). As *guangdongensis* and *behe* (Fig. 17) should be cited as the same species, the taxon *guangdongensis* is a synonym of *behe*. I also look upon *wuyishana* as a synonym of *guangdongensis*. Incidentally, although the collected date of the holotype specimen is written as “June” in the original description,

it is definitely “May”. Mr. Satoshi KOIWAYA, the author of *wuyishana*, provided me with the correct information.

***Euthalia (Limbusa) guangdongensis dayiana* KOIWAYA,
1996**

(Figs. 30, 303, 304)

Euthalia behe dayiana KOIWAYA, 1996. Studies of Chinese Butterflies, III: 248, figs. 1077, 1087 ♀. Holotype ♀, China: Dayi, Dafeishui, Sichuan (KMNH IR 200,294) (Fig. 30), [examined].

Distribution. Sichuan, Yunnan.

Compared with the nominotypical subspecies, the spots of bothwings are obviously larger and stronger in yellow in the male, and the underside is pale and hazy and tinged with yellow. In the female, the oblique band of the forewing is narrower, and the spots of the hindwing are more indistinct. The female is very close to *hebe*.

***Euthalia (Limbusa) confucius* (WESTWOOD, 1850)**

Distribution (Fig. 150). S. China, N. E. India, N. Myanmar, N. Indochina.

Length of Forewing. ♂ 46–52 mm, ♀ 55–59 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. It is large and sexually similar. Although this species, especially the female, has been thought to be rare, recently we have been able to obtain specimens relatively easily.

Antenna. Upperside: Entirely blackish-brown. Underside: Bright brown; the outside of the apical portion has a blackish-speck.

Male Genitalia (Figs. 196–198). Valva: Long and slender; the apex is sharply pointed and curved toward the dorsal side, with a large spine projected to the inside. Phallus: Slender; length is about 1/3 of the valva. Uncus: The middle portion is not as swelled; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) confucius confucius* (WESTWOOD,
1850)**

(Figs. 25, 305–307)

Adolias confucius WESTWOOD, 1850. The Genera of diurnal Lepidoptera, 2: 291. Syntype(s), China (OXUM) (Fig. 25), [examined].

Distribution. Sichuan, S. Shaanxi, Yunnan, Guangxi, Fujian. Syntypes are now preserved in OXUM, Oxford, UK. One of the syntypes is depicted in Fig. 25. The detailed type locality is unknown, as the original description mentioned only “China”.

For the same reason as with *E. (L.) kardama*, the true type locality would be around Guangdong or Fujian. Male material from southeastern Tibet (Fig. 307), which was presented by Mr. Hao HUANG, Qingdao, China, is thought to be associated with the nominotypical subspecies. It is distributed in a wide area of southern China.

***Euthalia (Limbusa) confucius sadona* TYTLER, 1940**

(Figs. 39, 85, 308–315)

Euthalia confucius sadona TYTLER, 1940. J. Bombay nat. Hist. Soc. 42 (1): 116. Holotype ♂, Myanmar: Sadon, Kachin (BMNH) (Fig. 85), [examined].

Euthalia confucius gibbsi MONASTYRSKII & DEVYATKIN, 2003. Butterflies of Vietnam (systematic list): 102, pl. IX, figs. 3, 4 ♂. Holotype ♂, Vietnam: Ha Tinh (BMNH) (Fig. 39), [examined]. **syn. nov.**

Distribution. Kachin, S. E. Xizang, Sikkim, N. Laos, C. Vietnam, N. Vietnam.

The type locality is Sadon, northern Kachin in Myanmar. Only a male (Fig. 85) was recognized in the original description, and no additional specimen was recorded for a long time. Recently, we have obtained many specimens, as the expeditionary party of Mr. Yukinobu Nose caught several males from northern Kachin state. The number in my collection is now 24 males and 2 females. This subspecies is darker in the upperside ground color and slightly narrower in the oblique yellowish-white band of the forewing than the nominotypical subspecies. Because the Indochina material has the same characteristics of *sadona*—that is dark greenish-brown in the upperside ground color—I classify it as the subspecies *sadona*. The taxon *gibbsi* (Fig. 39) that was described from central Vietnam has large and wide yellowish-white spots. On the other hand, one male from northern Vietnam (Fig. 313), presented by Mr. Kazuhiko OTSUKI, also has similar characteristics. Generally, the northern Vietnam materials are less developed in the spots, judging from my collection of 14 males and 15 females, so *gibbsi* should be considered to be a wide-band form. Indeed, a well-developed band type is sometimes seen in the nominotypical subspecies and Kachin material (Fig. 310). Here I give *gibbsi* as a synonym of *sadona*. Although the northern Laos specimens (Figs. 314, 315) have a tendency to an upperside ground color of reddish-brown, the characteristics do not seem to be stable, and similar features are found in other localities, even in southern China and northern Vietnam. Therefore, the tendency does not constitute a stable enough feature for it to be considered another subspecies.

***Euthalia (Limbusa) patala* (KOLLAR, 1844)**

Distribution (Fig. 151). N. India, N. Myanmar, N. Indochina.

Length of Forewing. ♂ 45–55 mm, ♀ 50–60 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. This species *patala* is distributed in the far western area of the subgenus *Limbusa*. Sexes are similar, although the size of the female is slightly larger than that of the male. In 1833, G. R. GRAY wrote a manuscript describing some new lepidopterous insects from Nepal, based on the collection of Thomas HARDWICKE (1737–1835), and he named this species “*epiona*”. HARDWICKE died 2 years later, and his death would have played a role in the delay of Gray’s publication. The manuscript was actually issued in 1846. KOLLAR named this species “*patala*” in March 1844, and BOISDUVAL (STICHEL in 1908 described it as being GRAY, but this is an error) designated it “*doubledayi*” in December of the same year. Therefore, the name “*epiona*” is considered invalid and *patala* is valid.

Antenna. Upperside: Entirely blackish-brown. Underside: Entirely bright brown.

Male Genitalia (Figs. 199–201). Valva: Long and slender; the apex is not round, not twisted, and with around 10 rough serrations. Phallus: Rather slender; length is about 1/2 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) patala patala* (KOLLAR, 1844)**

(Figs. 31, 80, 316, 317)

Adolias patala KOLLAR, 1844. Kaschmir und das Reich der Siek, 4(2): 435. Syntype(s), India: Massuri (NHMW) (Fig. 80), [not examined].

Adolias doubledayi BOISDUVAL, 1844. List. Lep. Brit. Mus., Part 1: 104. Syntype(s), (?) Nepal (Fig. 31), [synonymised by STICHEL, 1908: 191] [not located].

Aconthea epiona G. R. GRAY, 1846. Descriptions and figures of some new lepidopterous insects, chiefly from Nepal: 13. Syntype(s), “Nepal”, [synonymised by STICHEL, 1908: 191] [not located].

Distribution. Kumaon, Nepal, Sikkim, Bhutan.

The type specimen is now preserved in NHMW (Wien). The syntype specimen that is depicted in Fig. 80 is provided courtesy of Dr. Martin LÖDL, Naturhistorisches Museum Wien, Wien, Switzerland. It is slightly smaller, and the ground color of the upperside in both sexes is pale and a fuscous greenish-brown. The underside is strongly yellowish.

***Euthalia (Limbusa) patala taooana* (MOORE, 1879)**

(Figs. 55, 62, 97, 318, 319)

Adolias taooana MOORE, 1879. Proc. zool. Soc. Lond. 1878 (4): 831. Syntype(s), Myanmar: Taoo, Upper Tenasserim (BMNH) (Fig. 97), [examined].

Euthalia longi VITALIS DE SALVAZA, 1924. Faune ent. indo-chine

Fr. 3: 43. Syntype(s), Laos: Xieng Khouang (BMNH) (Fig. 62), [examined]. **syn. nov.**

Euthalia patala kikuoi K. OKANO, 1988. Tokurana 13 (2): 2, figs. 8, 9, 10, 11, p. 6. Holotype ♀, Thailand: Chiang Mai, N. Thailand (KO) (Fig. 55), [examined]. **syn. nov.**

Distribution. Kachin, Shan, Kayah, Karen, N. Thailand, N. Laos.

It is larger (LFW: ♂ 52–55 mm, ♀: 60 mm) in size and wider in the submarginal white band of the forewing than the nominotypical subspecies *patala*. The ground color is darker on the upperside and a paler bluish-green (yellowish in *patala*) on the underside. The ground color of *kikuoi* has a tendency to be bluish, but it is suitable for association with *taoana*. I settled here that *kikuoi* is a synonym of *taoana*. The taxon from Laos, *longi*, is also cited here as a synonym of *taoana*.

***Euthalia (Limbusa) lengba* TYTLER, 1940**

(Figs. 60, 320–322)

Euthalia lengba TYTLER, 1940. J. Bombay nat. Hist. Soc. 42 (1): 116. Lectotype ♂, India: Lengba R., Manipur (BMNH) (Fig. 60), [lectotype designated by YOKOCHI & KOIWAYA, 1997: 64] [examined].

Distribution (Fig. 152). Manipur, Kachin.

Length of Forewing. ♂ 46–48 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. Sexes are similar. The only locality that I know is northern Kachin state, Myanmar, except the type locality (Manipur, India). One pair has been recorded in Kachin, and the specimens are now preserved in the Kandawgyi National Garden Butterfly Museum (KNGBM), Mandalay, Myanmar, through the Nose collection (Osaka, Japan). Because this is slightly larger and the ground color of the upperside is rather stronger in bluish-green than that of Manipur, it would be a new subspecies (not to be described here). The differential diagnosis between *patala* is (1) rather smaller and with a strongly brown ground color; (2) a smaller spot in space 4 of the forewing; and (3) an equally flat outside white spot in space 2 of the forewing (convex), whereas it is concave in *patala* (Table 8).

Antenna. Upperside: Entirely blackish-brown. Underside: Entirely bright brown.

Male Genitalia (Fig. 202). Valva: Long and slender; the apex is not round, not twisted, and with around 10 rough serrations. Phallus: Rather slender; length is about 1/2 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

Table 8. Morphological differences among *confucius*, *patala*, *lengba*, and *linpingensis*

	<i>confucius</i>	<i>patala</i>	<i>lengba</i>	<i>linpingensis</i>
End of each vein of hindwing	wavelikely pointed	not so pointed	not so pointed	slightly pointed
Ground color of upperside	greenish-brown	pale greenish-brown	greenish-brown	dark brown
Oblique spots of forewing	large and conspicuous; both sides of band uneven in spaces 6 to 2; occasionally appear in space 1b	conspicuous; both sides of band even in spaces 6 to 2; trace in space 1b	conspicuous; both sides of band uneven in spaces 6 to 2; one or two spots appear in space 1b	conspicuous but small in spaces 6 to 3; spot in space 4 especially small; spot in space 2 absent or traced
Spots In spaces 6 to 3 of upperside hindwing	large and conspicuous	large and conspicuous	large and conspicuous	clear but rather small
Spot in space 6 of hindwing upperside	tornus side almost flat; basal side clearly concave	tornus side clearly concave; basal side almost flat	basal and tornus sides almost flat	basal and tornus sides almost flat
Ground color of underside	show several variation; brown with yellow, green or blue	differ between subspecies: yellowish brown in ssp. <i>patala</i> ; pale greenish-blue in ssp. <i>taoana</i>	pale greenish-blue	pale brown with greenish-blue
Discal spots of hindwing underside	conspicuous in spaces 7 to 3 (or 2); basal side concave and tornus side not to be convex	conspicuous in spaces 7 and 6; small or obscure in spaces 5 and below; tornus side concave	conspicuous in spaces 7 to around 2; shape nearly circle	conspicuous in spaces 7 to around 3; shape nearly circle

***Euthalia (Limbusa) linpingensis* MELL, 1935**

(Figs. 61, 323, 324)

Euthalia linpingensis MELL, 1935. Deut. ent. Zeit. 1934: 245.

Holotype ♂, China: Linping, Guangdong (ZFMK) (Fig. 61), [examined].

Euthalia ehuanensis [sic] WANG, LI, & NIU, 2004. Henan Science 22 (1): 55–56. Holotype ♂, China: Shunhuang shan, Dongan, Hunan, (DMS), [not examined]. **syn. nov.****Distribution** (Fig. 153). Guangdong, Guizhou, Hunan, Guangxi, Fujian, Yunnan.**Length of Forewing.** ♂ 51–56 mm, ♀ 56 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. Sexes are similar. The ground color of the upperside is a monotone of dark brown, and several spots are pale yellow (Table 8). Since MELL described *linpingensis* with a male from Linping, Guangdong, in 1935, additional specimens have not been discovered until quite recently. Several materials were recently recorded, however, from Tongren (Guizhou), Dayao-shan (Guangxi), and Dali (Yunnan), so it would be widely distributed in southern China. Though *ehuanensis* (the type locality is Hubei) was described as a new species in 2004, it should be cited as a synonym of *linpingensis*. In the original description, two spellings, “*ehuanensis*” and “*ehuanensis*”, were seen. Here I will adopt “*ehuanensis*” because it was

given in the forward page. The only female (Fig. 324) of which I am aware is one that Mr. Yuichi KONDO captured in Qingyun shan (Fujian). The wing shape is rather round, and the spots of bothwings are white. This precious specimen is now housed in the TOYAMA collection.

Antenna. Upperside: Entirely blackish-brown. Underside: The tip and the apical portion are blackish-brown; the discal and the basal portions are dark brown.**Male Genitalia** (Fig. 203). Valva: Long and slender; the apex is not round, not twisted, and with around 10 rough serrations. Phallus: Rather slender. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.***Euthalia (Limbusa) khambounei* UEHARA & YOKOCHI, 2001**

(Figs. 54, 325, 326)

Euthalia (Limbusa) khambounei UEHARA & YOKOCHI, 2001.

Trans. lepid. Soc. Japan 52 (4): 237, figs. 1, 2 ♂, 3, 4 ♀, 15 (♂ genitalia). Holotype ♂, Laos: Xamneua, Houa Phan (JU) (Fig. 54), [examined].

Distribution (Fig. 154). N. Laos, N. Vietnam.**Length of Forewing.** ♂ 45–49 mm, ♀ 49–51 mm.

The wing pattern of this species is classified into subtype

A1 in the type A group. Sexes are similar. This species was recently described from Laos, with some species such as *E. (L.) suprema*, etc.; however, an old male specimen of *khambounei* had been preserved in MNHN in an unsorted condition. This situation demonstrates how study of the *Limbusa* group has stagnated in the past. It is distributed in the northern part of Laos and Vietnam. The holotype is now housed in the personal collection of Mr. Jiro UEHARA. The taxonomic name *khambounei* was dedicated to the butterfly researcher Mr. Khamboune SENGHEUANGSOMPPOU of Laos. The ground color of the upperside is generally dark green. The hindwing is almost the same color as the forewing, but the costal area around spaces 7 to 5 is slightly tinged with blue. The underside of bothwings is pale greenish-blue. In the female, the median white spots of the forewing are larger than those of the male, and the submarginal black band of the upperside hindwing is slightly obscure.

Antenna. Upperside: Entirely blackish-brown. Underside: Entirely bright brown.

Male Genitalia (Fig. 204). Valva: Long and slender; the apex is round, not twisted, slightly bending toward the abdominal side, and with much short serrations. Phallus: Long and slender; length is about 2/3 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) hayashii* YOKOCHI, 2005**

(Figs. 41, 327, 328)

Euthalia (Limbusa) khambounei hayashii YOKOCHI, 2005a.

Futao 49: 18, pl. 3, figs. 24, 25 ♂. Holotype ♂, Myanmar: Myikina, Kachin (YN) (Fig. 41), [examined].

Distribution (Fig. 155). N. Myanmar.

Length of Forewing. ♂ 37–41 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. Sexes are similar. In the original description, I classified *hayashii* as a subspecies of *khambounei*, but here I treat it as an independent species. This northern Myanmar species is distinguishable from the allied species *khambounei* in the following characters: Smaller than *khambounei*, i.e., the length of the forewing is up to around 40 mm (over 44 mm in *khambounei*); the ground color of the upperside is dark bluish-green tinged with blackish-brown (not tinged with blackish-brown in *khambounei*); the central spots of the hindwing appear in spaces 7 to 4, and they are large and tinged with cream-yellow (smaller, whitish, and appear in spaces 7 and 6 in *khambounei*); the ground color of the underside forewing is more bluish (greenish in *khambounei*); the male genitalia is entirely different (see the description below). The female is unknown. The only specimens that I have examined are four males: the holotype and a paratype (Fig. 327), which are

preserved in KNGBM, Mandalay, Myanmar; a paratype in the SHIMONOYA collection, Fukui, Japan; and material (Fig. 328) caught by Mr. Azuma ABE on the expedition to northeastern Kachin in Myanmar, bordering Yunnan, China, in July 2010. The taxonomic name *hayashii* was dedicated to the butterfly researcher Mr. Kozaburo HAYASHI, who was earnestly engaged in the study of butterfly fauna in Myanmar.

