A list of butterflies collected from Nujiang (Lou Tse Kiang) and Dulongjiang, China with descriptions of new species, new subspecies, and revisional notes[1]

(Lepidoptera, Rhopalocera)

by

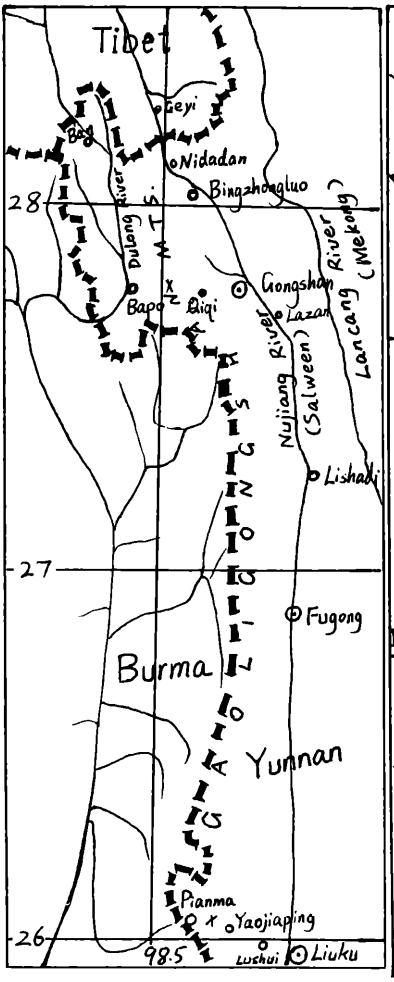
Hao Huang

Abstract: In this paper a full report is presented on the butterfly collection obtained from my 2002 expedition to Nujiang and Dulongjiang, NW. Yunnan. In addition to the descriptions of new Nymphalids and Satyrids in the first two parts, 10 new species and 14 new subspecies are described here, viz. Hesperiidae: *Coladenia uemurai, Gerosis yuani, Aeromachus catocyanea amplifascia, Aeromachus catocyanea curvifascia, Sebastonyma medoensis albostriata, Sovia grahami miliaohuae, Pedesta viridis, Thoressa gupta nujiangensis, Halpe mixta, Halpe parakumara, Halpe kumara micromacula, Potanthus riefenstahli, Polytremis micropunctata, Polytremis theca macrotheca*; Papilionidae: *Papilio polytes liujidongi*; Nymphalidae: *Limenitis misuji wenpingae, Stichophthalma sparta gongshana, Ypthima muotuoensis dulongae, Ypthima parasakra mabiloa, Ypthima iris naqialoa, Callerebia ulfi*; Lycaenidae: *Ahlbergia lynda nidadana, Ahlbergia distincta, Tongeia confusa*. In convenience, a new species and a new subspecies of Hesperiidae, *Aeromachus monstrabilus* and *Sovia separata metokana* are described from SE. Tibet, and a new subspecies of Lycaenidae, *Ahlbergia clarofacia meridionalis* is described from Xishuangbanna, S. Yunnan. All the new species have their genitalia illustrated, mostly together with their closest affinities. All holotypes are preserved in Biological Laboratory of Qingdao Vocational and Technical College (previous Qingdao Education College) and all paratypes are temporarily deposited in author's private collection. Some genera, species-groups and species are discussed or revised here, such as *Pseudocoladenia, Sovia lucasii, Limenitis (Litinga) mimica, L. rileyi, Limenitis albomaculata*. The following new combinations, new stati and new synonyms are given: *Lobocla bifasciata disparalis* syn. nov. = *Lobocla bifasciata, Celaenorrhinus consanguinea chihhsiaoi* stat. nov., *Aeromachus propinquus hokowensis* syn. nov. = *A. stigmata obsoleta, Sovia separata* stat. nov., *Sovia separata magna* comb. nov., *Thoressa naumanni* comb. nov., *Notocrypta eitschbergeri* syn. nov. = *Notocrypta curvifascia, Polytremis feifei* syn. nov. = *P. gigantea, Byasa dasarada nujiangana* syn. nov. = *Byasa dasarada ouvrardi, Papilio polytes flavolineatus* syn. nov. = *P. polytes polytes, Papilio obscuras* syn. nov. = *P. polytes polytes, Papilio krishna nu* syn. nov. = *Papilio krishna thawgawa, Delias lativitta tai* syn. nov. = *Delias lativitta yunnana, Aporia kaolinkonensis* stat. nov., *Neope serica kinpingensis* comb. nov., *Neptis aspasia weisiensis* syn. nov. = *Neptis aspasia aspasia, Limenitis (Litinga) rileyi xizangana* comb. nov., *Limenitis (Patsuia) sinensium lisu* syn. nov. = *L. sinensium minor, Limenitis albidior* stat. nov., *Euthalia sahadeva yanagisawai* stat. nov., *Calinaga buddha yunnana* syn. nov. = *C. buphonas, Ypthima muotuoensis* stat. nov., *Callerebia polyphemus confusa* stat. nov., *Callerebia polyphemus ricketti* comb. nov., *C. orixa atuntseana* syn. nov. = *C. suroia, Ahlbergia clarofacia* stat. nov. In addition, photos of male genitalia and drawings of female genitalia are published here concerning some taxa previously described from Nujiang valley and their affinities, such as the male genitalia of *Celaenorrhinus ratna nujiangensis, Zophoessa lisuae, Zophoessa neofasciata, Lethe umedai albofasciata, Lethe liae, Lethe latiaris lishadii, Lethe marginalis obscurofasciata, Neope oberthueri qiqia, Neope pulaha pulaha, Neope pulaha nuae, Neope pulahoides pulahoides, Neope pulahoides leechi, Neope ramosa* and *Neope chayuensis*, and the female genitalia of *Ypthima yangjiahei*.

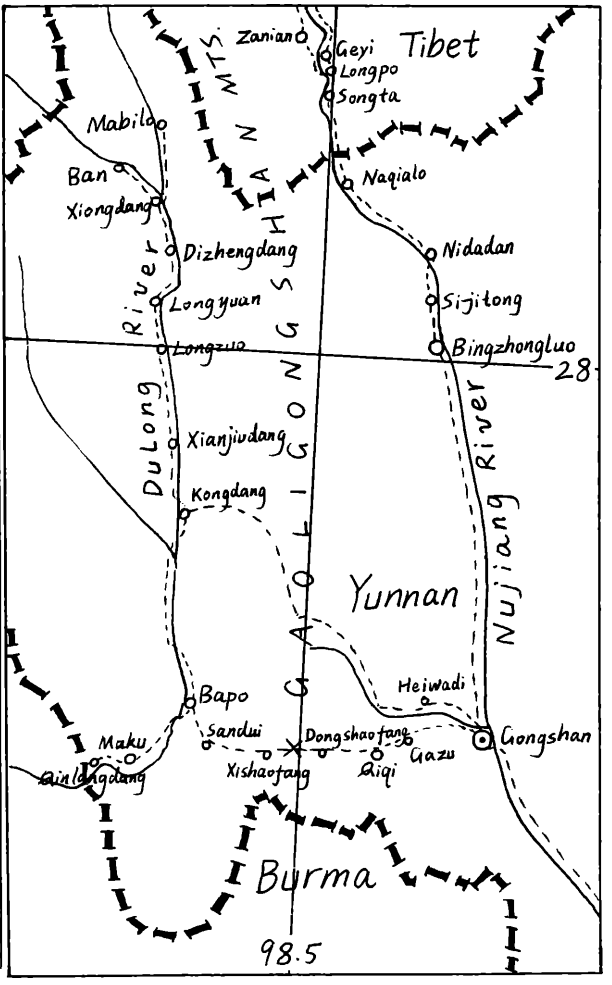
Introduction

For a proper understanding of this third article on the butterflies of the valleys of Nujiang and Dulongjiang, the first one (Huang, 2002), and especially its introduction, should be consulted.

1 Report of H. Huang's 2002 Expedition to NW. Yunnan for Lepidoptera. Part 3.



Map 1: The upper portion of Nujiang valley in NW. Yunnan.



Map 2: Dulongjiang valley in NW. Yunnan.

In my 2002 expedition, all the collecting localities are dated as follows. On May 15th at Yaojiaping, on May 16th at Yaojiaping and Yakou above it, on May 17th at Gongshan but without collecting, from May 18th to May 20th at Bingzhongluo, from May 21st to May 24th at Nidadan, Between May 25th and May 30th I was marching from Nidadan to Zanian, passing Naqialo, Songta, Longpo, Geyi, and then back to Nidadan on May 31st, on June 1st I was walking from Nidadan to Bingzhongluo, passing Sijitong. From June 2nd to June 6th I was collecting at Gongshan, and then went to Lishadi on June 7th, again at Yaojiaping on June 9th, back to Gongshan on June 10th. From June 11th to June 16th I was collecting at Gongshan, started to Dulong valley on June 17th, on June 18th at Gazu, from June 19th to June 21st at Qiqi, from June 22nd to June 24th I was marching from Qiqi to Bapo, passing Dongshaofang, Xishaofang and Sandui. Between June 25th and July 2nd I stayed at Bapo, started to Maku on July 3rd and back to Bapo on July 5th, then went to Kongdang on July 7th. My route along the Dulong River, July 9th to July 13th, was Xianjiudang, Longyuan, Dizhengdang, Xiongdang, Ban and Mabilo. From July 14th to July 16th I was back to Kongdang again, and on July 17th I went to Gongshan by truck.

On July 18th I was walking from Bingzhongluo to Sijitong and Nidadan and stayed there until July 22nd. On July 23rd I went to Gazu and Qiqi, and then back to Gongshan on July 28th, On July 29th I collected at Lishadi and on August 1st I was at Yaojiaping. To make the readers clear about the localities, a detailed map of collecting localities is included here. The elevations of some localities are as follows: Yaojiaping—2500 m, Lishadi—1500 m, Gongshan—1591 m, Bingzhongluo—1800 m, Nidadan—2000 m, Longpo—2200 m, Gazu—1800 m, Qiqi—2040 m, Bapo—1300 m, Kongdang—1400 m, Maku—1500 m, Longyuan—1800 m, Ban—2000 m, Mabilo—2200 m.

The following abbreviations have been used in this paper: DSF = Dry Season Form, WSF = Wet Season Form, LF = Length of Forewing, TL = Type Locality, IZAS = Institute of Zoology, Academia Sinica, Beijing.

Nearly all the specimens in this study are collected by me and preserved in the Biological Laboratory of Qingdao Vocational and Technical College (previous Qingdao Education College) and my private collection, except a few specimens which are loaned from the collection of IZAS and labeled accordingly.

The terminology of male genitalia in Hesperiidae mostly follows Evans (1949) in convenience; the current usage (fully introduced by Shirozu, 1960) is more reasonable, but mostly not adopted in this work because of my custom. In Evans' usage, clasp refers to valva, cuiller refers to harpe and harpe refers to ampulla.

New Descriptions

Hesperiidae

Coladenia ***uemurai*** **spec. nov.** (fig. 1; col. pl. I, fig. 1)

Diagnosis
This new species is closely allied to the recently described *C. tanya* Devyatkin, 2002 from Vietnam, but can be easily distinguished from the latter by the following combination of characters.

1) Upperside ground color is more uniform and darker brown than in *tanya*, with the marginal area not much darker than discal area as in *tanya*.
2) Forewing discal spots in spaces 2 and 3 and cell spot are contiguous, but not so conjoined as in *tanya*, with the ground coloring at base of space 3 conspicuously bigger.
3) Forewing hyaline spot above the cell spot is restricted in space 11, not into space 10 as in *tanya*.
4) On forewing underside, the whitish postdiscal patch is only visible in space 1B, not well marked from dorsum to costa as in *tanya*.
5) Male genitalia are different: clasp is bifurcate as in *tanya*, but the dorsal branch is much longer and thinner, more acutely pointed at tip, at least as long as the width of cuiller at base, and the distal branch is not heavily serrate at outer margin as in *tanya* and conspicuously longer and thinner than in *tanya*, with the apical spine as long as the width of base of cuiller.

This new species is very peculiar in male genital structures and seems to have no other close affinities within the genus except *C. tanya*. It can be very easily distinguished from all the elderly known species of *Coladenia* by the following combination of characters in the males:
1) Both sides of hindwing are dark brown and marked with a series of well-defined black discal spots, not with hyaline spots as in *C. hoenei* Evans, 1939, *C. nankoshana* (Shimonoya & Murayama, 1976), *C. maeniata* (Oberthür, 1896), *C. vitrea* (Leech, 1894) and *C. sheila* Evans, 1939.
2) Ground colour of both sides of both wings is more or less uniform brown, not marked with ochreous coloring or spots on upperside as in *C. indrani* (Moore, 1865).
3) Forewing hyaline spot above the cell spot is restricted in space 11, not extended over vein 12 towards costa as in *C. buchananii* De Niceville, 1889 and *C. laxmi* De Niceville, 1888.

4) Both sides of forewing have no subbasal spot in space 1b, which is presented in *C. palawana* STAUDINGER, 1888 and *C. kehelatha* HEWITSON, 1878; hindwing upperside black spots are placed mid end of cell and termen, whereas in *C. kehelatha* and *C. palawana* they are nearer end of cell than termen; termen of forewing and hindwing is evenly curved, not excavated as in *C. palawana* and *C. kehelatha*.
5) Forewing underside has an obscure white patch external to the discal series in space 1b, which is absent in *C. agni* DE NICEVILLE, 1883.
6) Antenna is entirely blackish above and completely paler brown below, not whitish before club as in *C. agnioides* ELWES & EDWARDS, 1897.
7) Forewing has five white subapical spots in spaces 4–8, whereas in *C. agni* and *C. agnioides* it has only three spots in spaces 6–8.
8) Male genitalia are very much different from all the previously known species except *tanya*: uncus is hawk-beak-shaped and has conspicuous wing at back as in *C. agnioides* and *C. tanya*, different from that of other species; clasp is bifurcate as in most species, but the dorsal branch is very long and slender, evenly curved upwards as a smooth hook and acutely pointed at tip, different from that of all other species, the distal branch is evenly curved upwards as the dorsal branch, narrowed towards tip smoothly and evenly, and pointed acutely at tip, different from that of all other species; aedeagus is serrate on dorsal margin at ⅓ length from the tip as in *C. laxmi*, different from that of other species.

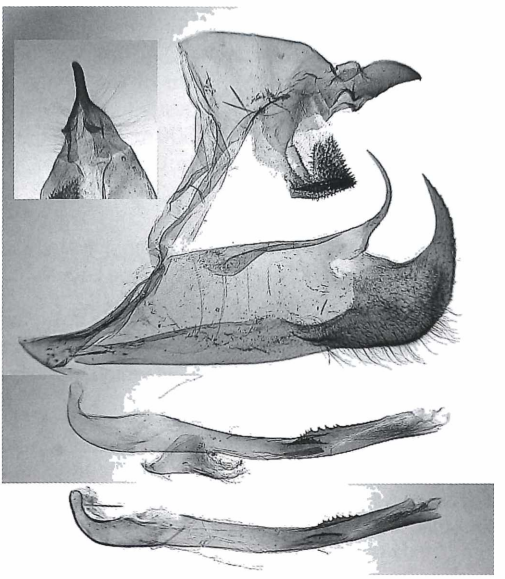


Fig. 1: Male genitalia of *Coladenia uemurai* (spec. nov.) consisting of genital capsule (genital capsule is composed of tegumen, uncus, gnathos, vinculum, saccus, valva, juxta and aedeagus) of holotype in lateral view with left clasp (valva), juxta and aedeagus removed (top right), of uncus of holotype in ventral view (top left), of aedeagus and juxta of holotype (specimen illustrated on col. pl. I, fig. 1) in lateral view (center) and of aedeagus of paratype (specimen not illustrated) in lateral view (bottom).

According to CHIBA et al. (1991: 59), both *C. igna* (SEMPER, 1892) and *C. semperi* ELWES & EDWARDS, 1897 from Philippines are all bona species. Recently the following species were also described from Philippines: *C. minor* CHIBA, 1991, *C. ochracea* DE JONG & TREADAWAY, 1992 and *C. similes* DE JONG & TREADAWAY, 1992. All these species were fully revised by DE JONG & TREADAWAY (1992); they have nothing to do with *C. uemurai* and can be simply distinguished from the latter in having forewing subapical spots usually three in number and forewing upperside submarginal markings well developed.

Remarks

There is no doubt that the closest species of *C. uemurai* is *C. tanya*. According to the structure of uncus and external features, another rather allied species of *C. uemurai* should be *C. agnioides* which is distributed from Manipur, Naga Hills, through Burma and probably north Indo-China to Fujian and Hainan.

It is a pity that I have no material of *Coladenia agnioides, C. agni* and *C. tanya*, thus I don't like to provide a pure description of the new species. I believe that in most morphological structures, such as legs and palpi, only the comparative description can provide useful information in taxonomy, whereas the pure description is often useless. Here I'd like to describe only the antennae as follows. Antennae nearly half as long as forewing costa, wholly black above; club and shaft not marked off in color, both much paler brown beneath; club gradually marked in thickness, with apiculus arcuate a little beyond its thickest part, nudum 15 in number. The general structures of eyes, frons, palpi, thorax, abdomen and legs agree with the key characters for the genus *Coladenia* in EVANS' work (1949).

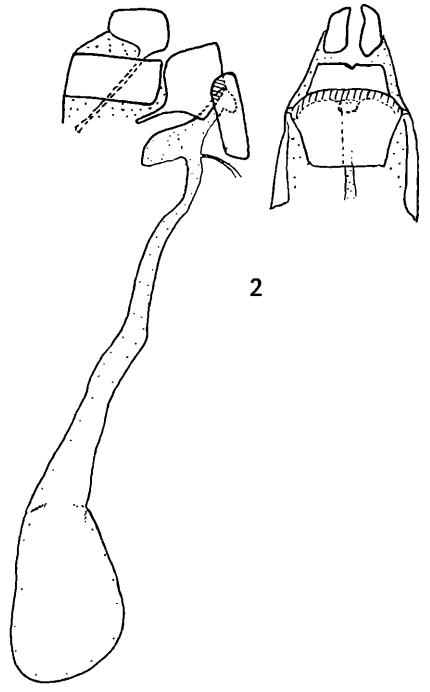
Type data
Holotype ♂: LF 20 mm, Gazu, Nujiang valley, NW. Yunnan, China, July 24th 2002. Paratypes: 3 ♂♂, Gazu, July 23rd–24th 2002.
This new species is named in honor of Dr. Yoshinobu Uemura, in gratitude for his constant help in literatures and valuable information on *Ypthima* that helped my study greatly.

Gerosis ***yuani*** **spec. nov.** (fig. 2; col. pl. I, fig. 2)

Generic classification
Although only a female is known, I decide to describe it as new species because of its peculiar female genitalia. In female genitalia of the new species, the apophysis posterioris is about twice as long as the 8th tergum as in *Gerosis phisara* (Moore, 1884) (fig. 3) and *G. sinica* (Felder, 1862) (fig. 4) (whereas in *Daimio tethys* (Ménétriés, 1857 – fig. 5) it is no more than twice as long as the 8th tergum); the 8th tergum is simple, without apophysis anterioris and distinctly separated from the 8th sternum by membranous region; the 8th sternum is specialized into lamella postvaginalis (postvaginal plate or genital plate), with the ostium at its anterior margin as in *Gerosis phisara, G. sinica* and *Daimio*, and with a pair of lateral processes expand dorsally, its posterior margin is somewhat excavated at middle as in *Gerosis phisara* and *G. sinica* (whereas in *Daimio* it is strongly protruded at middle, forming a central process), but such excavation is very slight and shallower than in *Gerosis phisara* and *G. sinica*; the lamella anterioris is undeveloped, only a small nonsclerotized pouch found there as in *Gerosis phisara* and *G. sinica* (not found in *Daimio*), which can be called as ostium pouch; the 7th sternum is specialized into a somewhat quadrilateral lamella (can be called as lodix) ventrally covering the lamella postvaginalis and posteriorly connected to it by the narrow intersegmental membrane, it is much shorter than in *Gerosis phisara, G. sinica* and *Daimio*; the caudal portion of ductus bursae between ostium and the attachment point of ductus seminalis is wholly nonsclerotized (whereas in *Gerosis phisara* and *G. sinica* it is partly sclerotized near ostium with the sclerotized part short, incomplete and not circular, whereas in *Daimio* it is strongly sclerotized near ostium with the sclerotized part rather long and complete, producing prominent antrum), and has an enlarged pouch dorsally (such additional pouch is not found in *Gerosis phisara* and *Daimio*, but as an elongate pouch attached to ductus bursae ventrally in *G. sinica*) in opposite with the attachment point of ductus seminalis, the ductus seminalis is attached ventrally to the ductus bursae, not laterally as in *Gerosis phisara* and *Daimio* or dorsally as in *Gerosis sinica*; the corpus bursae (bursa copulatrix) is somewhat ellipsoidal as in *Gerosis phisara* and *G. sinica*, not guttiform as in *Daimio*, without signum as in *Gerosis phisara, G. sinica* and *Daimio*.
Because this new species shares more female genital structures with the species of *Gerosis* than with *Daimio*, I treat it as a member of *Gerosis*.

Diagnosis
This new species is very similar to *G. sinica* (col. pl. I, figs. 5, 6) and *G. phisara* (col. pl. I, figs. 3, 4) in external features, but can be distinguished from both of them by the following combination of characters:
1) Discocellular white spot on upperside of forewing is larger than the spot in space 3, not small or absent as in *G. sinica* and *G. phisara*.
2) On upperside of forewing, the spot in space 3 is well separated from the spots in space 2 and the cell, whereas in *G. sinica* it is adjoining the spot in cell.
3) Female genitalia are remarkably different as discussed above.

This new species can be easily distinguished from *G. limax* (Plötz, 1884) by the forewing discocellular spot only attached to end of cubitus, not crossing cell as in *limax*, and the hindwing white band reaching costa, not restricted below vein 7 as in *limax*.
This new species can be distinguished from *G. tristis* (Eliot, 1959) by the forewing discocellular spot larger than the spot in space 3 and conjoined with spot in space 2 and hindwing white discal band much more developed.



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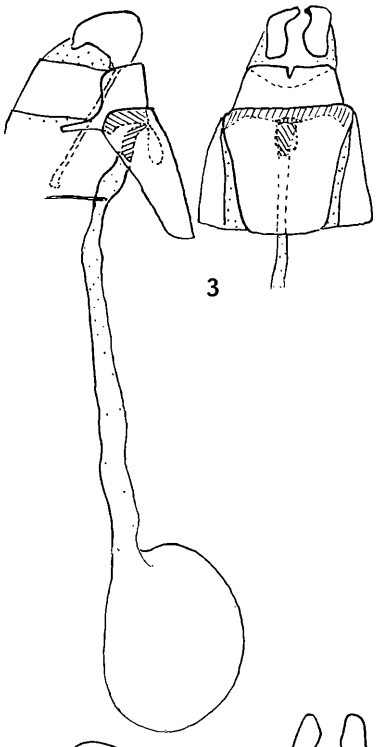

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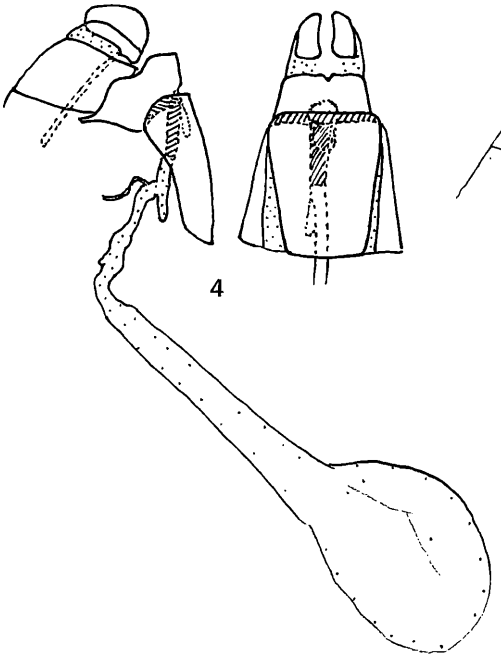

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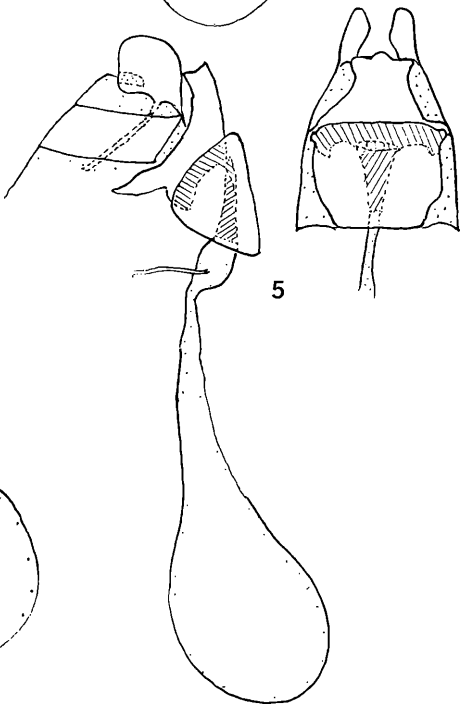

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Fig. 2: Female genitalia of *Gerosis yuani* (holotype, specimen illustrated on col. pl. I, fig. 2) consisting of complete genitalia in lateral view (at top of figure, composed of 8th tergum, 7th sternum (lodix), papilla analis, 8th sternum (lamella postvaginalis), ductus bursae, ductus seminalis and corpus bursae), and of complete genitalia with corpus bursae removed in ventral view (at bottom of figure).
Fig. 3: Female genitalia of *Gerosis phisara rex* (Nujiang, specimen illustrated on col. pl. I, fig. 4) consisting of complete genitalia in lateral view (top), and of complete genitalia with corpus bursae removed in ventral view (bottom).
Fig. 4: Female genitalia of *Gerosis sinica sinica* (Hubei, specimen illustrated on col. pl. I, fig. 6) consisting of complete genitalia in lateral view (top), and of complete genitalia with corpus bursae removed in ventral view (bottom).
Fig. 5: Female genitalia of *Daimio tethys moori* (Sichuan, specimen not illustrated) consisting of complete genitalia in lateral view (top), and of complete genitalia with corpus bursae removed in ventral view (bottom).

This new species can be distinguished from *G. bhagava* (MOORE, 1865) by the absence of black spots in hindwing white band at end of cell and in spaces 6 and 7. (Both the DSF and WSF of *bhagava* have such black spots well marked in hindwing discal white band.)
This new species can be easily distinguished from *G. corona* (SEMPER, 1892) by the spot in space 3 much closer to cell spot and spot in 2 than in *corona*, and by the hindwing white band crossing the whole wing from costa to dorsum, not oval in shape and restricted to discal area as in *corona*.
This new species can be easily distinguished from *G. celebica* (FELDER, 1867) by the absence of the postdiscal grey line and veins on hindwing upperside.
In addition to these differences, the new species has labial palpi white in color below, not yellow as in all other species (sexual dimorphism does not appear in the color of palpi below). However, such difference in color may be due to the worn condition of specimen.

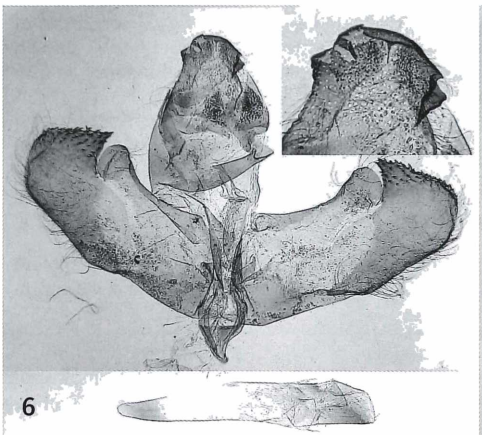
Description
Male unknown.
Female. Eyes smooth. Frons nearly twice as wide as eye and clad with blackish scales, with the area surrounding eyes clad with whitish scales and hairs. Labial palpi: 2nd segment slender, porrect and clad with blackish scales above and with whitish scales beneath, 3rd segment rather long, bent down and clad with black scales. Antennae nearly half as long as forewing, densely clad with fuliginous-brown scales on both sides, with club arcuate from the thickest part, nudum blackish and 13 in number, 5 in club proper and 8 in apiculus. Thorax clad with blackish scales and hairs above and with whitish scales and hairs beneath. Legs sparsely (this is probably due to the worn condition of specimen) clad with whitish scales, with all structures including the spurs on tibiae and spines on tarsi as in the female of *Gerosis phisara*. Abdomen wholly white on both upper and under sides, not striped as in most species of *Gerosis*. Wing venation and wing shape as in *Gerosis phisara*. Forewing length 19 mm. Wing markings similar to DSF of *Gerosis sinica narada* (MOORE, 1884), but different in having cell spot remarkably bigger than and widely separated from the discal spot in space 3.

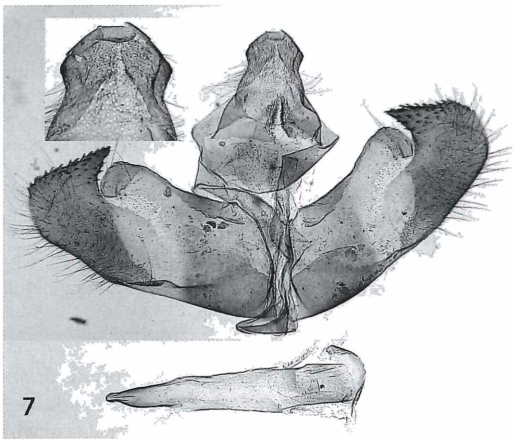
Remarks
The new species flies together with *Gerosis phisara rex* (EVANS, 1949) and *Daimio tethys birmana* EVANS, 1926 at its habitat in Nujiang valley. It is also nearly sympatric with *G. sinica narada* (MOORE, 1884), which has been found in the very nearby Dulong Valley.

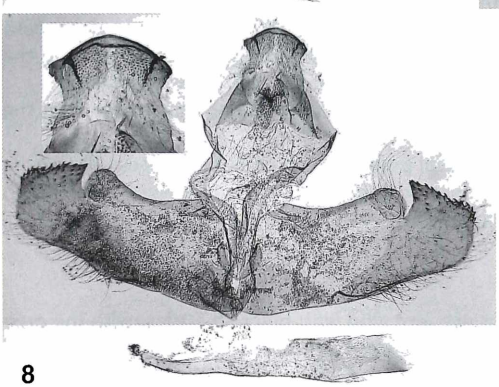
Type data
Holotype ♀: LF 20 mm, Nidadan, Nujiang valley, NW. Yunnan, China, July 23rd 2002.
This new species is named in honour of Mr. FENG YUAN, Beijing.

Aeromachus catocyanea ***amplifascia*** **subspec. nov.** (fig. 6; col. pl. I, figs. 7, 8)

Diagnosis
This new subspecies from Nujiang valley can be distinguished from the nominate *Aeromachus cato-*







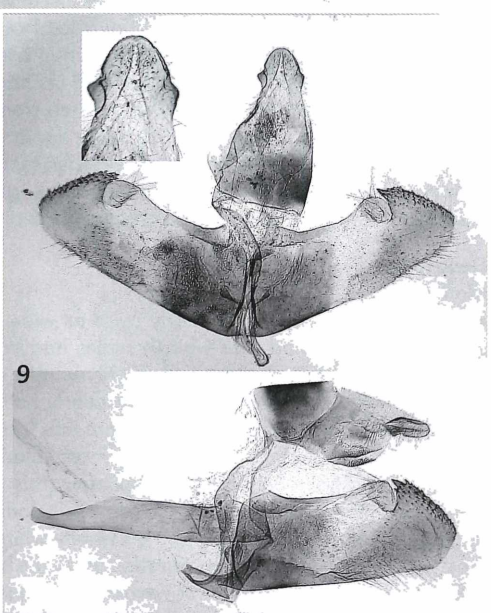


Fig. 6: Male genitalia of *Aeromachus catocyanea amplifascia* (holotype, Nujiang, specimen illustrated on col. pl. I, fig. 7) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top left), of aedeagus in lateral view (bottom), and of enlarged uncus in ventral view (top right).

Fig. 7: Male genitalia of *Aeromachus catocyanea catocyanea* (Sichuan, specimen illustrated on col. pl. I, fig. 9) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top right), of aedeagus in lateral view (bottom), and of enlarged uncus in ventral view (top left).

Fig. 8: Male genitalia of *Aeromachus catocyanea curvifascia* (holotype, Dulongjiang, specimen illustrated on col. pl. I, fig. 10) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top right), of aedeagus in lateral view (bottom), and of enlarged uncus in ventral view (top left).

Fig. 9: Male genitalia of *Aeromachus monstrabilus* (spec. nov.) consisting of genital capsule of holotype (specimen illustrated on col. pl. I, fig. 12) in lateral view with left clasp removed (bottom), of genital capsule of paratype (specimen not illustrated) spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top right), and of enlarged uncus of paratype in ventral view (top left).

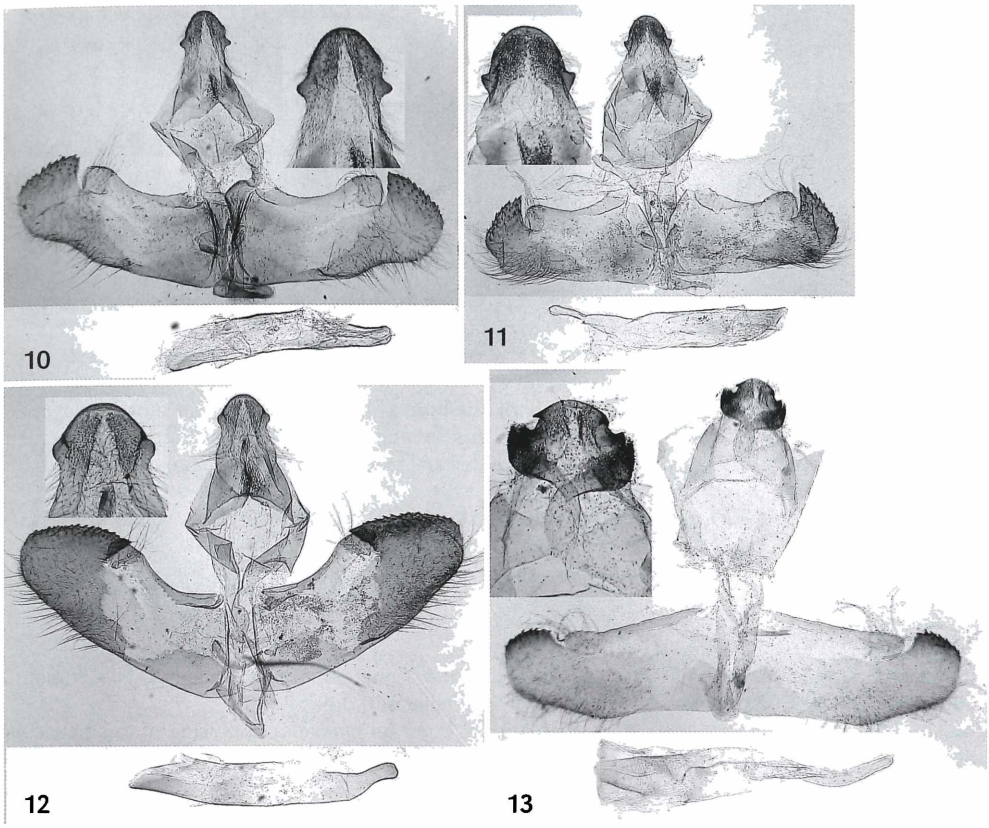


Fig. 10: Male genitalia of *Aeromachus stigmata obsoleta* (Metok, SE. Tibet, specimen illustrated on col. pl. I, fig. 14) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top left), of aedeagus in lateral view (bottom), and of enlarged uncus in ventral view (top right).
Fig. 11: Male genitalia of *Aeromachus stigmata obsoleta* (Gongshan, Nujiang, Yunnan, specimen illustrated on col. pl. I, fig. 13) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top right), of aedeagus in lateral view (bottom), and of enlarged uncus in ventral view (top left).
Fig. 12: Male genitalia of *Aeromachus inachus formosanus* (Guniujiang, Anhui, specimen illustrated on col. pl. 1, fig. 17) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top right), of aedeagus in lateral view (bottom), and of enlarged uncus in ventral view (top left).
Fig. 13: Male genitalia of *Aeromachus kali* (Lishadi, Nujiang, specimen illustrated on col. pl. I, fig. 16) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top right), of aedeagus in lateral view (bottom), and of enlarged uncus in ventral view (top left).

cyanea (Mabille, 1879) (fig. 7; col. pl. I, fig, 9) from Sichuan (2 ♂♂ from Er-lang-shan examined) by the following combination of characters in males:
1) Underside ground color is more blackish and apparently darker than in ssp. *catocyanea*.
2) On underside of hindwing, postdiscal lilac band is conspicuously broader than in ssp. *catocyanea*, especially in spaces 5–7, subbasal lilac spots near costa and at bases of spaces 1b–1c are more prominent.

Type data
Holotype ♂: LF 14 mm, Qiqi, Nujiang valley, NW. Yunnan, China, July 26th 2002. Paratypes: 4 ♂♂, Qiqi and Gazu, July; 1 ♂, Heiwadi, July; 1 ♂, Sijitong, July.
The Latin name refers to the broader postdiscal band on hindwing underside characterizing this new subspecies.

Aeromachus catocyanea ***curvifascia*** **subspec. nov.** (fig. 8; col. pl. I, figs. 10. 11)

Diagnosis
This new subspecies from Dulong valley is distinguishable from ssp. *catocyanea* and ssp. *amplifascia* by the following combination of characters in males.
1) Underside ground color is similar to that of ssp. *amplifascia*, apparently darker than in ssp. *catocyanea*.
2) On underside of hindwing, the postdiscal band is as broad as or a little narrower than in ssp. *catocyanea*, conspicuously narrower than in ssp. *amplifascia*, and is more incurved than in *catocyanea* and *amplifascia*, with parts in spaces 6 and 7 more shifted-in, whereas in *catocyanea* and *amplifascia* such band is nearly straight.
3) On underside of hindwing, the marginal lilac spots are less marked than in *catocyanea* and *amplifascia*, the subbasal spots are similar to those of *catocyanea*, smaller than in *amplifascia*.
4) On underside of hindwing, the cell spot is usually unseen, not traceable as in ssp. *amplifascia* and ssp. *catocyanea*.

Type data
Holotype ♂: LF 14 mm, on path between Longyuan and Xianjiudang, Dulong valley, NW. Yunnan, China, July 13th 2002. Paratypes: 2♂♂, Longyuan to Xianjiudang, July.
The Latin name refers to the more curved postdiscal band on hindwing underside of this new subspecies.

Aeromachus ***monstrabilus*** **spec. nov.** (fig. 9; col. pl. I, fig. 12)
= *Aeromachus stigmata obsoleta*, HUANG, 2000 (Lambillionea **C** (1): 157 (misidentification).

Diagnosis
This new species from Yigong, the Namjagbarwa area, SE. Tibet is somewhat close to *A. stigmata* (MOORE, 1878) (figs. 10, 11; col. pl. I, figs. 13, 14) and *A. piceus* (LEECH, 1894) (fig. 17; col. pl. I, fig. 15) in external features, but can be distinguished from them by the following combination of characters in males.
1) Outer ciliae on both sides of wings are uniform and brown-gray as in *piceus*, not chequered as in *stigmata*.
2) Forewing upperside is extensively and densely powdered with yellowish scales in discal area from costa to dorsum, whereas in either *stigmata* or *piceus* it is not powdered with yellow.
3) Hindwing upperside is extensively and densely clad with yellowish hairs, which are much paler than the gray-brown ground color of hindwing and extended to submargin of hindwing, whereas in either *stigmata* or *piceus* the hairs on hindwing upperside are dark and not paler than gray-brown ground color of hindwing.
4) Male brand is well marked, but not associated with brown-gray scales as in *piceus*.
5) All veins on underside of wings are concolorous with ground color as in *piceus*, not standing out in pale yellow in subapical area of forewing and outer half of hindwing as in *stigmata*.
6) Forewing underside cell spot is double and placed on discocellular, not single and at end of discocellular cell as in *stigmata* or absent as in *piceus*.
7) On underside of wings, all pale spots are much more clearly defined than in *piceus*, and less contiguous than in *stigmata*.

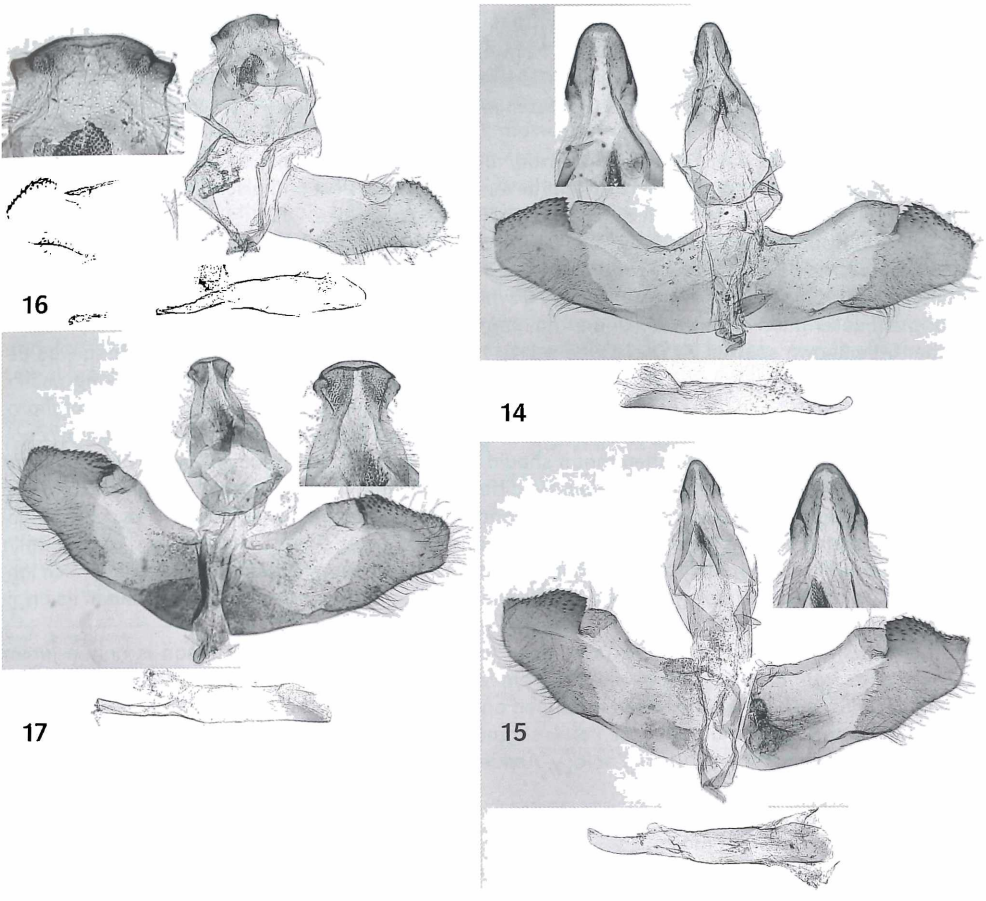


Fig. 14: Male genitalia of *Aeromachus propinquus tali* (Nujiang, specimen illustrated on col. pl. II, fig. 1) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top right), of aedeagus in lateral view (bottom), and of enlarged uncus in ventral view (top left).
Fig. 15: Male genitalia of *Aeromachus propinquus tali* (Nujiang, specimen not illustrated) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top left), of aedeagus in lateral view (bottom), and of enlarged uncus in ventral view (top right).
Fig. 16: Male genitalia of *Aeromachus jhora* (Guangxi, specimen illustrated on col. pl. II, fig. 2) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top right), of aedeagus in lateral view (bottom), and of enlarged uncus in ventral view (top left).
Fig. 17: Male genitalia of *Aeromachus piceus* (Nujiang, specimen illustrated on col. pl. I, fig. 15) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top left), of aedeagus in lateral view (bottom), and of enlarged uncus in ventral view (top right).

8) Hindwing underside subbasal spots at bases of spaces 1C and 7 are minute but clearly defined, not faint or absent as in *stigmata* and *piceus*.
9) Male genitalia are different: size of genitalia is much larger than in *stigmata* though the exmained specimens are in the same size; apical portion of uncus after the lateral swellings is similar to that of *stigmata* in shape, but longer than in *piceus*; clasp is similar to that of *piceus*, much longer and broader than in *stigmata*; cuiller is somewhat triangular in shape, not trapeziform as in *piceus*, with posterior angle more produced than in *stigmata* and apical portion more curved backwards than in *stigmata*.

Remarks

This new species can be easily distinguished from *A. catocyanea* (MABILLE, 1876), *A. kali* DE NICEVILLE, 1895 (fig. 13; col. pl. I, fig. 16), *A. inachus* (MÉNÉTRIÉS, 1859) (fig. 12) and *A. propinquus* ALPHERAKY, 1897 (figs. 14, 15; col. pl. II, fig. 1) by the difference shown in "Comparative description of males" below.

This new species can be easily distinguished from all the remaining old species except *A. jhora* (fig. 16; col. pl. II, fig. 2) simply by antennae club bent beyond its thickest part and also by different male genitalia, from *A. jhora* simply by much different uncus in male genitalia.

A. cognatus INOUE & KAWAZOE, 1966 from South Vietnam was described as a relative of *A. dubius* ELWES & EDWARDS, 1897, with a very broadly rounded tip of uncus. But according to DEVYATKIN & MONASTYRSKII (2002: 146), *cognatus* is most probably a synonym of *jhora*. I agree to this opinion after reading the original description of *cognatus* and examining a male of *jhora* from Guangxi.

Another little known species, *A. pseudojhora* LEE, 1962 (col. pl. II, figs. 3, 4) from S. Yunnan was described as a relative of *A. jhora*, with a very broad tip of uncus and much longer oblong cuiller. DEVYATKIN & MONASTYRSKII (2002: 146) doubted its validity and suspected it to be a synonym of *jhora*. Recently I had an opportunity to examine the holotype of *pseudojhora* preserved in Institute of Zoology, Academia Sinica, and concluded that it should be treated as a good species. As firstly illustrated in colour here, in external features *pseudojhora* differs from *jhora* in underside of hindwing having two additional subbasal yellow spots in spaces 1C and 7, discal spots entering space 7 and the discocellular associated with yellow streaks on both its inner and outer sides. Moreover, in male genitalia *pseudojhora* differs remarkably from *jhora* in having clasp much more elongated and cuiller much longer and more oblong in shape (good photos of male genitalia of *pseudojhora* can be found in its original description).

A. propinquus hokowensis LEE, 1962 (**syn. nov.**) (col. pl. I, fig. 18) from S. Yunnan is only a junior synonym of *A. stigmata shanda* EVANS, 1949 from S. Shan State, S. Burma and has nothing to do with *A. monstrabilus*, its holotype has been examined and illustrated here for the first time.

It should be noted that a male specimen of *A. stigmata obsoleta* taken from Metok, SE. Tibet has been found in the collection of Institute of Zoology, Academia Sinica, thus it is possible that *monstrabilus* is sympatric with *stigmata*.

Comparative description of males

The following comparative description is based upon the examination of 2 ♂♂ of *A. catocyanea catocyanea* from Er-lang-shan, Sichuan, 3 ♂♂ of *A. catocyanea curvifascia* from Dulong valley, 7 ♂♂ of *A. catocyanea amplifascia* from Nujiang valley, 1 ♂ of *A. kali* from Nujiang valley, 2 ♂♂ of *A. inachus formosanus* MATSUMURA, 1931 (col. pl. I, fig. 17) from Guniujiang, Anhui province, 1 ♂ from Nujiang valley and 1 ♂ from Metok, the Namjagbarwa area, SE. Tibet of *A. stigmata obsoleta*, 1 ♂ from Qingchengshan, Sichuan, 10 ♂ from Nujiang and Dulong valleys and 4 ♂♂ from Wuyishan, Fujian of *A. piceus*, 9 ♂♂ of *A. propinquus tali* EVANS, 1932 from Nujiang valley, 1 ♂ of *A. jhora* from Guangxi and 3 ♂♂ of *monstrabilus* from Yigong, SE. Tibet.

The following description is applicable to all the above-mentioned taxa except those noted. Eyes smooth and a little different in size between taxa. Frons nearly twice as wide as eye, clad with two transverse tufts of yellowish and blackish hairs between eyes, and with area surrounding eyes scaled with yellow, such hair tufts mostly blackish mixed with brown-yellow in all subspecies of *catocyanea* and *kali*, but mostly yellow mixed with black in other taxa. Antennae nearly of half the length of forewing; club a little bent or hooked beyond the thickest part in nearly all taxa except *A. propinquus tali*, obtuse about the thickest part in *A. propinquus tali*; apiculus short, stout and pointed at tip in all taxa. Palpi: 2nd segment porrect, nearly in same length in all taxa, black above, yellowish mixed with blackish below, slightly different in color between taxa; 3rd segment nearly in same length in all taxa, a little bent down, black above and mixed with yellowish below. Thorax clad with blackish hairs mixed with brownish and yellowish ones above, with yellow hairs below. Legs: all femora clad mostly with blackish scales on both sides, more mixed with yellow in *jhora, inachus, stigmata* and *monstrabilus*; all tibiae and tarsi more blackish above but more yellowish or brownish below, color of inner side of mid and hind-tibiae slightly different between taxa; no constant difference found in length of lower hind-

tibial spurs, length of upper hind-tibial spurs and length of mid-tibial spurs between taxa; no constant difference in size of spines on tarsi between taxa. Inner ciliae dark brown in all taxa; outer ciliae different between taxa, in most taxa uniform on both sides, but chequered in *jhora, inachus* and *stigmata* on both sides. Male brand well marked or absent as shown in the table below. Under microscope, hindwing upperside more or less clad with hairs in most parts of wings in all taxa, but some taxa only bearing decubital hairs whilst the others also bearing somewhat erect hairs; such erect hairs usually more apparent in spaces 1b–1c, discocellular cell and spaces 6–7; such difference in erect hairs between taxa as shown in the table below. Wing pattern: difference between taxa as shown in the table below. Male genitalia: no remarkable structural difference in aedeagus; tegumen bearing a pair of lateral expansions before uncus, which are not remarkable in most taxa except *jhora* and *kali*; uncus with a pair of lateral swellings near tip, with apical portion after such swellings remarkably different between taxa; clasp different in size and length between taxa; cuiller trapeziform or semi-elliptic or triangular in shape, different between taxa, more or less serrate at dorsal margin. The characters in external features of males and male genitalia of these taxa are shown in the following table.

Name	*cato. cato.*	*cato. ampl.*	*cato. cuvi.*	*kali*	*inac. form.*	*stig. obso.*	*mons.*	*piceus*	*jhora*	*prop. tali*
Length of forewing	14–14.5mm	14–14.5mm	14–14.5mm	14 mm	12 mm	10–12 mm	12 mm	11.5–13mm	12.5 mm	13.5–14mm
Length of antennae	6.5 mm	6.5–7 mm	6.5–7 mm	6.5–7 mm	5.5 mm	6 mm	6 mm	6–7 mm	6.5 mm	6.5 mm
Club above color	black	black	black	black	black	black	black	black	black	black
Club below color	yellow, dusted black at tip	yellow	yellow, sometimes tipped blackish	black at tip, yellow at base	yellow	black at tip, yellow at base	yellow	yellow	black at tip, yellow at base	yellow
Shaft above color	black	black	black	black	black	black	black	black	black	black
Shaft below color	chequered yellow and black	chequered yellow and black	chequered yellow and black	chequered yellow and black	chequered yellow and black	chequered yellow and black	chequered yellow and black	chequered yellow and black	chequered yellow and black	chequered yellow and black
Bent position of club	beyond thickest part	beyond thickest part	beyond thickest part	beyond thickest part	beyond thickest part	beyond thickest part	beyond thickest part	beyond thickest part	beyond thickest part	about thickest part
Nudum number	10	9–10	10	9	10	≥ 9	9	10	≥10	8
Nudum color	blackish	blackish or dark brown	blackish	blackish	yellow-brown	dark brown	blackish	blackish	blackish	blackish
Size of eyes	bigger	bigger	bigger	bigger	smaller	smaller	bigger	bigger	bigger	bigger
Color of lateral and under sides of 2nd segment of palpi	yellow-brown	yellow-brown, somewhat ochreous	yellow-brown, more greenish	yellow-brown	(missing)	pale yellow, grayish	yellowish gray	yellowish gray	yellowish gray	yellowish gray
Length of fore-femur	rather long	long	long	rather long	rather short	short	rather long	variable	short	short
Length of fore-tibia	medium	long	long	medium	short	short	short	medium or short	short	short
Length of fore-tarsi	rather short	rather long	long	rather short	short	short	short	short	short	short
Length of mid-femur	long	long	long	long	short	rather short	rather short	variable	rather short	rather short
Length of mid-tibia	long	long	long	long	short	short	short	medium or short	medium	medium
Length of mid-tarsi	rather short	long	long	rather long	short	short	short	rather short or short	rather short	rather short
Length of hind-femur	long	long	long	long	short	short	short	long or short	medium	medium
Length of hind-tibia	medium	long	long	long	short	short	short	long or medium	short	long
Length of hind-tarsi	long	long	long	long	rather short	short	rather short	long or short	short	long
Hairs on fore and mid-femora	mostly blackish	mostly yellowish	mostly blackish	mostly blackish	yellow-gray	yellow-gray	yellow-gray	yellow-gray	yellow-gray	yellow-gray
Hairs on hind-femora and hind-tibiae	mostly blackish	mostly brown-yellow mixed with black	mostly brown-yellow, mixed with black	mostly blackish	pale yellow	pale yellow	pale yellow mixed with black	pale yellow mixed with black	yellow mixed with black	pale yellow, mixed with black

Name	*cato. cato.*	*cato. ampl.*	*cato. cuvi.*	*kali*	*inac. form.*	*stig. obso.*	*mons.*	*piceus*	*jhora*	*prop. tali*
Density of hairs on hind-tibiae above	denser	denser	denser	sparser	sparser	sparser	sparser	sparser	denser	denser
Color of inner side of mid and hind-tibiae	brown	brown-yellow	brown-yellow	yellow-brown	yellow	yellow	yellow	brown	brown-yellow	yellow
Outer ciliae on both sides of wings	dark brown, uniform	dark brown, uniform	dark brown, uniform	blackish brown, uniform	clearly chequered with black and white	chequered with pale yellow and brown	brown-gray, uniform	brown-gray, uniform	chequered with pale yellow and brown	brown-gray, darker, uniform
Forewing upperside ground color	darker brown, with more reddish reflection	blackish brown, grayer	blackish brown, grayer	blackish brown, blacker	dark brown	dark gray-brown, with greenish reflection	gray-brown, more suffused yellowish scales	blackish brown or dark brown	gray-brown	gray-brown, with greenish reflection
Hairs on hindwing above	mostly dark, not paler than ground color	mostly dark, not paler than ground color	mostly dark, not paler than ground color	mostly dark, not paler than ground color	mostly not paler than ground, with sparse yellow	mostly not paler than ground, with sparse yellow	yellow-gray, much paler than ground, much denser	mostly dark, not paler than ground color	mostly dark, not paler than ground color	mostly dark, not paler than ground color
Erect hairs on hindwing above	more developed	more developed	more developed	less developed	less developed	less developed	more developed	more developed	less developed	not developed
Male brand	present, associated with yellowish scales	present, associated with yellowish scales	present, associated with yellowish scales	absent, replaced by a white dot over mid vein 1	replaced by two white dots at veins 1 and 2	present, without pale scales	present, without pale scales	present, with brownish gray scales	absent	present, with brownish gray scales
Forewing upperside markings	unmarked	unmarked	unmarked	unmarked	with small cell spot and small whitish postdiscal spots in spaces 1–8	with faint cell spot and small yellowish postdiscal spots in spaces 2–8	with minute faint spots in spaces 2–8 only traceable, no cell spot	unmarked	with minute faint spots in spaces 2–8 only traceable, no cell spot	unmarked, marginal area darker than rest of wing
Ground color of forewing underside	blackish, costa and apex broadly powdered with dense brown scales	blackish, costa and apex broadly powdered with sparse brown scales	blackish, costa and apex broadly powdered with sparse brown scales	blackish, apex powdered with few brown-yellow scales	dark gray-brown, costa powdered with dense pale yellow scales	dark gray-brown, costa powdered with dense pale greenish yellow	dark gray-brown, costa and apex with dense brown-yellow scales	dark gray-brown, costa and apex with sparse brown-yellow scales	dark gray-brown, costa and apex with dense yellow scales	dark gray-brown, costa powdered with sparse yellow-gray scales
Veins on forewing underside	unmarked	unmarked	unmarked	unmarked	marked yellow in costal and subapical areas	marked yellow in subapical area	unmarked	unmarked	nearly unmarked	unmarked
Forewing underside cell spot	absent	absent	absent	absent	clear, small, whitish near end of cell	faint, minute, whitish near end of cell	double whitish spots on discocellular	absent	faint, minute, yellow near end of cell	absent
Forewing underside postdiscal marks	small clear lilac spots contiguous from vein 2 to costa	small clear lilac spots contiguous from vein 2 to costa	small clear lilac spots contiguous from vein 2 to costa	minute faint lilac dots in from vein 2 to costa	small whitish spots, contiguous, from costa to dorsum	small whitish spots, contiguous, from costa to dorsum	small whitish spots contiguous from costa to dorsum	small obscure pale yellowish spots, mostly in spaces 2–6	small pale yellowish spots, in spaces 2–8	absent
Forewing underside submarginal marks	bigger lilac spots from vein 2 to costa, separated, nearer termen	bigger lilac spots from vein 2 to costa, separated, nearer termen	small lilac spots from vein 2 to costa, separated, nearer termen	small lilac spots from vein 2 to costa, separated, nearer termen	whitish spots from vein 3 to costa, contiguous, small, dusted	whitish spots conjoined from vein 3 to costa, wider, also in spaces 1–2	whitish elongate clear spots from costa to dorsum, well separated	obscure spots from cost to space 2, yellowish, only traceable	obscure spots from cost to space 2, yellowish	absent
Ground color of hindwing underside	blackish, entirely powdered with brown scales, with lilac at dorsum	blackish, entirely powdered with brown scales, with lilac at dorsum	blackish, entirely powdered with brown scales, with lilac at dorsum	blackish, sparsely powdered with brown scales, with lilac at dorsum	brown, powdered with yellow in basal and discal areas	brown, powdered with yellow from base to submargin	brown, entirely powdered with yellow scales	brown, entirely powdered with yellow scales	brown, entirely powdered with yellow scales	gray brown, paler, not powdered
Veins on hindwing underside	unmarked	unmarked	unmarked	unmarked	all marked yellow	marked yellow in outer half of wing	unmarked	unmarked	nearly unmarked	paler brown than ground

Name	*cato. cato.*	*cato. ampl.*	*cato. cuvi.*	*kali*	*inac. form.*	*stig. obso.*	*mons.*	*piceus*	*jhora*	*prop. tali*
Hindwing underside cell spot	single, minute lilac spot at end of cell	single, small lilac spot at end of cell	absent	absent	double whitish spots at end of cell	absent, but yellow line just out of cell	absent	absent	absent, but faint yellow patch just out of cell	double, upper one whitish, lower one black
Hindwing underside postdiscal marks	lilac band from vein 1B to costa, *rather wide*	lilac band from vein 1B to costa, *wide*	lilac band from vein 1B to costa, *curved at vein 6*	lilac faint dots from vein 1B to costa, *only traceable*	yellowish spots, conjoined in spaces 1C–5, also in 6 and 7	yellowish smaller spots conjoined in spaces 1C–5, also in 6 and 7	clear yellowish spots in spaces 1C–7, separated	very obscure spots, pale yellowish, in spaces 1C–7, separated	very obscure spots, pale yellowish, in spaces 1C–6, variable	white spots in spaces 1C–5, also in 7, margined by black
Hindwing underside submarginal marks	small lilac dots from vein 1C to costa, separated, nearer termen	small lilac dots from vein 1C to costa, separated, nearer termen	small lilac dots from vein 1C to costa, separated, nearer termen	small lilac dots from vein 1C to costa, separated, nearer termen	small yellowish spots, contiguous in spaces 1C–7	bigger yellowish spots, conjoined in spaces 1C–7	yellowish spots in spaces 1C–6, separated	very obscure yellowish spots, variable	very obscure yellowish spots, variable	not developed
Hindwing underside subbasal spot at base *of space 7*	small, clear, lilac	small, clearer, lilac	small, clear, lilac	minute, faint, lilac	small, clear, yellowish	faint or absent	minute, clear, yellowish	absent	absent	minute, clear, pale gray
Hindwing underside subbasal spot in space 1C	small, clear, lilac	small, clearer, lilac, bigger	small, clear, lilac	minute, faint, lilac	elongate, clear, yellowish, absent	minute, clear, yellowish	very faint or absent	absent	absent	
Apical portion after swellings of uncus	short and broadly rounded at tip	short and broadly rounded at tip	short and broadly rounded at tip	deeply constricted before apical margin	rather short and rounded at tip	rather short and rounded at tip	rather short and rounded at tip	short and broadly rounded at tip	Extremely short and broadly flat at tip	long and narrow, blunt at tip
Lateral expansions of tegumen	common	common	common	very large	common	common	common	common	large	common
Clasp	rather broad, long	rather broad, long	rather broad, long	narrow, short	rather broad, long	narrow, short	rather broad, long	broad, long	narrow, short	rather broad, long
Cuiller	trapeziform, rather long	trapeziform, rather long	trapeziform, rather long	trapeziform, short	semi-elliptic, long	rather triangular	triangular	trapeziform, long	trapeziform, short	trapeziform, long
Aedeagus	long	long	long	long	rather long	short	rather long	rather long	short	rather long

Type data
Holotype ♂: LF 12 mm, Yigong, the Namjagbarwa area, SE. Tibet, China, 2300 m, early August 1996.
Paratypes: 2 ♂♂, same data as holotype.
The Latin name means "conspicuous" and refers to the outstanding wing-markings on underside of this new species.

Sebastonyma medoensis ***albostriata*** **subspec. nov.** (fig. 18; col. pl. II, fig. 5)

Diagnosis
This very remarkable new subspecies has all the fulvous markings of ssp. *medoensis* Lee, 1979 (figs. 19–22; col. pl. II, figs. 6, 7) on underside (including subapical band on forewing, subbasal streak in space 7, submarginal spots and central band on hindwing) replaced by much more whitish coloring. Such difference is very constant among the examined 13 ♂♂ from Metok, SE. Tibet and 13 ♂♂ from Dulong valley, NW. Yunnan of ssp. *medoensis* and 7 ♂♂ in type series of ssp. *albostriata*.