Antenna. Upperside: Entirely blackish-brown. Underside: Entirely bright brown.

Male Genitalia (Fig. 205). Valva: Long and slender; the apex is rather pointed, not twisted, and with several rough serrations. Phallus: Slender; length is about 1/2 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) khama* ALPHÉRAKY, 1895**

Distribution (Fig. 156). S. China.

Length of Forewing. ♂ 37–40 mm, ♀ 44–49 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. This species appears to be sexually dimorphic, but the wing pattern between the sexes is similar. The male seems to be not so rare, but the female is extremely rare. The only females with which I am familiar are my one specimen (Fig. 330) and a female described by CHOU and WANG (1994) as the holotype of *perlella*. The detailed morphological differences from *E. (L.) dubernardi* are indicated in Table 9.

Antenna. Upperside: Entirely blackish-brown. Underside: Bright brown; the outside of the apical portion has a blackish-speck.

Male Genitalia (Figs. 206–208). Valva: Long and slender; the apex is pointed, not twisted, and with a few short serrations. Phallus: Rather stout; length is about 1/2 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) khama khama* ALPHÉRAKY, 1895**

(Figs. 53, 91, 329, 330)

Euthalia khama ALPHÉRAKY, 1895. Deut. ent. Zeit. Iris 8: 181. Syntypes, 5♂, China: Tai-Sian-Guan-lin, Sichuan (BMNH) (Fig. 53), [examined].

Limbusa sinica MOORE, 1898. Lepidoptera Indica, 3: 131. Holotype ♂, China: Ta Tong Kiao (BMNH) (Fig. 91), [synonymised by STICHEL, 1908: 190] [examined].

Euthalia perlella CHOU & WANG, 1994. Monographia Rhopalocerorum Sinensium: 492, 763, figs. 2nd ♀ (UP, UN). Holotype ♀, China: Baoxing, Sichuan (EMNAU), [synonymised by YOKOCHI, 2000: 27] [not examined].

Distribution. Sichuan, Yunnan, S. Gansu, Hunan, Guangxi, Jiangxi.

Table 9. Morphological differences between *khama* and *dubernardi*

	<i>khama</i>	<i>dubernardi</i>
Wing Size in both sexes	larger than <i>dubernardi</i>	slightly smaller than <i>khama</i>
Wing Shape in both sexes	rather round	rather round but oblonger in hindwing compared to <i>khama</i>
Ground color in male	upperside fuscous; underside brown.	almost the same as <i>khama</i> , but slightly darker.
Discal spots of hindwing in male	spots in spaces 7, 6, and 5 large and conspicuous; spots in spaces 4 and 3 clear but small; spot in space 2 small or traced	spots in spaces 7, 6, and 5 conspicuous but smaller than those of <i>khama</i> ; spot in space 4 absent or traced; spots in spaces 3 and 2 absent
Marginal black stripe of underside hindwing	slightly away from termen compared with <i>dubernardi</i>	slightly approaching to termen compared with <i>khama</i>

The type series of *khama* consists of five males. Among these, one is now preserved in BMNH (Rh37228), but I do not know where the other four specimens are kept. The white spots of the forewing in *sinica* are not as large as *khama* and are especially indistinct in space 2. The holotype is preserved in BMNH (Rh37228), and I treat it as a synonym of *khama*, as STICHEL (1908) described. As I mentioned above, the holotype of *perlella* should be classified in *khama*. Moreover, the male paratype of *perlella* is *dubernardi*. Therefore, *perlella* is a synonym of *khama*. The type specimens would be preserved in EMNAU in Xian, China, but I have not examined them. In addition to the nominotypical subspecies, I describe below a new subspecies *huangi* from northwestern Yunnan.

***Euthalia (Limbusa) khama huangi* ssp. nov.**

(Figs. 208, 331)

Distribution. N. W. Yunnan.

The differential diagnosis between *huangi* and *khama* (nominotypical subspecies) in the male is as follows. The ground color of the bothwings upperside is paler, and the median band of the hindwing upperside is pale yellow; the median band of the hindwing upperside is narrower and not spread toward space 2; the ground color of the bothwings underside is paler and tinged with gray.

Holotype. ♂, On path to Mabiluo, Longyuan, Dulongjiang, Gongshan in Dulong Valley, alt. 2000 m, Northwestern Yunnan. 13, Jul. 2002, in coll. Mr Hao HUANG, Shanghai, China. Only one male is recorded (female unknown).

Etymology. The new subspecies name *huangi* is dedicated to Mr. Hao HUANG. He is one of the best amateur butterfly researchers in China. He caught the holotype specimen in the expedition to the extreme northwestern Yunnan.

***Euthalia (Limbusa) dubernardi* OBERTHÜR, 1907**

Distribution (Fig. 157). N. Myanmar, S. China.

Length of Forewing. ♂ 34–36 mm, ♀ 41 mm.

The wing pattern of this species is classified into subtype A1 in the type A group. This species appears to be sexually dimorphic, but the wing pattern between the sexes is similar. It has been considered to be a subspecies of *khama*, but it has been recently recognized that *dubernardi* is distributed with *khama* in Zhongdian in northwestern Yunnan and Baoxing in western Sichuan. Thus, *dubernardi* should be treated as an independent species.

Antenna. Upperside: Entirely blackish-brown. Underside: Bright brown; the outside of the apical portion has a blackish-speck.

Male Genitalia (Figs. 209, 210). Valva: Long and slender; the apex is pointed, not twisted, and with a few short serrations. Phallus: Rather stout; length is about 1/2 of the valva. Uncus: The middle portion is swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) dubernardi dubernardi* OBERTHÜR, 1907**

(Figs. 32, 45, 332)

Euthalia khama dubernardi OBERTHÜR, 1907. Bull. Soc. ent. Fr. 1907 (15): 259. Syntype(s) ♂, China: Tsekou, N. Yunnan (BMNH) (Fig. 32), [examined].

Distribution. N. W. Yunnan, Sichuan.

The real number of type series is unknown, but one male syntype (Fig. 32) is preserved in BMNH (RH37228). The type locality is Tsekou of the Nujian basin in northwestern Yunnan, the so-called “Shangri-La”. I have never seen the female

of this subspecies. As mentioned in Part 1 (page 26), the manuscript designation of *hoenei* (Fig. 45) indicated that MELL was prepared to give the name for the specimen in ZFMK as “*hoenei*”, but the paper was not issued. MELL seemed to find that the “new species” was a synonym of *dubernardi*. This manuscript name has been included in case the specimen to which it refers does represent a previously undescribed taxon. However, its citation here does not make this name available under the rules of zoological nomenclature.

***Euthalia (Limbusa) dubernardi tonegawai* YOKOCHI, 2009**
(Figs. 102, 333, 334)

Euthalia (Limbusa) dubernardi tonegawai YOKOCHI, 2009b. Butterflies (*Teinopalpus*) 53: 22, figs. 11, 12 ♂, 13, 14 ♀. Holotype ♂, Myanmar: Panwa, Kachin (TY) (Fig. 102), [examined].

Distribution. Kachin.

In the male, the upperside of the ground color is brown tinged with dark green, whereas there is no greenish color in the nominotypical subspecies. The illustrated paratype specimen (Fig. 334) is a female. This material is now preserved in KNGBM through the personal collection of Mr. Yukinobu NOSE.

Subtype A2

Line combined with the discal white spot in space 6 and post-discal white spot in space 3 of the forewing towards the termen.

***Euthalia (Limbusa) pratti* LEECH, 1891**
(Figs. 81, 335, 336)

Euthalia pratti LEECH, 1891. Entomologist 24 (Suppl.): 4. Syntypes, 2♂ 2♀, China: Ichang, Hubei (BMNH) (Fig. 81), [examined].

Distribution (Fig. 158). Hubei, Hunan, Guangxi, S. Gansu, Yunnan, Sichuan, Fujian, Zhejiang.

Length of Forewing. ♂ 42–45 mm, ♀ 54–56 mm.

The wing pattern of this species is classified into subtype A2 in the type A group. Sexes are similar, but the female is larger. It distributes widely in southern China, but is rather rare in any localities. The female is especially rare, and I have never seen many specimens. Although this species is similar to *E. (L.) occidentalis*, the ground color of the upperside bothwings is different, i.e., in *pratti* it is slightly more bluish-green, whereas it is brownish in *occidentalis* (Table 4).

Antenna. Upperside: The tip is bright brown except that the extreme tip is blackish-brown. Underside: bright brown; outside of apical portion is a blackish speck.

Male Genitalia (Fig. 211). Valva: Long and slender; the apex is slightly pointed, not twisted, and with around 10 various length serrations. Phallus: Large and stout; length is almost the same as the valva. Uncus: The middle portion has a swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) occidentalis* HALL, 1930 stat. nov.**
(Figs. 77, 337, 338)

Euthalia pratti occidentalis HALL, 1930. Entomologist 63: 159. Lectotype ♂, China: Siao-lou, Sichuan (BMNH) (Fig. 77), [lectotype designated by YOKOCHI, 2005b: 13] [examined].

Distribution (Fig. 159). Sichuan, Yunnan, S. Gansu.

Length of Forewing. ♂ 39–44 mm, ♀ 50 mm.

The wing pattern of this species is classified into subtype A2 in the type A group. Sexes are similar, but the female is larger. It has been treated as a subspecies of *pratti*, but I classify it as an independent species. The differences between *pratti* and this species are as follows: (1) the forewing white spots of *occidentalis* are smaller, and the spots of the hindwing are rather faded; (2) the ground color of the upperside in *occidentalis* is basically dark brown (bluish-green is dominant in *pratti*) (Table 4). I could regard the distribution center of *occidentalis* to be southwestern China, whereas that of *pratti* is southeastern China. Both species are distributed over the same region in southeastern Gansu and the northern part of Yunnan. Among specimens given the reputation of being *occidentalis* in BMNH, one female in drawer Rh37228 and a larger female (LFW: 49 mm) in Rh11782 are *E. (L.) strephon*, and a smaller one (LFW: 41 mm) in Rh11782 is *E. (L.) omeia*. The description, “the small one is *nara*” in YOKOCHI (2005), is wrong, and I correct it here. Therefore, three species—*occidentalis*, *omeia*, and *strephon*—are included in the type series of *occidentalis*.

Antenna. Upperside: The tip is bright brown except that the extreme tip is blackish-brown. Underside: Bright brown; the outside of the apical portion is a blackish speck.

Male Genitalia (Fig. 212). Valva: Long and slender; the apex is slightly pointed, not twisted, and with around 10 various length serrations. Phallus: Large and stout; length is almost the same as the valva. Uncus: The middle portion has a swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) cooperi* (TYTLER, 1926)**
(Figs. 28, 339, 340)

Dophla cooperi TYTLER, 1926. J. Bombay nat. Hist. Soc. 31 (3): 580, pl. 5, fig. 1♂. Syntypes, 1♂ 1♀, Myanmar: Anisakan,

Mandalay (BMNH) (Fig. 28), [examined].

Distribution (Fig. 160). Mandalay.

Length of Forewing. ♂ 50–51 mm, ♀ 59–62 mm.

The wing pattern of this species is classified into subtype A2 in the type A group. Sexes are monomorphic. This is a very rare species in the subgenus *Limbusa* and is known only from central Myanmar. The complete specimens that I know are only three males and three females (including a pair of the type), and they are preserved in BMNH (drawers Rh37228 and Rh11776). D'ABRERA (1985) classified it as a subspecies of *E. (L.) iva*, but it should be given as an independent species closely related to *pratti*. The type locality of *cooperi* is Anisakan, eastern Mandalay state, Myanmar. I visited there in May 2009 and found that many broad-leaf trees had been felled to clear for cultivation and to develop a tea plantation. There is a monastery at the top of the Anisakan Waterfall (altitude around 1,100 m) and a small *Quercus* forest is left in the garden. I hope that *cooperi* can sustain itself in the remaining forest. The diagnoses among the five allied species (*malapana*, *pratti*, *occidentalis*, *cooperi*, and *monastyrskiyi*) are given in Table 4.

Antenna. Upperside: The tip is bright brown except that the extreme tip is blackish-brown. Underside: Bright brown; outside of apical portion is a blackish speck.

Male Genitalia (Fig. 213). Valva: Slender and extremely long; the apex is rather pointed, not twisted, and with several large serrations. Phallus: Large and stout; length is over 2/3 of the valva. Uncus: The middle portion has a swelling; the apex is pointed and gently curved toward the abdominal side.

***Euthalia (Limbusa) monastyrskiyi* sp. nov.**

(Figs. 341, 342)

Distribution (Fig. 161). N. Vietnam.

Length of Forewing. ♂ 47–50 mm, ♀ 59–61 mm.

The common characteristics of the wing shape, pattern, and the male genitalia have been described in section 7. The wing pattern of the male. Upperside of the forewing: The ground color is dark green, darker in the limbal area and apex area; there is a discal row of pale yellowish-white spots running clearly from spaces 6 to 2, oval shaped in spaces 3 and 2, toward the outside in space 2 compared with that of space 3, slender in spaces 6, 5, and 4, and with an especially pointed outside in spaces 5 and 4; costa are eroded by pale yellowish-white scales; there are pale yellowish-white spots in spaces 8 and 6 in the subapical area, with space 8 larger than that of space 6. The upperside of the hindwing: The ground color is

dark green as in the forewing; there is a discal row of pale yellowish-white spots clearly in spaces 7 and 6, convex toward the inside in space 7, obscured in space 5, rudimentary in spaces 4 to 2; a series of indistinct terminal rows of a black sagittal line running from spaces 7 to 1b. The underside of the forewing: The ground color is pale greenish-blue in the basal area, blackish-brown tinged with green in the discal and limbal areas; there are pale yellowish-white spots, the same as the upperside forewing, and occasionally appearing white spots in space 1b. The underside of the hindwing: The ground color is a pale greenish-blue; there is a discal row of pale yellowish-white spots clearly in spaces 7 to 3, obscured or rudimentary in space 2, shifted to the outside in space 3; there is a series of extremely indistinct terminal rows of dark sagittal lines running from spaces 7 to 1b. The wing pattern of the female is the same as the male.

Holotype. ♂, Dong Van, Ha Giang, N. Vietnam, May–Jul. 2008, in KMNH (KMNH IR 200,295).

Paratypes. 1♂, 3, Jul. 2006; 1♂, 15, Jun. –10, Aug. 2004; 3♂, Jul. 2007; 1♂, 25, Jun. –2, Jul. 2006 (same locality as the holotype); 1♂, Apr. 2003 (Ha Giang, N. Vietnam); 1♀, Jul. 2007; 1♀, 25, Jun. –2, Jul. 2006 (same locality as the holotype). Paratypes are preserved in T. YOKOCHI collection.

Etymology. The new species name *monastyrskiyi* is dedicated to Dr. Alexander L. MONASTYRSKIY in Vietnam-Russia Tropical Centre, Hanoi, Vietnam.

The wing pattern of this species is classified into subtype A2 in the type A group. Until now, *monastyrskiyi* has been known from the most northern part of Vietnam, which is bordered with Yunnan, China. This species is very similar to *E. (L.) malapana* from Taiwan, but there are the following differences. (1) Large size: the male FW, 46–49 mm; female, 59–61 mm (male FW: 39–41 mm; female: 48–50 mm in *malapana*). (2) A spot in space 2 of the forewing is toward the outside compared with that of space 3, while a spot in space 2 is slightly outside of space 3 in *malapana*. (3) The inside of the spot in space 7 of the hindwing is convex, while it is flat in *malapana* (Table 4).

Antenna. Upperside: The tip is bright brown except that the extreme tip is blackish-brown. Underside: Bright brown; outside of apical portion is a blackish speck.

Male Genitalia (Fig. 214). Valva: Slender and extremely long; the apex is rather pointed, not twisted, and with several large serrations. Phallus: Large and stout; length is almost the same as the valva. Uncus: The middle portion has a swelling; the apex is pointed and gently curved toward the abdominal side.

(to be continued)

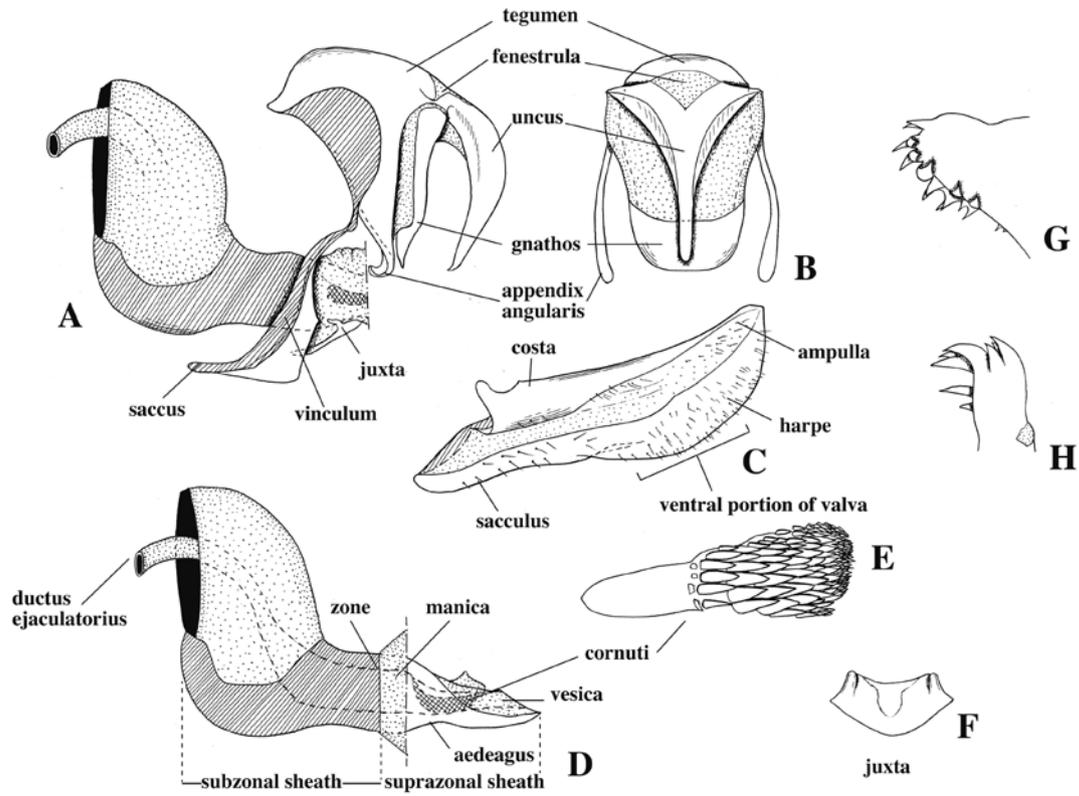


Fig. 116. Diagram of male genitalia (Figured by Dr. Kyoichiro UEDA). A: Whole genitalia in left lateral view (valvae removed); B: Tegumen in caudal view; C: Right valva inner view; D: Phallus in left lateral view; E: Cornuti (enlarged); F: Juxta in ventral view; G: Apical processes of right ampulla in outer view; H: Apical processes of right ampulla in dorsal view.

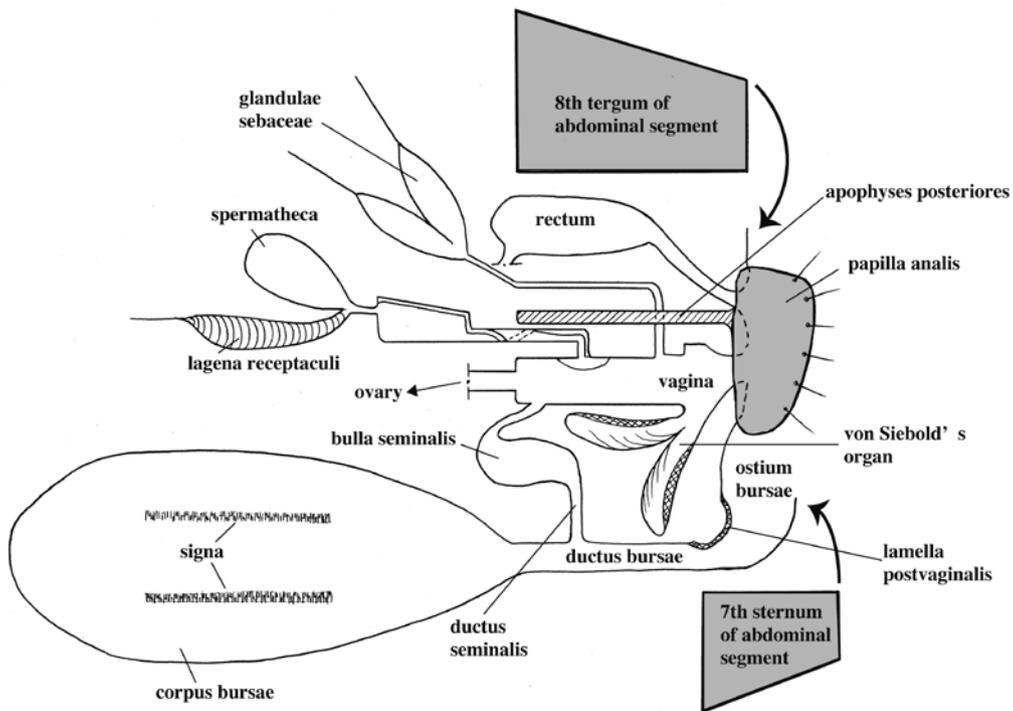


Fig. 117. Diagram of female genitalia (Figured by Dr. Kyoichiro UEDA).

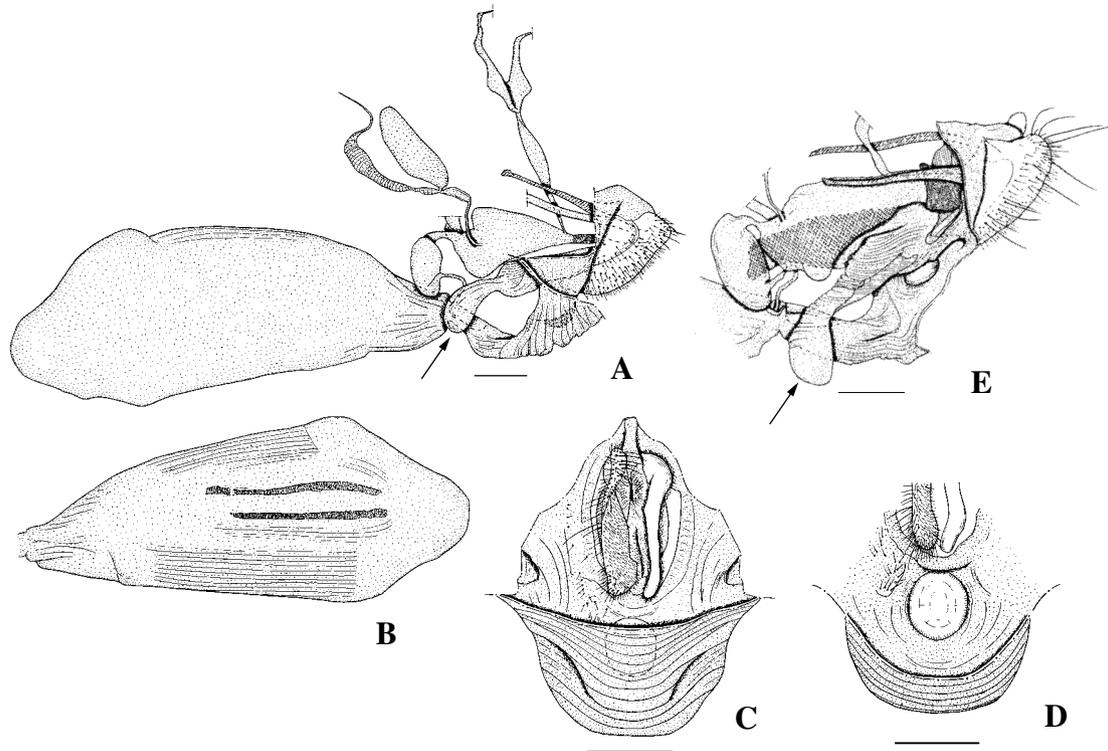


Fig. 118. Female genitalia of *Euthalia patala* (Figured by Dr. Kyoichiro UEDA). A: Whole genitalia in left lateral view; B: Corpus bursae in right lateral view showing signa; C: Papilla analis and ostium bursae in caudal view (7th sternum of abdominal segment removed); D: Lamella postvaginalis in caudal view (dorsal half of ostium bursae removed); E: Terminal portion of female genitalia in dorsolateral view (arrows indicated von SIEBOLD's organ). Scales 1 mm.

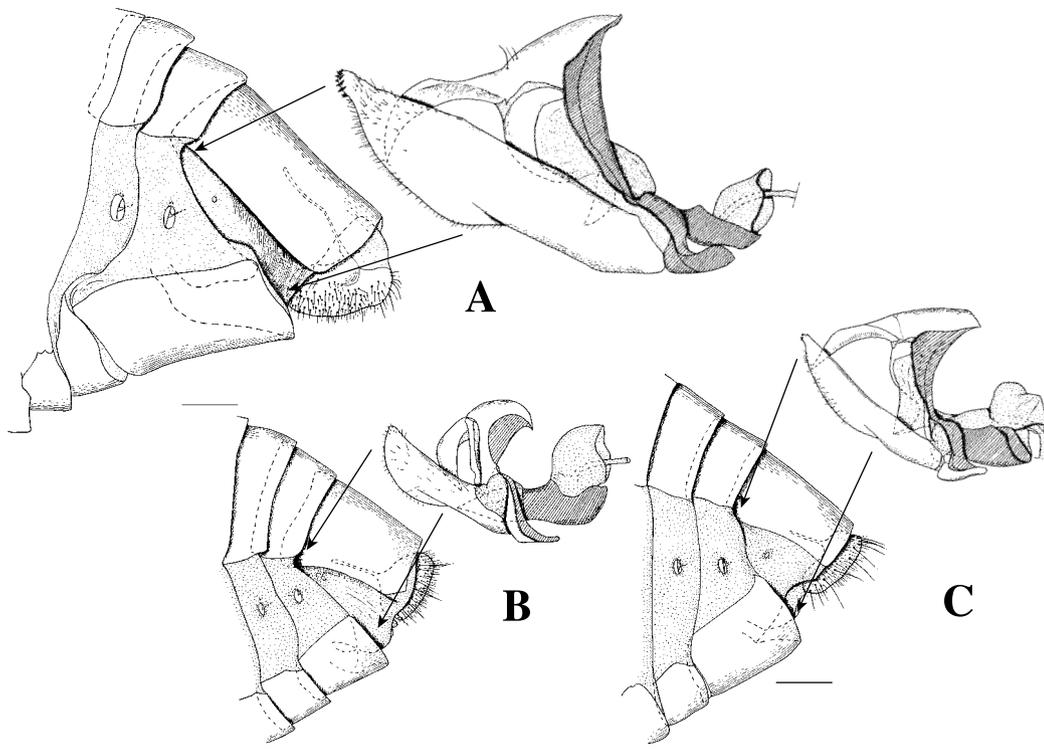


Fig. 119. Combination of male and female genitalia (Figured by Dr. Kyoichiro UEDA). A: *Euthalia (L.) patala*; B: *Euthalia (L.) nara*; C: *Euthalia (L.) francae*. Scales 1 mm.

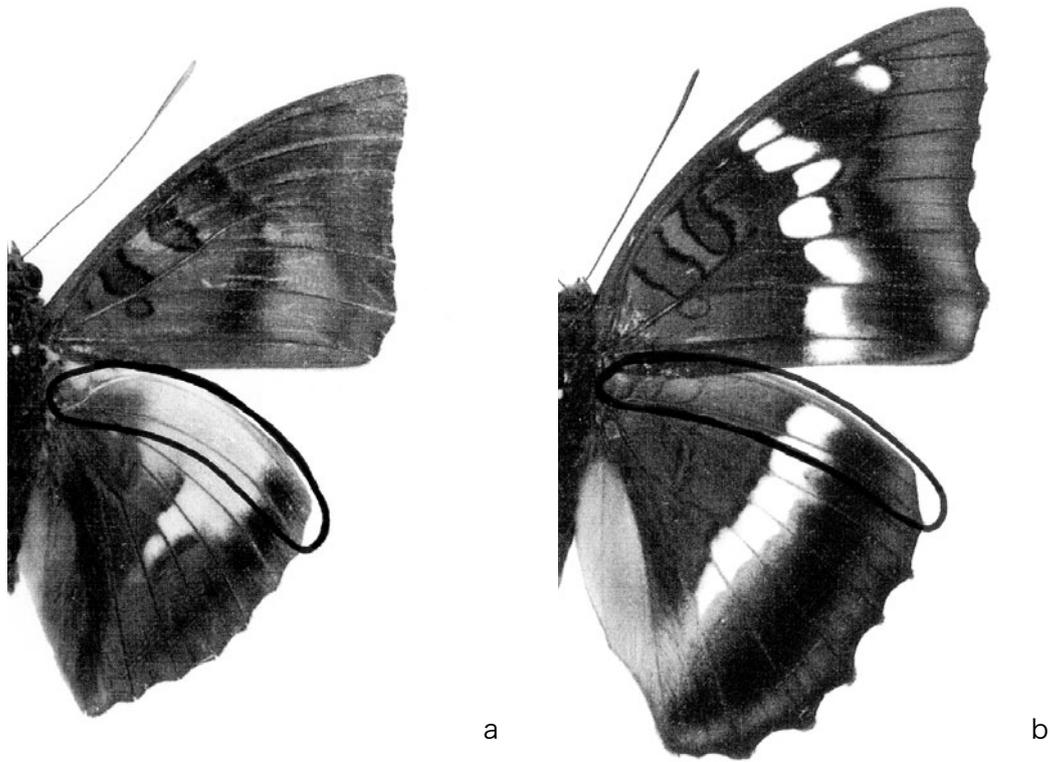


Fig. 120. Morphological difference between *nara* and *patala* group. a: *nara* group (*pacificus*); b: *patala* group (*bellula*).

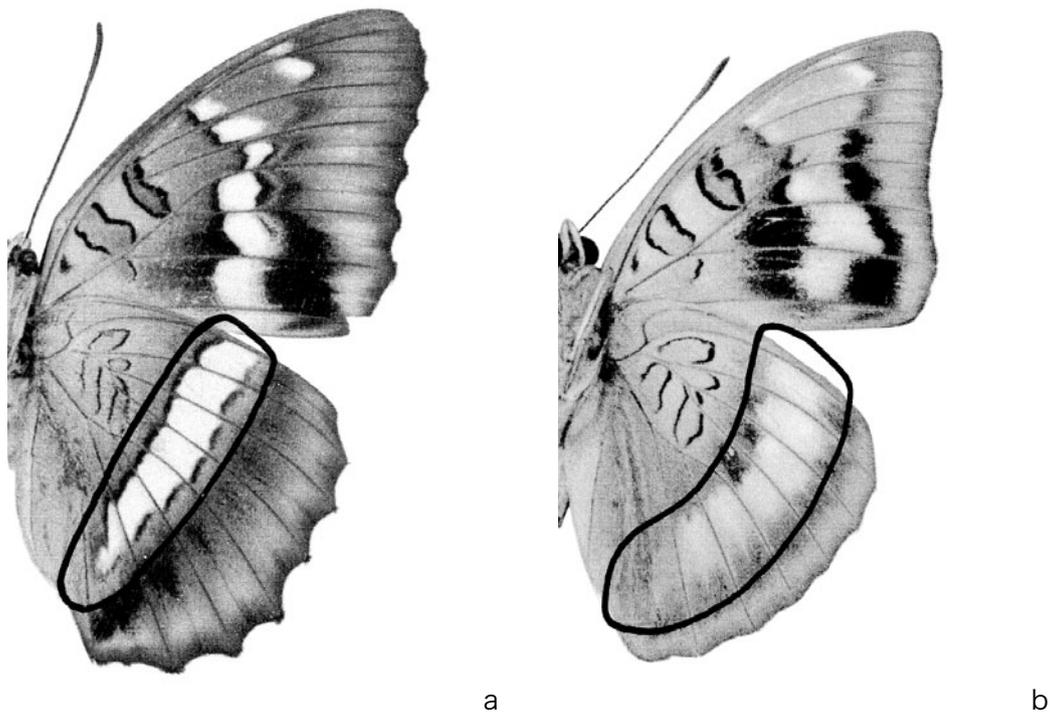


Fig. 121. Type division of *patala* group. a: Type A (*masumi*); b: Type B (*strephon*).

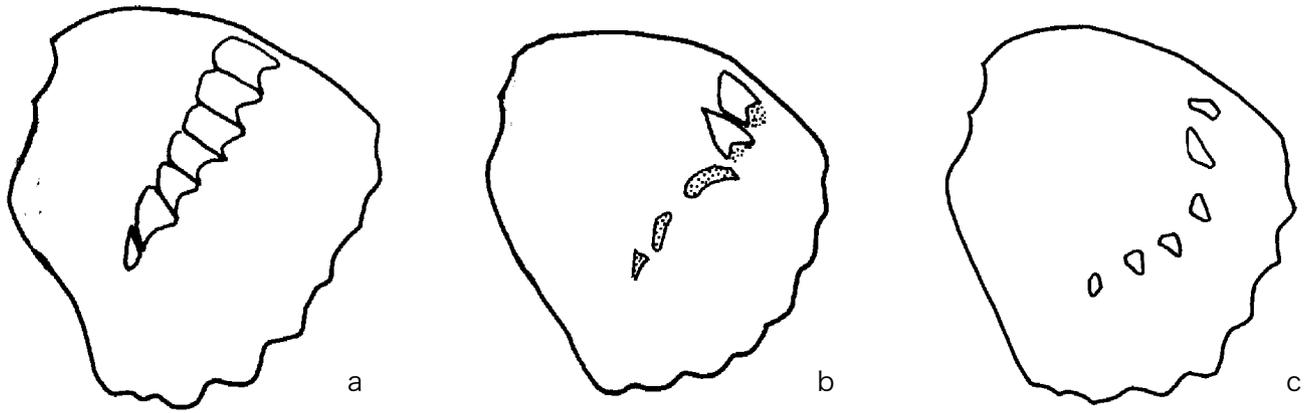


Fig. 122. Variation of type A. a: *insulae*; b: *malapana*; c: *iva*.