Remarks
S. medoensis was originally described upon two males from Metok, SE. Tibet and said to be different from *S. dolopia* (Hewitson, [1868]) in having forewing spots in spaces 2 and 3 separated and not overlapping, central band on underside hindwing narrower and sub-tornal spot on underside hindwing much larger. The subsequently added specimens from Metok confirmed such difference in external features. However, when more specimens being dissected, the male genitalia of *medoensis* show remarkable individual variation and do not differ apparently from those of *dolopia* illustrated by Evans (1949) considering Evans' bad drawing. In addition to the topotypical population, a new population

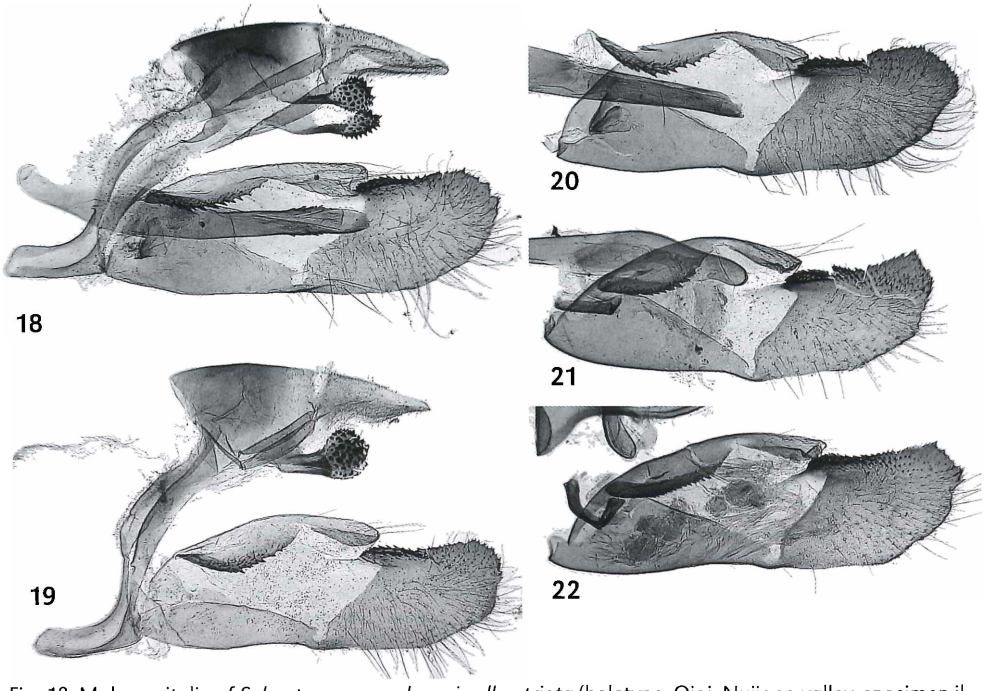


Fig. 18: Male genitalia of *Sebastonyma medoensis albostriata* (holotype, Qiqi, Nujiang valley, specimen illustrated on col. pl. II, fig. 5) consisting of genital capsule in lateral view with left clasp removed.
Fig. 19: Male genitalia of *Sebastonyma medoensis medoensis* (Bapo, Dulong valley, specimen illustrated col. pl. II, fig. 6) consisting of genital capsule in lateral view with left clasp, aedeagus and juxta removed.
Fig. 20: Male genitalia of *Sebastonyma medoensis medoensis* (Dulong valley, specimen not illustrated) consisting of right clasp in lateral view.
Fig. 21: Male genitalia of *Sebastonyma medoensis medoensis* (Metok, SE. Tibet, specimen not illustrated) consisting of right clasp in lateral view.
Fig. 22: Male genitalia of *Sebastonyma medoensis medoensis* (Metok, SE. Tibet, specimen illustrated on col. pl. II, fig. 7) consisting of right clasp in lateral view.

belonging to *medoensis* was discovered from Dulong valley and shows the forewing spots in spaces 2 and 3 more or less nearer to each other than in topotypical population. Since there is no sympatric record of *medoensis* and *dolopia* (recorded by EVANS, 1949) from Sikkim, Assam and N. Burma and by DEVYATKIN (1999) from N. Vietnam), it may be possible that both taxa are conspecific and represent different geographical races.

A careful examination of all my specimens of ssp. *medoensis* and ssp. *albostriata* shows that the two subspecies have no constant difference from each other in eyes, frons, palpi, antennae, thorax, legs, ciliae, hindwing upperside male brand in discocellular cell and male genitalia. Length of forewing is 15 mm for *albostriata*, 14.5–15 mm for Metok population of *medoensis*, and 14 mm for Dulongjiang population of *medoensis*. The following description is applicable to all populations of *medoensis* and *albostriata*: outer ciliae chequered with blackish and grayish on both sides of both wings; fore-femur mostly black-scaled above, black-scaled and clad with black and yellow hairs below, fore-tibia clad with black and yellow scales and with very long yellow scales covering and surrounding tibial epiphysis, fore-tarsi clad with blackish scales above but with yellow below; midlegs and hindlegs all clad with sparse hairs on inner side of femora and outer side of tibiae, without any long hair-tuft; no difference in mid and hind-tibial spurs and spines on tarsi found between all populations of species. The population from Metok seems to have all legs somewhat longer than in the population of Dulong valley and

ssp. *albostriata*, but such difference is not very constant and probably due to individual variation. There is only very slight constant difference in length of fore-tibia, which is a little longer in both populations from Metok and Dulong valley of ssp. *medoensis* than in ssp. *albostriata*. In wing-pattern, the population of Dulong valley of ssp. *medoensis* seems to have forewing discal spot in space 2 closer to spot in 3 than to cell spot and on underside nearly touching spot in 3, but such feature can be occasionally found in very few examples from Metok.

Type data
Holotype ♂: LF 15.5 mm, Qiqi, Nujiang valley, NW. Yunnan, China, July 26th 2002. Paratypes: 6 ♂♂, Qiqi, July.
The name refers to the more whitish discal band on underside hindwing of this new subspecies.

Sovia grahami ***miliaohuae*** **subspec. nov.** (fig. 23; col. pl. II, figs. 8, 9)

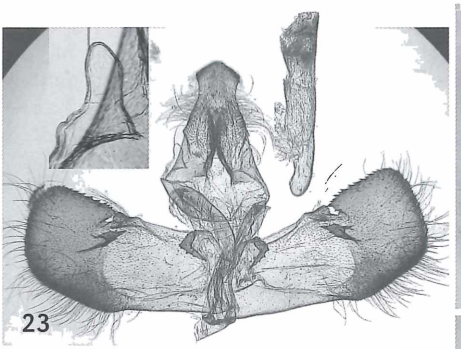
Diagnosis
This new subspecies can be distinguished from the nominotypical subspecies of *S. grahami* (Evans, 1926) (fig. 24; col. pl. II, fig. 10) from Assam (TL: Khasia Hills) and Sikkim in males by the following combination of characters in males.
1) Forewing discal spot in space 2 is remarkably shorter than in ssp. *grahami*.
2) Forewing discal spot in space 2 is remoter from cell spot than in ssp. *grahami*.
3) Male genitalia are different: uncus is broader and more obtuse at tip in dorsal view than in ssp. *grahami*.

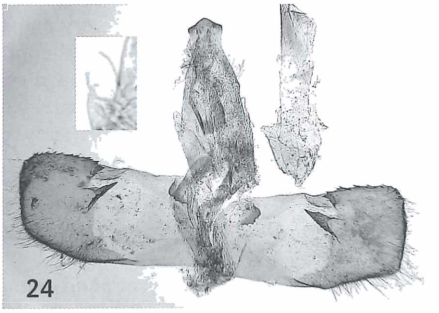
Remarks
Besides the external difference, this new subspecies seems to differ from ssp. *grahami* also in male genitalia according to the illustration of male genitalia in Evans' work. In this new subspecies, uncus is obtusely pointed at tip, not so acutely pointed at tip as in ssp. *grahami*; cuiller is smooth at inner margin near its juncture with harpe, not serrate as in ssp. *grahami*, with inner process more remarkable and more centrally situated than in ssp. *grahami*. I inclined to regard this new taxon as independent at first, but after examining a specimen from Cuona, near Sikkim-Tibet border, which is indistinguishable from ssp. *grahami* in external features but shows the similar genital structures to *miliaohuae*, I dared not to treat my new taxon as full species. It is very possible that Evans' figure of *grahami* is not accurate.
A detailed description of this new taxon can be found in the following description of *Sovia separata metokana*.

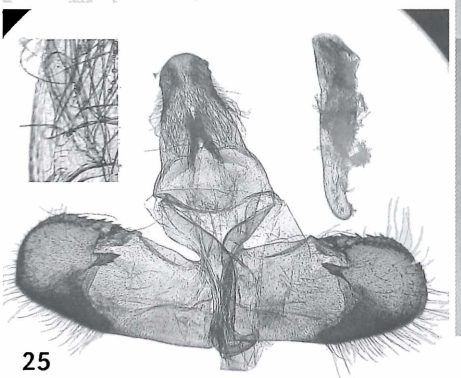
Type data
Holotype ♂: LF 15.5 mm, Yaojiaping, Lushui county, Gaoligongshan Mts., NW. Yunnan, China, August 2nd 2002. Paratypes: 3 ♂♂, same data as holotype.
This new subspecies is dedicated to Miss Mi Liao-Hua, a Lisu girl, who worked for the Yaojiaping Station of the Gaoligongshan Nature Reserve and helped me during every time I stayed there.

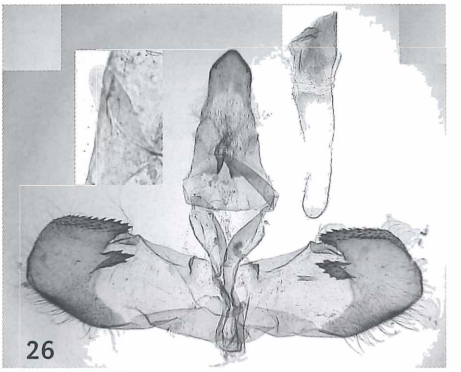
Sovia separata ***metokana*** **subspec. nov.** (fig. 25; col. pl. II, figs. 11, 12)

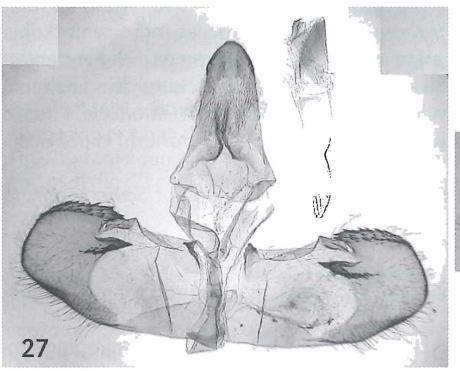
Specific classification
Three subspecies have been described under *Sovia lucasii* (Mabille, 1876) (fig. 28; col. pl. II, fig. 15) , viz. ssp. *lucasii* from West Sichuan (2 ♂♂ from Er-lang-shan examined), ssp. *separata* (Moore, 1882) from Sikkim and ssp. *magna* Evans, 1932 from Naga Hills and Lou-tse-kiang (Nujiang valley) (14 ♂♂ from Nujiang valley and Dulong valley examined). The male genitalia of both *lucasii* and *separata* were illustrated in rough drawings by Evans (1949), and they show remarkably difference from each other in the tip of uncus in dorsal view and the shape of cuiller in lateral view: uncus is broadly rounded at tip in *lucasii* but triangular and obtusely pointed in *separata* whilst cuiller is rectangular in *separata* but somewhat semicircular in *lucasii*. Because both *separata* and *magna* are different from











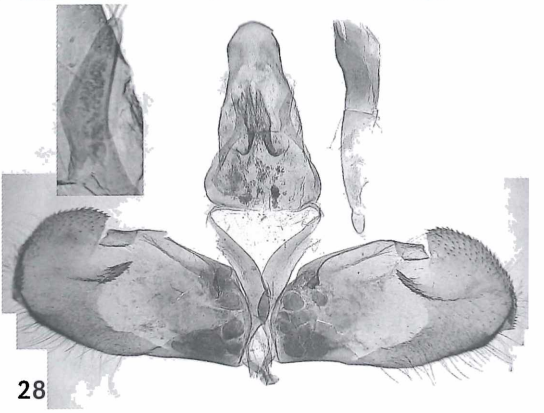


Fig. 23: Male genitalia of *Sovia grahami miliaohuae* (holotype, Yaojiaping, specimen illustrated on col. pl. II, fig. 8) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (bottom), of aedeagus in lateral view (top right), and of enlarged lateral process of tegumen in ventral view (top left). Fig. 24: Male genitalia of *Sovia grahami grahami* (Cuona, S. Tibet, specimen illustrated on col. pl. II, fig. 10) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (bottom), of aedeagus in lateral view (top right), and of enlarged lateral process of tegumen in ventral view (top left). Fig. 25: Male genitalia of *Sovia separata metokana* (holotype, Metok, SE. Tibet, specimen illustrated on col. pl. II, fig. 11) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (bottom), of aedeagus in lateral view (top right), and of enlarged lateral process of tegumen in ventral view (top left). Fig. 26: Male genitalia of *Sovia separata magna* (Yaojiaping, specimen illustrated on col. pl. II, fig. 13) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (bottom), of aedeagus in lateral view (top right), and of enlarged lateral process of tegumen in ventral view (top left). Fig. 27: Male genitalia of *Sovia separata magna* (Dulongjiang, specimen illustrated on col. pl. II, fig. 14) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (bottom), and of aedeagus in lateral view (top right). Fig. 28: Male genitalia of *Sovia lucasii* (Sichuan, specimen illustrated on col. pl. II, fig. 15) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (bottom), of aedeagus in lateral view (top right), and of enlarged lateral process of tegumen in ventral view (top left).

lucasii in the shape of cuiller, uncus and lateral processes of tegumen in nearly the same degree as *Sovia grahami miliaohuae* (which is sympatric with *magna* at Yaojiaping) does, it is at best to consider *separata* as independent from *lucasii* and *magna* as a subspecies of *separata*, viz. *Sovia separata* **stat. rev.**, *Sovia separata magna* **comb. nov.** (figs. 26, 27; col. pl. II, figs. 13, 14). In this paper the photos of male genitalia are presented concerning *Sovia lucasii, Sovia separata magna* and *Sovia grahami miliaohuae*. In addition to these taxa, a new subspecies of *S. magna* from Metok, which was misidentified as *Sovia lucasii separata* in my previous report on Metok Expedition (HUANG, 2000), is described here in convenience. It closely resembles *Sovia separata magna* in shape of cuiller and appearance of ciliae on both sides of wings, but differs from the latter in shape of uncus.

Diagnosis

This new subspecies from Namjagbarwa area, SE. Tibet can be distinguished from ssp. *magna* from Naga Hills, N. Burma and the valleys of Dulongjiang and Nujiang by the following combination of characters in males.

1) Forewing is broader, with apex rounded, apparently less pointed than in ssp. *magna*.
2) Underside ground color is brighter.
3) Male genitalia are constantly different a little: apical portion after lateral swellings of uncus is remarkably shorter than in ssp. *magna*, and is broadly rounded at tip, not obtusely pointed as in ssp. *magna*.

This new subspecies can be distinguished from ssp. *separata* simply by ciliae on upperside of hindwing more clearly chequered, forewing apex more rounded in shape and apical portion of uncus broadly rounded at tip and shorter, not pointed as in ssp. *separata*.

Comparative description of males

The following comparative description is based upon the examination of 4 ♂♂ of *S. grahami miliaohuae* from Yaojiaping, 1 ♂ of *S. grahami grahami* from Cuona, S. Tibet, 2 ♂♂ from Yaojiaping, Nujiang valley and 12 ♂♂ from Dulong valley of *S. separata magna*, 2 ♂♂ of *S. separata metokana* from Metok, SE. Tibet and 2 ♂♂ of *S. lucasii* from Er-lang-shan, Sichuan.

The following description is applicable to all the above-mentioned taxa except those noted. Eyes smooth and nearly same-sized in all taxa, not constantly different between taxa, a little variable in size in individuals. Frons nearly twice as wide as eye, clad with two transverse tufts of yellowish and blackish hairs between eyes, and with area surrounding eyes scaled with yellow. Antennae a little longer than half the length of forewing, entirely black above; club arcuate or bent beyond its thickest part, with apiculus slender and acutely pointed at tip; nudum very dark brown, nearly blackish in all taxa. Palpi: 2nd segment porrect, black above, densely clad with yellowish and black long scales and hairs on lateral sides and underside, somewhat more slender in *S. grahami* than in others; 3rd segment a little bent down, black above and yellowish below. Thorax clad with dark yellowish and blackish hairs above, below with yellowish hairs mixed with black, somewhat greenish gray. Legs: femora£¬tibiae and tarsi all clad with black and yellowish scales, above usually blacker and below more with yellow, all femora below and hind-tibiae above clad with yellowish and blackish hairs, no constant difference in color between taxa; hind-femora of same length in all taxa, but the length of fore and mid-femora, all tibiae and all tarsi constantly different between taxa as shown in the table below. Inner ciliae dark brown in all taxa; outer ciliae different between taxa as shown in the table below. Male brand well marked, black from dorsum to base of space 2, not different between taxa. Wing pattern: difference between taxa as shown in the table below. Male genitalia: no remarkable difference in aedeagus; tegumen bearing a pair of lateral processes before uncus, which are different between taxa; uncus with two pair of lateral swellings near tip, remarkably different between taxa; cuiller semicircular or oblong or rectangular in shape, different between taxa, more or less serrate at dorsal margin, with an inner process centrally. The differences in external features of males and male genitalia between these taxa are shown in the following table.

Name	*Sovia lucasii*	*Sovia separata magna*	*Sovia separata metokana*	*Sovia grahami grahami*	*Sovia grahami miliaohuae*
Length of forewing	15.5 mm	16–17 mm	16 mm	16 mm	15.5–17 mm
Length of antennae	8 mm	8–8.5 mm	8–8.5 mm	8.5 mm	8–8.5 mm
Color of 2nd segment of palpi	more yellowish	variable	variable	more greenish	more greenish
Club below color	yellow	black at tip, more or less with yellow at base	yellow, more or less with black near nudum	yellow	yellow
Shaft below color	chequered with black and yellow	weakly chequered or entirely blackish	chequered black and yellow	chequered black and yellow	chequered black and yellow
Nudum number	13	13–14	13	11	12–13
Fore-femur, fore-tibia and fore-tarsi	shorter	longer	longer	shorter	shorter
Mid-femur, mid-tibia and mid-tarsi	shorter	longer	longer	shorter	shorter
Mid-tibial spurs	shorter	longer	longer	longer	longer
Hind-tibia	shorter	longer	longer	shorter	shorter
Hind-tarsi	shorter	longer	longer	shorter	shorter
Upper hind-tibial spurs	shorter	longer	longer	longer	longer
Lower hind-tibial spurs	shorter	longer	longer	longer	longer
Ciliae on forewing upperside	brown-gray, appearing darkened at vein-ends	brown-gray, obscurely chequered	brown-gray, obscurely chequered	(missing)	all dark brown, not chequered
Ciliae on hindwing upperside	mostly chequered with black and whitish	clearly chequered with black and whitish	clearly chequered with black and whitish	(missing)	all dark brown, not chequered
Ciliae on forewing underside	brown-gray, obscurely chequered	clearly chequered with black and whitish	clearly chequered with black and whitish	(missing)	all dark brown, not chequered
Ciliae on hindwing underside	clearly chequered with black and white	clearly chequered with black and whitish	clearly chequered with black and whitish	(missing)	all dark brown, not chequered
Upperside ground color	more brownish	more blackish	blackish brown	blackish brown	blackish brown
Hairs on hindwing upperside	brown-yellow, much paler than ground	dark brown-gray or blackish	dark brown-gray or blackish	dark brown-gray	dark brown-gray or blackish
Blackish hair tufts on veins 1A and 1B of hindwing above	well developed	well developed	well developed	only with sparse hairs	only with sparse hairs
Underside ground color	suffused brownish yellow, bright	suffused yellow-brown, grayer, dark or rather dark	suffused yellow-brown, rather dark	suffused yellow-brown, grayer, dark	suffused yellow-brown, grayer, dark

Name	*Sovia lucasii*	*Sovia separata magna*	*Sovia separata metokana*	*Sovia grahami grahami*	*Sovia grahami miliaohuae*
Basal yellow-brown suffusion on forewing upperside	denser, more extensive	sparser, narrower	sparser, narrower	sparser, narrower	sparser, narrower
Pale spots on forewing underside	yellowish	whitish	whitish	yellowish	yellowish
Discal spots in spaces 2, 3	closer to each other	remote from each other	remote from each other	remote from each other	remote from each other
Spot in space 2 and cell spot	nearly in a line, closer to each other	nearly in a line, closer to each other	nearly in a line, closer to each other	not in a line, medium distance	not in a line, remote from each other
Uncus	broader, even in width before lateral swellings, longer after swellings, broadly rounded at tip	broader, even in width before lateral swellings, longer after swellings, obtusely pointed at tip	broader, even in width before lateral swellings, shorter after swellings, broadly rounded at tip	narrower, constricted before lateral swellings, shorter after swellings, obtusely pointed at tip	narrower, constricted before lateral swellings, shorter after swellings, obtusely pointed at tip
Lateral processes of tegumen	long and broad	rather short and narrow	rather short and narrow	short and broad	short and broad
Cuiller	semicircular, with denser and weaker teeth	oblong, with sparser and heavier teeth	oblong, with sparser and heavier teeth	rectangular, with sparser and heavier teeth	rectangular, with sparser and heavier teeth

Type data
Holotype ♂: LF 16 mm, Hanmi, Metok, Namjagbarwa area, SE Tibet, China, July 13th 1996. Paratype: 1 ♂, same data as holotype.
The subspecies name is derived from the type locality, Metok.

Pedesta ***viridis*** **spec. nov.** (fig. 29; col. pl. II, fig. 16)

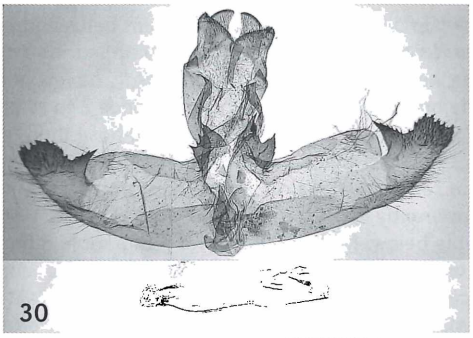
Generic classification
This new species seems to have no close affinities within the genus *Pedesta* HEMMING, 1934, but the examination of male genitalia, in which the lateral processes of tegumen are absent, and antennae, in which the nudum are 12 in number with the caudal segments somewhat stout, suggests this new species to be a member of *Pedesta*. According to EVANS' revision, the division between genera *Pedesta* and *Thoressa* SWINHOE, 1913 only exists in the appearance of apiculus of antennae, which is more obtuse, blunter and thicker with less nudum segments in *Pedesta* than in *Thoressa*, and in the tegumen of male genitalia, which bears apparent lateral processes in *Thoressa* but not in *Pedesta*. Further study may suggest *Pedesta* to be a synonym of *Thoressa*, because the delimitation in male genitalia between the two genera is unclear among some species, for example, *Pedesta baileyi* (SOUTH, 1913) (fig. 30; col. pl. II, fig. 17) has all the male genital structures much more similar to those of *Thoressa fusca* and *T. gupta* than to other species of *Pedesta*, occasionally bears the vestige of lateral processes in tegumen. The delimitation in apiculus of antennae between two genera is also blunt in some species, such as in *Pedesta viridis* (spec. nov.), *P. serena* EVANS, 1937 (fig. 31; col. pl. II, fig. 18) and *Thoressa naumanni* **stat. nov.** (= *Pedesta naumanni* HUANG, 1998, see remarks under *Thoressa gupta nujiangensis* subspec. nov.).

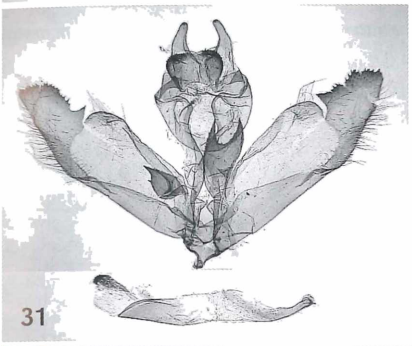
Diagnosis
This new species can be distinguished from all the previously known species of *Pedesta* by the following combination of characters in males.

1) On upperside of forewing the male brand is well marked from vein 1 to base of space 2, whereas in *P. masuriensis* (MOORE, 1878) (including *cuneomaculata* MURAYAMA, 1995 – fig. 33; col. pl. III, fig. 1), *P. panda* EVANS, 1937 and *P. pandita* (DE NICEVILLE, 1885) (fig. 34; col. pl. III, fig. 3) the male brand is absent.
2) On upperside of forewing, the discal spot in space 2 is widely separated from the very minute cell spot, not overlaps the cell spot as in *P. masuriensis* and *P. panda*.
3) On upperside of forewing, the discal spots in space 2 and 3 are widely separated, not overlapping as in *P. pandita* and *P. blanchardii* (MABILLE, 1876) (fig. 32; col. pl. III, fig. 2).
4) On upperside of forewing, only a very minute white dot is present in discocellular cell near Radius, whereas in *P. blanchardii* the cell spot is double with upper part small or absent, whereas in all other species the cell spot reaches across the cell.
5) On underside, the costal, apical and subapical areas of forewing and whole hindwing are densely suffused with pale greenish scales, not clad with yellowish or brownish scales as in all other species.
6) Male genitalia are different from those of all other species: gnathos expands laterally very much as in *P. baileyi*, different from that of the others; uncus is more widely divided than in all other species, with the two uncal branches similar to those of *P. baileyi*, thicker than in the others; both clasps are nearly homeotypic, very similar to those of *P. baileyi*, but with dorsal process of cuiller shorter and thicker than in *P. baileyi*.

A survey in literatures proves that this new species has no close affinities in the genus *Thoressa* in either external features or male genitalia.
The recently described *Ampittia luanchuanensis* WANG & NIU, 2002 from Henan province of China should be a member of *Pedesta* or *Thoressa* according to its male genitalia illustrated. It is characterized by the very remarkable yellowish markings on underside of hindwing, which gives it an appearance of *Ampittia* species. It does nothing with *P. viridis*.

Comparative description of males
The following comparative description is based upon the examination of 3 ♂♂ of *viridis*, 4 ♂♂ of *baileyi* from Nujiang valley, 8 ♂♂ of *serena* from Nujiang valley, 1 ♂ of *cuneomaculata* from Nujiang valley, 1 ♂ of *blanchardii* from Omei, Sichuan and 1 ♂ of *pandita* from Metok, SE. Tibet.
The following description is applicable to all the above-mentioned taxa except those noted. Eyes smooth and same sized in all taxa. Frons twice as wide as eye, black-scaled and clad with two transverse tufts of more or less yellowish hairs between eyes, with area surrounding eyes scaled yellowish; all hairs paler in *baileyi*, more greenish in *viridis* but a little darker in others. Antennae nearly of half the length of forewing; club abruptly marked in thickness from shaft, with its thickest part 3–4 times as thick as shaft, and arcuate beyond its thickest part; shaft and club mostly black-scaled above, sparsely with very few yellow scales; club below wholly yellow or partly yellow, shaft below more or less chequered with yellow and black; nudum reddish, tipped with black except *viridis*, thicker in *baileyi, blanchardii, pandita* and *cuneomaculata* than in *viridis* and *serena*. Labial palpi (missing in Metok specimen of *pandita*): 2nd segment porrect, nearly same-sized in all taxa and densely clad with yellowish and blackish long scales, darker yellowish brown in *serena, blanchardii*, and *cuneomaculata*, paler tawny yellow in *baileyi*, paler greenish yellow in *viridis*; 3rd segment nearly same sized in all taxa, somewhat thicker in dorsal view in *serena* than in others, a little bent down from 2nd segment in *serena, baileyi* and *blanchardii*, nearly rectangular to 2nd segment in *viridis* but nearly in continuation with 2nd segment in *cuneomaculata*, clad with festucine scales dusted with black above and below in *baileyi*, but with black above and with yellow below in *viridis, serena, blanchardii* and *cuneomaculata*. Thorax clad with dark brownish green and black hairs above in all taxa, below darker brownish gray in *serena*, darker brown in *pandita, blanchardii* and *cuneomaculata*, bright yellowish in *baileyi* but bright greenish gray in *viridis*. Legs: femora and tibiae all clad with black and yellowish scales, above usually blacker and below more with straw, femora below and tibiae above clad with yellowish and blackish hairs; tarsi above yellowish in *baileyi* but darker and blackish in all other species, below more or less yellowish; hairs and scales a little different in color between taxa in accordance with those on palpi, thorax and hindwing underside; no constant remarkable difference in length of upper pair of hind-tibial spurs between taxa; all differences in legs between taxa as shown in the table below. Inner ciliae





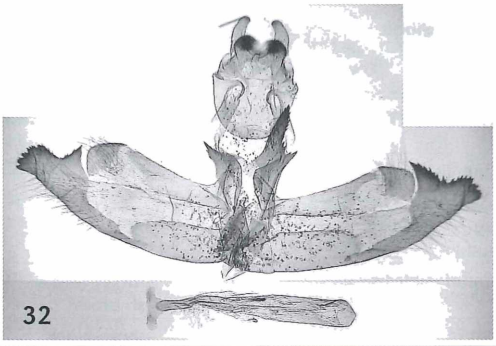


Fig. 29: Male genitalia of *Pedesta viridis* (holotype, specimen illustrated on col. pl. II, fig. 16) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom).
Fig. 30: Male genitalia of *Pedesta baileyi* (Nujiang, specimen illustrated on col. pl. II, fig. 17) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom).
Fig. 31: Male genitalia of *Pedesta serena* (Yaojiaping, specimen illustrated on col. pl. II, fig. 18) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom).
Fig. 32: Male genitalia of *Pedesta blanchardii* (Sichuan, specimen illustrated on col. pl. III, fig. 2) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom).
Fig. 33: Male genitalia of *Pedesta cuneomaculata* (Qiqi, Nujiang, specimen illustrated on col. pl. III, fig. 1) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom).
Fig. 34: Male genitalia of *Pedesta pandita* (Metok, SE. Tibet, specimen illustrated on col. pl. III, fig. 3) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus and juxta in lateral view (bottom).

dark brown in all taxa; outer ciliae different between taxa, usually uniform except on forewing underside of *viridis* and *blanchardii* where they appearing darkened at vein-ends. Male brand on forewing upperside well marked in *viridis, blanchardii, baileyi* and *serena*, absent in *pandita* and *cuneomaculata*; male brand extended from base of space 2 to vein 1 and a little along vein 1 towards wing-base with its lower end somewhat closer to wing-base than to termen in both *viridis* and *baileyi*, from base of space 3 to vein 1 and a little along vein 1 towards wing-base in *blanchardii*, from base of space 2 to dorsum in *serena*, with vein 1 acutely distorted at the lower end of male brand in *baileyi* but not distorted apparently in *serena, blanchardii* and *viridis*. Wing pattern: difference between taxa as shown in the table below. Male genitalia: no remarkable difference in aedeagus; both left and right clasps nearly homeotypic, only with very slight difference in all taxa, but conspicuously different between taxa; uncus, gnathos, footstalks and cuillers all different between taxa. The differences in external features of males and male genitalia between these taxa are shown in the following table.

Name	*viridis*	*baileyi*	*serena*	*pandita*	*blanchardii*	*cuneomaculata*
Length of forewing	14 mm	16 mm	16–16.5 mm	14.5 mm	16.5 mm	16 mm
Length of antennae	6.5 mm	7 mm	7.5 mm	(broken)	7.5 mm	7.5 mm
Nudum number	12	9	11	10	11	10
Caudal segment of nudum	reddish	black	black	black	black	black
2nd segment of palpus	paler greenish yellow	paler tawny yellow	darker yellowish brown	(missing)	darker yellowish brown	darker yellowish brown
3rd segment of palpus	above black	above yellowish	above black	(missing)	above black	above black
Outer ciliae on forewing upperside	pale brown mixed with white	pale brown mixed with yellow	mostly dark brown, uniform	(missing)	pale yellow brown, uniform	dark brown, uniform
Outer ciliae on hindwing upperside	whitish, uniform	yellowish, uniform	mostly dark brown mixed with pale reddish ones	(missing)	pale brown, rather uniform	distally short white, basally dark brown
Outer ciliae on forewing underside	greenish white, darkened at vein-ends	yellowish white, uniform	dark brown, uniform	(missing)	pale yellow-brown, darkened at vein-ends	dark brown, uniform
Outer ciliae on hindwing underside	greenish white, uniform	yellowish, uniform	dark brown, somewhat ochreous, uniform	(missing)	pale yellow-brown, rather uniform	distally short white, basally dark brown
Color on upperside of tarsi	mostly blackish	mostly yellowish	mostly blackish	mostly blackish	mostly blackish	mostly blackish
Length of fore-femur	shorter	shorter	medium	shorter	longer	medium
Length of fore-tibia	shorter	shorter	longer	shorter	longer	shorter
Length of fore-tarsi	shorter	medium	longer	shorter	longest	shorter
Length of mid-femur	shorter	shorter	longer	shorter	longer	shorter
Length of mid-tibia	shorter	shorter	longer	shorter	longer	shorter

Name	*viridis*	*baileyi*	*serena*	*pandita*	*blanchardii*	*cuneomaculata*
Length of mid-tarsi	medium	medium	longer	shorter	longer	medium
Length of hind-femur	shorter	shorter	longer	medium	medium	shorter
Length of hind-tibia	shorter	longer	longer	longer	longer	shorter
Length of hind-tarsi	medium	medium	longer	shorter	medium	medium
Lower hind-tibial spurs	shorter, black	shorter, yellow	longer, mostly black	shorter, black	longer, yellow	shorter, black
Spines on hind-tarsi	medium, variable	smaller	larger	medium, variable	medium, variable	medium, variable
Male brand	vein 1 to space 2, with two yellow patches, vein 1 not acutely distorted	vein 1 to space 2, with a crossing yellow patch, vein 1 acutely distorted	dorsum to space 2, with two yellow patches, vein 1 not distorted	absent	vein 1 to base of space 3, without yellow patch, vein 1 not distorted	absent
Cell spot on forewing upperside	minute, near radius, not crossing cell	small, crossing cell	small, crossing cell	small, crossing cell	small, near cubitus, not crossing cell	large, crossing cell
Forewing discal spots	small, widely separated, whitish	medium, widely separated, yellowish	medium, widely separated, whitish	medium, a little overlapping, yellowish	small, separated, whitish	large, completely overlapping, touching cell spot
Upperside ground color	grayer	grayer	more blackish	more reddish	more reddish	grayer
Ground color on hindwing underside	pale greenish	bright yellowish	ochreous brown, much darker	darker brown, suffused with yellowish brown	yellowish brown	darker yellowish brown
Discal spots on hindwing underside	absent	prominent, paler, followed by postdiscal clouds	very faint in spaces 2, 3 and 6, only traceable	absent	absent	absent
Uncal processes	stout, widely opened	stout, narrowly opened	slender, widely opened	slender, widely opened	slender, widely opened	slender, widely opened
Gnathos in ventral view	expanding laterally, hooked at ends	expanding laterally, obtuse at ends	large single plate	small, double	small, double	small, double
Footstalks	broad, serrate	broad, serrate	broad, serrate	single-pointed, narrow	broad, serrate	broad, serrate
Dorsal process of cuiller	medium, blunt	longer, more pointed	shorter, more pointed	shorter, blunt	medium, more pointed	medium, blunt
Distal end of cuiller	simple	simple	simple	complex, with inner branch	simple	simple

Type data

Holotype ♂: LF 14 mm, Sijitong, Nujiang valley, NW. Yunnan, China, June 1st 2002. Paratypes: 2 ♂♂, Nidadan, May.