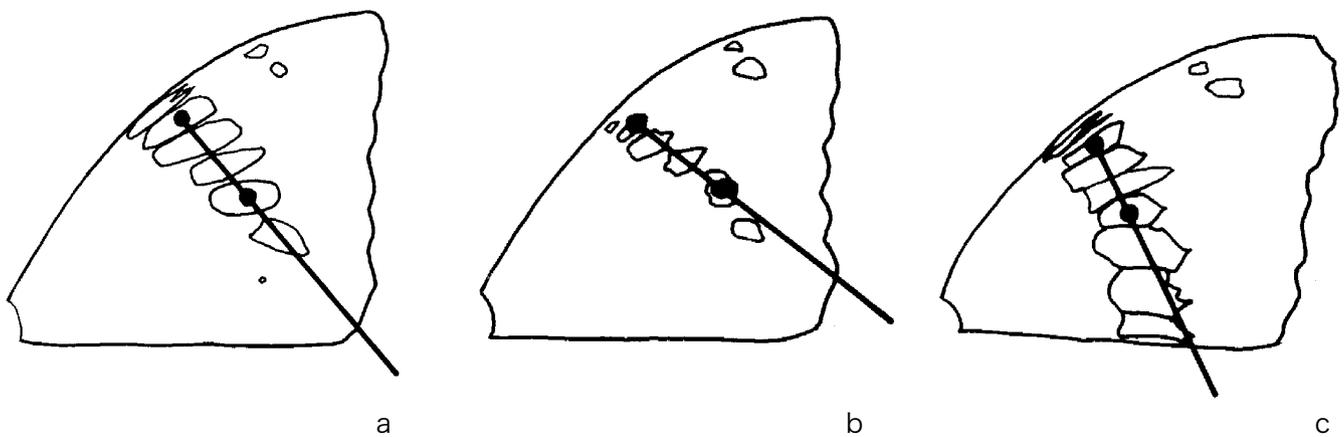


Fig. 123. Subtypes in type A. a: Subtype A1 (*patala*); b: Subtype A2 (*pratti*); c: Subtype A3 (*durga*).

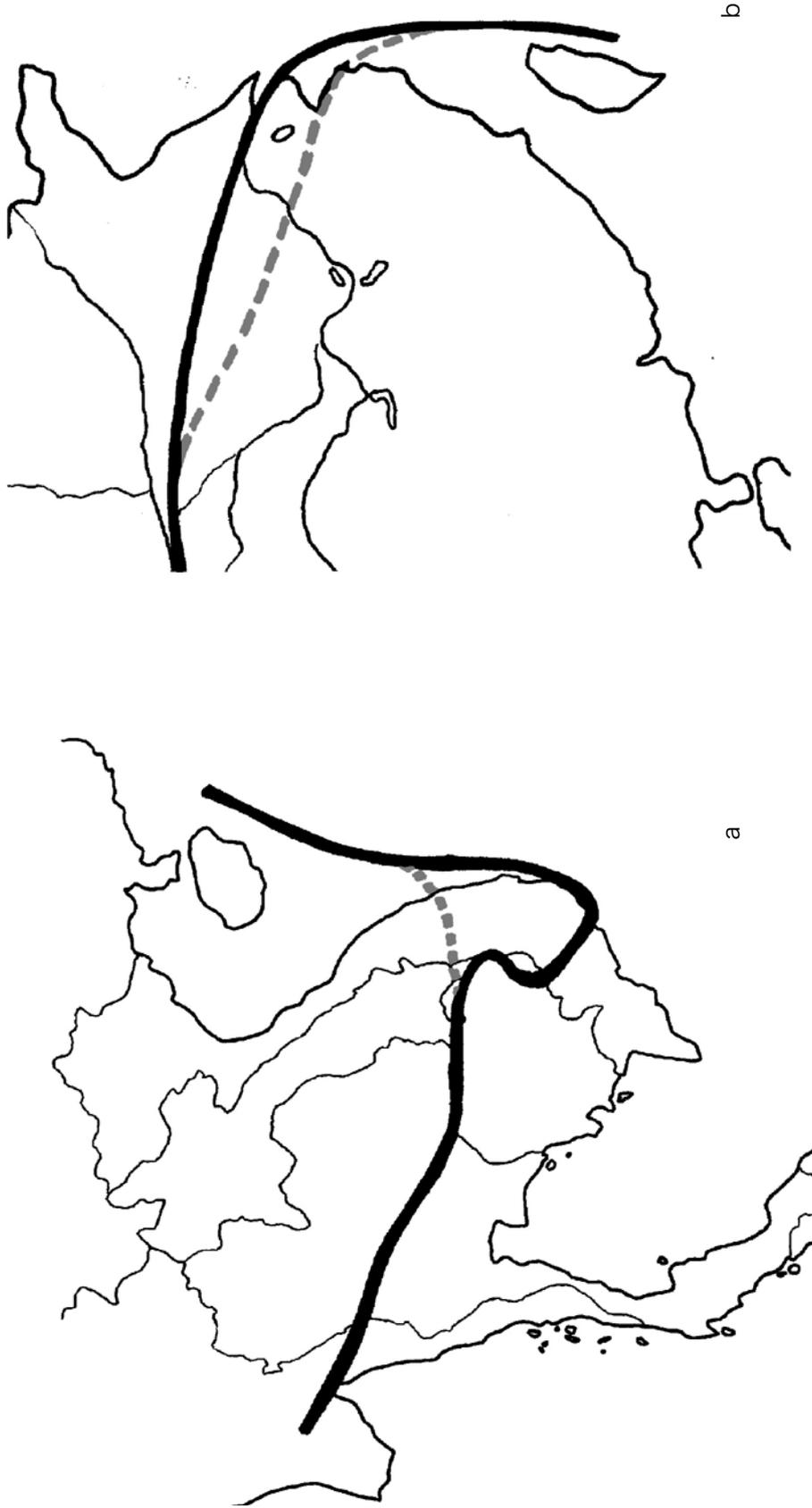


Fig. 124. Alteration of the distribution map of the subgenus *Limbusa* in Fig 7. a: Vietnam area; b: Nanjing area.

Distribution maps

Fig. 125. *E. (L.) nara*.

1. [N.India] [TL]; 2. Num; 3. Godawari; 4. Pokhara; 5. [Bhutan]; 6. Naga Hills; 7. [N.Sagain]; 8. Chudu Razi, Taundam, Nitadi; 10. Dahei shan; 11. Chuxiong; 12. Daibu; 9. Fugong; 13. Xishuangbanna; 15. Kalaw; 14. Loimwe; 17. Chiang Rai, Wiang Pa Pao; 16. Chiang Mai, Fang; 18. Na San; 19. Phong Sali; 20. Oudom Xay; 21. Xam Neua; 22. Bu Huong (Nghe An); 23. SaThay.

Fig. 126. *E. (L.) chaywana*.

1. Tiyu [TL]; 2. around Putao.

Fig. 127. *E. (L.) pseudonara*.

1. Chudu Razi [TL].

Fig. 128. *E. (L.) colinsmithi*.

1. Tiyu [TL].

Fig. 129. *E. (L.) bunzoi*.

Ssp. *bunzoi* (●) : 1. Dayao shan [TL]; 2. Wuyi shan (Fujian, Jiangxi); 3. Wenshan; 4. Dali, Jizushan; 5. Zhiziluo; 6. Wulian Feng; 7. Xishuangbanna; 8. Zhongzhou.

Ssp. *tayiensis* (▲) : 1. Dayi [TL], Emei shan, Qionglai shan, Qingcheng shan, Luding; 2. Wenxian; 3. Zhangjiajie.

Ssp. *vietnamica* (■) : 1. Dong Van [TL]; 2. Sa Pa.

Fig. 130. *E. (L.) omeia*.

Ssp. *omeia* (●) : 1. Emei shan [TL], Qingcheng shan, Qionglai shan, Luding, Siao lou (between Yaan and Kanding); 2. Miyi; 3. Zhongdian; 4. Dahei shan; 5. Guilin; 6. Wuyi shan; 7. Sanming; 8. Dayao shan; 9. Xishuangbanna.

Ssp. *xamneua* (▲) : 1. Xam Neua [TL].

Fig. 131. *E. (L.) pseudomeia*.

1. Sa Thay [TL].

Fig. 132. *E. (L.) pacifica*.

1. Chekiang (= [Zhejiang]) [TL]; 2. Lishui; 3. Wuyi shan; 4. Dayao shan; 5. Zhangjiajie; 6. Emei shan, Qionglai shan, Kongga shan, Luding, Dayi; 7. Wenxian; 8. Zhongdian; 9. Dali; 10. Zhiziluo; 11. Wenshan; 12. Tongren.

Fig. 133. *E. (L.) masaokai*.

1. Xam Neua [TL]; 2. Oudom Xay.

Fig. 134. *E. (L.) kuriyamai*.

1. Di Linh [TL]; 2. Sa Thay; 3. Nghe An.

Fig. 135. *E. (L.) iva*.

Ssp. *iva* (●) : 1. Darjeeling [TL], Sikkim; 2. Putao, Naung Mon; 3. Metok; 4. [Manipur]; 5. [Bhutan]; 6. Angpawng Bum.

Ssp. *buensis* (▲) : 1. Bu Huong [TL]; 2. Sapa; 3. Vu Quang; 4. Xuan Lien.

Fig. 136. *E. (L.) malapana*.

1. Malapa [TL], Kukuan, Danshan Xi.

Fig. 137. *E. (L.) kosempona*.

Ssp. *kosempona* (●) : 1. Kosempo [TL], Baling, Daito, Kanshirei, Nashan xi, Meiyuan, Gewang shan.

Ssp. *albescens* (▲) : 1. [N.Guangdong] [TL]; 2. Dayao shan; 3. Wuyi shan; 4. Zhangjiajie; 5. Shennongjian Linqiu; 6. Tabai shan; 7. Miyi; 8. Zhiziluo; 9. Lincang (Daxue shan); 10. Mengla; 11. Nghe An.

Fig. 138. *E. (L.) narayana*.

Ssp. *narayana* (●) : 1. Ruby Mines (Mogok) [TL], Maymyo; 2. Tiddim; 3. Sadon; 4. Angpawng Bum; 5. Chudu Razi; 6. Sylhet; 7. Khasi Hills, Shilong; 8. Darjeeling; 9. Mengla; 10. Xam Neua; 11. Muang Khoun; 12. Wiang Pa Pao.

Ssp. *yanagisawai* (▲) : 1. Xichang [TL]; 2. Xue shan; 3. [W. Yunnan]; 4. Kunming; 5. Wuyi shan.

Ssp. *dongvanensis* (■) : 1. Dong Van [TL].

Ssp. *dalatensis* (★) : 1. Dalat [TL].

Fig. 139. *E. (L.) sahadewa*.

1. [N.India] [TL], Darjeeling, Sikkim; 2. Khasi Hills; 3. Kathmandu (Godawari), Nagarkot, Ramsay; 4. [Bhutan], Lingtsi Dzong; 5. Metok.

Fig. 140. *E. (L.) thawgawa*.

1. Hthawgaw [TL], Chudu Razi, Naung Mon; 2. Angpawng Bum; 3. Naga Hills.

Fig. 141. *E. (L.) kardama*.

1. [China] [TL] (not indicated in the map, as the detailed type locality is unknown); 2. Emei shan, Qingcheng shan, Qionglai shan, Moupin (= Baoxing); 3. Qinling shan, Wenxian; 4. Dayao shan; 5. Miaola shan; 6. Tabai shan; 7. Xishuangbanna; 8. Shennongjia Linqu; 9. Lishui; 10. Wuyi shan; 11. Tianshui.

Fig. 142. *E. (L.) mingyiae*.

1. Nidadan (Nujiang valley) [TL].

Fig. 143. *E. (L.) tsuchiyai*.

1. Xam Neua [TL]; 2. Sa Pa, Tram Ton.

Fig. 144. *E. (L.) hebe*.

1. Changyang (= Xiangyang) [TL]; 2. Emei shan, Da Fei Shui; 3. Dali.

Fig. 145. *E. (L.) pulchella*.

Ssp. *pulchella* (●) : 1. Chayu [TL], Tiyu; 2. Chudu Razi, around Putao.

Ssp. *ebbe* (▲) : 1. Zhongdian [TL]; 2. Gongshan.

Fig. 146. *E. (L.) curvifascia*.

Ssp. *curvifascia* (●) : 1. Yakama (Jakama) [TL], Phesima [TL]; 2. Kohima.

Ssp. *nosei* (▲) : 1. Nitadi [TL], Shankong.

Fig. 147. *E. (L.) suprema*.

1. Xam Neua [TL].

Fig. 148. *E. (L.) pyrrha*.

Ssp. *pyrrha* (●) : 1. Emei shan [TL], Moupin (= Baoxing) [TL], Siao lou (between Yaan and Kanding); 2. Wuyi shan.

Ssp. *ueharai* (▲) : 1. Xam Neua [TL]; 2. Dong Van; 3. Sa Pa; 4. Tam Dao.

Fig. 149. *E. (L.) guangdongensis*.

Ssp. *guangdongensis* (●) : 1. Fengkai [TL]; 2. Dayao shan; 3. Miaola shan; 4. Wuyi shan.

Ssp. *dayiana* (▲) : 1. Dayi [TL], Qionglai shan, Qingcheng shan; 2. Dali.

Fig. 150. *E. (L.) confucius*.

Ssp. *confucius* (●) : 1. [China] [TL] (not indicated in the map, as the detailed type locality is unknown); 2. Wuyi shan; 3. Dayao shan; 4. Emei shan, Qingcheng shan, Qionglai shan, Dayi, Danba, Leshan, Siao lou (between Yaan and Kanding), Ta-Tsien-Lu (= Kangding); 5. Tabai shan; 6. Daibu; 7. Jizu shan.

Ssp. *sadona* (▲) : 1. Sadon [TL]; 2. Chudu Razi; 3. Chayu; 4. Sikkim; 5. Huong Son; 6. Ha Giang, Dong Van; 7. Sa Pa; 8. Xam Neua.

Fig. 151. *E. (L.) patala*.

Ssp. *patala* (●) : 1. Kumaon (Massuri) [TL]; 2. Godawari, Nagarjun; 3. Sikkim; 4. [Bhutan].

Ssp. *taoana* (▲) : 1. Taoo [TL], Dawna Range; 2. Chiang Rai, Wiang Pa Pao; 3. Chiang Mai, Doi Inthanon; 4. Loi Kaw; 5. Taunggyi; 6. Oudom Xay; 7. Xiang Khoang; 8. Chudu Razi.

Fig. 152. *E. (L.) lengba*.

1. Lengba River [TL]; 2. around Putao.

Fig. 153. *E. (L.) linpingensis*.

1. Lianping [TL]; 2. Dayao shan; 3. Shunhuang shan; 4. Tongren; 5. Jizu shan; 6. Qingyun shan; 7. Xishuangbanna.

Fig. 154. *E. (L.) khambounei*.

Ssp. *khambounei* (●) : 1. Xam Neua [TL]; 2. Sa Pa; 3. Ban Thoay; 4. [Tonkin].

Ssp. *hayashii* (▲) : 1. Myikina [TL], Keradap.

Fig. 155. *E. (L.) hayashii*.

1. Myikina [TL], Keradap; 2. Panwa.

Fig. 156. *E. (L.) khama*.

Ssp. *khama* (●) : 1. Tai Sian Guan Lin (= Daxiang Ling) [TL], Ta Tong Kiao (= Luding), Emei shan, Baoxing, Qionglai shan, Erlang shan, Dayi; 2. Jiulong; 3. Zhongdian; 4. Wulian Feng; 5. Jizu shan, Dali; 6. Wenshan; 7. Dayao shan; 8. Wenxian; 9. Zhangjiajie.

Ssp. *huangi* (▲) : 1. Dulongjiang valley [TL].

Fig. 157. *E. (L.) dubernardi*.

Ssp. *dubernardi* (●) : 1. Tsekou [TL]; Zhongdian; 2. Lijiang; 3. Baoxing.

Ssp. *tonegawai* (▲) : 1. Panwa [TL]; 2. Chudu Razi, Nitadi.

Fig. 158. *E. (L.) pratti*.