The Latin name refers to the unmarked greenish underside of hindwing characterizing this new species.

Thoressa gupta ***nujiangensis*** **subspec. nov.** (figs. 35–37; col. pl. III, figs. 4, 5)

Diagnosis

Hitherto only two subspecies of *T. gupta* (DE NICEVILLE, 1886) are known: ssp. *gupta* (col. pl. III, fig. 6) from Sikkim and ssp. *leechii* EVANS, 1932 (fig. 38; col. pl. III, fig. 7) from Sichuan (Wa-ssu-kow = Wasigou, east of Kangding). From NW. Yunnan two distinctly separable populations have been obtained: one from Dulong valley, with white spots on hindwing underside visible and cell spots on upperside of forewing very faint, has been identified as ssp. *gupta*, another from Nujiang valley has been regarded as a new subspecies here. The new subspecies from Nujiang valley can be distinguished from both ssp. *gupta* (2 ♂♂ from Dulong valley examined) and ssp. *leechii* (1♂ from W. Sichuan examined) by the following combination of characters in males.

1) On upperside of forewing the cell spot is double and clearly defined, not obsolescent as in ssp. *gupta* and ssp. *leechii*.

2) On underside of hindwing, the whitish spots of ssp. *gupta* in spaces 2, 3 and 6 are absent.

3) Ground color of hindwing underside is darker than in ssp. *gupta*.

4) A detailed comparison between specimens of *gupta, leechii* and *nujiangensis* shows that *nujiangensis* has both wings more pointed at apex and tornus than in *gupta* and *leechii*, and the 3rd segment of palpus longer than in *gupta* and *leechii*.

Remarks

T. gupta is sympatric with *Thoressa fusca* (ELWES, [1893]) in a few localities: *T. gupta leechii* flies together with *T. fusca senna* EVANS, 1937 in W. Sichuan, *T. gupta nujiangensis* with *T. fusca senna* (fig. 40; col. pl. III, fig. 9) at Lishadi, Nujiang valley, and *T. gupta gupta* with *T. fusca fusca* (fig. 39; col. pl. III, fig. 8) at Bapo, Dulong valley. The population of *gupta* from Dulong valley has been identified as ssp. *gupta* because it agrees with EVANS' description of ssp. *gupta* very well except for the olive scaling on underside denser. A detailed comparison between the Chinese populations of these two species can be found in the table below.

Recently two new species were added into this genus by MURAYAMA from NW. Yunnan, viz. *Thoressa dianchiana* MURAYAMA, 1995 and *T. nanshaona* MURAYAMA, 1995. Unfortunately MURAYAMA neither published any figures of male genitalia nor gave description of the detailed structures concerning them. Judging from the simple descriptions (in Japanese only) and the black and white photos of holotypes, I suspect that *Thoressa dianchiana* is possibly a bona species of *Pedesta* or *Thoressa* and very close to *Pedesta serena* EVANS, 1937 in external features, with its male brand more upright to dorsum of forewing, not associated with whitish scales and cell spots conjoined, and *T. nanshaona* is most probably a bona species of *Pedesta* or *Thoressa* too, with cell spots nearly directed to forewing tornus. *T. gupta nujiangensis* can be easily distinguished from both of them by the cell spots on upperside forewing separated and male brand associated with whitish scales. The recently described *Thoressa naumanni* (HUANG, 1998) (**comb. nov.** = *Pedesta naumanni* HUANG, 1998) from Metok, SE. Tibet should be placed into the genus *Thoressa*, with nudum number 13, apiculus somewhat slender and lateral processes of tegumen in male genitalia present. It is rather difficult to distinguish the genera *Pedesta* and *Thoressa* from each other by external features on wings.

The other recently described taxa of *Thoressa* include *Thoressa monastyrskyi* DEVYATKIN, 1996, *T. submacula rubella* DEVYATKIN, 1996, *T. monastyrskyi annamita* DEVYATKIN, 1999 and *T. similissima* DEVYATKIN, 2002, all of which are described from Vietnam and have nothing to do with *T. gupta nujiangensis*.

Comparative description of males

The following comparative description is based upon the examination of 5 ♂♂ of *T. gupta nujiangensis* (subspec. nov.) from Nujiang valley, 2 ♂♂ of *T. gupta gupta* from Dulong valley, 1 ♂ of *T. gupta leechii* from Qingchengshan, Sichuan, 3 ♂♂ of *T. fusca senna* EVANS, 1937 from Nujiang valley, 2 ♂♂ of *T. fusca fusca* from Dulong valley and 4 ♂♂ of an unnamed population of *T. fusca* from Metok. These two species are characterized in male genitalia by gnathos expanding laterally very much.

The following description is applicable to all taxa except those noted. Antennae: club more than 3 times thicker than shaft, bent beyond its thickest part, wholly black above and yellow below; shaft

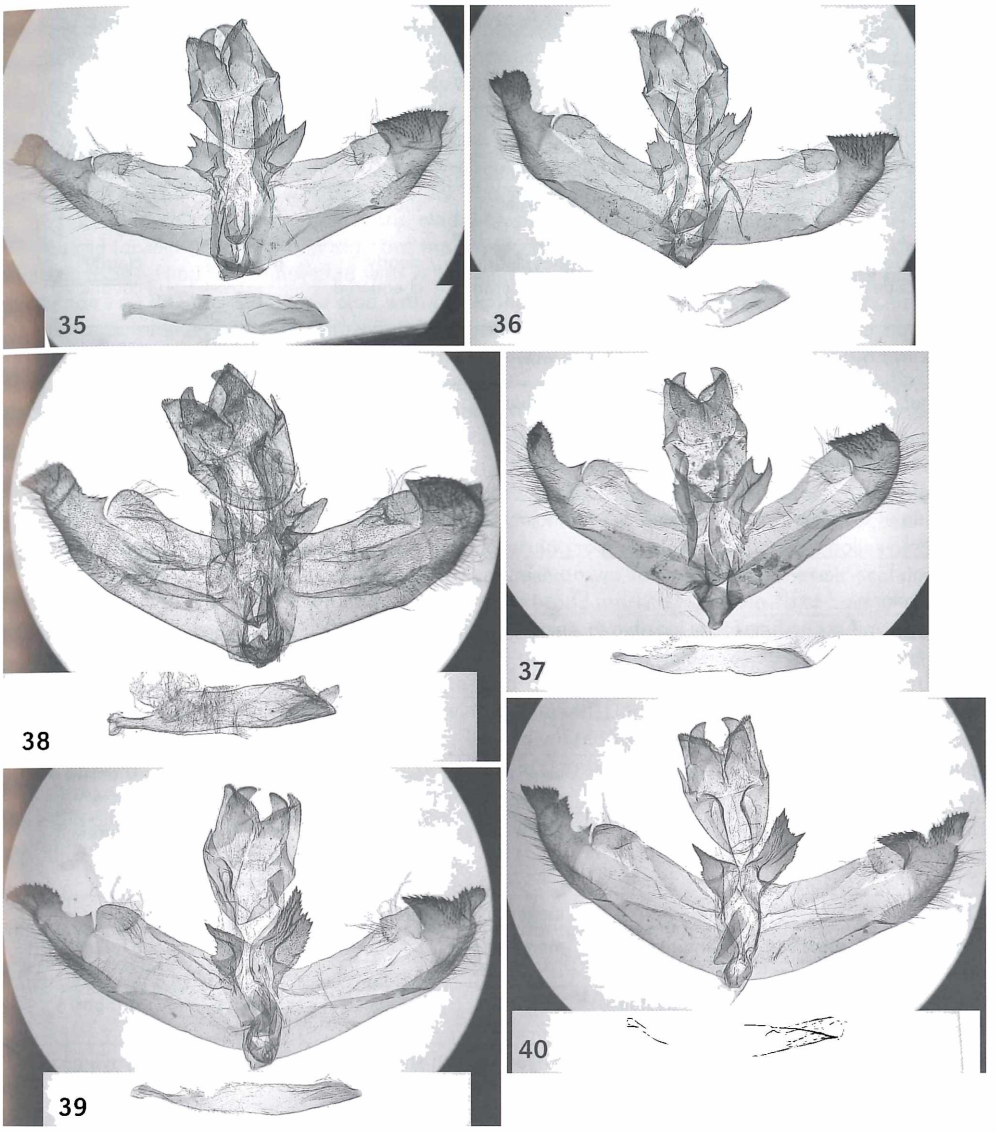


Fig. 35: Male genitalia of *Thoressa gupta nujiangensis* (paratype, Gongshan, Nujiang, specimen not illustrated) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom). Fig. 36: Male genitalia of *Thoressa gupta nujiangensis* (paratype, Gazu, Nujiang, specimen illustrated on col. pl. III, fig. 5) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom). Fig. 37: Male genitalia of *Thoressa gupta nujiangensis* (holotype, Lishadi, Nujiang, specimen illustrated on col. pl. III, fig. 4) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom). Fig. 38: Male genitalia of *Thoressa gupta leechii* (Sichuan, specimen illustrated on col. pl. III, fig. 7) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom). Fig. 39: Male genitalia of *Thoressa fusca fusca* (Bapo, Dulongjiang, specimen illustrated on col. pl. III, fig. 8) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom). Fig. 40: Male genitalia of *Thoressa fusca senna* (Lishadi, Nujiang, specimen illustrated on col. pl. III, fig. 9) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom).

Name	*fusca fusca*	*fusca senna*	*fusca* Metok	*gupta gupta*	*gupta leechii*	*gupta nujiangensis*
Length of forewing	17.5 mm	16.5 mm	17.5–18 mm	15–17 mm	18.5 mm	17 mm
Nudum	13	13	13	13	(missing)	12–13
Size of eye	medium	medium	medium	smaller	larger	medium
3rd segment of palpus	shorter	shorter	shorter	shorter	shorter	longer
Outer ciliae on underside forewing	not clearly chequered	not clearly chequered	not clearly chequered	clearly chequered	(missing)	clearly chequered
Length of foreleg	longer	longer	longer	shorter	(missing)	longer
Length of midleg	medium	medium	medium	shorter	longer	medium
Length of hind leg	longer	longer	longer	shorter	(missing)	longer
Spines on hind-tarsi	larger	larger	larger	smaller	(missing)	larger
Upperside ground color	darker	darker	paler	paler	paler	darker
Upperside forewing cell spot	very variable	absent or single and minute	very variable	absent or minute	nearly absent	double, clear, not conjoined
Forewing discal spots	remote	close	remote	close	remote	remote
Underside tawny scaling	sparse	sparse	extensive and dense	extensive and dense	extensive and dense	extensive and dense
Underside hindwing	pale spots in spaces 2, 3, 6	unmarked	unmarked	pale spots in spaces 2, 3, 6	pale spots in spaces 2, 3, 6, only traceable	unmarked
Clasps	longer	longer	longer	shorter	longer	shorter
Footstalk of right clasp	more serrate	more serrate	more serrate	bifurcate	bifurcate	bifurcate
Inner face of right cuiller	excavated	excavated	excavated	straight	straight	straight
Aedeagus	longer	longer	longer	shorter	longer	medium

black above but chequered with black and yellow below; nudum clad with black partly on upperside and with yellow on underside, blackish in the caudal segment but reddish or orange in all other segments. Eyes smooth, surround by festucine scales. Frons clad with blackish scales mixed with some yellowish hairs at vertex, and with two transverse tufts of black and yellowish hairs, one row between bases of antennae, another just behind palpi. 2nd segment of palpus porrect, clad with the black and yellowish scales and hairs, more with black on upperside but more with yellowish on lateral and under sides, not different between these taxa. 3rd segment of palpus black above and bearing some yellow scales below, bent down a little, apparently longer in *T. gupta nujiangensis* than in others. Thorax clad with greenish brown and blackish hairs above but much paler below. Inner ciliae mostly dark or blackish on both sides of both wings in all taxa. Outer ciliae generally varying from dark brown to pale

gray according to individuals, only on forewing underside constantly different between taxa, clearly chequered in *T. gupta gupta* and *T. gupta nujiangensis*, but only appearing darkened at vein-ends in all taxa of *T. fusca*. Foreleg: femur clad densely with yellow and black hairs beneath, with the hairs becoming shorter towards tip of femur and never longer than femur; tibia clad with black and yellow long scales and hairs around epiphysis on its inner side; tarsi clad with more blackish scales on their outer side but with yellowish scales on their inner side. Midleg: femur clad with black scales mixed with some yellow ones on both sides, and with black and yellow hairs on its inner side; tibia blackish on its outer side, yellowish on its inner side, and clad with blackish and yellowish hairs on its inner lateral side; tarsi blackish on their outer side but more yellowish on their inner side, tibial spurs clad with blackish scales. Hind leg: femur clad with yellow and black scales on both sides, and with black and yellow hairs on its inner side; tibia clad with black and yellow scales, more yellowish on its inner side than on its outer side, and with yellow and black hairs on its outer side; tarsi black on their outer side but yellow on their inner side; tibial spurs clad with yellow scales. All spines in three rows on tarsi and reddish in all taxa, the spines on fore and mid-tarsi nearly the same in all taxa, but the spines on hind-tarsi smaller in *T. gupta gupta* than in other taxa. The length of mid-tibial spurs and hind-tibial spurs varying in individuals, sometimes with inner upper hind-tibial spur absent, but not constantly different between taxa. All legs remarkably shorter in *T. gupta gupta* than in other taxa. No difference in wing-venation between these taxa. Ground color on upperside basically blackish brown, more blackish in *T. gupta nujiangensis, T. fusca fusca, T. fusca senna* than in *T. gupta gupta, T. gupta leechii* and the Metok population of *T. fusca*, somewhat variable according to individuals. Upperside: bases of spaces 1a and 1b and costa of forewing powdered with greenish brown scales, the basal and discal areas of hindwing clad with greenish brown hairs, a black male brand marked from vein 1b to base of space 2 on forewing, always associated with apparent whitish scales, two discal spots and two subapical spots (sometimes three) placed at bases of spaces 2, 3, 6 and 7 (sometimes in 8) on forewing, whitish in color, forewing cell spots variable according to taxa and individuals, all discal spots separated by blackish ground color, never overlapping, hindwing unmarked. Underside: costal apical and subapical areas of forewing and whole hindwing more or less powdered with tawny scales, all spots on upperside of forewing repeated, hindwing unmarked or marked with pale spots in spaces 2, 3 and 6 according to taxa.
The main differences in external features of males and male genitalia between these taxa are shown in the table on the opposing page.

Type data
Holotype ♂: LF 17 mm, Lishadi, Nujiang valley, NW. Yunnan, China, June 7th 2002. Paratypes: 7 ♂♂, Qiqi, June; 5 ♂♂, Gazu, June 19th; 4 ♂♂, Gongshan, June; 3 ♂♂, Lishadi, June; 1 ♂, Sijitong, June.
This new subspecies is named after the Nujiang River.

Halpe kumara ***micromacula*** **subspec. nov.** (fig. 41; col. pl. III, fig. 10)

Diagnosis
This new subspecies from Dulong valley can be distinguished from the nominotypical subspecies of *Halpe kumara* De Niceville, 1885 (figs. 42, 43; col. pl. III, fig. 11) from Sikkim, Assam (Khasia Hills, Manipur and Naga Hills) and SE. Tibet (15 ♂♂ from Metok and Yigong examined) by the following combination of characters in males.
1) Forewing discal spots in spaces 2 and 3 are much smaller than in ssp. *kumara*, nearly as large as the subapical spots.
2) Forelegs and midlegs are longer than in ssp. *kumara*.
3) Inner upper hind-tibial spur is longer than in ssp. *kumara*.
4) Yellowish scales on femora and tibiae are more greenish than in ssp. *kumara*, not tawny.
5) All tarsi are clad with much duller and darker yellowish scales than in ssp. *kumara*.
6) In male genitalia, the uncus has no excavation at tip, whereas in ssp. *kumara* it always has a shallow excavation at tip (7 males of ssp. *kumara* from SE. Tibet dissected).

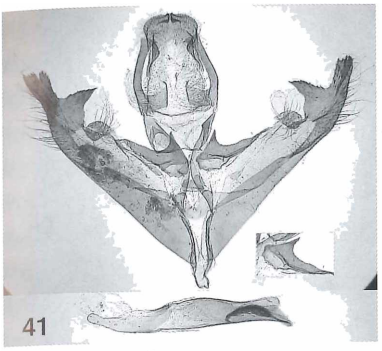
Remarks
Although only the unique holotype male is known, I decided to describe it as new because it differs from *kumara* not only in wing-pattern, but also in uncus of male genitalia and the features of legs.
The detailed description of this new subspecies can be found in the comparative description of *Halpe mixta* (spec. nov.) below.
H. elana ELIOT, 1959 from Malaya is a relative of *H. zema* (HEWITSON, 1877) and *H. ormenes* (PLÖTZ, 1886), have nothing to do with the here-concerned *H. homolea*-group and the *H. kumara*-group.
From SE. Asia, the following species were added to science in the recent 20 years, *H. damar* BEDFORD RUSSELL, 1984 from Sulawesi, *H. albicilia* TSUKIYAMA & CHIBA, 1991 from Sulawesi, *H. latipinna* DE JONG & TREADAWAY, 1993 from Philippines, *H. purpurascens* DE JONG & TREADAWAY, 1993 from Philippines, *H. inconspicua* DE JONG & TREADAWAY, 1993 from Philippines and *H. hermaphrodite* CHIBA & TSUKIYAMA, 1999 from Philippines. Besides these new taxa, the following Philippine taxa were raised to full species: *H. luzona* EVANS, 1949 and *H. tilia* EVANS, 1949. All these species do not belong to the *H. homolea*-group or the *H. kumara*-group; their male genitalia have been illustrated in their original descriptions and other recent works on Philippine Hesperiidae (TSUKIYAMA & CHIBA, 1991; DE JONG & TREADAWAY, 1993; CHIBA, 1999; KITAMURA, 2002), they have nothing to do with the new taxa described in this paper.
The recently described *Halpe paupera* DEVYATKIN, 2002 from Central Vietnam and *H. paupera walthewi* DEVYATKIN, 2002 from Hongkong are close to *Halpe veluvana* FRUHSTORFER, 1911 and have nothing to do with the *H. homolea*-group and *H. kumara*-group, with forewing cell spot double.

Type data
Holotype ♂: LF 15.5 mm, Maku, Dulong valley, NW. Yunnan, China, July 3rd 2002.
The Latin name refers to the very small forewing discal pale spots of this new subspecies.

Halpe ***parakumara*** **spec. nov.** (figs. 44, 45; col. pl. III, figs. 12, 13)

Diagnosis
This new species is very close to *H. kumara* in external features, but can be distinguished from the latter by the following combination of characters in males.
1) Outer ciliae are dark brown or grayish on both sides of both wings, without any reddish hue, whereas in all subspecies of *kumara* they are more or less reddish.

Fig. 41: Male genitalia of *Halpe kumara micromacula* (holotype, Dulongjiang, specimen illustrated on col. pl. III, fig. 10) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), of right footstalk in lateral view (right), and of aedeagus in lateral view (bottom).
Fig. 42: Male genitalia of *Halpe kumara kumara* (Yigong, SE. Tibet, specimen not illustrated) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), of right footstalk in lateral view (right), and of aedeagus in lateral view (bottom).
Fig. 43: Male genitalia of *Halpe kumara kumara* (Yigong, SE. Tibet, specimen illustrated on col. pl. III, fig. 11) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), of right footstalk in lateral view (right), and of aedeagus in lateral view (bottom).
Fig. 44: Male genitalia of *Halpe parakumara* (paratype, Qiqi, Nujiang, specimen illustrated col. pl. III, fig. 13) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), of right footstalk in lateral view (right), and of aedeagus in lateral view (bottom).
Fig. 45: Male genitalia of *Halpe parakumara* (holotype, Qiqi, Nujiang, specimen illustrated on col. pl. III, fig. 12) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), of right footstalk in lateral view (right), and of aedeagus in lateral view (bottom).
Fig. 46: Male genitalia of *Halpe mixta* (holotype, Qiqi, Nujiang, specimen illustrated on col. pl. III, fig. 14) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom).
Fig. 47: Male genitalia of *Halpe unicolora* (paratype, Metok, SE. Tibet, specimen illustrated on col. pl. III, fig. 15) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps and aedeagus in inner lateral view.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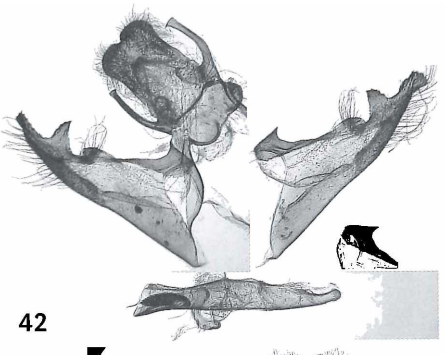
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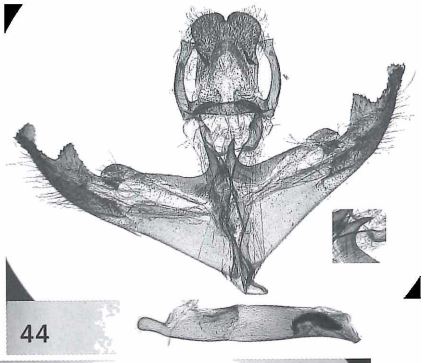
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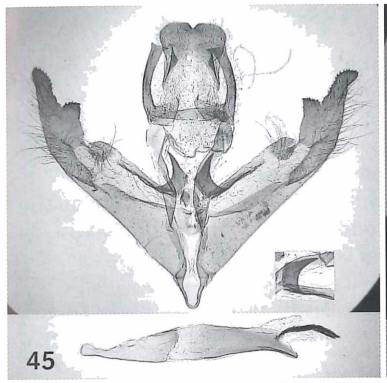
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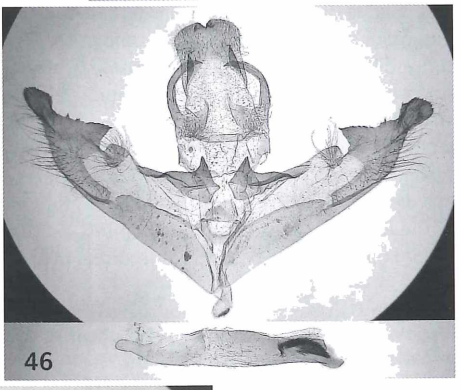
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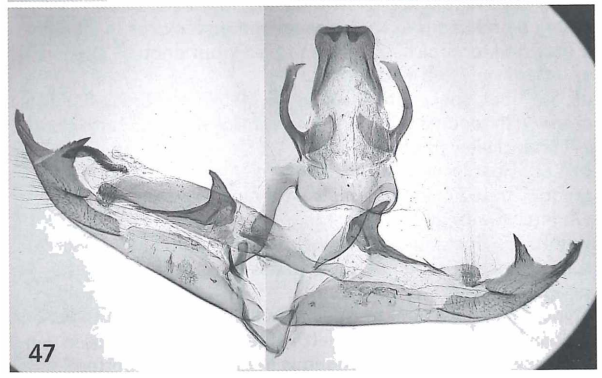
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2) Nudum is 12–13 in number, less than in *kumara* (14 in ssp. *kumara*, 15 in ssp. *micromacula*).
3) Male genitalia are constantly different from those of all subspecies of *kumara*: footstalk of clasp is constantly narrower at middle, dorsal branch of cuiller is shorter, less pointed and remote from harpe whilst distal branch of cuiller is a little longer.
This new species can be distinguished from *H. knyvetti* ELWES & EDWARDS, 1897 from Sikkim and Assam by the size smaller (length of forewing 14.5–15 mm against 17 mm in *knyvetti*) and in male genitalia the dorsal branch of cuiller remarkably shorter and less pointed.

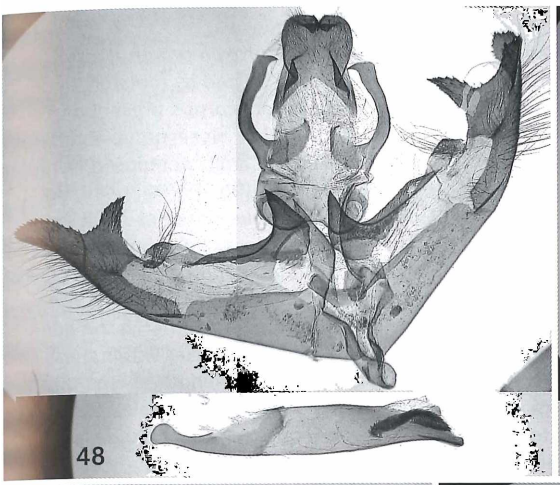
Remarks
It should be noted that this new species from Nujiang valley is nearly sympatric with *kumara*, as *H. kumara micromacula* occurs in the very nearby Dulong valley. Description of external features of this new species can be found in the comparative description of *H. mixta* (spec. nov.) below.

Type data
Holotype ♂: LF 15.5 mm, Qiqi, Nujiang valley, NW. Yunnan, China, July 29th 2002. Paratype: 2 ♂♂, Qiqi, July.
The species name refers to the similarity of this new species to *Halpe kumara*.

Halpe ***mixta*** **spec. nov.** (fig. 46; col. pl. III, fig. 14)

Diagnosis
This new species closely resembles *H. unicolora* HUANG, 1999 (figd. 47, 48; col. pl. III, figs. 15, 16), but can be distinguished from the latter by the following combination of characters in males.
1) Outer ciliae are dark brown, not reddish as in *unicolora*.
2) Nudum are 13 in number, less than in *unicolora* (15).
3) Eyes, all legs and spines on tarsi are smaller or shorter than in *unicolora*.
4) Inner upper hind-tibial spur is longer than in *unicolora*.
5) Male genitalia are different from those of *unicolora*: lateral process of uncus is much more pointed at tip; dorsal branch of cuiller is shorter, less pointed and very near harpe; distal branch of cuiller is shorter; aedeagus is shorter.
This new species can be easily distinguished from *H. knyvetti* by the dorsal branch of cuiller shorter, less pointed and very near harpe and distal branch of cuiller comparatively shorter.
This new species is sympatric with *H. parakumara* in Nujiang valley, but can be easily distinguished from the latter by the lateral process of uncus pointed, not flat and upright, footstalk broader at middle, dorsal branch of cuiller very near harpe and distal branch of cuiller comparatively shorter.

Fig. 48: Male genitalia of *Halpe unicolora* (Chayu, SE. Tibet, specimen illustrated on col. pl. III, fig. 16) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom).
Fig. 49: Male genitalia of *Halpe handa* (Gongshan, Nujiang, specimen illustrated on col. pl. III, fig. 17) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), of aedeagus in lateral view (bottom), and of tip of clasps taken from another specimen (Gongshan, Nujiang, not illustrated) in inner lateral view (left and right).
Fig. 50: Male genitalia of *Halpe filda* (Metok, SE. Tibet, specimen illustrated in Neue Ent. Nachr. **41**: 245, figs. 1d, 2d) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom).
Fig. 51: Male genitalia of *Halpe molta* (Metok, SE. Tibet, specimen illustrated in Neue Ent. Nachr. 41: 245 figs. 1h, 2h) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom).
Fig. 52: Male genitalia of *Halpe aucma* (Metok, SE. Tibet, specimen illustrated in Neue Ent. Nachr. **41**: 245, figs. 1g, 2g) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom).
Fig. 53: Male genitalia of *Halpe muoi* (holotype, Qujing, N.Yunnan, specimen illustrated in Lambillionea **1999** (4): 666, figs. 25, 34) consisting of left clasp in inner lateral view (left), of tegumen and uncus in ventral view (center), of right clasp in inner lateral view (right), and of aedeagus in lateral view (bottom).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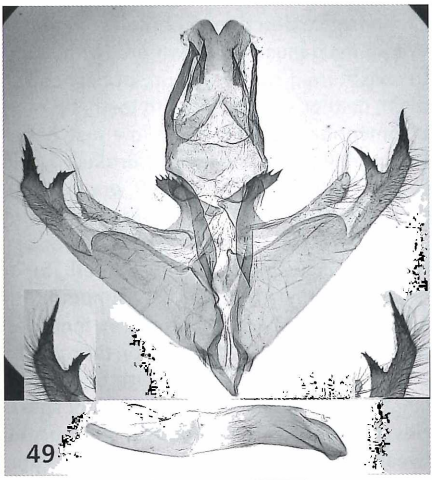
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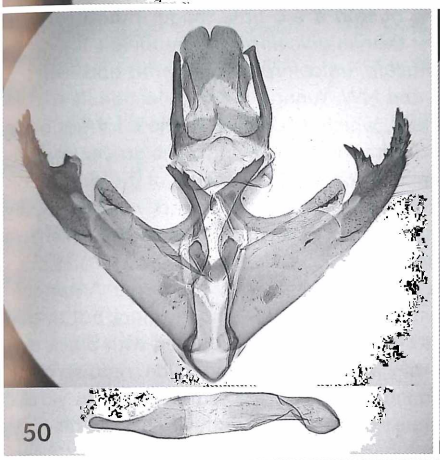
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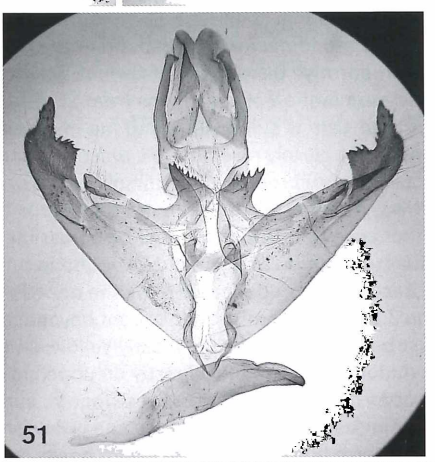
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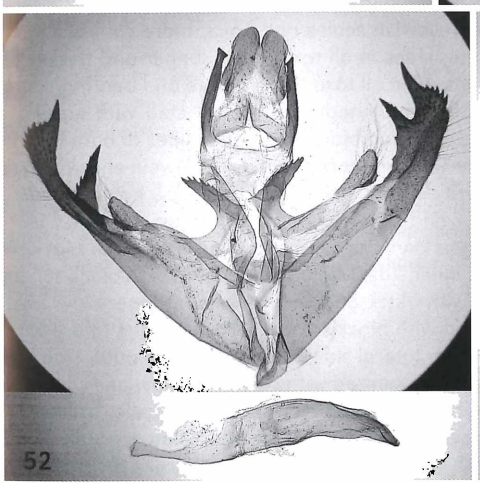
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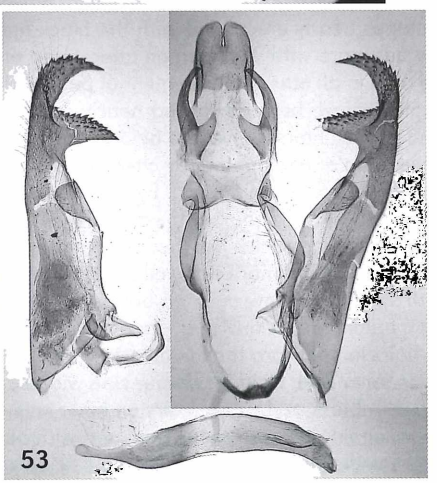
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Comparative description of males

Within the genus *Halpe, kumara* (with *micromacula*), *knyvetti, unicolora, parakumara* and *mixta* seem to constitute a species group, at best called the *H. kumara*-group, characterized by footstalk of clasp plain, neither serrate nor with teeth, tip of uncus without an deep excavation, cornuti present and club of antennae ringed with yellow just before nudum on upperside. Another close group inhabiting E. Himalaya and SW. China parallelly is the *H. homolea*-group, in Chinese limits composed of *molta* EVANS, 1949, *filda* EVANS, 1949, *aucma* SWINHOE, 1893, *handa* EVANS, 1949 (fig. 49; col. pl. III, fig. 17) (here firstly recorded for Chinese fauna), *nephele* LEECH, 1894 and *dizangpusa* HUANG, 2002 (excluding *H. muoi* HUANG, 1999 which is special in external features and male genitalia), characterized by footstalk of clasp serrate or with teeth, tip of uncus with a deep excavation, cornuti absent and club of antennae wholly blackish before nudum on upperside. A careful examination of specimens of these two groups in my collection shows that these two groups do not differ from each other in the general appearance of eyes, frons, palpi, thorax and legs, and the difference between species within these two groups are restricted to the size of eyes, the size of 2nd segment of palpi, the length of legs and the length of the upper pair of hind-tibial spurs, most of which are depend exactly on the size of the species. (The following comparisons are useful to give the readers an impression of the difference between species within two groups: 2nd segment of palpus of *aucma* or *dizangpusa* is nearly as long as that of *unicolora* but thinner; all legs of *molta, filda* and *aucma* are a little longer than in *mixta, parakumara, kumara* and *micromacula*, but a little shorter than in *unicolora* and *nephele*.)

The following comparative description of *kumara, micromacula, unicolora, parakumara* and *mixta* is based upon the examination of specimens from SE. Tibet and NW. Yunnan in my collection. It should be noted that *H. knyvetti* is still unknown to me in specimens, which, according to the information in EVANS' revision (1949), closely resembles *H. unicolora* and differs a little in having ciliae grayer and distal branch of cuiller much broader than dorsal branch of cuiller. However, on account of the very rough drawing by EVANS, it is possible that the male genitalia of *H. knyvetti* were not correctly illustrated by EVANS and in that case *H. unicolora* should be a possible synonym of *H. knyvetti*. To solve this problem needs a careful examination of types of *H. knyvetti* in future.

The following description is applicable to all the above-mentioned taxa except those noted. Antennae: club more than 3 times thicker than shaft, bent beyond its thickest part, above mostly black but ringed with yellow just before nudum, below mostly yellow; shaft black above but chequered with black and yellow below; nudum clad with black partly on upperside and with yellow on underside, reddish or orange in color according to individuals. Eyes smooth, surrounded by festucine scales except at vertex. Frons clad with blackish scales mixed with some yellowish hairs at vertex, and with two transverse tufts of black and yellowish hairs, one row between bases of antennae, another just behind palpi. 2nd segment of palpus nearly erect, clad with the black and yellowish scales and hairs, more with black on upperside but more with yellowish on lateral and under sides in all taxa, much longer and thicker in *unicolora* than in all others. 3rd segment of palpus identical in all taxa, black above and bearing some yellow scales below, bent down and nearly rectangular to 2nd segment. Thorax clad with greenish brown and grayish hairs above and below. Inner ciliae dark and blackish on both sides of both wings. Outer ciliae more or less apparently chequered on forewing, appearing darkened at vein-ends but not apparently chequered on hindwing. Foreleg: femur clad densely with black and yellow hairs beneath, with the hairs becoming shorter towards tip of femur and never longer than femur; tibia clad with black and yellow long scales and hairs around epiphysis on inner side; tarsi clad more with blackish scales on outer side but more with yellowish scales on inner side. Midleg: femur clad with black scales mixed with very few yellow ones on both sides, and with black and yellow hairs on inner side; tibia blackish on outer side, yellowish on inner side, and clad with blackish and yellowish hairs (more with yellowish hairs in *unicolora* than in all other taxa) on inner lateral side; tarsi blackish on outer side but yellowish on inner side. Hind leg: femur clad with black scales mixed with very few yellow ones on both sides, and with black and yellow hairs on inner side; tibia clad with black and yellow scales, more yellowish on inner side than on outer side, and with black and yellow hairs on outer side; tarsi black on outer side but yellow on inner side; tibial spurs clad with yellow scales. All spines in 3 rows and reddish. No difference in wing-venation between these taxa. Ground color on upperside basically fuliginous brown, more blackish in *mixta* and *micromacula*, more brownish in *kumara* and intermediate in *para-*

Name	*kumara*	*micromacula*	*parakumara*	*mixta*	*unicolora*
Length of forewing	13–15 mm	15.5 mm	15.5 mm	16.5 mm	18–18.5 mm
Length of antennae	6.5 mm	7.5 mm	7–8 mm	8 mm	8.5–9 mm
Number of nudum	14	15	12–13	13	15
Size of eyes	smaller	smaller	smaller	smaller	larger
2nd segment of palpi	smaller	smaller	smaller	(missing)	larger
Length of fore-femur	shorter	shorter	shorter	medium	longer
Length of fore-tibia	shorter	medium	medium	medium	longer
Length of fore-tarsi	shorter	medium	medium	medium	longer
Length of mid-femur	shortest	shorter	shorter	longer	longest
Length of mid-tibia	shortest	shorter	shorter	longer	longest
Length of mid-tarsi	shortest	shorter	shorter	longer	longest
Length of hind-femur	shorter	shorter	shorter	shorter	longer
Length of hind-tibia	shorter	shorter	shorter	shorter	longer
Length of hind-tarsi	shorter	shorter	shorter	medium	longer
Mid-tibial spurs	shorter	shorter	shorter	shorter	longer
Inner upper hind-tibial spur	shorter	longer	longer	longer	shorter
Inner lower hind-tibial spur	shorter	shorter	shorter	shorter	longer
Spines on tarsi	smaller	smaller	variable	smaller	larger
Color of yellowish scales on femora and tibiae	tawny	more greenish	tawny	tawny	tawny
Color of inner side of tarsi	bright tawny	duller, darker	bright tawny	bright tawny	bright tawny
Outer ciliae on both sides	more reddish, more reddish, warmer and brighter	not reddish, dark brown or grayish	not reddish, dark brown	more reddish, pale brown, longest	
Excavation on tip of central process of uncus	present	nearly absent	present	present	present
Tip of lateral process of uncus	flat, upright	flat, upright	flat, upright	pointed	flat, oblique
Middle of footstalk of clasp	broader	broader	narrower	broader	broadest
Dorsal branch of cuiller	longer, more pointed, remote from harpe	longer, more pointed, remote from harpe	shorter, thicker, less pointed, remote from harpe	shorter, thicker, less pointed, very near harpe	longer, more pointed, remote from harpe
Distal branch of cuiller	shorter	shorter	medium	shorter	longer
Aedeagus	shorter	shorter	shorter	medium	longer

kumara and *unicolora*, but such difference not very constant because of the individual variation. Upperside: in all taxa, bases of spaces 1a and 1b and costa of forewing powdered with greenish brown scales, basal and discal areas of hindwing clad with greenish brown hairs, a black male brand marked from vein 1b to base of space 2 on forewing, not associated with apparent white scales or hairs, two discal spots and two subapical spots placed at bases of spaces 2, 3, 6 and 7 on forewing, somewhat yellowish in color, a single forewing cell spot placed just below radius in the upper half of cell, all discal

spots separated by blackish ground color, a little overlapping or not overlapping according to individuals, subapical spots subequal to cell spot in size, hindwing is unmarked; the difference between taxa mainly in size of spots, the discal spots larger than subapical and cell spots in *mixta, kumara, parakumara* and *unicolora*, but as large as subapical and cell spots in *micromacula*. Underside: in all taxa, costal, apical and subapical areas of forewing and whole hindwing densely clad with scattered tawny scales, a series of submarginal small yellow spots traceable from space 3 to costa on forewing; nearly in all taxa except *parakumara*, a sub-tornal yellow spot and very seldom a discal series of yellow spots traceable on hindwing, but such markings sometimes totally absent in some individuals of *kumara*. The main differences in external features of males and male genitalia are shown in the table on the preceeding page.

Type data
Holotype ♂: LF 16.5 mm, Qiqi, Nujiang valley, NW. Yunnan, China, July 29th 2002.
The Latin name refers to the very similarity of this new species to its close affinities within the genus *Halpe*.

Potanthus ***riefenstahli*** **spec. nov.** (figs. 54, 55; col. pl. III, fig. 18; col. pl. IV, fig. 1)

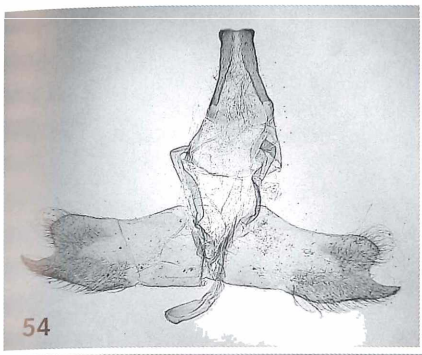
Diagnosis
This new species is very close to *P. lydia* EVANS, 1934 from Assam (with ssp. *fraseri* EVANS, 1934 from Malaya), but can be distinguished from the latter by the following combination of characters in males.
1) On both sides of forewing, the postdiscal spot in space 5 is clearly separated from costal spot in 6 by blackish ground color, whereas in both *lydia* and *fraseri* it is contiguous with spot in 6.
2) Male genitalia are different: uncus is rather flat at tip, not waved as in both *lydia* and *fraseri*, and is obtusely angled at lateral shoulders, not sharply pointed at lateral shoulders as in *lydia* and *fraseri*.

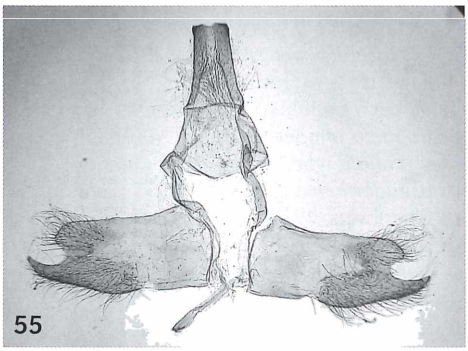
This new species is somewhat close to *P. motzui* HSU, LI & LI, 1990 from Taiwan in male genitalia, but can be distinguished from the latter by the following combination of characters in males.
1) On both sides of forewing, the postdiscal spots in spaces 3 and 4 are widely overlapping, whereas in *motzui* such spots are narrowly overlapping.
2) On hindwing underside the pale postdiscal spot in space 6 is absent, not visible as in *motzui*.
3) Male genitalia are different: uncus is even in width throughout near tip, not narrowed near tip as in *motzui*, and not forming a shallow V of *motzui* at tip; upper branch of clasp (as ampulla in current terminology, as harpe in EVANS' usage) is protruded, not sloping to the lower branch of clasp (as harpe in current terminology, as cuiller in EVANS' usage) as in *motzui*.

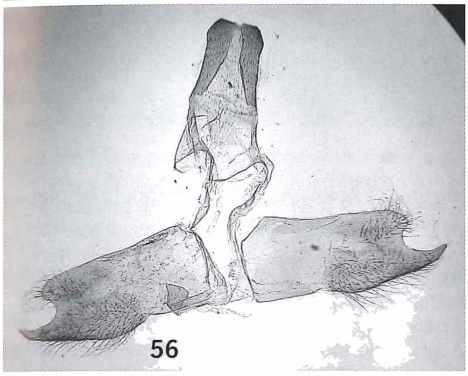
This new species shares the wide uncus with the sympatric *P. tibetana* HUANG, 2002 (fig, 56) from SE. Tibet and Dulong valley (new record), but can be easily distinguished from the latter by the following combination of characters in males.
1) Size is remarkably smaller, with length of forewing 13.5 mm against 15.5–16 mm in *tibetana*.
2) On both sides of forewing, the postdiscal spots in spaces 3 and 4 are widely overlapping, whereas in *tibetana* such spots are contiguous but not overlapping.
3) On both sides of forewing, the postdiscal spot in space 5 is separated from costal spot in 6 by blackish ground color, whereas in *tibetana* it is contiguous with spot in 6.
4) On hindwing underside the pale postdiscal spot in space 6 is absent, not visible as in *tibetana*.
5) Male genitalia are different: uncus is narrower than in *tibetana*, and is obtusely angled at lateral shoulders, not rounded as in *tibetana*.

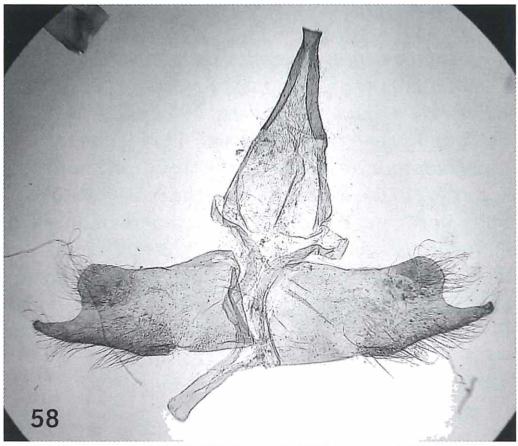
This new species can be easily distinguished from all other species of *Potanthus* simply by the peculiar uncus in male genitalia.

Type data
Holotype ♂: LF 14.5 mm, Lishadi, Nujiang valley, NW. Yunnan, China, July 30th 2002. Paratypes: 1 ♂, Maku, Dulong valley, July.
This species is named after Dr. HANS RIEFENSTAHL, Germany, in gratitude for his kind help in literatures.









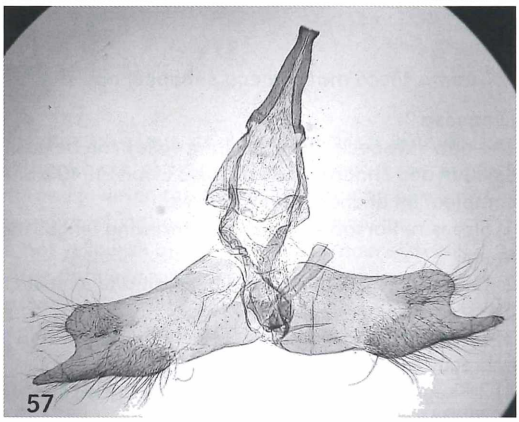


Fig. 54: Male genitalia of *Potanthus riefenstahli* (holotype, Lishadi, specimen illustrated on col. pl. III, fig. 18) consisting of genital capsule spread with tegumen and uncus in dorsal view and both clasps in outer lateral view.
Fig. 55: Male genitalia of *Potanthus riefenstahli* (paratype, Dulongjiang, specimen illustrated on col. pl. IV, fig. 1) consisting of genital capsule spread with tegumen and uncus in dorsal view and both clasps in outer lateral view.
Fig. 56: Male genitalia of *Potanthus tibetana* (Dulong valley, specimen not illustrated) consisting of genital capsule spread with tegumen and uncus in dorsal view and both clasps in outer lateral view.
Fig. 57: Male genitalia of *Potanthus flavus* (Nidadan, Nujiang, specimen illustrated on col. pl. IV, fig. 2) consisting of genital capsule spread with tegumen and uncus in dorsal view and both clasps in outer lateral view.
Fig. 58: Male genitalia of *Potanthus flavus* (Nidadan, Nujiang, specimen illustrated on col. pl. IV, fig. 3) consisting of genital capsule spread with tegumen and uncus in dorsal view and both clasps in outer lateral view.

Remarks

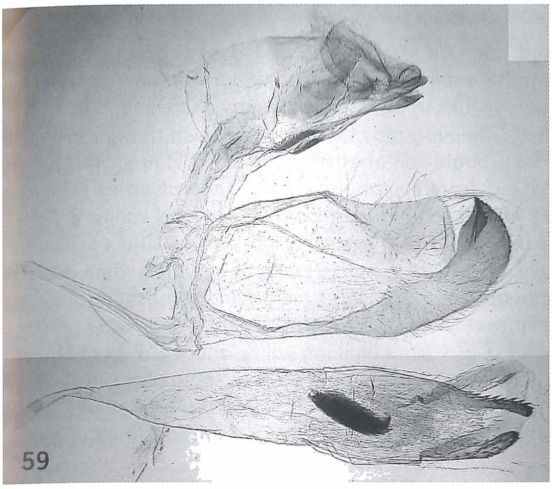
At present a review of all Chinese taxa of the genus *Potanthus* is being prepared by the author and Dr. Wu (Institute of Zoology, Chinese Academy of Science, Beijing). After a study of almost 200 specimens from China (mainly from Yunnan, Hainan, Fujian, Zhejiang and Tibet) preserved in IZAS and QVTC, we concluded the following checklist for Chinese fauna (excluding Taiwan):

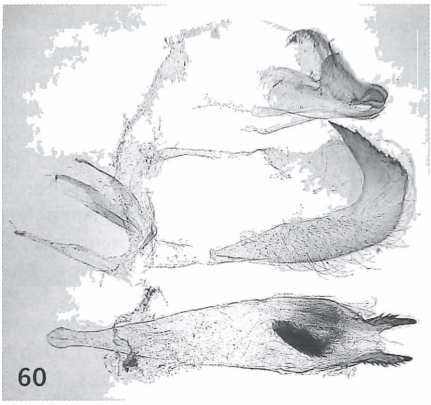
1. *Potanthus rectifasciata* ELWES & EDWARDS, 1897 (Yunnan)
= *Potanthus rectifasciata menglana* LEE, 1962
Three more males were recently captured by the author from S. Yunnan and the unique holotype of *menglana* have been examined. The formal revision will be given in another paper.
2. *Potanthus trachala phoebe* EVANS, 1934 (Anhui, Jiangxi, Hunan, Sichuan, Fujian, Hainan)
2a. *Potanthus trachala tytleri* EVANS, 1914 (Yunnan)
3. *Potanthus pseudomaesa clio* EVANS, 1932 (Yunnan)
4. *Potanthus juno* EVANS, 1932 (Zhejiang)
5. *Potanthus yani* HUANG, 2002 (Anhui, Fujian)
This species was previously known only from Anhui, I have found one male specimen in IZAS from Fujian.
6. *Potanthus taqini* HUANG, 2001 (SE. Tibet)
7. *Potanthus flavus* MURRAY, 1875 (Jilin, Hebei, Shandong, Hunan, Fujian, Yunnan) (figs. 57, 58; col. pl. IV, figs. 2, 3)
8. *Potanthus confucius confucius* FELDER, 1862 (Zhejiang, Fujian, Anhui, Hubei, Guangdong, Hunan)
8a. *Potanthus confucius dushta* FRUHSTORFER, 1911 (Hainan)
9. *Potanthus mara mara* EVANS, 1932 (SC. Tibet)
10. *Potanthus nesta nesta* EVANS, 1934 (Yunnan)
10a. *Potanthus nesta omeia* LEE, 1962 (Sichuan)
According to the examination of the male genitalia of the unique holotype, this taxon should be placed under *nesta*, not *mara*, but the formal revision will be given in another paper.
11. *Potanthus mingo ajax* EVANS, 1932 (Yunnan)
12. *Potanthus pava pava* FRUHSTORFER, 1911 (Fujian, Hubei)
13. *Potanthus riefenstahli* spec. nov. (Yunnan)
14. *Potanthus ganda ganda* FRUHSTORFER, 1911 (Yunnan, Guangxi, Hainan)
= *Potanthus tropica menglana* LEE, 1962
The unique holotype has been examined.
15. *Potanthus palnia palnia* EVANS, 1914 (Yunnan, Hainan, Guangxi, Fujian, SE. Tibet)
16. *Potanthus tibetana* HUANG, 2002 (SE. Tibet, Yunnan).

Polytremis theca **macrotheca subspec. nov.** (fig. 59; col. pl. IV, fig. 4)

Diagnosis
This new subspecies from Nujiang valley can be easily distinguished from ssp. *theca* EVANS, 1937 from Sichuan and Shaanxi and ssp. *fukia* EVANS, 1940 from Fujian and Anhui (1♂ examined) by the following combination of characters in males.
1) Size is remarkably larger, with forewing length average 21.5 mm against 18 mm in both *fukia* and *theca*.
2) Outer ciliae are mixed with blackish and whitish, neither wholly whitish as in *fukia* nor brown as in *theca*.
3) Underside hindwing is extensively overlaid with whitish scaling as in *fukia*, not with sparse greenish ochreous scaling as in *theca*.
4) 2nd segment of palpus is longer and thicker than in *fukia*.
5) All legs are longer with mid-tibial spurs and lower pair of hind-tibial spurs a little shorter than in *fukia*.

Type data
Holotype ♂: LF 21.5 mm, Gazu, Nujiang valley, NW. Yunnan, China, July 25th 2002. Paratypes: 2 ♂♂, Qiqi, July; 4 ♂♂, Gazu, July.
The name refers to the larger size of the new subspecies than in the previously known subspecies.





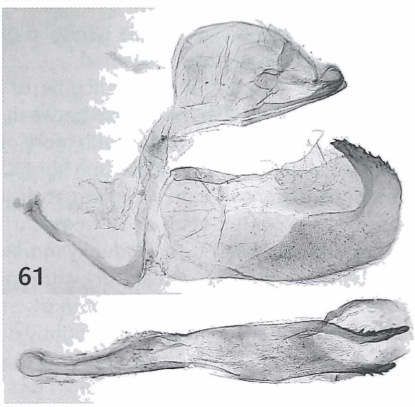


Fig. 59: Male genitalia of *Polytremis theca macrotheca* (holotype, Nujiang, specimen illustrated on col. pl. IV, fig. 4) consisting of genital capsule in lateral view with left clasp and aedeagus removed (top), and of aedeagus in dorsal view (bottom). Fig. 60: Male genitalia of *Polytremis micropunctata* (holotype, Nujiang, specimen illustrated on col. pl. IV, fig. 5) consisting of genital capsule in lateral view with left clasp and aedeagus removed (top), and of aedeagus in dorsal view (bottom). Fig. 61: Male genitalia of *Polytremis caerulescens* (Nujiang, specimen illustrated on col. pl. IV, fig. 6) consisting of genital capsule in lateral view with left clasp and aedeagus removed (top), and of aedeagus in dorsal view (bottom).

Polytremis ***micropunctata*** **spec. nov.** (fig. 60; col. pl. IV, fig. 5)

Diagnosis

This new species seems to have no close affinities within the genus; its closest species is probably the sympatric *Polytremis caerulescens* (Mabille, 1876) (fig. 61; col. pl. IV, fig. 6), with which it shares most morphological characters and male genital structures. However, the new species can be easily distinguished from *Polytremis caerulescens* by the following combination of characters in males.

1) Club is blackish on both upper and under sides, not yellowish on underside as in *caerulescens*.
2) Eyes are larger and 3rd segment of palpus is longer than in *caerulescens*.
3) Male brand is present, not absent as in *caerulescens*.
4) On hindwing upperside a minute white discal spot is present, whereas in *caerulescens* the hindwing upperside is unmarked.
5) On hindwing underside the discal spots are grayish in color, not lilac as in *caerulescens*.
6) Male genitalia are different: cuiller is acutely pointed at tip, not blunt at tip as in *caerulescens*, cornutus is present, not absent as in *caerulescens*.

This new species shares the similar male brand with *P. mencia* Moore, 1877, *P. kiraizana* Sonan, 1938, *P. suprema* Sugiyama, 1999 and *P. matsuii* Sugiyama, 1999, but can be very easily distinguished from all of them by the following combination of characters.

1) All pale spots on wings are much smaller.
2) Ground color on both sides is much darker and more blackish.
3) Forewing cell spot is single and near radius, not double as in the others.
4) Male genitalia different: aedeagus shorter, cuiller broadly serrate and more acutely pointed at tip.

Comparative description of males

The following comparative description is based upon an examination of 1 ♂ of *P. pellucida quanta* EVANS, 1949 from Guniujiang, Anhui province (misidentified and illustrated in my original description of *P. feifei* HUANG, 2002 as *P. pellucida pellucida* (MURRAY, 1875), the recently described *P. pellucida inexpecta* TSUKIYAMA, CHIBA & FUJIOKA, 1997 from Zhejiang may be only a synonym of *quanta* in the case that the unique holotype of *quanta* is most probably an aberration), 2 ♂♂ of *P. mencia* (MOORE, 1877) from Anhui, 1 ♂ from Er-lang-shan and 1 ♂ from Nujiang valley of *P. caerulescens* (MABILLE, 1876), 1 ♂ of *P. theca fukia* from Anhui, 7 ♂♂ of *P. theca macrotheca* from Nujiang valley, 3 ♂♂ of *P. zina* EVANS, 1932 from Qingchengshan, Sichuan, 5 ♂♂ of *P. gigantea* TSUKIYAMA & CHIBA & FUJIOKA, 1997 (≈ *P. feifei* HUANG, 2002 **syn. nov.**—I totally overlooked the description of *gigantea* when describing *feifei*.) from Qingchengshan, 1 ♂ of *P. matsuii* SUGIYAMA, 1999 from Qingchengshan, 3 ♂♂ of *P. lubricans lubricans* (HERRICH-SCHÄFFER, 1869) from Metok, SE. Tibet, 6 ♂♂ of *P. lubricans taiwana* MATSUMURA, 1919 from Anhui, 2 ♂♂ from Metok, 6 ♂♂ from Nujiang valley and 4 ♂♂ from Dulong valley of *P. discreta* (ELWES & EDWARDS, 1897) and the unique holotype ♂ of *P. micropunctata*. Male genitalia of most of these taxa have been taken photos and published in my original description of *P. feifei*, thus in this paper only the male genitalia of *micropunctata, macrotheca* and the specimen of *caerulescens* from Nujiang are illustrated.

The following description is applicable to all the above-mentioned taxa except those noted. Eyes smooth, constantly different in size between some taxa as shown in the table below. Frons nearly twice as wide as eye and densely clad with more or less brownish or yellowish hairs mixed with black ones, in some taxa shining metallic in certain light. Labial palpi: 2nd segment erect, different in length and size between taxa, densely clad with long scales and hairs, with color different between taxa; 3rd segment slender and in continuation of 2nd segment, different in length between taxa. Antennae nearly of half the length of forewing; club gradually marked in thickness from shaft, in most taxa except *discreta* obtusely bent beyond its thickest part with apiculus constricted after its commencement, but angled in *discreta*, mostly black above except in *discreta*, mostly yellow below except in *micropunctata*; nudum slender and acutely pointed at tip, slightly different in number and color between taxa as shown in the table below; shaft black above and more or less chequered below in all taxa. Thorax and abdomen clad with darker hairs above and paler hairs below, such hairs different in color between taxa. Legs: all femora clad with hairs below whilst all tibiae clad with hairs above; fore-tibia with a tibial epiphysis as usual; mid-tibia with one pair of spurs as usual, unspined; hind-tibia with an upper pair and a lower pair of spurs; all tarsi spined in three rows; the detailed difference in legs as shown in the table below.

The detailed differences in external features of males and male genitalia between these taxa are shown in the following table.

Name	*pell. quan.*	*menc.*	*micr.*		*thec. fuki.*	*thec. macr.*		*giga.*	*mats.*	*lubr. lubr.*	*lubr. taiw.*	*disc.*
Length of forewing	17.5 mm	18 mm	21 mm	18.5–19mm	18 mm	21.5 mm	19 mm	20 mm	20.5 mm	17 mm	17.5 mm	19 mm
Length of antennae	8.5 mm	9 mm	10 mm	9–9.5 mm	8.5 mm	10 mm	8.5 mm	9.5 mm	9.5 mm	8 mm	8 mm	10 mm
Club above	entirely black	entirely black	entirely black	entirely black	entirely black	entirely black	entirely black	entirely black	entirely black	narrow black	narrow black	black, with *yellow near* shaft
Club below	yellow	yellow	mostly black	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow	yellow
Shaft above	entirely black	entirely black	entirely black	entirely black	entirely black	entirely black	entirely black	entirely black	entirely black	narrow black	narrow black	entirely black
Shaft below	chequered with black and yellow	chequered with black and yellow	chequered with black and yellow	chequered with black and yellow	chequered with black and yellow	black near base chequered near club	black near base chequered near club	chequered with black and yellow	chequered near base, yellow near club	nearly circularly chequered	nearly circularly chequered	chequered with black and yellow
Number of nudum	12	12	14	13	12	12	13	14	13	14	14	12
Nudum color	reddish, tip black	blackish	blackish	reddish, dark	blackish	blackish	dark brown	blackish	reddish	reddish	reddish	blackish
Size of eyes	smaller	smaller	medium	smaller	medium	medium	larger	larger	larger	smaller	smaller	medium

Name	*pell. quan.*	*menc.*	*micr.*		*thec. fuki.*	*thec. macr.*		*giga.*	*mats.*	*lubr. lubr.*	*lubr. taiw.*	*disc.*
2nd segment of palpus	(missing)	short, thin, yellow-gray	long, rather thick, dark brown	long, rather thick, dark brown	short, thin, whitish	long, rather thick, whitish	long, rather thick, brownish yellow	long, rather thick, brownish yellow	long, rather thick, brownish yellow	short, thin, brownish yellow	short, thin, brownish yellow	rather long,, thick, brownish yellow
3rd segment of palpus	(missing)	medium	long	long	long	long	medium	medium	medium	medium	medium	short
Hairs on underside of thorax	nearly whitish	dark brown with metallic reflection	dark brown with metallic reflection	dark brown with metallic reflection	whitish	whitish	yellowish brown	yellowish brown	yellowish brown	brownish yellow	brownish yellow	yellowish brown
Hairs on upperside of thorax and hindwing	greenish gray	greenish gray	brownish gray, with greenish hue	brownish gray, with greenish hue	brownish gray	brownish gray, with greenish hue	yellowish brown	yellow-brown	yellow-brown	brownish yellow	brownish yellow	yellow-brown
Length of fore-femur	short	short	rather short	short	short	rather long	rather short	rather short	long	short	short	rather long
Length of fore-tibia	short	medium	medium	medium	medium	long	medium	medium	long	short	short	long
Length of fore-tarsi	rather short	rather long	rather long	rather short	rather short	long	rather long	rather long	long	short	short	rather long
Length of mid-femur	short	short	rather long	rather short	short	rather long	rather long	rather long	long	short	short	long
Length of mid-tibia	rather short	rather short	medium	rather short	rather short	rather long	medium	medium	long	short	short	long
Length of mid-tarsi	short	rather long	rather long	short	rather long	long	rather short	rather short	rather long	short	short	rather long
Mid-tibial spurs	black	mostly black	black	black	black	black	brown	brown	dark brown	brown	brown	dark brown
Color of outer side of mid-tibiae	blackish	blackish	blackish	blackish	blackish	blackish	brown	brown	dark brown	brown	brown	dark brown
Length of hind-femur	short	short	medium	short	short	medium	medium	medium	long	short	short	medium
Length of hind-tibia	short	short	rather short	short	short	long	short	short	rather short	short	short	rather long
Length of hind-tarsi	short	rather short	medium	short	short	medium	rather long	rather long	rather long	rather short	short	long
Inner upper hind-tibial spur	shorter	shorter	shorter	shorter	shorter	shorter	shorter	shorter	shorter	shorter	shorter	longer, thinner
Inner lower hind-tibial spur	shorter	shorter	shorter	shorter	shorter	shorter	shorter	shorter	shorter	shorter	shorter	longer, thinner
Spines on hind-tarsi	small	small	small	small	small	small	small	small	small	small	small	big
Hind-tibial spurs color	mostly blackish	entirely pale yellow	blackish	blackish	blackish and whitish	mostly pale yellow	yellow-brown	yellow-brown	yellow-brown	yellow-brown	yellow-brown	mostly blackish
Hairs on hind leg	black and yellow	pale yellow mixed black	mostly black, denser, longer	mostly blackish, denser	whitish mixed black	whitish mixed black	yellow-brown and black, denser	yellow-brown and black, denser	yellow-brown and black, denser	yellow-brown and black	yellow-brown and black, denser	mostly black
Color of inner side of hind-tibiae	pale yellow	pale yellow	blackish	yellow	whitish	whitish	yellow	yellow	yellow	yellow	yellow	yellow
Color of outer side of hind-tibiae	mostly black	partly yellow	black	black	mostly blackish	mostly blackish	brown	brown	brown	brown	brown	partly yellow
Color of outer side of hind-tarsi	blackish	brown	black	black	mostly blackish	mostly blackish	brown	brown	brown	brown	brown	brown