1. Ichang [TL]; 2. Zhangjiajie; 3. Dayao shan; 4. Baoshan; 5. Zhongdian; 6. Wenxian, Min; 7. Wuyi shan; 8. Lishui; 9. Jinkouhe.

Fig. 159. *E. (L.) occidentalis*.

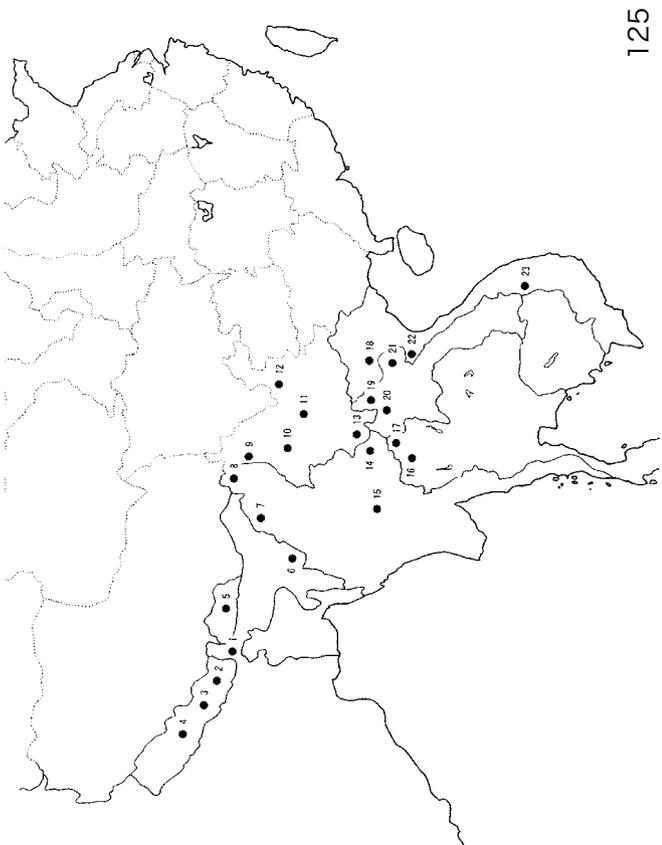
1. Siao lou (between Yaan and Kanding) [TL], Emei shan, Baoxing, Qionglai shan, Kongga shan; 2. Wenxian; 3. Baoshan; 4. Daifu; 5. Ailao shan; 6. Jizu shan; 7. Zhongdian.

Fig. 160. *E. (L.) cooperi*.

1. Anisakan [TL].

Fig. 161. *E. (L.) monastyrskiyi*.

1. Dong Van [TL].





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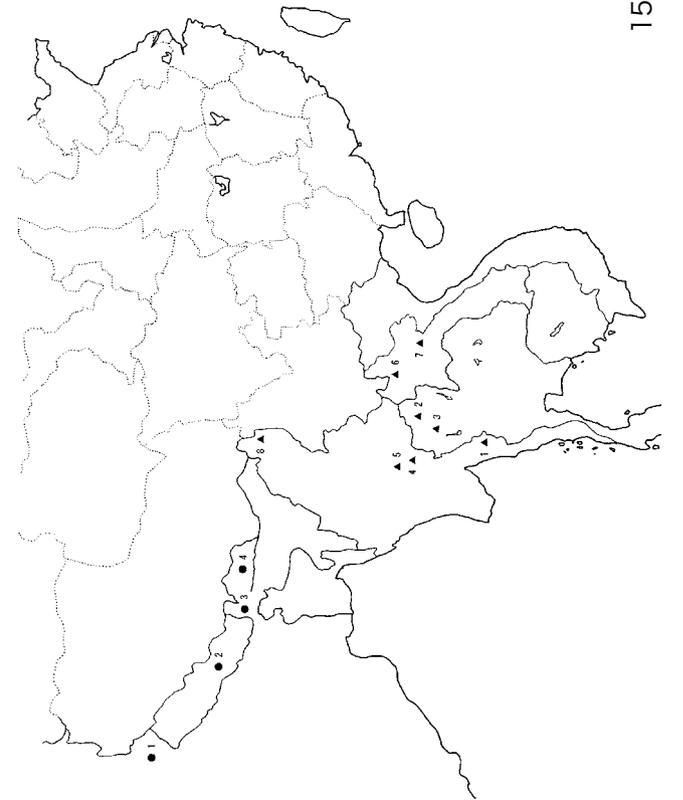
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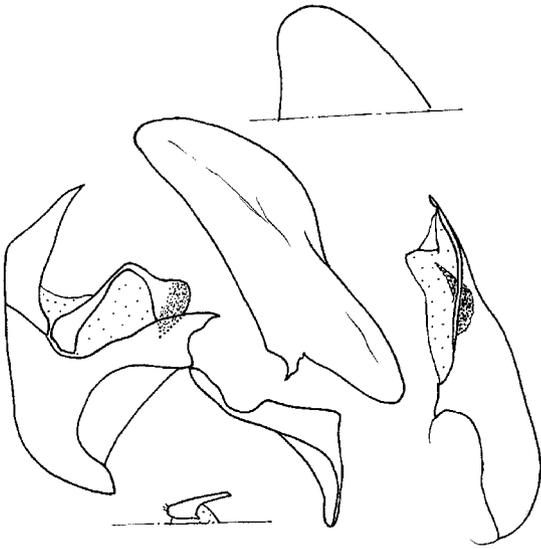
Figures of male genitalia

Scales 1 mm

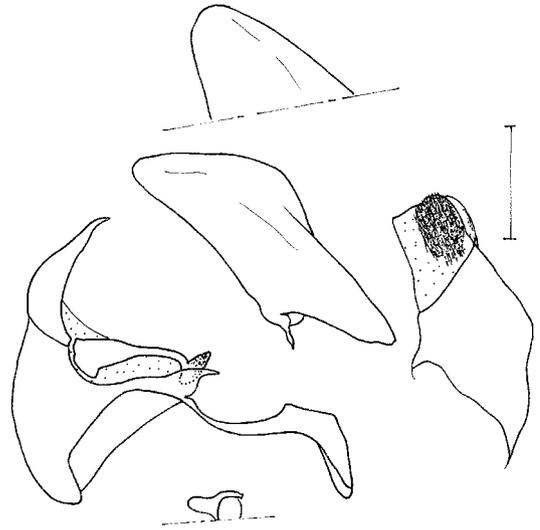
- Fig. 162. *E. (L.) nara*. Num, Nepal. TY.
- Fig. 163. *E. (L.) nara*. Shan, Myanmar. Syntype of *shania*, BMNH (E): 29852.
- Fig. 164. *E. (L.) nara*. "E. India". Syntype of *anyte*, BMNH (E): 29851.
- Fig. 165. *E. (L.) nara*. Nagaland, India. Syntype of *nagaensis*, BMNH (E): 29857.
- Fig. 166. *E. (L.) nara*. Shan, Myanmar. Syntype of *kalawrica*, BMNH (E): 29856.
- Fig. 167. *E. (L.) chaywana*. Tiyu, S. E. Xizang, China. Paratype of *chaywana*, KMNH.
- Fig. 168. *E. (L.) pseudonara*. Chudu Razi, Kachin, Myanmar. Holotype, KMNH.
- Fig. 169. *E. (L.) colinsmithi*. Metok, S. E. Xizang, China. TY.
- Fig. 170. *E. (L.) bunzoi*. Hunan, China. TY.
- Fig. 171. *E. (L.) bunzoi*. Dong Vang, Ha Giang, Vietnam. Paratype of *vietnamica*, TY.
- Fig. 172. *E. (L.) omeia*. Sichuan, China. Syntype of *omeia*, BMNH (E): 29850.
- Fig. 173. *E. (L.) pseudomeia*. Sa Thay, Kon Tum, Vietnam. Holotype, KMNH.
- Fig. 174. *E. (L.) pacifica*. Gansu, China. TY.
- Fig. 175. *E. (L.) makaokai*. Houa Phan, Laos. Paratype of *masaokai*, TY.
- Fig. 176. *E. (L.) kuriyamai*. Di Linh, Lam Dong, Vietnam. Holotype, KMNH.
- Fig. 177. *E. (L.) iva*. Sikkim, India. Holotype of *iva*, BMNH (E): 29847.
- Fig. 178. *E. (L.) malapana*. Taiwan, R. China. TY.
- Fig. 179. *E. (L.) kosempona*. Taiwan, R. China. TY.
- Fig. 180. *E. (L.) kosempona*. Guangdong, China. Paralectotype of *albescens*, BMNH.
- Fig. 181. *E. (L.) narayana*. Ssp. *narayana*, Kachin (Bhamo), Myanmar. BMNH.
- Fig. 182. *E. (L.) narayana*. Ssp. *narayana*, Naga Hills, India. BMNH.
- Fig. 183. *E. (L.) sahadeva*. [N. India], India. Syntype of *sahadeva*, BMNH (E): 29903.
- Fig. 184. *E. (L.) thawgawa*. Kachin, Myanmar. Syntype of *thawgawa*, BMNH.
- Fig. 185. *E. (L.) kardama*. Sichuan, China. TY.
- Fig. 186. *E. (L.) mingyiae*. Yunnan, China. TY.
- Fig. 187. *E. (L.) tsuchiyai*. Houa Phan, Laos. Paratype of *tsuchiyai*, TY.
- Fig. 188. *E. (L.) hebe*. Hubei, China. Syntype of *hebe*, BMNH (E): 29829.
- Fig. 189. *E. (L.) pulchella*. Tiyu (Chayu), S. E. Xizang, China. TY.
- Fig. 190. *E. (L.) curvifascia*. Nagaland, India. Syntype of *curvifascia*, BMNH (E): 29826.
- Fig. 191. *E. (L.) curvifascia*. Nagaland, India. Syntype of *anaea*, BMNH (E): 29854.
- Fig. 192. *E. (L.) curvifascia*. Kachin, Myanmar. Paratype of *nosei*, YN.
- Fig. 193. *E. (L.) suprema*. Houa Phan, Laos. Holotype of *suprema*, JU.
- Fig. 194. *E. (L.) pyrrha*. Sichuan, China. Syntype of *leechi*, BMNH (E): 29828.
- Fig. 195. *E. (L.) guangdongensis*. Guangxi, China. TY.
- Fig. 196. *E. (L.) confucius*. Wuyi shan, Fujian, China. TY.
- Fig. 197. *E. (L.) confucius*. Kachin, Myanmar. Holotype of *sadona*, BMNH (E): 29846.
- Fig. 198. *E. (L.) confucius*. Ha Giang, Ha Giang, Vietnam. TY.
- Fig. 199. *E. (L.) patala*. Janbesi, Nepal. TY.
- Fig. 200. *E. (L.) patala*. Karen, Myanmar. Syntype of *taoana*, BMNH (E): 29858.
- Fig. 201. *E. (L.) patala*. Xiang Khoang, Laos. Syntype of *longi*, BMNH.
- Fig. 202. *E. (L.) lengba*. Manipur, India. Lectotype of *lengba*, BMNH (E): 29827.
- Fig. 203. *E. (L.) linpingensis*. Guangdong, China. Holotype of *linpingensis*, ZFMK: 408.
- Fig. 204. *E. (L.) khambounei*. [Tonkin], Vietnam. Paratype of *khambounei*, MNHN.
- Fig. 205. *E. (L.) hayashii*. Panwa, Kachin, Myanmar. AA.
- Fig. 206. *E. (L.) khama*. Sichuan, China. Syntype of *khama*, BMNH (E): 29830.
- Fig. 207. *E. (L.) khama*. Sichuan, China. Syntype of *sinica*, BMNH.
- Fig. 208. *E. (L.) khama*. Yunnan, China. Holotype of *huangi*, HH.

- Fig. 209. *E. (L.) dubernardi*. Yunnan, China. Syntype of *dubernardi*, BMNH (E): 29831.
Fig. 210. *E. (L.) dubernardi*. Kachin, Myanmar. Paratype of *tonegawai*. TY.
Fig. 211. *E. (L.) pratti*. Hubei, China. Syntype of *pratti*, BMNH (E): 29849.
Fig. 212. *E. (L.) occidentalis*. Sichuan, China. Lectotype of *occidentalis*, BMNH (E): 29848.
Fig. 213. *E. (L.) cooperi*. Mandalay, Myanmar. Syntype of *cooperi*, BMNH (E): 29825.
Fig. 214. *E. (L.) monastyrskiyi*. Ha Giang, Vietnam. Paratype of *monastyrskiyi*, TY.

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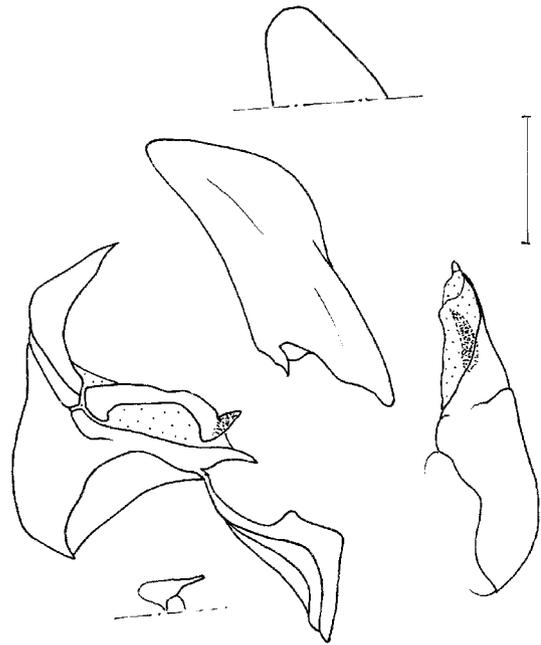
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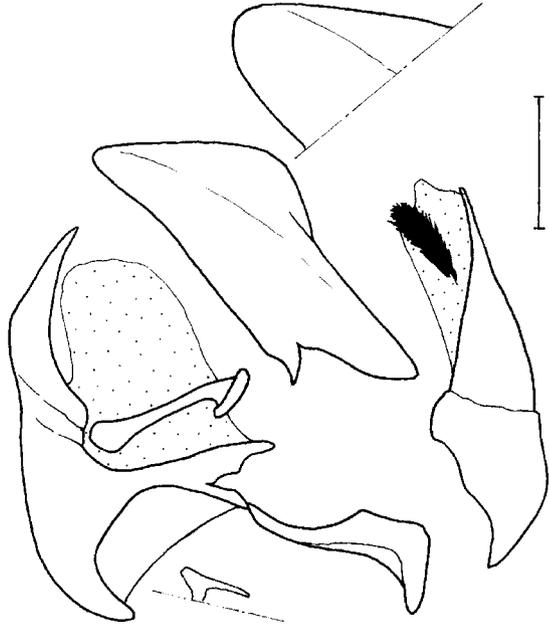


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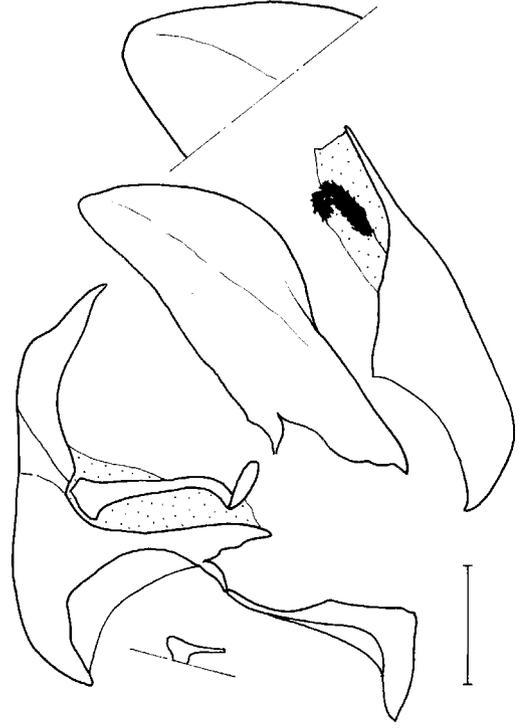


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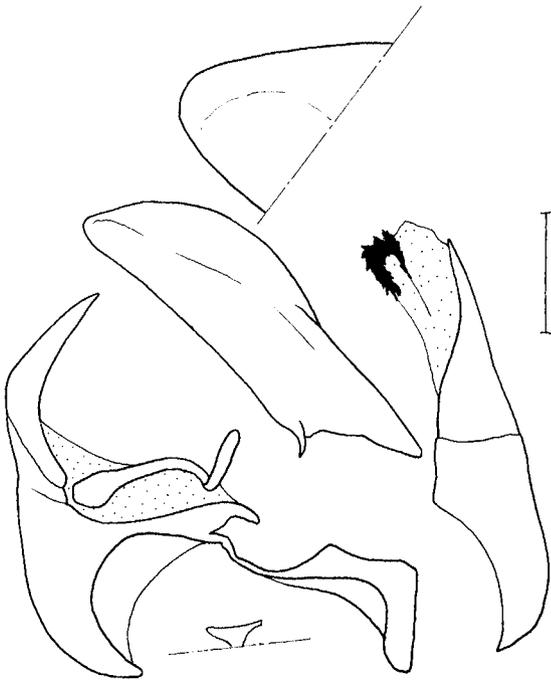


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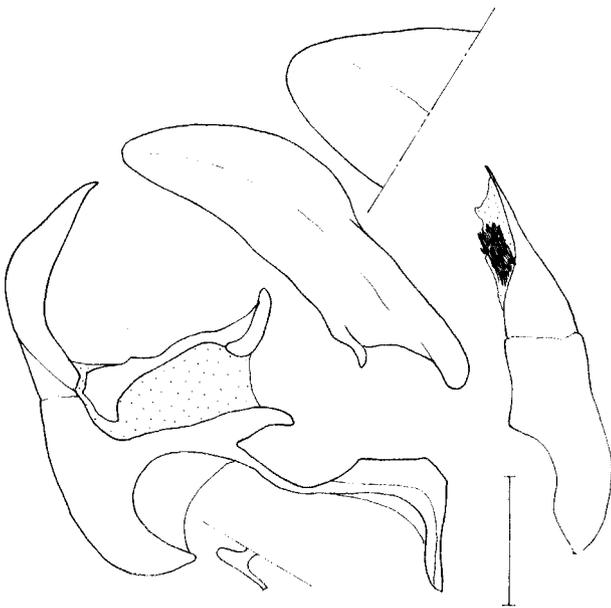
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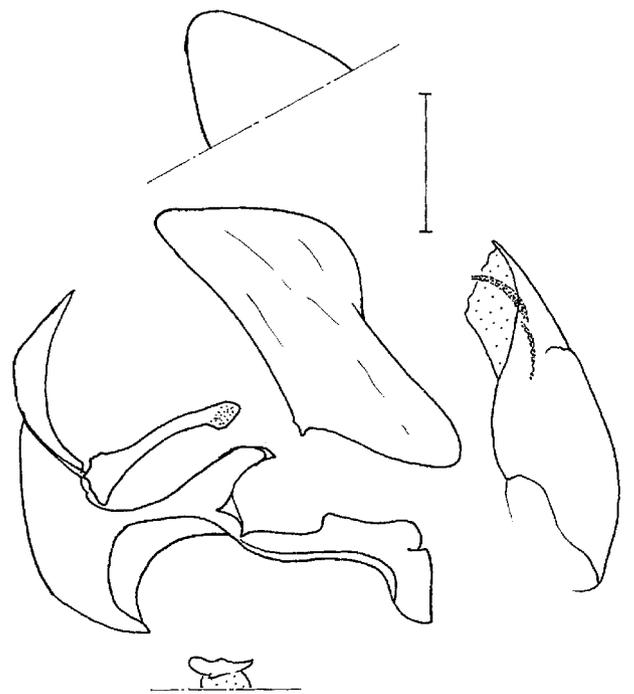
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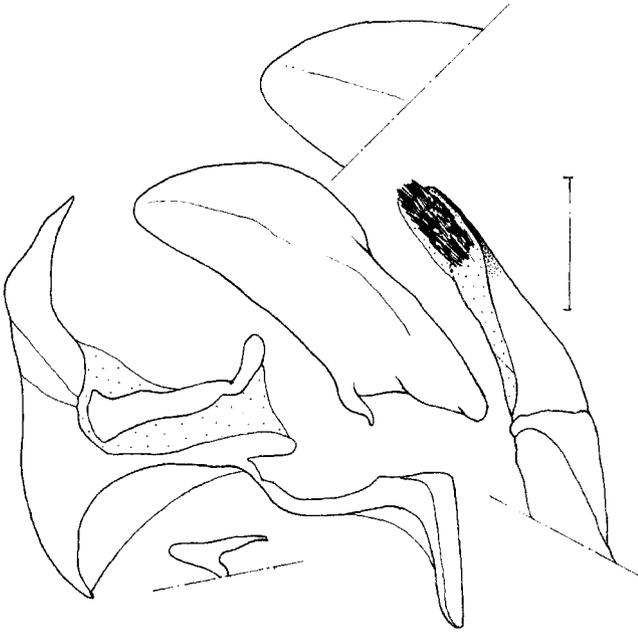
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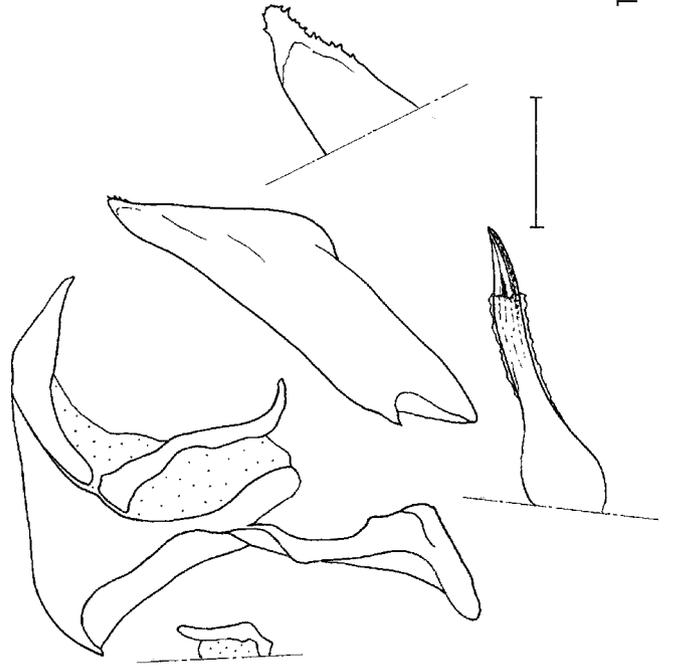
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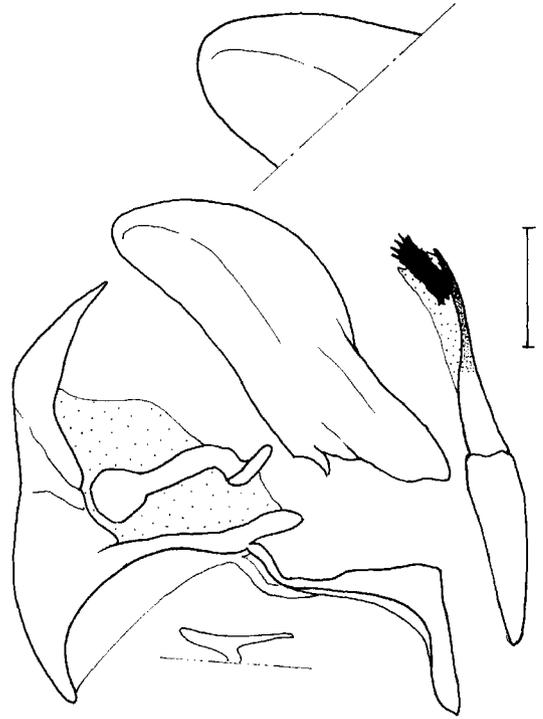
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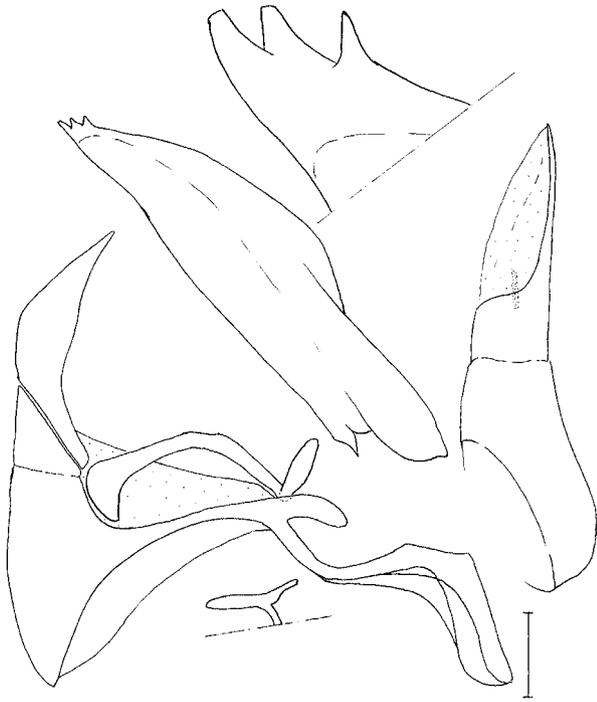
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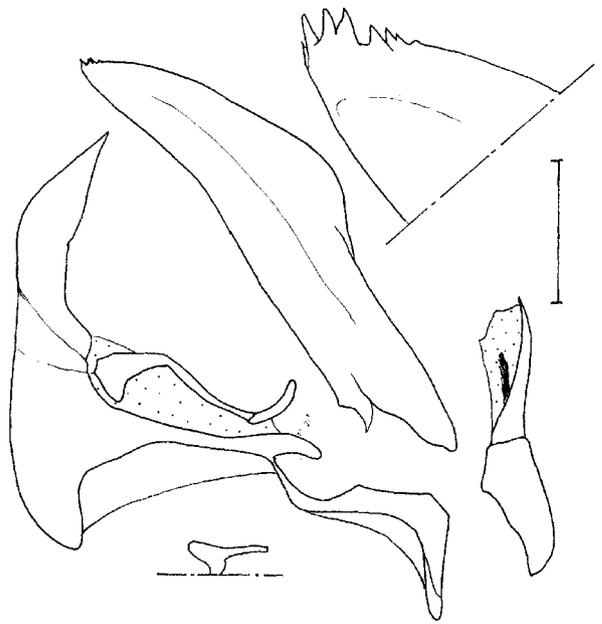


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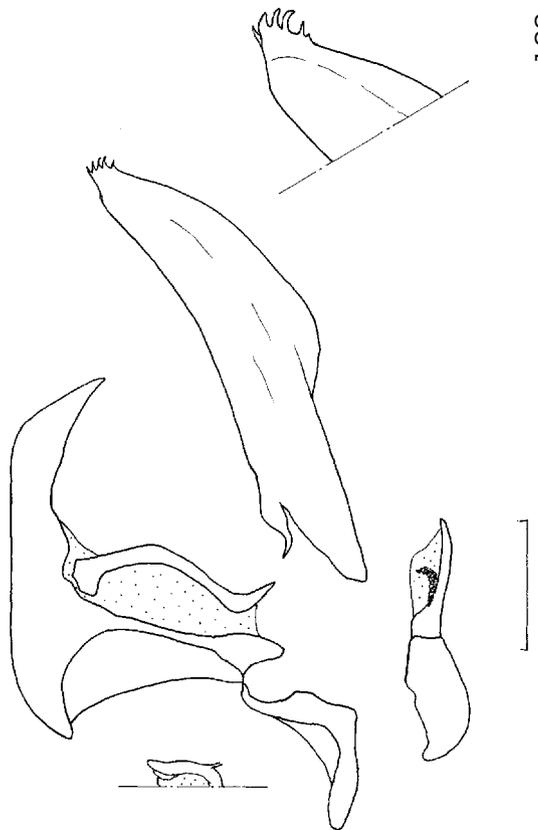
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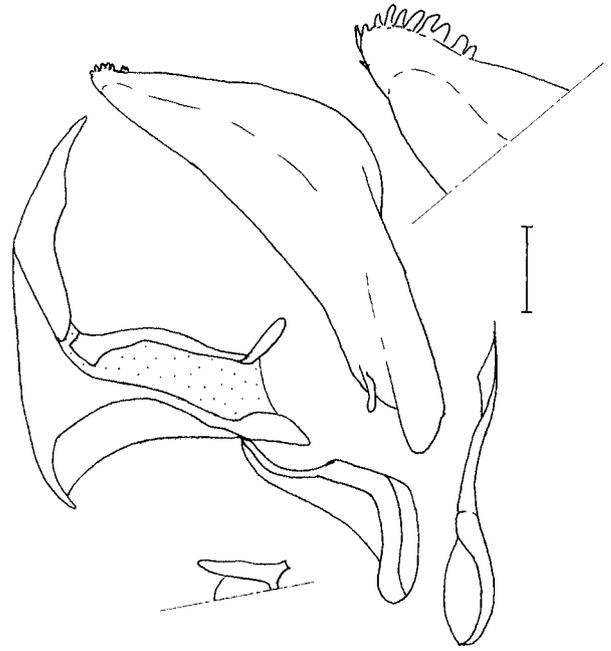


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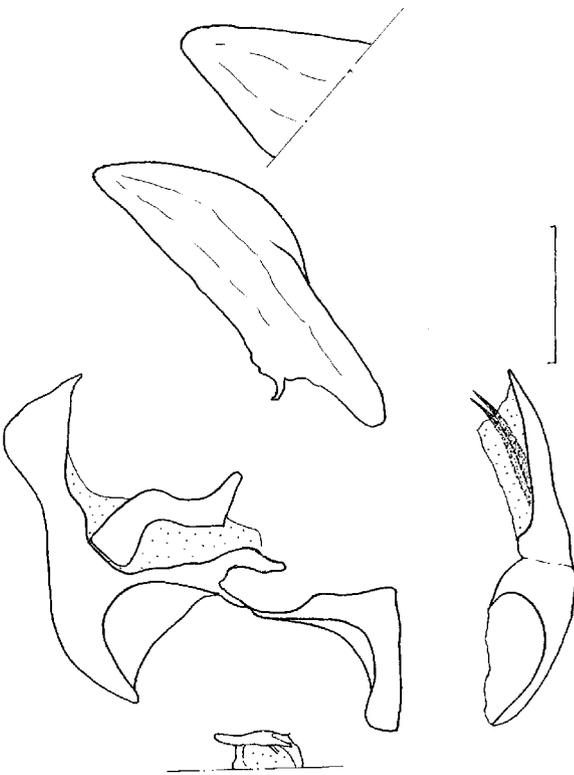