Name	*pell. quan.*	*menc.*	*micr.*		*thec. fuki.*	*thec. macr.*		*giga.*	*mats.*	*lubr. lubr.*	*lubr. taiw.*	*disc.*
Outer ciliae on forewing upperside	dark brown above vein 2	whitish	mostly dark brown	pale gray	mostly white	mixed black and white	yellow-white	mostly brown	pale gray	brown	pale brown	mostly dark brown
Outer ciliae on hindwing upperside	whitish	whitish	dark brown	dark brown	mostly white	mixed black and white	yellow-white	yellowish	pale gray	yellowish	yellowish	yellowish
Outer ciliae on forewing underside	dark brown above vein 2	whitish	dark brown	gray	mostly white	mostly white	yellow-white	mostly brown	pale gray	brown	pale brown	mostly dark brown
Outer ciliae on hindwing underside	whitish	whitish	dark brown	dark brown	mostly white	mostly white	yellow-white	yellowish	pale gray	yellowish	yellowish	yellowish
Male brand	absent	well	well	absent	absent	absent	absent	absent	well	absent	absent	absent
Cell spot	double, small, well separate	double, minute, well separate	single, minute, well separate	single, minute, well separate	double, small, well separate	double, small, well separate	double, rather small, differm	double, rather small, differm	double, rather small, differm	double, rather small, united	double, small, separate	single, large, crossing cell
Spot in space 2 on forewing	rather large, close to cell spot	minute, remote from cell spot	minute, remote from cell spot	minute, remote from cell spot	small, rather close to cell spot	small, rather close to cell spot	rather large, rather close to cell spot	rather large, close to cell spot	small, remote from cell spot	large, elongate, close to cell spot	large, elongate, close to cell spot	large, broad, connected with cell spot
Upperside ground color	grayish brown with greenish hue	grayish brown with greenish hue	dark brown	dark brown	blackish brown	blackish brown	brown	brown	brown	brown	brown, more suffused yellow	dark brown
Spots on hindwing upperside	four, small	two, minute	one, minute	none	four, rather small	four, rather small	four, big	four, big	four, rather small	two to four, small	two to four, small	three, upper one big
Underside ground color	greenish	greenish	dark brown	reddish brown	mostly suffused whitish	suffused whitish	brownish yellow	brownish yellow	brownish yellow	brownish yellow	brownish yellow	yellow-brown
Spots on hindwing underside	four, small, whitish	three, minute, whitish	four, minute, grayish	four, rather big, lilac	four, rather small, whitish	four, rather small, whitish	four, large, whitish	four, large, whitish	four, rather small, whitish	four, small, whitish	four, small, whitish	three, upper one big, whitish
Uncal plates	absent	long, expanding at two directions, obtuse at two ends	short, obtuse at posterior end, rounded at anterior end	short, obtuse at posterior end, pointed at anterior end	long, obtuse at posterior end, rounded and serrate at anterior end	long, obtuse at posterior end, broadly rounded at anterior end	short, broad, abruptly pointed at both ends	short, gradually pointed at both ends	rather long, gradually pointed at both ends	strongly bent upwards at two ends as long processes	strongly bent upwards at two ends as long processes	broad, short, obtuse at both ends
Gnathos	longer, pointed	thin	rather thin	rather thin	thin	rather thin	thick	rather thick	rather thick	curved upwards	curved upwards	rather thick
Clasp	long	short	medium	medium	medium	medium	short	medium	medium	medium	medium	medium
Cuiller	short, serrate, blunt at tip	bifurcate with inner branch longer	elongate, serrate, acutely pointed at tip	elongate, serrate, blunt at tip	stout, pointed, with an inner branch	stout, pointed, with an inner branch	short, serrate, blunt at tip	rather short, acutely pointed at tip	rather short, serrate, blunt at tip	short, serrate at tip	short, serrate at tip	short, smooth, gently pointed at tip
Length of aedeagus	rather long	medium	rather short	rather short	medium	medium	short	long	rather long	medium	medium	long
Tip of aedeagus	single-pointed, smooth	bifurcate, branches slender, slightly toothed, subequal in length	bifurcate, branches slender, serrate, equal in length	bifurcate, branches slender, serrate, subequal in length	bifurcate, branches slender, slightly toothed, subequal in length	bifurcate, branches slender, toothed, subequal in length	sclerotized as two smooth triangular branches at tip	bifurcate, branches robust, heavily toothed, equal in length	bifurcate, branches robust, heavily toothed, differm in length	broad, bearing minute teeth at both left and right walls	broad, bearing minute teeth at both left and right walls	bifurcate, branches robust, heavily toothed, equal in length
Cornutus	absent	present	present	absent	present	present	absent	absent	absent	absent	absent	absent

Type data

Holotype ♂: LF 21 mm, Qiqi, Nujiang valley, NW. Yunnan, China, July 27th 2002.

The Latin name refers to the small sub-hyaline spots on both sides of both wings of the species.

Papilionidae

Papilio polytes ***liujidongi*** **subspec. nov.** (col. pl. IV, figs. 7–10)

Diagnosis
This well marked new subspecies was reported as ssp. *romulus* CRAMER, [1775] in hesitation on two males taken from September in my previous report for 2000 expedition to Nujiang. More specimens taken from May and July this time strongly suggest that this population deserves a new subspecies. It differs constantly from the nearby subspecies *romulus* and *polytes* LINNAEUS, 1758 in all generations from May to September as follows.
1) Male: hindwing upperside submarginal red spots are invariably very prominent, not absent or very small as in *romulus* and *polytes*.
2) Male: hindwing discal white band is much broader than in *romulus* and *polytes* in spaces 3–6, much smaller than in *romulus* and *polytes* in space 1C whilst the reddish tornal spot is more developed than in *romulus* and *polytes*.
3) Female: forewing termen is not associated with white marginal spots, hindwing discal white spots are present from space 1C to costa, very broad in spaces 3, 4 and 5, more or less dusted with blackish and reddish scales in spaces 2, 6 and 7, the hindwing upperside submarginal reddish spots are prominent; whereas in all the known female forms of *polytes* and *romulus*, if the white discal spots enter spaces 1C, 6 and 7 the hindwing upperside submarginal reddish spots will be invariably obsolescent and the marginal white spots will be always prominent, if the hindwing upperside submarginal red spots are well marked the white discal spots will be restricted below vein 6, never into spaces 6 and 7.

Remarks
Because the above-mentioned difference is based upon the examination of more than ten specimens taken from different seasons (from May to September) in different years (2000 and 2002), it is reasonable to consider that the difference is not due to individual or seasonal variation. This new subspecies has male genitalia examined and shows no constant difference from *polytes* and *romulus*.
From Taligebiet, Mitu (Dali, N. Yunnan) and Chipikuan, Yunnanfu (Kunming, N. Yunnan) MELL (1938: 313) described ssp. *yunnana*, but in my opinion the population from N. Yunnan does not deserve a separate subspecies from ssp. *polytes*. Moreover, the name *yunnana* is preoccupied by *Papilio yunnana* OBERTHÜR, 1907, which is now treated as a questionable subspecies of *Byasa daemonius* (ALPHERAKY, 1895).
The recently described *P. polytes flavolineatus* CHOU, YUAN & WANG, 2000 (**syn. nov.** = ssp. *polytes*) from Jiangsu, E. China and *P. obscuras* CHOU, YUAN & WANG, 2000 (**syn. nov.** = ssp. *polytes*) from Sichuan are apparently only aberrant individuals of *P. polytes polytes* LINNAEUS, 1758 and invalid in taxonomy. The taxon *thibetanus* OBERTHÜR, 1886 (= *Papilio pammon* var. *thibetanus* OBERTHÜR, 1886: Etud. ent. **11**: 14; TL: Chapa) from Tibetan area in the current W. Sichuan is an aberration too and very similar to *obscuras*. The name *borealis* (= *Papilio polytes* var. *borealis* FELDER & FELDER, 1861: Wien. ent. Monats. **6** (1): 22; TL: Ning-Po, E. China), which had been used for Chinese subspecies for many years, has been proved to be a junior synonym of ssp. *polytes*.
In distribution, ssp. *polytes* is widely known from Indo-China and nearly the whole Oriental part of China (recently also recorded from N. China, such as Qingdao) including Hainan, Taiwan and Yunnan except the upper portion of Nujiang valley above the Lushui County; ssp. *romulus* is widely known from the whole continental India, Ceylon and Burma. A survey in literatures concerning subspecies and forms of *P. polytes* shows no other valid subspecies known from areas around S. China, Indo-China, Burma and E. India.

Type data
Holotype ♂: LF 40 mm, Nidadan, Nujiang valley, NW. Yunnan, China, July 21st 2002. Paratypes: 7 ♂♂, 1 ♀, Nidadan, May 2002; 1 ♂, Nidadan, July 2002; 2 ♂♂, Naqialo to Nidadan, September 2000.
This new subspecies is named after Mr. LIU JI-DONG, who accompanied me to visit Zanian and Longpo during my expedition.

Nymphalidae

Limenitis misuji **wenpingae subspec. nov.** (fig. 62; col. pl. V, figs. 1, 2)

Diagnosis
Limenitis misuji SUGIYAMA, 1994 (col. pl. V, fig. 3) was originally described from montane forests in Dujiangyan, Dayi and Qingchengshan, W. Sichuan. Hitherto it has not been recorded from other areas. The new subspecies from Nujiang valley is easily distinguishable from the nominated subspecies by the following combination of characters in both sexes.
1) Outer cell spot of forewing is trapeziform in shape, not nearly triangular as in ssp. *misuji*.
2) On both sides of both wings the discal band or spots are constantly broader or larger than in ssp. *misuji*.
3) On hindwing underside the postdiscal spots are more associated with white patches, so much broader in whitish color than in ssp. *misuji*.

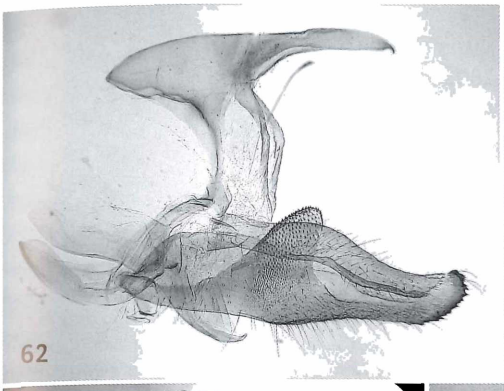
Remarks
At its habitat this new subspecies of *L. misuji* flew together with a population of *L. homeyeri*. Because HALL (1930: 157) described *L. homeyeri meridionalis* (fig. 63; col. pl. V, figs. 4, 5) from NW. Yunnan, a discussion on the identification of *meridionalis* and *wenpingae* is necessary here. According to HALL's original description, compared with *L. homeyeri venata, L. homeyeri meridionalis* has "underside lighter, more yellowish-brown than in *venata*"; all specimens of *L. homeyeri* from Nujiang agree with such description in having area between discal and postdiscal bands on hindwing underside yellow-brown and therefore belong to *meridionalis* whilst all specimens of *L. misuji* from Nujiang have underside all dark brown, even darker than in all populations of *L. homeyeri*.
From China the following related taxa have been described recently: *L. doerriesi tongi* YOSHINO, 1997 from Zhejiang, East China, *L. doerriesi shennonjiaensis* YOSHINO, 2001 from Hubei, central China. Both of them should belong to *L. doerriesi* and do nothing with *wenpingae*. Both *L. misuji misuji* and *L. misuji wenpingae* are easily distinguishable from all other taxa in *L. helmanni* group (including *helmanni* LEDERER, 1853, *homeyeri* TANCRE, 1881, *doerriesi* STAUDINGER, 1892) and characterized by outer cell spot on forewing upperside narrow, not expanded, black subbasal spots on hindwing underside all big and rounded, not linear, and valva of male genitalia robust and broad at tip.

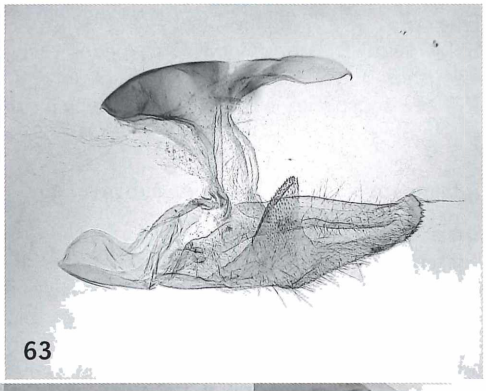
Type data
Holotype ♂: LF 28 mm, Nidadan, Nujiang valley, NW. Yunnan, China, May 29th 2002. Paratypes: 2 ♂♂, 1 ♀, Nidadan, May; 2 ♂♂, 3 ♀♀, Nidadan, July.
This new subspecies is named in honor of Ms. LIU WEN-PING, Chongqing Museum (Natural History), in gratitude for her constant help in loaning valuable specimens for my previous works.

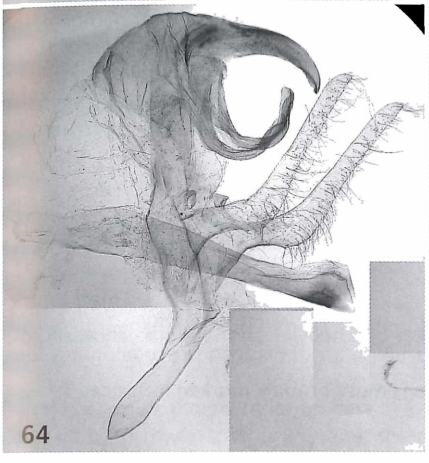
Stichophthalma sparta **gongshana subspec. nov.** (fig. 64; col. pl. V, figs. 6, 7)

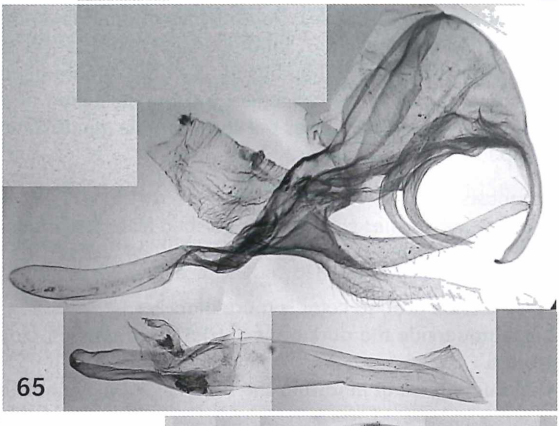
Diagnosis
Hitherto only two subspecies of *Stichophthalma sparta* DE NICEVILLE, 1889 are known, viz. ssp. *sparta* from Hthawgaw, NE. Burma (not "Manipur", according to TALBOT, 1947), and ssp. *evansi* TYTLER, 1928 from Sadon, NE. Burma. These two previously known subspecies were described from the same area in NE. Burma and doubtfully different from each other. The new subspecies from Gongshan can be very easily distinguished from them in both sexes by the apical area of forewing upperside pale fulvous brown, not creamy white.

Remarks
This species seems to be known only from July: TALBOT (1947) recorded six males of ssp. *sparta* from July; TYTLER described ssp. *evansi* on a series of males and seven females from July, and all my types of new subspecies came from July as well.
This new subspecies is rather similar to *S. howqua* WESTWOOD, 1851 in big size and is distributed very close to *S. howqua suffusa* LEECH, 1892 (fig. 65) from Sichuan. However, an examination of the male









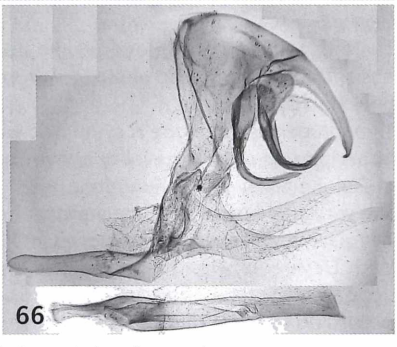


Fig. 62: Male genitalia of *Limenitis misuji wenpingae* (holotype, Nujiang, specimen illustrated on col. pl. V, fig. 1) consisting of genital capsule in lateral view with left clasp removed.
Fig. 63: Male genitalia of *Limenitis homeyeri meridionalis* (Nujiang, specimen illustrated on col. pl. V, fig. 4) consisting of genital capsule in lateral view with left clasp and aedeagus removed.
Fig. 64: Male genitalia of *Stichophthalma sparta gongshana* (holotype, Nujiang, specimen illustrated on col. pl. V, fig. 6) consisting of genital capsule in lateral view.
Fig. 65: Male genitalia of *Stichophthalma howqua suffusa* (Sichuan, specimen not illustrated) consisting of genital capsule in lateral view with aedeagus removed (top), and of aedeagus in lateral view (bottom).
Fig. 66: Male genitalia of *Stichophthalma neumogeni neumogeni* (Sichuan, specimen not illustrated) consisting of genital capsule in lateral view with aedeagus removed (top), and of aedeagus in lateral view (bottom).

genitalia and underside wing-pattern proves *gongshana* not to be *S. howqua* (3 ♂♂ of ssp. *suffusa* from Sichuan and 1 ♂ of ssp. *howqua* from Fujian dissected): compared with *howqua, gongshana* has uncus shorter and thicker, valva shorter and broader, and saccus and aedeagus shorter.
This new subspecies of *S. sparta* shows conspicuous difference in male genitalia from *S. neumogeni* Leech, 1892 (fig. 66) in having valva much broader and apparently constricted a little near base, uncus and saccus much thicker and aedeagus longer and thicker.

Type data
Holotype ♂: LF 58 mm, Gongshan, Nujiang valley, NW. Yunnan, July 27th 2002. Paratypes: 4 ♂♂, 2 ♀♀, Gongshan, July 27th 2002; 2 ♀♀, Lishadi, July 30th 2002.
This new subspecies is named after its type locality, Gongshan.

Ypthima muotuoensis ***dulongae*** **subspec. nov.** (figs. 67, 69; col. pl. VI, figs. 1–3)

Specific classification
I described *muotuoensis* as a new subspecies of *Y. confusa* SHIROZU & SHIMA, 1977 on only two males from Metok, SE. Tibet, because *muotuoensis* is indistinguishable from *confusa* in male genitalia but shows different external features. However, a recent visit to Beijing made me possible to examine the collection preserved in Institute of Zoology, Academia Sinica (IZAS) and I found 3 ♀♀ of *muotuoensis* taken from the type locality, Metok and the same season as my type data, September. An examination of female genitalia proves *muotuoensis* to be independent from either *Y. confusa* or *Y. pemakoi*, deserving full species, viz. *Y. muotuoensis* HUANG, 2000 **stat. nov.** The specific classification of these closely allied taxa is chiefly based upon the female genital structures. The result of my study on the *Y. newara*-group in my collection and the collection of IZAS is stated below in "Remarks" The new taxon described here shares the same female genitalia with *Y. muotuoensis* thus will be regarded as a subspecies of *muotuoensis*.

Diagnosis
This new subspecies can be distinguished from ssp. *muotuoensis* by the following combination of characters in both sexes.
1) Size is much bigger.
2) Upperside ground color is more blackish.
3) On underside the dark brown striation is sparser, blacker and heavier on the more yellowish pale ground.
4) On upperside of hindwing the blackish submarginal line is more broadly marked in spaces 3–5.

Remarks
There is no difference in androconia and female genitalia between ssp. *dulongae* and ssp. *muotuoensis*. The male genitalia of ssp. *dulongae* agree to those of ssp. *muotuoensis* in structures but are apparently bigger in size.
Y. muotuoensis dulongae is sympatric with *Y. tiani nuae* at Kongdang in Dulong valley, it occupies the upper portion of Dulong valley above Kongdang whilst *Y. tiani nuae* chiefly occupies the lower portion of Dulong valley below Kongdang.
The very little known *Ypthima newara sarcaposa* FRUHSTORFER, 1911 from Tenasserim, S. Burma should be raised to full species and placed into *Y. newara*-group, according to UEMURA's opinion (pers. com.). With UEMURA's help, the photos of a syntype male of *sarcaposa* preserved in B.M. (N.H.) from Tandong, Tenasserim and a male in UEMURA's collection from Karen, South Burma have been examined. According to these photos, *Y. "newara" sarcaposa* has the forewing subapical ocellus nearly upright, not oblique as in *Y. dengae* HUANG, 2001 and *Y. muotuoensis dulongae*, the submarginal fasciae on both sides of both wings more prominent than in *Y. dengae*, but less marked than in *Y. muotuoensis dulongae*, the upperside ground color less blackish than in both *dengae* and *dulongae*, and the underside dark striation browner and remarkably less in contrast with the whiter pale ground than in both *dengae* and *dulongae*. The taxonomic position of *sarcaposa* needs a further study.

A study of Chinese specimens of the *Y. newara*-group in my collection and the collection of IZAS concludes the following checklist. All the specimens mentioned in this list have been dissected. The comparative description of external features is not presented to *yaluzangbui, dengae* and *sinica* because all these species are much easier to be recognized and have been fully described in their original descriptions. It should be noted that there is no constant difference in androconia between *confusa, pemakoi, muotuoensis, dulongae* and *nuae*.

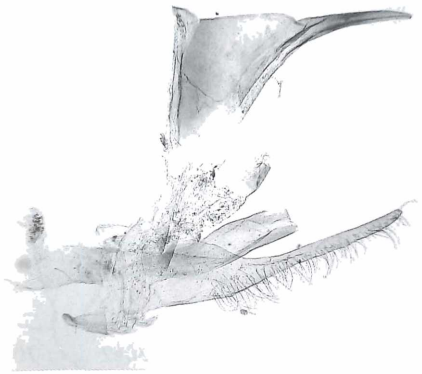


Fig. 67: Male genitalia of *Ypthima muotuoensis dulongae* (holotype, Dulongjiang, specimen illustrated on col. pl. VI, fig. 1) consisting of genital capsule in lateral view with left valva removed.

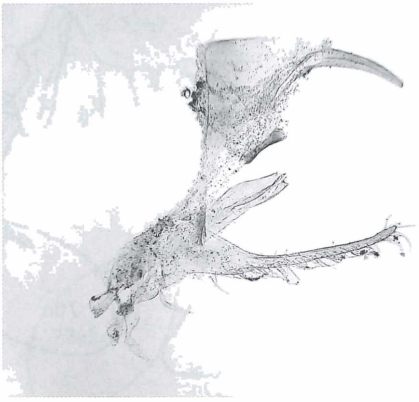
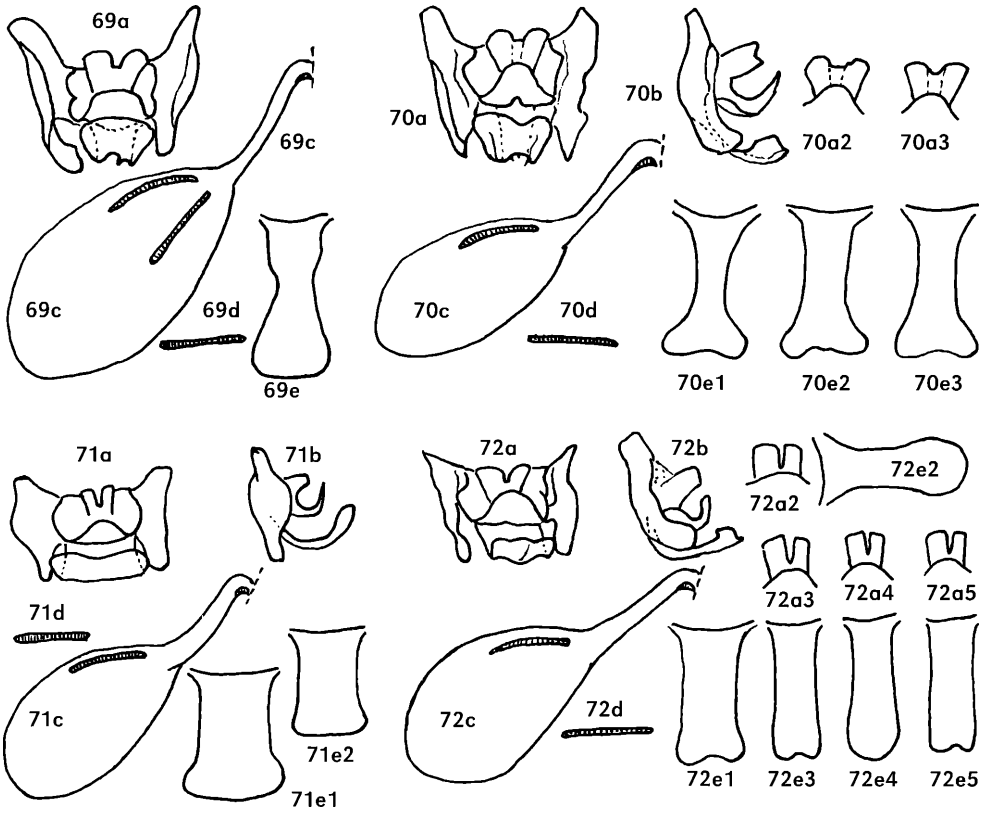


Fig. 68: Male genitalia of *Ypthima tiani nuae* (Nujiang, specimen illustrated on col. pl. VI, fig. 12) consisting of genital capsule in lateral view with left valva removed.

1) *Y. confusa* (TL: Nepal) (fig. 71; col. pl. VI, figs. 8–10): 1 ♂ (IZAS), Pingbian, S. Yunnan, June 1956; 1 ♀ (IZAS), Jingdong, C. Yunnan, June 1956.
Male: upperside ground color is browner than in other taxa; underside dark striation is denser than in *muotuoensis*, browner than in *muotuoensis* and *nuae*, and less in contrast with the browner pale ground than in *muotuoensis* and *nuae*.
Female: upperside ground color is much paler than in ♂, otherwise as in ♂.
Male genitalia are of *confusa* form, as illustrated in Shirozu & Shima (1977).

Female genitalia: the posterior process of lamella postvaginalis is somewhat semicylinder in structure and has a narrower split as in *nuae*, the central process of lamella antevaginalis is even in width throughout and comparatively shorter and broader than in *nuae*, the ductus bursae is remarkably longer than in *pemakoi* but slightly shorter than in *nuae* and *muotuoensis*.
2) *Y. pemakoi* (TL: Metok, SE. Tibet) (fig. 74; col. pl. VII, figs. 1, 2): 9 ♂♂, 5 ♀♀, Metok, SE. Tibet, June–July 1996 (only the type series).
Male: upperside ground color is grayer and darker than in *confusa* but paler and less blackish than in *nuae* and *dulongae*; underside dark striation is as dense as in *confusa*, browner than in *muotuoensis* and *nuae*, and less in contrast with the more yellowish pale ground than in *muotuoensis* and *nuae*; underside ocelli are more broadly ringed with blackish than in all other taxa.
Female: upperside ground color is paler than in ♂, wings are more rounded in shape than in ♂.
Male genitalia are nearly identical to those of *confusa*, except for the valva shorter than in *confusa, nuae* and *muotuoensis*.
Female genitalia: the posterior process of lamella postvaginalis is flat and broad in structure and has a shallower split, the central process of lamella antevaginalis is remarkably narrower at middle portion than in *confusa* but expands at tip as wide as in *confusa*, the ductus bursae is constantly much shorter than in *confusa, muotuoensis* and *nuae*.

3a) *Y. muotuoensis muotuoensis* (TL: Metok, SE. Tibet) (fig. 70; col. pl. VI, figs. 4–7): 2 ♂♂ (types), Metok, SE. Tibet, August–September 1995; 3 ♀♀ (IZAS), Metok, September–October 1982.
Male: upperside ground color is similar to that of *pemakoi*; underside dark striation is sparser than in *confusa, pemakoi* and *nuae*, blacker and more in contrast with the grayer pale ground than in *confusa* and *pemakoi*.
Female: upperside ground color is paler than in ♂, wings are more rounded in shape than in ♂.
Male genitalia are of *confusa* form, as illustrated in Huang (2001).



Figs. 69–76: Female genitalia of *Ypthima* species: a – lamella antevaginalis and lamella postvaginalis in ventral view, or only posterior process of lamella postvaginalis in ventral view; b – lamella antevaginalis and lamella postvaginalis in lateral view; c – ductus bursae and corpus bursae in lateral view; d – signum; e – central process of lamella antevaginalis.)
Fig. 69: Female genitalia of *Ypthima muotuoensis dulongae* (paratype, specimen illustrated on col. pl. VI, fig. 3).
Fig. 70: Female genitalia of *Ypthima muotuoensis muotuoensis* including different samples: 1 Metok, specimen illustrated on col. pl. VI, fig. 6; 2 – Metok specimen illustrated on col. pl. VI, fig. 7; 3 Metok, specimen not illustrated.
Fig. 71: Female genitalia of *Ypthima confusa* including different samples: 1 – Nepal, specimen illustrated on col. pl. VI, fig. 10; 2 – Yunnan, specimen illustrated on col. pl. VI, fig. 9.
Fig. 72: Female genitalia of *Ypthima tiani nuae* including different samples: 1 – Bapo, Dulong valley, specimen not illustrated; 2 – Gongshan, Nujiang valley, specimen not illustrated; 3 – Nidadan, Nujiang valley, specimen illustrated on col. pl. VI, fig. 17; 4 – Lishadi, Nujiang valley, specimen illustrated on col. pl. VI, fig. 16; 5 – Maku, Dulong valley, specimen not illustrated.

Female genitalia: the posterior process of lamella postvaginalis is somewhat semicylinder in structure and has a wider and shallower split than in *nuae* and *confusa*, the central process of lamella antevaginalis is remarkably narrower at middle portion than in *confusa* but expands at tip nearly as wide as in *confusa*, the ductus bursae is as long as in *nuae*.

3b) *Y. muotuoensis dulongae* (TL: Dulong valley, NW. Yunnan) (figs. 67, 69; col. pl. VI, figs. 1–3): 13 ♂♂, 1 ♀, Dulong valley, July 2002 (only the type series).
Male: size is remarkably larger than all other members within the group; upperside ground color is

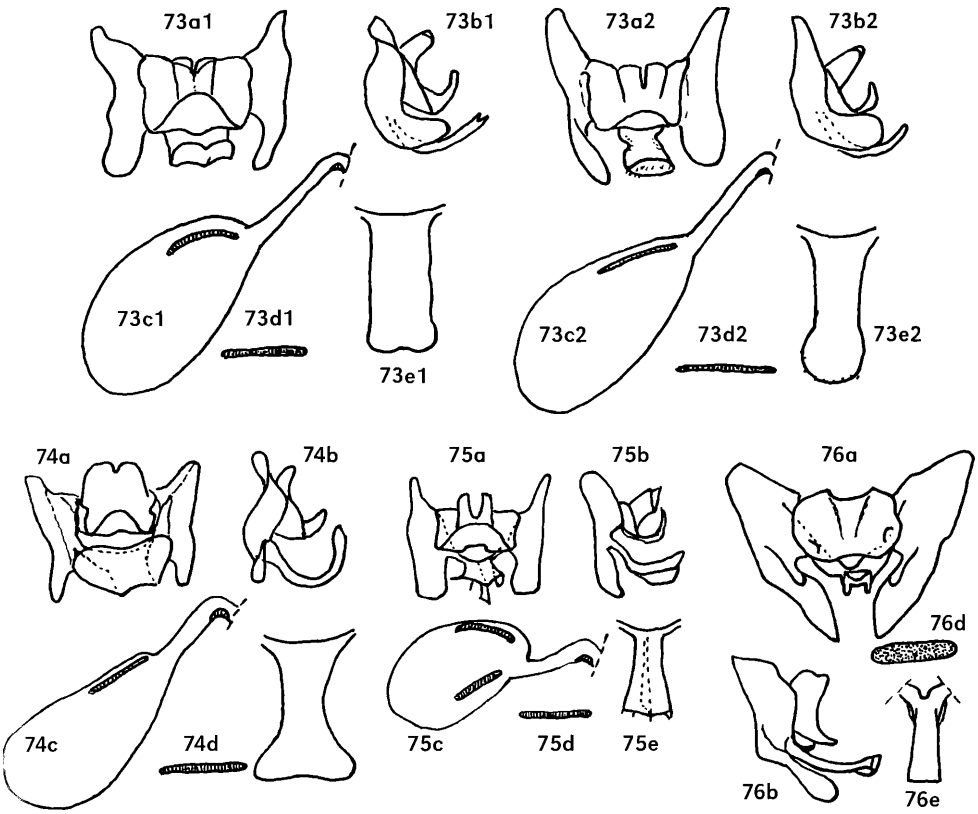


Fig. 73: Female genitalia of *Ypthima tiani nuae* including different samples: 1 – Napo, Guangxi province, specimen illustrated on col. pl. VI, fig. 18; 2 – Napo, specimen not illustrated.
Fig. 74: Female genitalia of *Ypthima pemakoi* (paratype ♀, Metok, specimen illustrated on col. pl. VII, fig. 2).
Fig. 75: Female genitalia of *Ypthima sinica* (Qingchengshan, Sichuan, specimen not illustrated).
Fig. 76: Female genitalia of *Ypthima yangjiahei* (Nujiang, specimen illustrated on col. pl. VII, fig. 6).

blacker than in all other taxa except *nuae*; underside dark striation is sparser than in *confusa, pemakoi* and *nuae*, blacker and more in contrast with the more yellowish pale ground than in all other taxa.
Female: upperside ground color is paler than in ♂, wings are more rounded in shape than in ♂.
Male genitalia are of *confusa* form, but have size larger than in *muotuoensis, confusa, nuae* and *pemakoi*, as illustrated in this paper.
Female genitalia agree to those of *muotuoensis*.