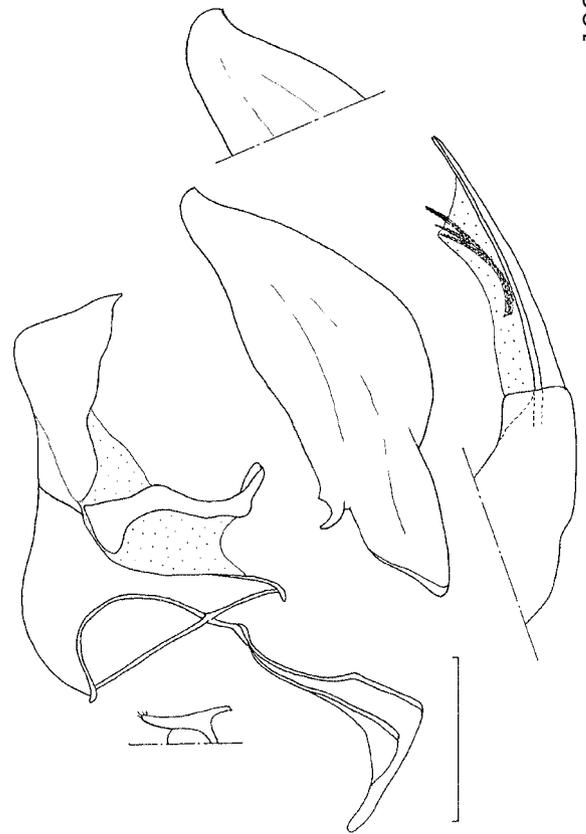
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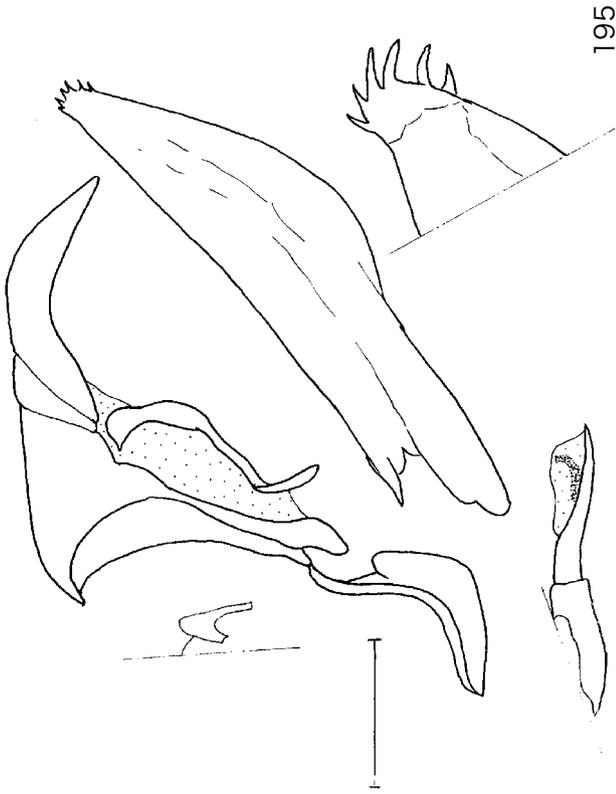
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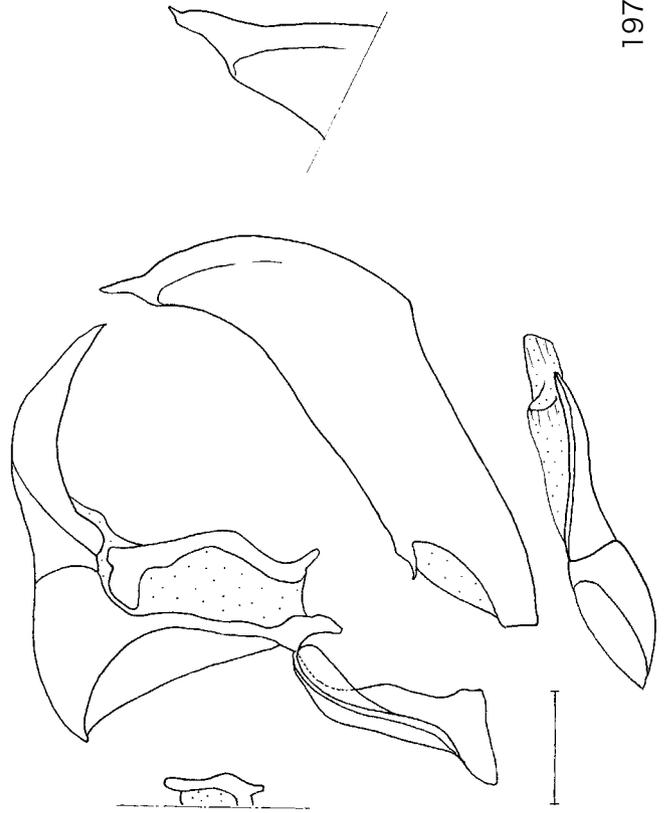
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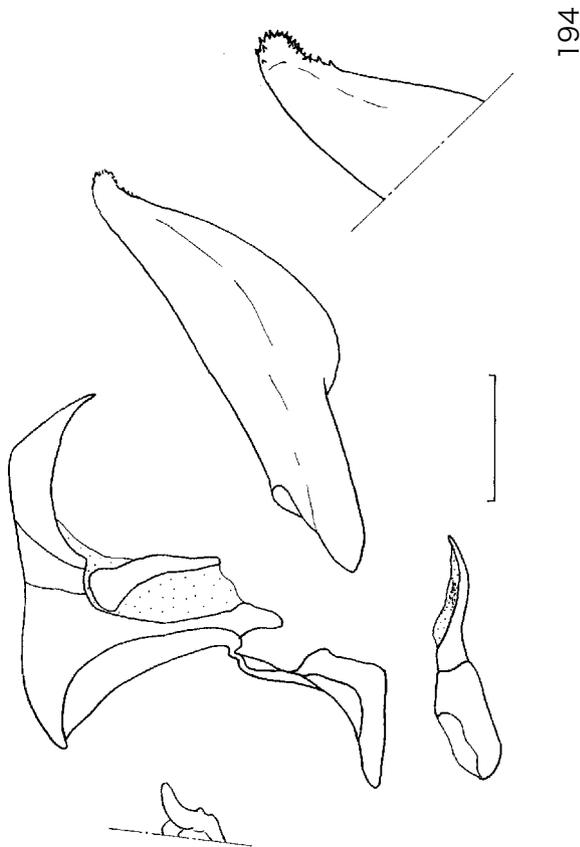
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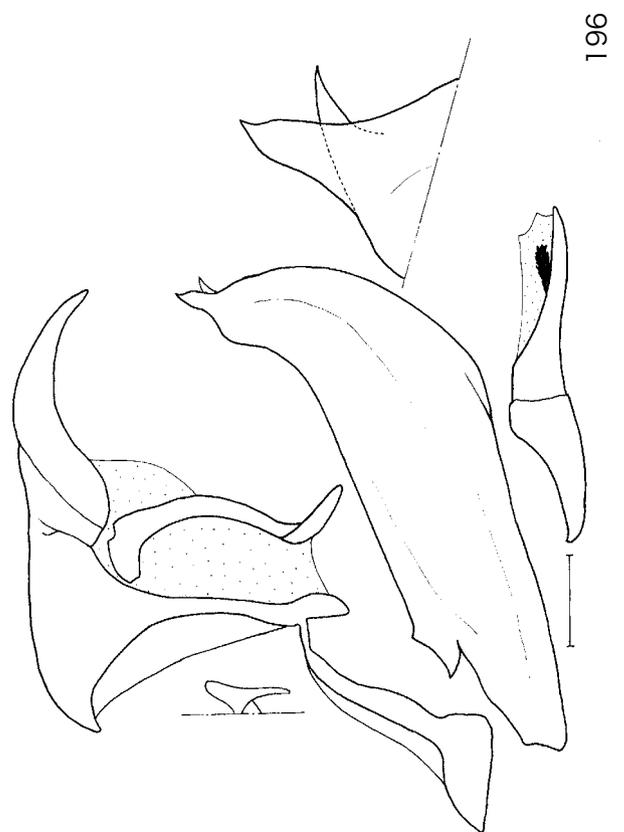
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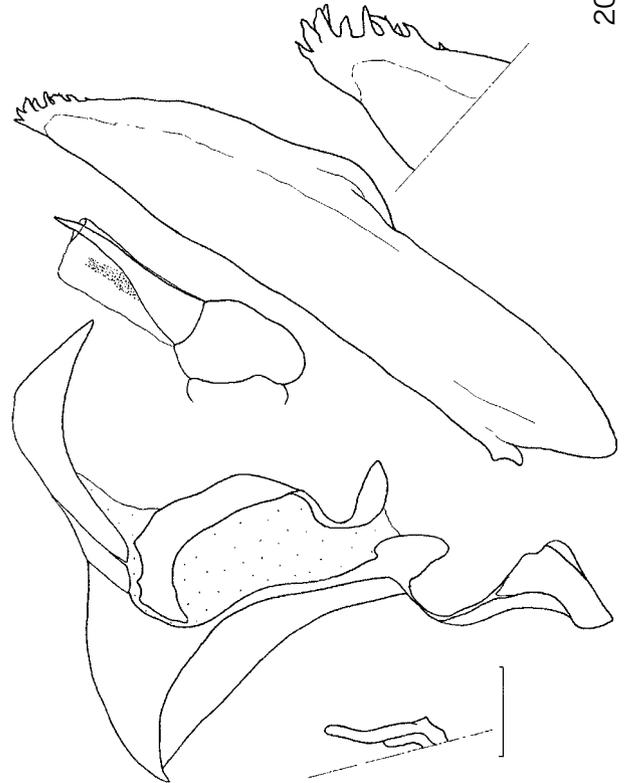
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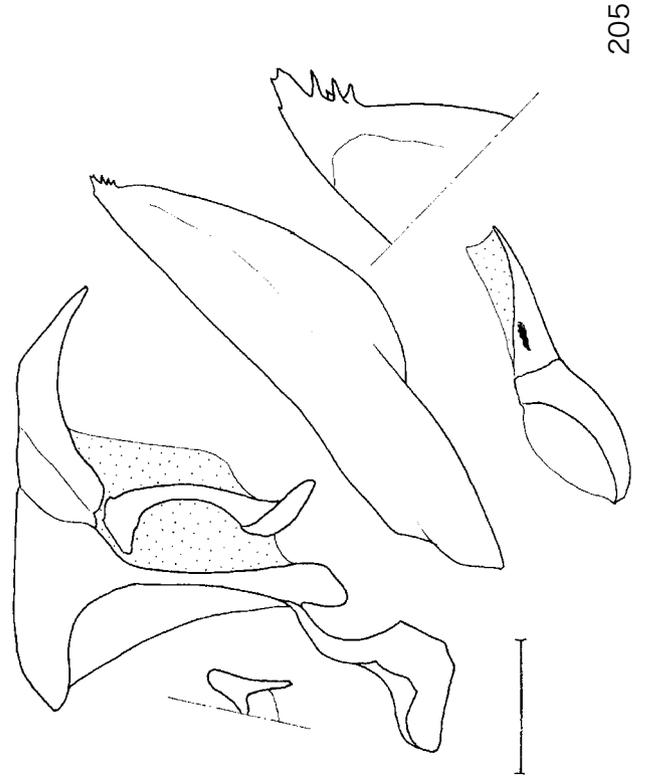
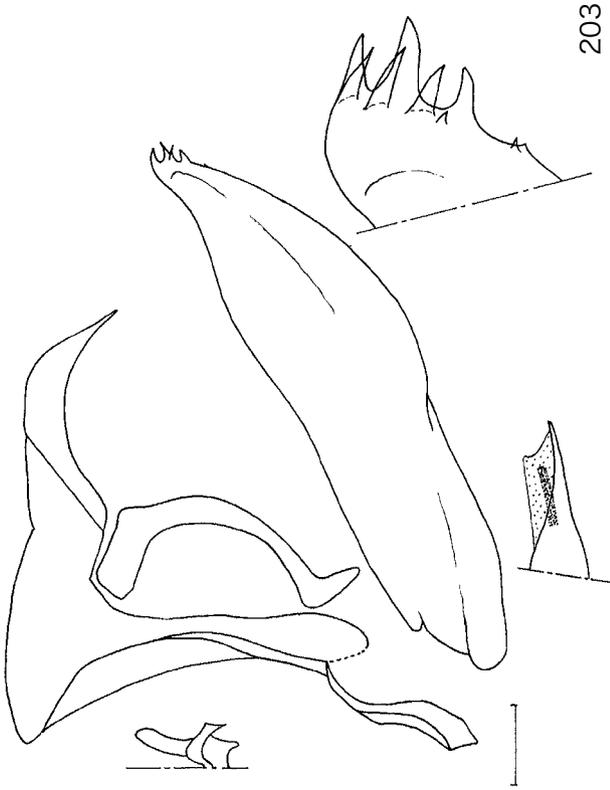
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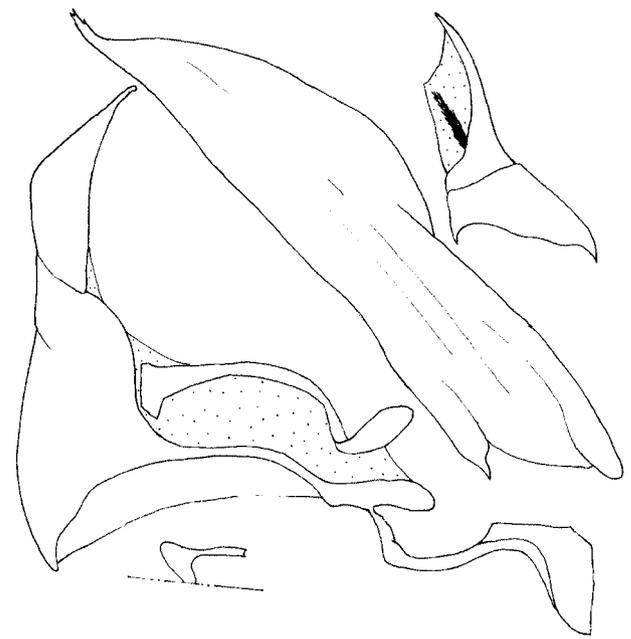
207



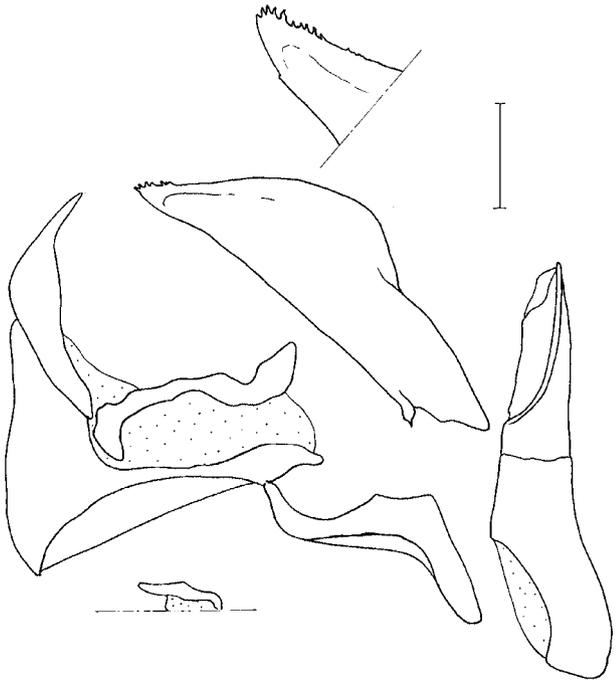
209



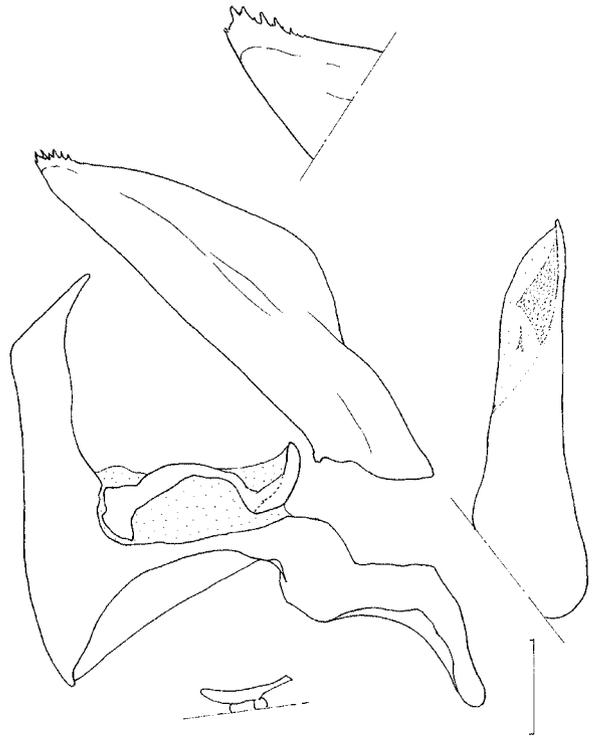
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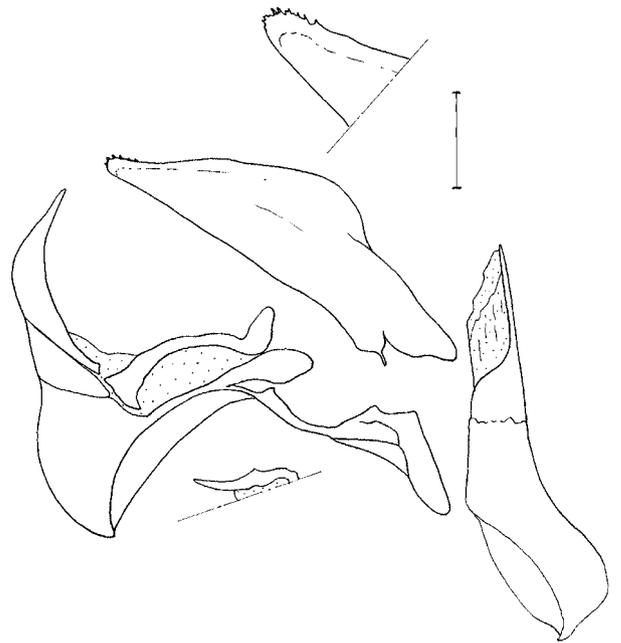
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Explanations of plates

(a: upperside of the wings, b: underside of the wings)

Plate 28

- Fig. 215. *E. (L.) nara nara* ♂, FW: 35 mm. Num, Nepal. TY.
 Fig. 216. *E. (L.) nara nara* ♀, FW: 43 mm. Pokara, Nepal. TY.
 Fig. 217. *E. (L.) nara nara* ♂, FW: 35 mm. Chiang Mai, Thailand. TY.
 Fig. 218. *E. (L.) nara nara* ♀, FW: 44 mm. Chiang Mai, Thailand. TY.

Plate 29

- Fig. 219. *E. (L.) nara nara* ♀, FW: 43 mm. Loimwe, Shan, Myanmar. Syntype of *shania*, BMNH.
 Fig. 220. *E. (L.) nara nara* ♀, FW: 41 mm. Naga Hills, Nagaland, India. Syntype of *nagaenis*, BMNH.
 Fig. 221. *E. (L.) nara nara* ♀, FW: 43 mm. Kalaw, Shan, Myanmar. Syntype of *kalawrica*, BMNH.
 Fig. 222. *E. (L.) nara* (?) ♀, FW: 39 mm. Nitadi, Kachin, Myanmar. KNGBM.

Plate 30

- Fig. 223. *E. (L.) chaywana* ♂, FW: 32 mm. Naungmon (Putao), Kachin, Myanmar. TY.
 Fig. 224. *E. (L.) chaywana* ♀, FW: 43 mm. Naungmon (Putao), Kachin, Myanmar. TY.
 Fig. 225. *E. (L.) chaywana* (?) ♀, FW: 47 mm. Mongoe (Putao), Kachin, Myanmar. TY.
 Fig. 226. *E. (L.) pseudonara* ♂, FW: 34 mm. Chudu Razi, Kachin, Myanmar. Holotype, KMNH.