4) *Y. tiani nuae* (TL: Nujiang valley, NW. Yunnan) (figs. 68, 72, 73; col. pl. VI, figs. 11–18): 5 ♂♂ (types), 5 ♀♀ (types), Nidadan to Longpo, Nujiang valley, NW. Yunnan, September 2000; 17 ♂♂, 6 ♀♀, Nidadan to Longpo, May and July 2002; 4 ♂♂, 3 ♀♀, Gongshan, June 2002; 3 ♂♂, 3 ♀♀, Lishadi, June and July 2002; 7 ♂♂, 2 ♀♀, Gazu and Qiqi, June 2002; 6 ♂♂, 3 ♀♀, Bapo and Maku, Dulong valley, June and July 2002; 1 ♀, Kongdang, July 2002; 1 ♂ (IZAS), 2 ♀♀ (IZAS), Napo, Guangxi, April 1998.
Male: upperside ground color is as blackish as in *dulongae*; underside dark striation is as dense as in *pemakoi* and *confusa*, denser than in *muotuoensis* and *dulongae*, blacker on a grayer pale ground than in *confusa* and *pemakoi*, less in contrast with the pale ground than in *muotuoensis* and *dulongae*.

Male genitalia are of *confusa* form, as illustrated in HUANG (2001) and in this paper.
Female genitalia: the posterior process of lamella postvaginalis is somewhat semicylinder in structure and has a narrower and deeper split than in *muotuoensis*, the central process of lamella antevaginalis is nearly even in width throughout, usually rounded at tip and comparatively longer and narrower than in *confusa*, the ductus bursae is as long as in *muotuoensis*, slightly longer than in *confusa* and much longer than in *pemakoi*.

5) *Y. sinica* UEMURA & KOIWAYA, 2000 (TL: Qingchengshan, Sichuan) (fig. 75): 4 ♂♂ (IZAS), 1 ♀ (IZAS), Qingchengshan, Sichuan, May 1963; 2 ♂♂ (IZAS), 2 ♀♀ (IZAS), Qingchengshan, Sichuan, May 1963; 2 ♂♂ (IZAS), 1 ♀ (IZAS), Qingchengshan, Sichuan, September 1964; 1 ♂ (IZAS), Dayaoshan, Jinxiu, Guangxi, May 1999.
No male brand is visible to the naked eyes.
Male genitalia as illustrated in original description, bear perfect teeth at tip of valva.
Female genitalia: as illustrated in this paper, the posterior process of lamella postvaginalis is remarkably smaller and has a wider and deeper split than in the preceding species in this list, the central process of lamella antevaginalis is shorter and narrower than in the preceding species and keeled, and the ductus bursae is as long as in *pemakoi*, much shorter than in other species.

6) *Y. newara yaluzangbui* HUANG, 1999 (TL: Metok, SE. Tibet): 4 ♂♂, Metok, August–September 1995 (type series only).
Male genitalia are of *newara* form.
Female genitalia are unknown.

7) *Y. dengae* HUANG, 2001 (TL: Chayu, SE. Tibet): 3 ♂♂, 8 ♀♀, Chayu area of Tibet, July–August 2000 (type series only).
Male genitalia are of *newara* form.
Female genitalia are different from those of *newara* and other species within the group, as illustrated in its original description.

Type data
Holotype ♂: LF 23.5 mm. Xianjiudang to Longyuan, Dulong valley, NW. Yunnan, China, July 9th 2002.
Paratypes: 3 ♂♂, Xiongdang, July 2002; 5 ♂♂, 1 ♀ (LF 22.5 mm), Longyuan to Ban, July 2002; 4 ♂♂, Mabilo, July 2002.
This new subspecies is named after the tribe of the Dulong.

Ypthima parasakra ***mabiloa*** **subspec. nov.** (col. pl. VII, fig. 3)

Diagnosis
This new subspecies can be distinguished from ssp. *parasakra* ELIOT, 1987 from Nepal, Bhutan and SC. Tibet (2 ♂♂ in IZAS examined) and ssp. *menpae* HUANG, 1999 from Namjagbarwa area, SE. Tibet (the type series examined) by the following combination of characters in males.
1) Upperside ground color is more blackish and much darker than in all other subspecies.
2) On underside of wings the dark striation is more clearly defined, more blackish and more in contrast with the pale ground than in other subspecies.
3) On underside of hindwing, the subapical ocellus in spaces 5 and 6 is much bigger than in all other subspecies.
4) On upperside of wings, all submarginal fasciae are well marked as in ssp. *menpae*, not obsolescent as in ssp. *parasakra*.
This new subspecies differs from the population of Chayu (unnamed subspecies) in having the underside striation clearer, heavier and sparser, the subapical ocellus much bigger and underside less brownish but more yellowish in appearance.

Type data
Holotype ♂: LF 28 mm, Xiongdang, Dulong valley, NW. Yunnan, China, July 15th 2002. Paratypes: 2 ♂♂, Xiongdang to Mabilo, July.
The subspecies name is derived from one of its type localities, Mabilo, a very mystery village in Dulong valley.

Ypthima iris ***naqialoa*** **subspec. nov.** (col. pl. VII, fig. 4)

Diagnosis
This new subspecies can be distinguished from ssp. *iris* LEECH, 1891 from Sichuan (areas around Kangding, Kunkalashan, Songpan and Batang, 5 ♂♂ from Batang examined), ssp. *paradromon* UEMURA & KOIWAYA, 2000 from N. Yunnan (Kunming, Dali, Lijiang, 4 ♂♂ from Dali in IZAS examined) and ssp. *microiris* UEMURA & KOIWAYA, 2000 from NE. Tibet (Changdu, 1 ♂ in IZAS examined) by the following combination of characters in both sexes.
1) Size is remarkably larger than in ssp. *microiris*, length of forewing 24 mm against 21–22 mm in *microiris*.
2) Upperside ground color is grayish brown as in ssp. *microiris*, not so warm as in ssp. *iris* and ssp. *paradromon*, all markings including submarginal fasciae, forewing subapical ocellus and hindwing ocelli are similar to those of ssp. *iris*, usually more prominent than in ssp. *paradromon* and ssp. *microiris*.
3) On underside of forewing, the submarginal fascia is heavily marked and apparently waved as in ssp. *iris*, more conspicuous than in ssp. *paradromon* and ssp. *microiris*.
4) On underside of hindwing, the submarginal and discal fasciae are as prominent as in ssp. *paradromon*, but closer to each other in space 4 than in ssp. *paradromon*, more pronounced than in ssp. *iris*, the subbasal fascia is faint and only traceable, not so prominent as in ssp. *paradromon*.
5) On underside of hindwing, all postdiscal ocelli are usually prominent as in ssp. *iris*, whereas in ssp. *paradromon* they are mostly minute and only traceable in space 6.

Type data
Holotype ♂: LF 24 mm, on path between Naqialo and Longpo, Nujiang valley, NW. Yunnan, China, May 24th 2002. Paratypes: 7 ♂♂, 2 ♀♀, Naqialo to Zanian, May.
The subspecies name is derived from one of its type localities, Naqialo.

Callerebia ***ulfi*** **spec. nov.** (fig. 77; col. pl. VII, fig. 15)

Diagnosis
This new species is close to *C. suroia* TYTLER, 1914 (figs. 78, 79; col. pl. VII, figs. 7, 8, 16), but can be easily distinguished from the latter by the following combination of characters in males.
1) Upperside ground color is blackish, not dark brown as in *C. suroia*; underside ground color is more blackish too.
2) Marginal area of both wings upperside is clouded with white scales, whereas in *C. suroia* it appears paler brown but not powdered with whitish scales.
3) On forewing underside, marginal area from vein 3 to costa is brownish, not apparently paler than ground color, whereas in *C. suroia* such area is clouded with whitish striation.
4) On hindwing underside, antediscal reddish brown stripe is nearly absent, not clearly defined as in *C. suroia*; discal stripe is ill-defined and merged into the extensive costal dark brown coloring at its upper half, not entirely clearly defined as in *C. suroia*; submarginal stripe is ill-defined and entirely merged into the extensive marginal dark brown coloring, not entirely clearly defined as in *C. suroia*, the striation is clearer and sparser than in *C. suroia*.
5) Male genitalia are different: distal branch of valva is constantly shorter than in *suroia*, aedeagus is constantly shorter than in *suroia*.

This new species can be easily distinguished from *C. orixa* MOORE, 1872 (= *ophthalmica* STAUDINGER, 1888) from Assam simply by the much more convex forewing termen, the absence of ocellus on both sides of hindwing and the more blackish ground color on both sides of wings. (I don't know the male genitalia of *C. orixa*.)

This new species can be distinguished from *C. polyphemus polyphemus* OBERTHÜR, 1877 and *C. polyphemus annadina* WATKINS, 1927 by size smaller, upperside ground color more blackish, forewing upperside ocellus more broadly ringed with more yellowish coloring, the inner ciliae white, not brown, all stripes on hindwing underside ill-defined, not clearly marked, and in male genitalia by distal branch of valva remarkably shorter and aedeagus shorter.

This new species can be distinguished from *C. polyphemus confusa* WATKINS, 1925 (**stat. nov.**, see remarks below) and *C. polyphemus ricketti* WATKINS, 1925 (**comb. nov.**, see remarks below) by size smaller, ground color on both upper and under sides more blackish, the marginal area of wings on upperside clouded with white scales, hindwing underside dark brown coloring in marginal and apical areas more blackish and darker, more in contrast with the paler ground color, and in male genitalia by the distal branch of valva constantly shorter.

Remarks

In external features this new species is much closer to *C. suroia* and the Chinese taxa of "*C. confusa*" and *C. polyphemus* than to all other species within the genus, thus the detailed discussion is only made on these taxa (including the valid *polyphemus, annadina, confusa, ricketti* and *suroia*) as follows.

After an examination of a large series of specimens preserved in IZAS and my collection, only the following external features in males and male genital structures are of important taxonomic value: appearance of ring of subapical ocellus on forewing; discal line on hindwing underside; hindwing underside striation; hindwing underside ground color; length of distal branch of valva. The androconia however is not important; all these Chinese taxa examined have no difference in androconia from one another. The width of ring of forewing subapical ocellus is rather variable in individuals among all the taxa examined, but more often broader in *ulfi* and *suroia* than in *polyphemus, annnadina, confusa* and *ricketti*. The hindwing underside subbasal line is very variable in individuals for *polyphemus, annadina, suroia* and *confusa*, from rather distinct to absent, therefore can not be used as diagnostic characters; such line in *C. ulfi* is usually absent. The hindwing underside ocelli are variable in individuals for *polyphemus*, usually two in number but sometimes absent totally, therefore can not be used as diagnostic characters too; such ocelli are invariably absent in *confusa* and *ulfi*, usually absent but occasionally marked as minute dots in *suroia*. The hindwing upperside tornal ocellus is usually present in *polyphemus, annadina, confusa* and *ricketti*, present or absent in *suroia* according to individuals, but always absent in *ulfi*. The examination of these specimens concludes the following checklist.

1a) *C. polyphemus polyphemus* OBERTHÜR, 1877 (TL: Muping (now Baoxing), W. Sichuan) (figs. 80–83; col. pl. VII, fig. 9)

Specimens examined: 9 ♂♂, Hanyuan, Sichuan; 2 ♂♂ (IZAS), 4 ♂♂, Luding, Sichuan; 4 ♂♂, 2 ♀♀, Lushan, Sichuan; 5 ♂♂, Moxi, Gonggashan, Sichuan.

Synonyms and forms: *oberthueri* WATKINS, 1925 (TL: Wa-shan, Sichuan); *perocellata* WATKINS, 1927 (TL: Sichuan).

All these forms can be found in the same population from Sichuan thus have no taxonomic value. This species was originally described from Muping (now Baoxing), W. Sichuan, the type described and figured by OBERTHÜR is a male specimen, in which the hindwing has no spot beneath. WATKINS (1925)

Fig. 77: Male genitalia of *Callerebia ulfi* (holotype, Dulongjiang, specimen illustrated on col. pl. VII, fig. 15) consisting of genital capsule in lateral view with left valva removed.

Fig. 78: Male genitalia of *Callerebia suroia* (Qujing, Yunnan, specimen illustrated on col. pl. VII, fig. 16) consisting of genital capsule in lateral view with left valva removed.

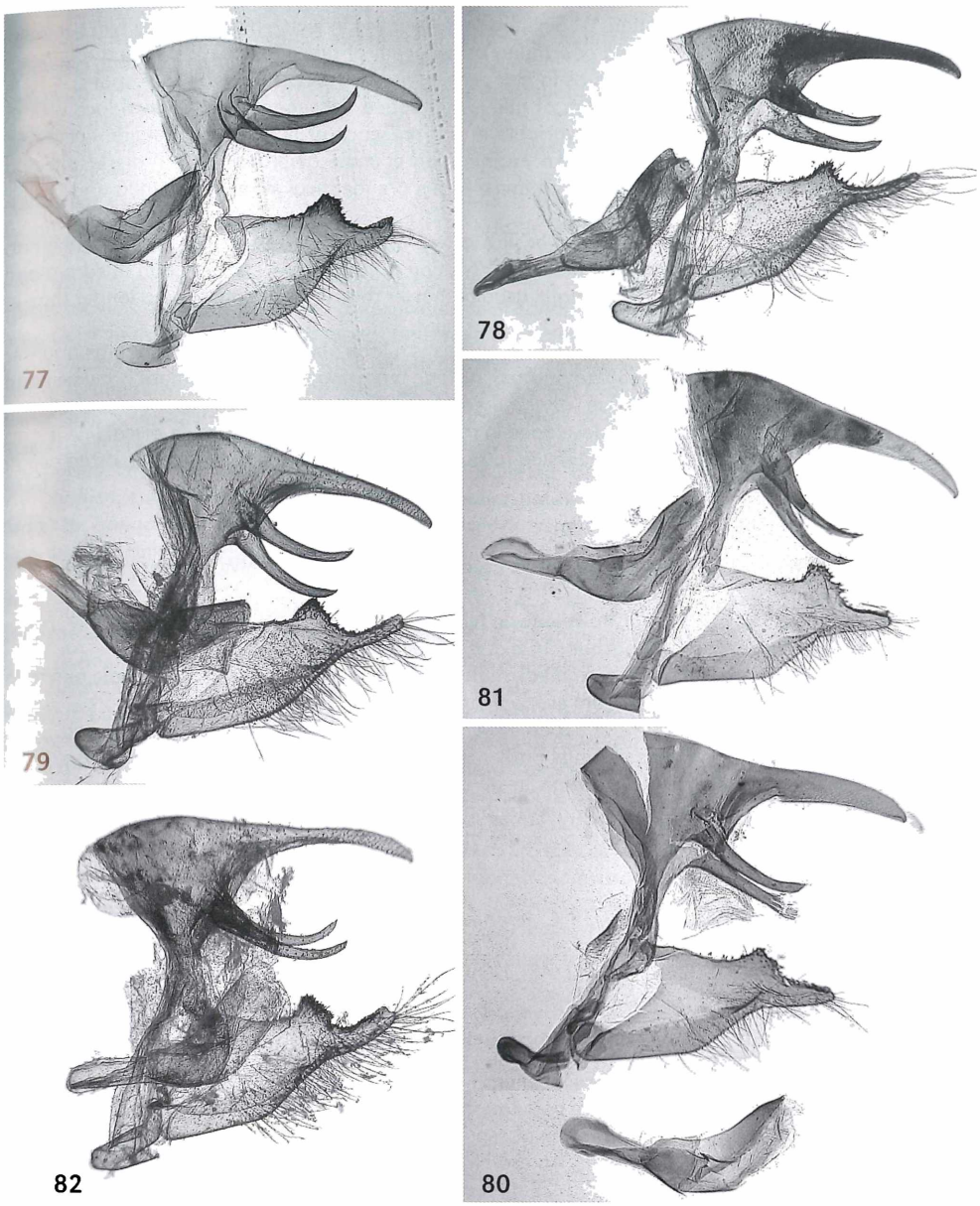


Fig. 79: Male genitalia of *Callerebia suroia* (Qujing, Yunnan, specimen illustrated on col. pl. VII, fig. 7) consisting of genital capsule in lateral view with left valva removed.
Fig. 80: Male genitalia of *Callerebia polyphemus polyphemus* f. *oberthueri* (Hanyuan, Sichuan, specimen not illustrated) consisting of genital capsule in lateral view with left valva and aedeagus removed (top), and of aedeagus in lateral view (bottom).
Fig. 81: Male genitalia of *Callerebia polyphemus polyphemus* f. *oberthueri* (Hanyuan, Sichuan, specimen not illustrated) consisting of genital capsule in lateral view with left valva removed.
Fig. 82: Male genitalia of *Callerebia polyphemus polyphemus* f. *polyphemus* (Lushan, Sichuan, specimen illustrated on col. pl. VII, fig. 9) consisting of genital capsule in lateral view with left valva removed.

described *C. oberthueri* from Wa-shan, W. Sichuan on specimens in which hindwing has two spots beneath, he subsequently (1927) treated *oberthueri* as synonym of *polyphemus*. In addition one more name was published under this species as forms: *perocellata* WATKINS, 1927 with four spots on forewing above and beneath. An examination of above-mentioned specimens from sereval localities of Sichuan proves that this species is very variable in the presence of hindwing underside ocelli and forewing ocelli below subapical eyespot. An examination of male genitalia (11 ♂♂ dissected) and androconia (13 ♂♂ examined) shows that all these forms are identical in male genitalia and androconia.
Specific characters in ♂♂: ring of subapical ocellus is less yellowish and usually (not constantly) narrower than in *suroia* and *ulfi*, hindwing underside striation is clearer and sparser than in *suroia* and *ulfi*, distal branch of valva is medium in length, usually shorter than in *suroia* but always longer than in *ulfi*.
Subspecific characters in ♂♂: forewing subapical ocellus is a little oblique, with reddish rings brighter and more yellowish than in ssp. *annadina* and ssp. *ricketti*; hindwing underside is more brownish and less blackish in appearance than in ssp. *annadina*, but less brownish than in ssp. *confusa*; whitish striation on hindwing underside is not developed in tornal area; hindwing underside discal line is narrower than in ssp. *confusa*; hindwing underside tornal ocelli are variable in appearance, often two in number but sometimes absent.
Distribution: W. Sichuan.

1b) *C. polyphemus annadina* WATKINS, 1927 (TL: Lozejiang (now Nujiang), NW. Yunnan) (figs. 84, 85; col. pl. VII, fig. 10)
Specimens examined: 12 ♂♂, 6 ♀♀, Chawalong to Nidadan, Nujiang, NW. Yunnan; 5 ♂♂, 1 ♀, Nidadan; 2 ♂♂, Bingzhongluo; 6 ♂♂, Gongshan; 16 ♂♂, 5 ♀♀, Sijitong and Nidadan.
An examination of androconia (5 ♂♂ examined), male genitalia (9 ♂♂ dissected) and female genitalia (3 ♀♀ dissected) shows no difference from ssp. *polyphemus*.
Subspecific characters in ♂♂: forewing subapical ocellus is usually more oblique than in ssp. *polyphemus* and ssp. *ricketti*, with reddish rings darker than in ssp. *polyphemus* and ssp. *confusa*; hindwing underside is much more blackish than in all other subspecies; whitish striation on hindwing underside entering tornal area as in ssp. *ricketti*; hindwing underside discal line is usually narrower than in ssp. *confusa*; hindwing underside ocelli are always prominent.
Distribution: NW. Yunnan.

1c) *C. polyphemus confusa* **stat. nov.** (= *C. confusa* WATKINS, 1925. TL: Changyang, Hubei) (figs. 88–90; col. pl. VII, figs. 12–14)
Specimens examined: 3 ♂♂ (IZAS), 2 ♀♀ (IZAS), Lichuan, Hubei; 1 ♂ (IZAS), Sangzhi, Hunan; 10 ♂♂ (IZAS), 2 ♂♂ (LIU), 2 ♀♀ (LIU), Wushan and Fuling, Chongqing (previous E. Sichuan); 3 ♂♂ (IZAS), Leigongshan, Guizhou.
One paratype ♂ was illustrated by D'ABRERA (1992: 195). The specimens examined from Hubei agree with this paratype in details, however the specimens from Chongqing usually have hindwing underside discal and subbasal lines clearer; all these populations have hindwing underside remarkably browner and discal line broader than in all the forms of ssp. *polyphemus* from W. Sichuan. There is no sympatric record of *confusa* and *polyphemus*. An examination of androconia, male genitalia and female genitalia shows that *confusa* (8 ♂♂ and 3 ♀♀ dissected) shows no difference from ssp. *polyphemus* (11 ♂♂ and 2 ♀♀ dissected) and ssp. *annadina* (9 ♂♂ and 3 ♀♀ dissected). Therefore, *confusa* is treated here as a subspecies of *C. polyphemus*.
Subspecific characters in ♂♂: forewing subapical ocellus is variable (according to WATKINS' original description, *confusa* has "a deeper ferruginous, less diffuse, apical ring than" *polyphemus*, but such feature is not constant in individuals), usually as oblique as in ssp. *annadina*, sometimes as oblique as in *polyphemus*, nevertheless always more oblique than in ssp. *ricketti*, with reddish rings usually similar to those of ssp. *polyphemus*, brighter than in ssp. *annadina* and ssp. *ricketti*, but sometimes similar to those of ssp. *ricketti* and more ferruginous; hindwing underside is more warm brownish and uniform in ground color than in all other subspecies; hindwing underside discal line is constantly broader than in

all other subspecies; the whitish striation on hindwing underside is not developed in tornal area; hindwing underside ocellus is always absent.
Distribution: Hubei, Hunan, Chongqing (previous E. Sichuan), Guizhou.

1d) *C. polyphemus ricketti* **comb. nov.** (= *C. confusa ricketti* WATKINS, 1925 (TL: Kao-tien, Yun-ling Mts. of NW. Fujian) (figs. 86, 87; col. pl. VII, fig. 11)
Specimens examined: 9 ♂♂ (IZAS), Wuyishan, Fujian; 1 ♂ (IZAS), Napo, Guangxi.
Synonym: *C. annada kuatunensis* MELL, 1939 (TL: Kuatun, Wuyishan, Fujian). MELL overlooked the publication of *ricketti* when describing his *kuatunensis*, both taxa were from the same area and agree with each other according to their original descriptions.
This taxon was originally described as a subspecies of *confusa*. However, because *ricketti* shows no difference in androconia (2 ♂♂ examined) and male genitalia (4 ♂♂ dissected) from both *polyphemus* and *confusa* and there is no sympatric record of these closely allied taxa, it is treated here as a subspecies of *C. polyphemus*. The female specimen of *ricketti* is not available to me at present.
Subspecific characters in ♂♂: size is usually larger than in other subspecies; forewing subapical ocellus is more upright than in other subspecies, with reddish rings more ferruginous than in other subspecies; hindwing underside whitish striation is clearer and heavier than in ssp. *polyphemus* and ssp *confusa*, entering tornal area as in ssp. *annadina*; hindwing underside is brownish, not so blackish as in ssp. *annadina*; hindwing underside ocellus is always absent.
Distribution: Fujian, Zhejiang, Guangxi.

2) *C. suroia* TYTLER, 1914 (TL: Suroi, Manipur, Assam) (figs. 78, 79; col. pl. VII, figs. 7, 8, 16)
Specimens examined: 8 ♂♂, Qujing, N. Yunnan; 4 ♂♂, Kunming; 12 ♂♂ (IZAS), Lijiang, NW. Yunnan; 3 ♂♂ (IZAS), Deqin, NW. Yunnan; 4 ♂♂, Xiaqiaotou, S. Yunnan.
Subspecies: No other valid subspecies.
Synonyms and forms: *C. orixa atuntseana* V. D. GOLTZ, 1939 (**syn. nov.**). V. D. GOLTZ (1939) named the population from Atuntse (now Deqin), NW. Yunnan as *C. orixa atuntseana*, and reported the population from Likiang (Lijiang), NW. Yunnan as *C. orixa suroia*. However in my opinion, *C. orixa* is not conspecific with *suroia* or *polyphemus*, characterized by the hindwing underside striation much denser and thinner than in *polyphemus*, hindwing underside discal line very obscure, not clear as in *suroia*, and hindwing underside ocelli well marked in spaces 1C and 2, not absent as in *suroia*. *C. suroia* was originally described from Suroi, Manipur, and also recorded from Sichuan (D'ABRERA, 1992), Yunnan (D'ABRERA, 1992) and Vietnam (MONASTYRSKII & DEVYATKIN, 2000). Most of the specimens from Yunnan differ from the typical specimens from Manipur in having an additional ocellus on hindwing upperside, but very few samples from Yunnan correspond to the original figure of *suroia*, with hindwing upperside entirely unmarked. According to its original description and figure (V. D. GOLTZ, 1939: 165, fig. 5), *atuntseana* undoubtedly belong to *suroia*; moreover, the population from Atuntse cannot be separated from other populations soundly thus the name, *atuntseana* should be treated as synonym of *suroia*. The specimens figured by D'ABRERA (1992: 195) from Yunnan and Sichuan are not so typical and a little different from the original figure of *suroia* in having hindwing underside ground color darker and submarginal line unclear and merged into marginal dark coloring, however a few samples corresponding to TYTLER's original figure can be found together with those samples corresponding to D'ABRERA's figures in the same population from Yunnan. Therefore, the presence or absence of ocellus on hindwing upperside and the appearance of submarginal line on hindwing underside all belong to individual variation of *suroia*.
There is no difference in androconia between *suroia* (5 ♂♂ examined) and all the subspecies of *polyphemus*. An examination of male genitalia (9 ♂♂ dissected) shows that *C. suroia* usually has a remarkably longer distal branch of male valva than in all the four subspecies of *C. polyphemus*, but such character is not always constant. It is a pity that I have no ♀ of *suroia* thus a comparison of female genitalia is impossible here. Although there is no reliable sympatric record of *suroia* and *polyphemus*, it is possible that the two species have an overlapping distributional pattern. Due to the extreme individual variability, some samples of *C. suroia* from Yunnan are very difficult to be distinguished from some samples of *C. polyphemus confusa* from Chongqing and Guizhou in external features, the only reliable

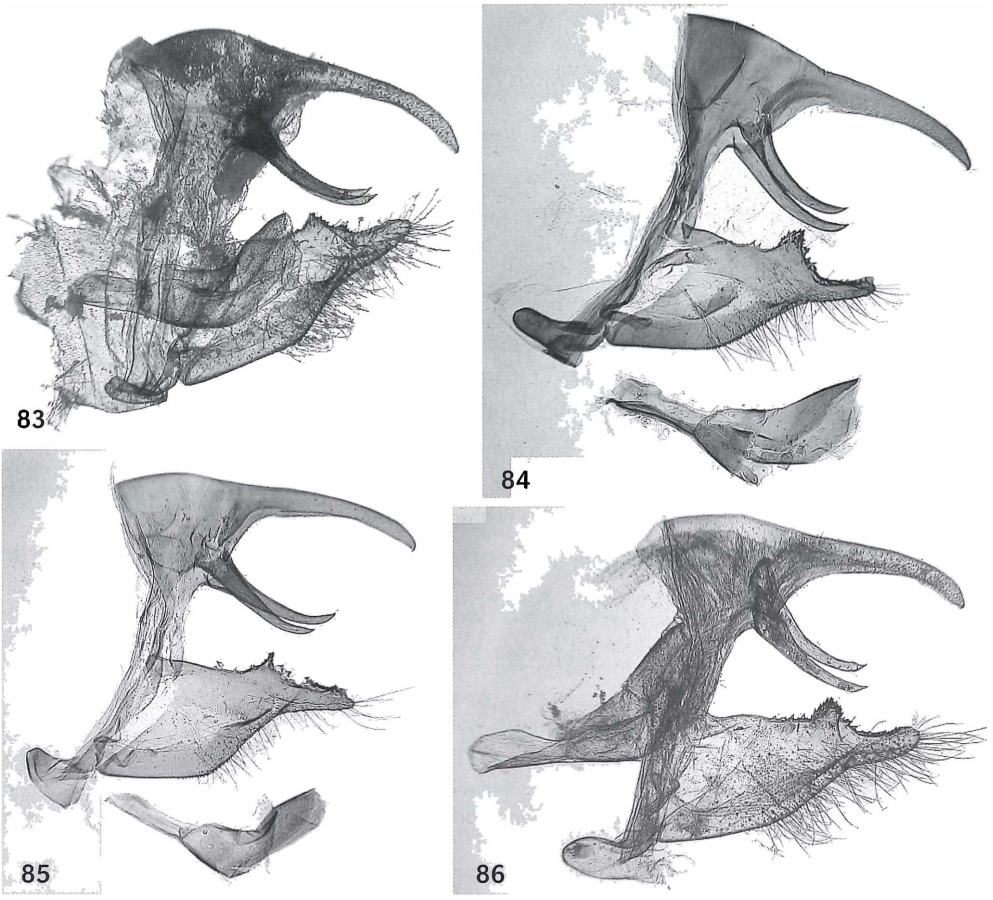


Fig. 83: Male genitalia of *Callerebia polyphemus polyphemus* f. *polyphemus* (Lushan, Sichuan, specimen not illustrated) consisting of genital capsule in lateral view with left valva removed.
Fig. 84: Male genitalia of *Callerebia polyphemus annadina* (Nujiang, specimen illustrated on col. pl. VII, fig. 10) consisting of genital capsule in lateral view with left valva and aedeagus removed (top), and of aedeagus in lateral view (bottom).
Fig. 85: Male genitalia of *Callerebia polyphemus annadina* (Nidadan, Nujiang, specimen not illustrated) consisting of genital capsule in lateral view with left valva and aedeagus removed (top), and of aedeagus in lateral view (bottom).
Fig. 86: Male genitalia of *Callerebia polyphemus ricketti* (Fujian, specimen illustrated on col. pl. VII, fig. 11) consisting of genital capsule in lateral view with left valva removed.

diagnostic feature should be the appearance of striation on underside of hindwing, in which *suroia* is always fainter and thinner and usually denser than *confusa*.
Specific characters in ♂♂: ring of subapical ocellus is usually more yellowish and broader than in all subspecies of *C. polyphemus*; hindwing underside discal line is always clear; hindwing underside striation is fainter and usually denser than in *C. polyphemus* and *C. ulfi*; distal branch of valva is usually longer than in *C. polyphemus* and always much longer than in *C. ulfi*.
Distribution: Assam, N. Burma, N. Yunnan, Sichuan, Vietnam.