Plate 31

- Fig. 227. *E. (L.) colinsmithi* ♂, FW: 36 mm. Metok, S. E. Xizang, China. Paratype, TY.
 Fig. 228. *E. (L.) bunzoi bunzoi* ♂, FW: 35 mm. Dali, Yunnan, China. TY.
 Fig. 229. *E. (L.) bunzoi bunzoi* ♀, FW: 46 mm. Dayao shan, Guangxi, China. Paratype, HS.
 Fig. 230. *E. (L.) bunzoi tayiensis* ♂, FW: 33 mm. Jigzhi, Qinghai, China. TY.

Plate 32

- Fig. 231. *E. (L.) bunzoi tayiensis* ♀, FW: 43 mm. Wenxian, Gansu, China. TY.
 Fig. 232. *E. (L.) bunzoi vietnamica* ssp. nov. ♂, FW: 36 mm. Dong Van, Ha Giang, Vietnam. Holotype, KMNH.
 Fig. 233. *E. (L.) bunzoi vietnamica* ssp. nov. ♀, FW: 43 mm. Dong Van, Ha Giang, Vietnam. Paratype, TY.
 Fig. 234. *E. (L.) omeia omeia* ♂, FW: 34 mm. Emei shan, Sichuan, China. TY.

Plate 33

- Fig. 235. *E. (L.) omeia omeia* ♀, FW: 41 mm. Qionglai shan, Sichuan, China. TY.
 Fig. 236. *E. (L.) omeia xamneuana* ♂, FW: 33 mm. Xamneua, Laos. Holotype, KMNH.
 Fig. 237. *E. (L.) omeia xamneuana* ♀, FW: 41 mm. Xamneua, Laos. Paratype, TY.
 Fig. 238. *E. (L.) pseudomeia* ♂, FW: 36 mm. Sa Thay, Kon Tum, Vietnam. Holotype, KMNH.

Plate 34

- Fig. 239. *E. (L.) pacifica* ♂, FW: 38 mm. Qionglai shan, Sichuan, China. TY.
 Fig. 240. *E. (L.) pacifica* ♀, FW: 49 mm. Lishui, Zhejiang, China. TY.
 Fig. 241. *E. (L.) masaokai* ♂, FW: 39 mm. Xamneua, Houa Phan, Laos. Paratype, TY.
 Fig. 242. *E. (L.) masaokai* ♀, FW: 50 mm. Xamneua, Houa Phan, Laos. Paratype, TY.

Plate 35

- Fig. 243. *E. (L.) masaokai* ♀, FW: 49 mm. Oudomxay, Laos. KM.
 Fig. 244. *E. (L.) kuriyamai* ♂, FW: 39 mm. Di Linh, Lam Dong, Vietnam. Holotype, KMNH.
 Fig. 245. *E. (L.) kuriyamai* ♀, FW: 51 mm. Sa Thay, Kon Tum, Vietnam. Paratype, TY.
 Fig. 246. *E. (L.) kuriyamai* ♀, FW: 51 mm. Nghe An, Vietnam. Paratype, TKS.

Plate 36

- Fig. 247. *E. (L.) iva iva* ♂, FW: 46 mm. Sikkim, India. BMNH.
 Fig. 248. *E. (L.) iva iva* ♀, FW: 58 mm. Sikkim, India. BMNH.
 Fig. 249. *E. (L.) iva iva* ♂, FW: 40 mm. Taundam (Putao), Kachin, Myanmar. TY.
 Fig. 250. *E. (L.) iva iva* ♀, FW: 51 mm. Naungmon (Putao), Kachin, Myanmar. TY.

Plate 37

- Fig. 251. *E. (L.) iva buensis* ♂, FW: 45 mm. Sapa, Lao Cai, Vietnam. TY.
 Fig. 252. *E. (L.) iva buensis* ♀, FW: 55 mm. Sapa, Lao Cai, Vietnam. TY.
 Fig. 253. *E. (L.) malapana* ♂, FW: 41 mm. Shishanxi, Taiwan, R. China. TY.
 Fig. 254. *E. (L.) malapana* ♀, FW: 48 mm. Kukuan, Taiwan, R. China. TY.

Plate 38

- Fig. 255. *E. (L.) kosempona kosempona* ♂, FW: 37 mm. Nanshanxi, Taiwan, R. China. TY.
 Fig. 256. *E. (L.) kosempona kosempona* ♀, FW: 43 mm. Nanshanxi, Taiwan, R. China. TY.
 Fig. 257. *E. (L.) kosempona albescens* ♂, FW: 39 mm. Zhangjiajie, Hunan, China. TY.
 Fig. 258. *E. (L.) kosempona albescens* ♀, FW: 44 mm. Zhiziluo, Yunnan, China. TY.

Plate 39

- Fig. 259. *E. (L.) narayana narayana* ♂, FW: 38 mm. Chudu Razi, Kachin, Myanmar. TY.
 Fig. 260. *E. (L.) narayana narayana* ♀, FW: 45 mm. Chudu Razi, Kachin, Myanmar. TY.
 Fig. 261. *E. (L.) narayana narayana* ♀, FW: 45 mm. Tiddim, Chin, Myanmar. TY.
 Fig. 262. *E. (L.) narayana narayana* ♂, FW: 39 mm. Assam, India. BMNH.

Plate 40

- Fig. 263. *E. (L.) narayana narayana* ♀, FW: 50 mm. Khasi Hills, Meghalaya, India. Syntype, MNHN.
 Fig. 264. *E. (L.) narayana yanagisawai* ♂, FW: 35 mm. Xue shan, N. W. Yunnan, China. TY.
 Fig. 265. *E. (L.) narayana yanagisawai* ♂, FW: 39 mm. "Tibet", China. BMNH.
 Fig. 266. *E. (L.) narayana yanagisawai* ♀, FW: 42 mm. "Yunnan", China. BMNH.

Plate 41

- Fig. 267. *E. (L.) narayana yanagisawai* ♀, FW: 42 mm. Wuyi shan, Fujian, China. HU.
 Fig. 268. *E. (L.) narayana dongvanensis* ♂, FW: 40 mm. Dong Van, Ha Giang, Vietnam. TY.
 Fig. 269. *E. (L.) narayana dongvanensis* ♀, FW: 44 mm. Dong Van, Ha Giang, Vietnam. TY.
 Fig. 270. *E. (L.) narayana dalatensis* ♂, FW: 39 mm. Ta Nung (near Dalat), Lam Dong, Vietnam. TKS.

Plate 42

- Fig. 271. *E. (L.) narayana dalatensis* ♀, FW: 43 mm. Tiger Falls (near Dalat), Lam Dong, Vietnam. TKS.
 Fig. 272. *E. (L.) sahadeva* ♂, FW: 40 mm. Kathmandu, Nepal. TY.
 Fig. 273. *E. (L.) sahadeva* ♀, FW: 49 mm. Kathmandu, Nepal. TY.
 Fig. 274. *E. (L.) thawgawa* ♂, FW: 40 mm. Gushin (Putao), Kachin, Myanmar. TY.

Plate 43

- Fig. 275. *E. (L.) thawgawa* ♀, FW: 46 mm. Dazulong (N. Putao), Kachin, Myanmar. TY.
 Fig. 276. *E. (L.) thawgawa* ♀, FW: 47 mm. Chudu Razi, Kachin, Myanmar. TY.
 Fig. 277. *E. (L.) thawgawa* ♂, FW: 42 mm. Naga Hills, India. BMNH.
 Fig. 278. *E. (L.) kardama* ♂, FW: 43 mm. Qionglai shan, Sichuan, China. TY.

Plate 44

- Fig. 279. *E. (L.) kardama* ♀, FW: 54 mm. Emei shan, Sichuan, China. TY.
 Fig. 280. *E. (L.) mingyiae* ♂, FW: 41 mm. Nujiang Valley, Yunnan, China. TY.
 Fig. 281. *E. (L.) tsuchiyai* ♂, FW: 43 mm. Xamneua, Houa Phan, Laos. TY.

Fig. 282. *E. (L.) tsuchiyai* ♀, FW: 50 mm. Xamneua, Houa Phan, Laos. Paratype, TY.

Plate 45

Fig. 283. *E. (L.) hebe* ♂, FW: 39 mm. Emei shan, Sichuan, China. TY.

Fig. 284. *E. (L.) hebe* ♀, FW: 46 mm. Emei shan, Sichuan, China. TY.

Fig. 285. *E. (L.) pulchella pulchella* ♂, FW: 37 mm. Tiyu, Xizang, China. TY.

Fig. 286. *E. (L.) pulchella pulchella* ♀, FW: 42 mm. Chudu Razi, Kachin, Myanmar. TY.

Plate 46

Fig. 287. *E. (L.) pulchella pulchella* ♀, FW: 44 mm. Chudu Razi, Kachin, Myanmar. RIEB.

Fig. 288. *E. (L.) pulchella ebbe* ♂, FW: 37 mm. Zhongdian, Yunnan, China. TY.

Fig. 289. *E. (L.) pulchella ebbe* ♀, FW: 40 mm. Zhongdian, Yunnan, China. TY.

Fig. 290. *E. (L.) curvifascia curvifascia* ♂, FW: 36 mm. Naga Hills, Nagaland, India. Syntype, BMNH.

Plate 47

Fig. 291. *E. (L.) curvifascia curvifascia* ♀, FW: 41 mm. Naga Hills, Nagaland, India. TY.

Fig. 292. *E. (L.) curvifascia nosei* ♂, FW: 35 mm. Nitadi, Kachin, Myanmar. Paratype, TY.

Fig. 293. *E. (L.) curvifascia nosei* ♀, FW: 39 mm. Shankong, Kachin, Myanmar. Paratype, KNGBM.

Fig. 294. *E. (L.) suprema* ♂, FW: 41 mm. Xamneua, Houa Phan, Laos. Paratype, TY.

Plate 48

Fig. 295. *E. (L.) suprema* ♀, FW: 53 mm. Xamneua, Houa Phan, Laos. TY.

Fig. 296. *E. (L.) pyrrrha pyrrrha* ♂, FW: 37 mm. Baoxing, Sichuan, China. TY.

Fig. 297. *E. (L.) pyrrrha pyrrrha* ♀, FW: 43 mm. Wuyi shan, Fujian, China. TY.

Fig. 298. *E. (L.) pyrrrha ueharai* ♂, FW: 41 mm. Dong Van, Ha Giang, Vietnam. TY.

Plate 49

Fig. 299. *E. (L.) pyrrrha ueharai* ♀, FW: 47 mm. Dong Van, Ha Giang, Vietnam. TY.

Fig. 300. *E. (L.) pyrrrha ueharai* ♀, FW: 46 mm. Sapa, Lao Cai, Vietnam. Paratype, TY.

Fig. 301. *E. (L.) guangdongensis guangdongensis* ♂, FW: 40 mm. Dayao shan, Guangxi, China. TY.

Fig. 302. *E. (L.) guangdongensis guangdongensis* ♀, FW: 49 mm. Dayao shan, Guangxi, China. TY.

Plate 50

Fig. 303. *E. (L.) guangdongensis dayiana* ♂, FW: 39 mm. Dali, Yunnan, China. TK.

Fig. 304. *E. (L.) guangdongensis dayiana* ♀, FW: 46 mm. Qionglai shan, Sichuan, China. TY.

Fig. 305. *E. (L.) confucius confucius* ♂, FW: 51 mm. Da Fei Shui, Sichuan, China. TY.

Fig. 306. *E. (L.) confucius confucius* ♀, FW: 54 mm. Emei shan, Sichuan, China. TY.

Plate 51

Fig. 307. *E. (L.) confucius confucius* ♂, FW: 52 mm. S. E. Tibet. TY.

Fig. 308. *E. (L.) confucius sadona* ♂, FW: 52 mm. Chudu Razi, Kachin, Myanmar. TY.

Fig. 309. *E. (L.) confucius sadona* ♀, FW: 58 mm. Chudu Razi, Kachin, Myanmar. TY.

Fig. 310. *E. (L.) confucius sadona* ♂, FW: 48 mm. Kachin, Myanmar. KNGBM.

Plate 52

Fig. 311. *E. (L.) confucius sadona* ♂, FW: 52 mm. Dong Van, Ha Giang, Vietnam. TY.

Fig. 312. *E. (L.) confucius sadona* ♀, FW: 58 mm. Dong Van, Ha Giang, Vietnam. TY.

Fig. 313. *E. (L.) confucius sadona* ♂, FW: 51 mm. Dong Van, Ha Giang, Vietnam. TY.

Fig. 314. *E. (L.) confucius sadona* ♂, FW: 50 mm. Xamneua, Laos. TY.

Plate 53

Fig. 315. *E. (L.) confucius sadona* ♀, FW: 57 mm. Xamneua, Laos. TY.

- Fig. 316. *E. (L.) patala patala* ♂, FW: 47 mm. Kumaon, India. TY.
 Fig. 317. *E. (L.) patala patala* ♀, FW: 55 mm. Kumaon, India. TY.
 Fig. 318. *E. (L.) patala taooana* ♂, FW: 53 mm. Dawna Range, Karen, Myanmar. TY.

Plate 54

- Fig. 319. *E. (L.) patala taooana* ♀, FW: 61 mm. Chiang Rai, Thailand. TY.
 Fig. 320. *E. (L.) lengba* ♂, FW: 45 mm. Manipur, India. Paralectotype, BMNH.
 Fig. 321. *E. (L.) lengba* ♂, FW: 50 mm. N. Kachin, Myanmar. KNGBM.
 Fig. 322. *E. (L.) lengba* ♀, FW: 56 mm. N. Kachin, Myanmar. KNGBM.

Plate 55

- Fig. 323. *E. (L.) linpingensis* ♂, FW: 57 mm. Jizu shan, Yunnan, China. TY.
 Fig. 324. *E. (L.) linpingensis* ♀, FW: 56 mm. Qingyun shan, Fujian, China. MT.
 Fig. 325. *E. (L.) khambounei* ♂, FW: 48 mm. Xamneua, Houa Phan, Laos. TY.
 Fig. 326. *E. (L.) khambounei* ♀, FW: 51 mm. Sapa, Lao Cai, Vietnam. TY.

Plate 56

- Fig. 327. *E. (L.) hayashii* ♂, FW: 41 mm. Mykina, Kachin, Myanmar. Paratype, KNGBM.
 Fig. 328. *E. (L.) hayashii* ♂, FW: 37 mm. Panwa, Kachin, Myanmar. AA.
 Fig. 329. *E. (L.) khama khama* ♂, FW: 39 mm. Jizu shan, Yunnan, China. TY.
 Fig. 330. *E. (L.) khama khama* ♀, FW: 42 mm. Emei shan, Sichuan, China. TY.

Plate 57

- Fig. 331. *E. (L.) khama huangi* ssp. nov. ♂, FW: 38 mm. Dulongjiang Valley, Yunnan, China. Holotype, HH.
 Fig. 332. *E. (L.) dubernardi dubernardi* ♂, FW: 36 mm. Zhongdian, Yunnan, China. TY.
 Fig. 333. *E. (L.) dubernardi tonegawai* ♂, FW: 36 mm. Chudu Razi, Kachin, Myanmar. Paratype, TY.
 Fig. 334. *E. (L.) dubernardi tonegawai* ♀, FW: 41 mm. Nitadi, Kachin, Myanmar. Paratype, KNGBM.

Plate 58

- Fig. 335. *E. (L.) pratti* ♂, FW: 43 mm. Min, Gansu, China. TY.
 Fig. 336. *E. (L.) pratti* ♀, FW: 53 mm. Chia kou ho (Jinkouhe), Sichuan, China. Paratype, BMNH.
 Fig. 337. *E. (L.) occidentalis* ♂, FW: 44 mm. Qionglai shan, Sichuan, China. TY.
 Fig. 338. *E. (L.) occidentalis* ♀, FW: 51 mm. Zhongdian, Yunnan, China. TY.

Plate 59

- Fig. 339. *E. (L.) cooperi* ♂, FW: 50 mm. Maymyo, Mandalay, Myanmar. BMNH.
 Fig. 340. *E. (L.) cooperi* ♀, FW: 59 mm. Anisakan, Mandalay, Myanmar. Syntype, BMNH.
 Fig. 341. *E. (L.) monasteryskiyi* sp. nov. ♂, FW: 50 mm. Ha Giang, Vietnam. Holotype, KMNH.
 Fig. 342. *E. (L.) monasteryskiyi* sp. nov. ♀, FW: 59 mm. Dong Van, Ha Giang, Vietnam. Paratype, TY.

Figs. 219–221, 247, 248, 262, 265, 266, 277, 290, 320, 336, 339, 340: © The Natural History Museum, London.

















243a



243b



244a



244b



245a



245b



246a



246b













267a



267b



268a



268b



269a



269b



270a



270b











287a



287b



288a



288b



289a



289b



290a



290b

