3) *C. ulfi* (TL: Dulong valley, NW. Yunnan)
Specific characters in ♂♂: size is usually smaller than in *C. suroia* and *C. polyphemus*; ring of sub-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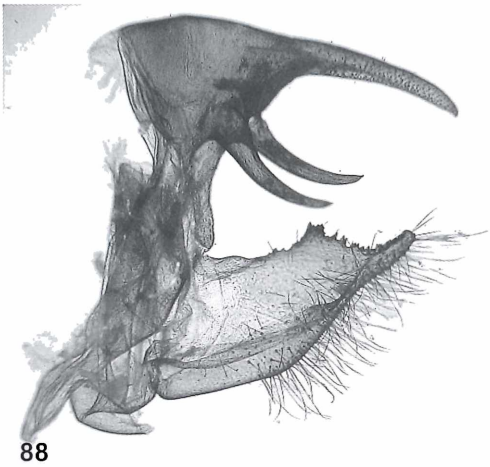
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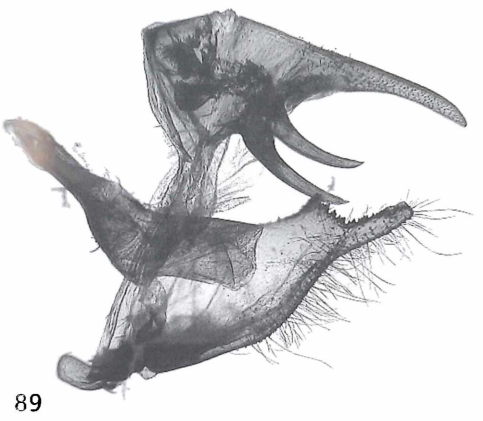
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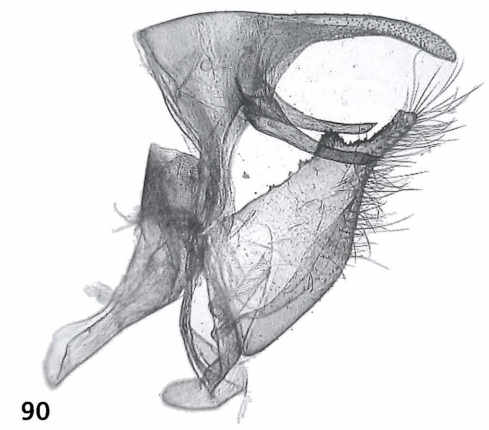
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Fig. 87: Male genitalia of *Callerebia polyphemus ricketti* (Fujian, specimen not illustrated) consisting of genital capsule in lateral view with left valva removed.
Fig. 88: Male genitalia of *Callerebia polyphemus confusa* (Hubei, specimen illustrated on col. pl. VII, fig. 12) consisting of genital capsule in lateral view with left valva removed.
Fig. 89: Male genitalia of *Callerebia polyphemus confusa* (Hubei, specimen illustrated on col. pl. VII, fig. 13) consisting of genital capsule in lateral view with left valva removed.
Fig. 90: Male genitalia of *Callerebia polyphemus confusa* (Fuling, specimen illustrated on col. pl. VII, fig. 14) consisting of genital capsule in lateral view with left valva removed.

apical ocellus is usually more yellowish and broader than in *C. polyphemus*; upperside ground color is more blackish than in *C. suroia* and *C. polyphemus*; underside of hindwing is more blackish than in *C. suroia* and most subspecies of *C. polyphemus* except *annadina*; discal line is always much fainter than in *C. suroia*; hindwing underside striation is clearer and sparser than in *C. suroia*; distal branch of valva is shorter than in *C. suroia* and *C. polyphemus*.

Type data
Holotype ♂: LF 29 mm, Longyuan, Dulong valley, NW. Yunnan, China, July 10th 2002. Paratypes: 7 ♂♂, Xianjiudang to Ban, July.
This new species is dedicated to my friend, Ulf Eitschberger, who helped me constantly in literatures during my study.

Lycaenidae

Ahlbergia lynda ***nidadana*** **subspec. nov.** (figs. 91, 92, 97; col. pl. VIII, figs. 1–3)

Diagnosis

A. lynda JOHNSON, 1992 was originally described upon a single female from Sichuan (Ta-tsien-lou = Kangding), no further record has been added to science since then. A good series of specimens including both sexes collected from Nujiang valley have been identified as this species because of the very similar wing pattern on underside. However, significant differences in facies of females and female genitalia allow a new subspecific name to be published for this new population. And I describe it as follows.

The new subspecies from Nujiang valley can be distinguished from ssp. *lynda* by the following combination of characters in females (the male of ssp. *lynda* is unknown).

1) Upperside ground color is bright purplish blue from bases to the postdiscal (postmedial) areas, only leaving submargins of wings black, recalling the females of the sympatric *A. pluto cyanus* JOHNSON, 1992 (figs. 95, 96, 98, 99; col. pl. VIII, figs. 5–7), whereas in ssp. *lynda* it is only suffused with iridescent blue-violet at bases of wings.

2) On underside of hindwing, the discal line (margin of basal disc) is rather straight in spaces 6 and 7, with the part in space 6 not shifted-out and beyond the part in space 7 as in ssp. *lynda*. (Such difference may not be constant as only one female of ssp. *lynda* has been known.)

3) Female genitalia are remarkably different from those of ssp. *lynda* illustrated and described by JOHNSON: a keel throughout the ductus bursae and lamella postvaginalis is much more conspicuous; lamella postvaginalis is hemispherical as in ssp. *lynda*, but with an excavation instead of caudal "knob" of ssp. *lynda* (such difference may not run out of individual variation), and with heavy ventral folds beneath along outer margin less in number; ductus bursae is broadened gradually and evenly to lamella, neither producing prominent antrum nor flared caudally as in ssp. *lynda*; signa are single-pointed elongate spines, longer than in ssp. *lynda*. (Because of such conspicuous difference in female genitalia, especially in caudal portion of ductus bursae, I regard *nidadana* as distinct new subspecies.)

Description

Male. Length of forewing: 12.5–14 mm. Upperside: ground color variable in individuals, the most marked individual with more extensive faint blue suffusion from bases to antediscal or discal areas on both wings, leaving rest of wings entirely blackish, whereas the least marked individual with both wings entirely blackish brown, blacker distad, even without vague flecking of blue at base, however the intermediate individuals more usual, with ground basically blackish but suffused with faint blue scales at inner half of spaces 1a and 1b, the base of space 2 and most of discocellular cell on forewing, and with vague flecking of blue scales on basal and subbasal areas; male scent brand located at end of radius and bases of veins 6 and 7 on forewing, very variable in size among individuals, somewhat grayer than ground color; margins of both wings moderately crenate, with blackish longer ciliae at vein-ends and whitish shorter ciliae between veins, and with slight bluish marginal line from anal lobe to vein 2 or vein 4 on hindwing according to individuals, sometimes with a faint bluish sub-tornal patch on hindwing; anal lobe of hindwing prominent, sometimes more suffused with brown, always with heavy blackish fringe. Underside: forewing ground color red-brown above vein 2 except submargins which broadly suffused bluish, smooth blackish gray in space 1b but pale gray in space 1a, with postdiscal (postmedian) line from costa to vein 2, a bit displaced distally in space 3, marked basally black to brown, distally suffused with blue or not; hindwing ground color similar to forewing but lighter distad basal disc (area inside of discal line); basal disc with two subbasal (postbasal) slashes in discocellular cell and costal area, each distally brown and basally suffused with blue (not apparent in worn specimens); discal line (margin of basal disc) very angulate and irregular, basally brown, distally suffused with blue and white scales, especially at anal area and costal area; postdiscal area with a series of crescent dark brown or blackish marks as a jagged arc across the wing, such marks contiguous but not conjoined, each surrounded by blue and prominent white scattered scales, more extensively on inner side; marginal area usually with a series of obscure blackish smudges in spaces 1c–5, surrounded and dusted by whitish and bluish scales; anal area below vein 1c suffused densely and brightly with

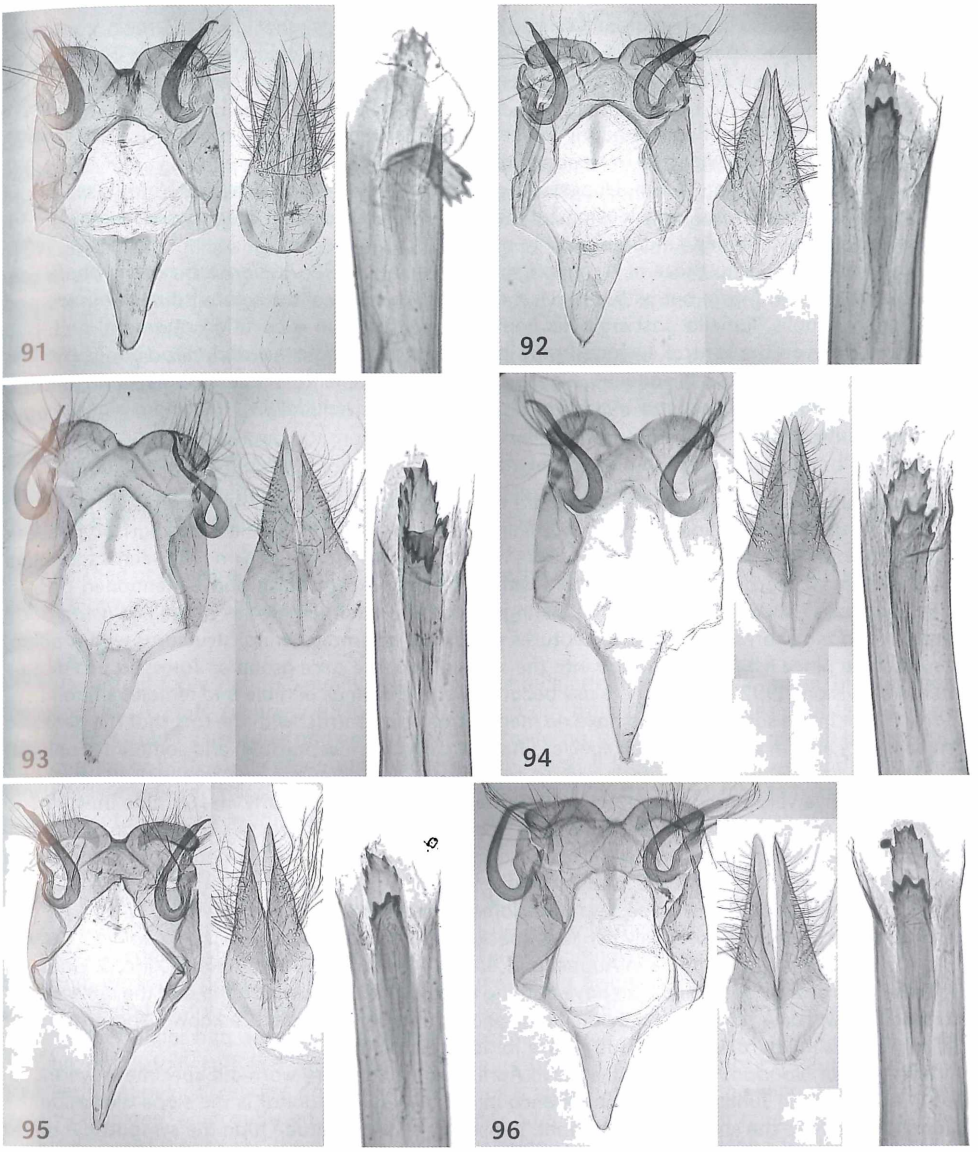


Fig. 91: Male genitalia of *Ahlbergia lynda nidadana* (paratype, Nujiang, specimen illustrated on col. pl. VIII, fig. 2) consisting of ring spread and flattened (left), of valvae in ventral view (center), and of enlarged tip of aedeagus in dorsal view to show cornuti (right). Fig. 92: Male genitalia of *Ahlbergia lynda nidadana* (paratype, Nujiang, specimen illustrated on col. pl. VIII, fig. 3) consisting of ring spread and flattened (left), of valvae in ventral view (center), and of enlarged tip of aedeagus in dorsal view to show cornuti (right). Fig. 93: Male genitalia of *Ahlbergia pluto cyanus* (Nujiang, specimen not illustrated) consisting of ring spread and flattened (left), of valvae in ventral view (center), and of enlarged tip of aedeagus in dorsal view to show cornuti (right). Fig. 94: Male genitalia of *Ahlbergia distincta* (holotype, Nujiang, specimen illustrated on col. pl. VIII, fig. 4) consisting of ring spread and flattened (left), of valvae in ventral view (center), and of enlarged tip of aedeagus in dorsal view to show cornuti (right). Fig. 95: Male genitalia of *Ahlbergia pluto cyanus* (Nujiang, specimen illustrated on col. pl. VIII, fig. 5) consisting of ring spread and flattened (left), of valvae in ventral view (center), and of enlarged tip of aedeagus in dorsal view to show cornuti (right). Fig. 96: Male genitalia of *Ahlbergia pluto cyanus* (Nujiang, specimen illustrated on col. pl. VIII, fig. 6) consisting of ring spread and flattened (left), of valvae in ventral view (center), and of enlarged tip of aedeagus in dorsal view to show cornuti (right).

whitish and bluish scales between discal line and postdiscal markings; anal lobe red-brown, continued to submarginal area in spaces 1c–3 in red-brown, with the red-brown coloring in space 2 sometimes (not always) isolated as a *Thecla*-spot; ciliae longer and blackish at vein-ends but shorter and paler between veins.
Male genitalia: the shape of valvae nearly indistinguishable from that of *A. prodiga* JOHNSON, 1992 with which it sympatric at Nidadan in Nujiang valley.
Female: Length of forewing: 14 mm. Upperside: ground color bright purplish blue from bases to the postdiscal (postmedial) areas, only leaving submargins of wings black; no scent brand; remaining facies of wings similar to males. Underside: as on males.
Female genitalia: similar to those of *A. pluto cyanus* JOHNSON, 1992, *A. clarofacia meridionalis* (described below) and *A. lynda*, but with a much more conspicuous keel throughout ductus bursae and lamella postvaginalis, lamella postvaginalis hemispherical, with an excavation at caudal end, and with convolutions on the ventral surfaces more prominent than in *cyanus* and *meridionalis* but less than in *lynda*, ductus bursae broadened slightly and evenly to lamella, a little broader at its juncture with lamellae than in *cyanus* and *meridionalis*, but not flared caudally as in *lynda*, signa single-pointed elongate spines.

Remarks
The above-mentioned diagnostic characters are mainly based upon JOHNSON's description and illustrations of *lynda*, I have no specimen of *lynda* in my collection thus the detailed comparison between *lynda* and *nidadana* is impossible. Judging from the original description of *lynda*, its seems that *nidadana* shares most morphological characters with *lynda* only except those above-mentioned characters in "diagnosis", thus *nidadana* can be distinguished from all other species as well as *lynda* does. Because *nidadana* shares most external features with *lynda* and male genital structures with *prodiga*, it is suitable to place *lynda* and *prodiga* into the same group, the *circe*-group as JOHNSON has done.
JOHNSON's revision (1992) is not easy to use because all his drawings of male and female genitalia are apparently not in the same scale and have no measurement in contrast with the fact that the genitalia often vary very little in shape between species (in some cases are inseparable) and sometimes only different in size, and because only black and white photos are available in contrast with the fact that most species have very obscure and dull wing-pattern and some are nearly inseparable in wing-pattern except the coloration. Moreover, there were a lot of mistakes in JOHNSON's translation of old geographical names into modern names (a rather accurate translation for old geographical names in China can be found in LEECH, 1892 and WAGENER, 1959: 85–98). Therefore here I prefer to provide photos of genitalia of all my new species in the same scale instead of hand-drawings.
After JOHNSON's revisional work, only two new species were added to science, viz. *A. chalcidis* CHOU & LI, 1994 from Kunming, N. Yunnan in August and *A. hsui* JOHNSON, 2000 from Kang Xian, S. Gansu in July. These two recently described taxa have nothing to do with *A. lynda nidadana* and the new species described below. For *A. chalcidis*, only the color photos of holotype male are known, the drawing of male genitalia is in lateral view and has no use for identification.
The flight time of *nidadana* probably begins in April because few very worn-out specimens were captured in May, ends in June because I didn't encounter it in July. Its habitat is the slope alongside the Nujiang River, where the shrubs are abundant. It inhabits a lower altitude than the sympatric *A. pluto cyanus, A. prodiga* and *A. distincta* (described below).

Type data
Holotype ♀: LF 14 mm, Nidadan, Nujiang valley, NW. Yunnan, China, May 22nd 2002. Paratypes: 11 ♂♂, 1 ♀, Nidadan, May.
This new subspecies is named after its type locality, from which numerous new species of butterflies have been discovered.

Ahlbergia ***distincta*** **spec. nov.** (fig. 94; col. pl. VIII, fig. 4)

Diagnosis
This new species is distinctly different from all the previously known species of *Ahlbergia* in external

features. It closely resembles the sympatric *A. pluto* (LEECH, 1893) in male genitalia, but shows remarkable difference in external features from the latter in males as follows.
1) On underside of forewing, the postdiscal line is much more marked with white distally than in *pluto*.
2) On underside of hindwing, the discal line is more broadly suffused with white in costal area than in *pluto*.
3) On underside of hindwing, the whitish and bluish suffusion is only pronounced near postdiscal crescent markings but obsolescent near discal line in anal area, whereas in *pluto* it is brightly marked in the entire anal area between discal line and postdiscal crescent markings.
4) On underside of hindwing, the postdiscal crescent markings are completely conjoined into a serrate line, whereas in *pluto* they are smaller and shorter, contiguous but not conjoined.
In male genitalia, this new species has aedeagus longer, cornuti broader and bearing more perfect teeth than in *A. pluto*.
This new species somewhat resembles *A. ferrea* (BUTLER, 1866) and *A. prodiga* in having the remarkable costal white markings on underside of hindwing, but can be easily distinguished from *ferrea* by upperside ground color wholly blackish, without any bluish suffusion, size remarkably larger, underside hindwing postdiscal crescent markings more conjoined and distinct on a paler ground, and from the sympatric *prodiga* by forewing termen not so angled at vein 4, upperside ground color entirely blackish, not extensively bluish, and valvae of male genitalia different in shape.
This new species somewhat resembles *A. chalybeia* (LEECH, 1894) and *A. chalcidis* CHOU & LI, 1994 in having all the discal and postdiscal lines distinct on a paler ground of hindwing underside, but can be distinguished at once from either of them in males by the remarkable costal white markings on underside of hindwing and more brownish appearance of underside.

Description
Male: Length of forewing: 15.5 mm. Upperside: ground color entirely blackish brown, blacker than in the sympatric *A. pluto cyanus* JOHNSON, 1992, without any trace of bluish scales at bases; male scent brand located at end of radius and base of vein 6 on forewing, a little paler than ground but not apparent; margins of both wings moderately crenate, with blackish longer ciliae at vein-ends and whitish shorter ciliae between veins, and with slight bluish marginal line from anal lobe to vein 3 on hindwing; anal lobe of hindwing prominent, suffused with brown and with heavy blackish fringe. Underside: forewing ground color suffused red-brown above vein 2, smooth blackish gray in space 1b but paler gray in space 1a, with postdiscal line from costa to vein 2, slightly waved and nearly in a smooth line, marked basally dark brown, distally suffused with white; submarginal area with a series of small faint crescent dark brown marks from costa to dorsum, nearer to termen than to postdiscal line; marginal area with a series of whitish vague smudges between veins; hindwing ground color similar to forewing but much darker in basal disc and postdiscal area; basal disc with two subbasal slashes in discocellular cell and costal area, each distally dark brown and basally suffused with white, and with a dark brown discocellular bar; discal line (margin of basal disc) same shaped as in *A. pluto cyanus*, basally dark brown, distally suffused with white scales, more broadly and heavily at costal area; postdiscal area with a series of crescent dark brown marks as a jagged arc across the wing, such marks completely conjoined, each suffused with whitish scales on inner side but with red-brown on outer side; alongside postdiscal marks, the outer red-brown coloring continued to anal lobe, the inner whitish suffusion nearly disappeared near discal line; marginal and submarginal areas broadly suffused with whitish and bluish scales; ciliae longer and blackish at vein-ends but shorter and paler between veins.
Male genitalia with all structures nearly indistinguishable from those of *A. pluto cyanus*, but with aedeagus a little longer and cornuti broader and bearing more perfect teeth.
Female unknown.

Remarks
This new species should be placed into *pluto*-group (JOHNSON, 1992), because it is nearly inseparable from *A. pluto cyanus* in male genitalia and shares most morphological characters with the previously known species of this group. JOHNSON's division of species groups of *Ahlbergia* is basically acceptable in morphology, but the delimitation between the *pluto*-group and the *chalybeia*-group is very unclear.

Because some species of the *pluto*-group, such as *A. aleucopuncta* JOHNSON, 1992, *A. unicolora* JOHNSON, 1992 and *A. caerulea* JOHNSON, 1992 have female genitalia appearing to be primitive, with generally unsculptured structures, I prefer to sink the *chalybeia*-group into the *pluto*-group.
The generic classification of elfin butterflies is very clear in female genitalia but rather blunt and unclear in external features and male genitalia, especially between *Ahlbergia* and *Cissatsuma*. Without the discovery of female, it is rather difficult to confirm the generic classification of *distincta* very soundly. Therefore a discussion on the difference of *distincta* from the species of *Novosatsuma* and *Cissatsuma* is necessary here.
This new species is similar to *Novosatsuma cibdela* JOHNSON, 1992 in the conjoined postdiscal markings on underside of hindwing and to *N. pratti* (LEECH, 1889) in the remarkable white costal marking on underside of hindwing, but can be easily distinguished from both of them by the entire black upperside ground color and different male genitalia. In male genitalia, *distincta* has caudal extensions of valvae immediately tapered in a gradual slope from bilobed area to pointed termini, not maintaining width at juncture with bilobed configuration for nearly half of terminal length as in the genus *Novosatsuma*. Therefore it is impossible for *distincta* to be a member of *Novosatsuma*.
There is no species of the genus *Cissatsuma* similar to *distincta* in external features.

Type data
Holotype ♂: LF 16 mm. Nidadan, Nujiang valley, NW. Yunnan, China, May 23rd 2002.
The species name refers to the distinct appearance of this new species.

Ahlbergia clarofacia ***meridionalis*** **subspec. nov.** (fig. 100; col. pl. VIII, fig. 8)

Specific classification
An accurate translation of the old geographical names labeled on type specimens of *pluto, cyanus* and *clarofacia* demonstrates that *pluto* is known only from Sichuan (Wa-suu-kou, Chipa, Rinthau, Pu-tsu-fong, Siao-lou, Taiho, Ta-ho, Yare Gong, Tong Ho etc., all not belonging to Yunnan as JOHNSON thought), *cyanus* only from Nujiang valley (= Loutsechiang) of NW. Yunnan and *clarofacia* from both Sichuan (Ta-tsien-lu) and NW. Yunnan (Tsekou). Because JOHNSON (1992) clearly indicated the morphological difference of *clarofacia* from both *pluto* and *cyanus* in lacking the under surface blue and gray suffusions particularly in the limbal regions (marginal area in spaces 1c–3) of hindwing and in more robust genitalia of both sexes, it is acceptable to raise *clarofacia* to full species rank (*Ahlbergia clarofacia* **stat. nov.** = *Ahlbergia pluto clarofacia* JOHNSON, 1992). A detailed translation of old geographical names is as follows: Wa-suu-kou = Wassukou, Wassakoe, now called Wasigou, almost 30 km east of Kangding in West Sichuan; Chipa = Chapa, by the Daduhe River, almost 2 km southwest of Luding County in West Sichuan; Pu-tsu-fong = Pa Tse Fang, southeast of Kangding, by the Daduhe River, near Moxi town of the Luding County, at foot of Gonggashan Mts.; Siao-lou = Siaolu, between Kangding and Ya-an in West Sichuan; Ta-ho = Taho, Lu Ho, referring to Daduhe River, near Kangding in West Sichuan; Taiho, Tong Ho maybe referring to Ta-ho; Yare Gong uncertain, maybe west of Kangding; Rinthau, uncertain; Loutsechiang, now called Nujiang, upper water of the Salween, in NW. Yunnan, not Lutien as JOHNSON thought (Lutien, now called Luding, east of Kangding in West Sichuan); Ta-tsien-lu now called Kangding in West Sichuan; Tsekou, now called Cigu, near Cizhong, by the Lancang River (Mekong), NW. Yunnan.

Diagnosis
The new subspecies from S. Yunnan can be easily distinguished from the nominotypical *A. clarofacia* from West Sichuan and NW. Yunnan by the following combination of characters in females.
1) Upperside ground color is smoking gray from bases to the discal areas bordered on the outside by vague clouds of bright purplish blue, leaving the outer half of wings black, whereas in ssp. *clarofacia*, it is completely blackish brown with only a faint basal blue hue suffused on both wings.
2) Underside is extensively suffused with cinnamon scales from base to submargin on forewing, leaving only marginal area flecked gray, from base to discal line and again in submarginal area on hindwing, leaving the postdiscal area pale brownish gray, without any blackish or dark brown markings or

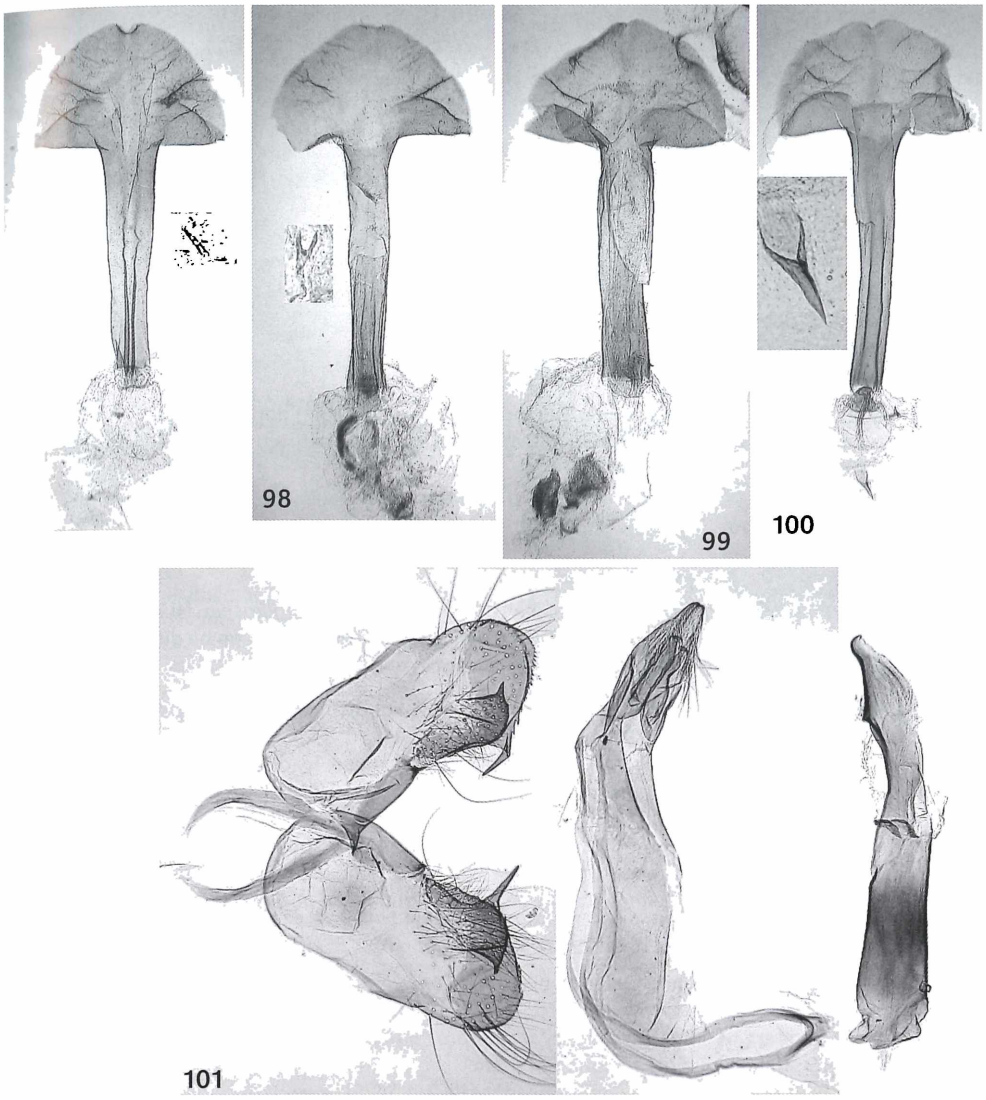


Fig. 97: Female genitalia of *Ahlbergia lynda nidadana* (holotype, Nujiang, specimen illustrated on col. pl. VII, fig. 15) consisting of genital plates (lamella antevaginalis and lamella postvaginalis), ductus bursae and corpus bursae flattened (center), and of enlarged signa (left and right).
Fig. 98: Female genitalia of *Ahlbergia pluto cyanus* (Nujiang, specimen illustrated on col. pl. VIII, fig. 4) consisting of genital plates (lamella antevaginalis and lamella postvaginalis), ductus bursae and corpus bursae flattened (right), and of enlarged signum (left).
Fig. 99: Female genitalia of *Ahlbergia pluto cyanus* (Nujiang, specimen not illustrated) consisting of genital plates (lamella antevaginalis and lamella postvaginalis), ductus bursae and corpus bursae flattened.
Fig. 100: Female genitalia of *Ahlbergia clarofacia meridionalis* (holotype, S. Yunnan, specimen illustrated on col. pl. VIII, fig. 5) consisting of genital plates (lamella antevaginalis and lamella postvaginalis), ductus bursae and corpus bursae flattened (right), and of the enlarged signum (left).
Fig. 101: Male genitalia of *Tongeia confusa* (holotype, Dulongjiang, specimen illustrated on col. pl. VIII, fig. 7) consisting of valvae and juxta spread and flattened (left), of ring in lateral view (center), and of aedeagus in lateral view (right).

scales in basal disc, submarginal and marginal areas, whereas in ssp. *clarofacia* the ground color distad the basal disc of hindwing is sometimes heavily flecked with black, the outer margin of hindwing is blackish and subbasal (postbasal) area is mottled with dull dark brownish.

Remarks
This new subspecies agrees more with *clarofacia* than with either *pluto* or *cyanus* in having underside ground color warmer brown and lacking the blue and gray suffusions, particularly in the limbal areas of the hindwing. The female genitalia examined are similar to those of *clarofacia* and *cyanus* figured by JOHNSON, only a little longer than in females of *cyanus* examined by me from Nujiang valley, but sharply different from those of the allied species, such as *A. aleucopuncta* JOHNSON, 1992, *A. unicolora* JOHNSON, 1992 and *A. pictila* JOHNSON, 1992. The underside wing-pattern of *meridionalis* is generally the same as in *clarofacia* except the much paler and brighter appearance as a whole and the lacking of dark brown or blackish coloring on markings.

Type data
Holotype ♀: LF 14 mm, Xishuangbanna, S. Yunnan, China, no collecting date recorded.
The subspecies name refers to its distribution, which represents a southern "outlier" for this species.

Tongeia ***confusa*** **spec. nov.** (fig. 101; col. pl. VIII, fig. 9)

Diagnosis
This new species from Dulong valley is closely allied to *Tongeia amplifascia* HUANG, 2001 from Nujiang valley and *T. pseudozuthus* HUANG, 2001 from Chayu, SE. Tibet, but can be distinguished from both of them by the following combination of characters in males.

1) On underside of forewing, the discal spot in space 4 is slightly oblique as in *T. pseudozuthus*, not nearly decumbent as in *T. amplifascia*.
2) On underside hindwing, the subbasal spots near bases of space 1c, discocellular cell and space 7 are brown, concolorous with the hindwing discal spots as in *T. amplifascia*, not black and concolorous with the forewing discal spots as in *T. pseudozuthus*.
3) Male genitalia are different from those of *T. amplifascia* and *T. pseudozuthus*: valva is relatively shorter, more rounded at caudal end, with ventral process of ampulla closer to caudal end of valva, longer and more sharply pointed, and with harpe broader and more abruptly pointed.

Type data
Holotype ♂: LF 13 mm, Xiongdang, Dulong valley, NW. Yunnan, China, July 10th 2002. Paratype: 1 ♂, same data as holotype.
The species name refers to its very similarity to the previously known *T. amplifascia* and *T. pseudozuthus*, which may confuse the identification of them.

List of collection from the valleys of Nujiang and Dulongjiang with revisional notes

Hesperiidae

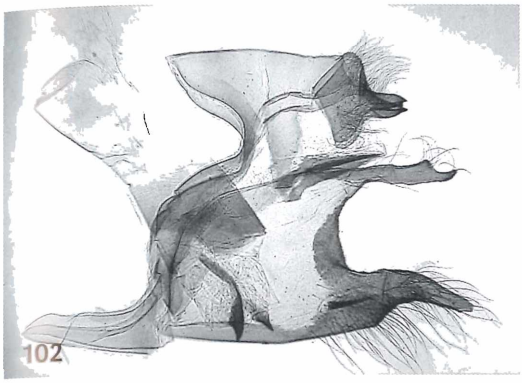
Coeliadinae

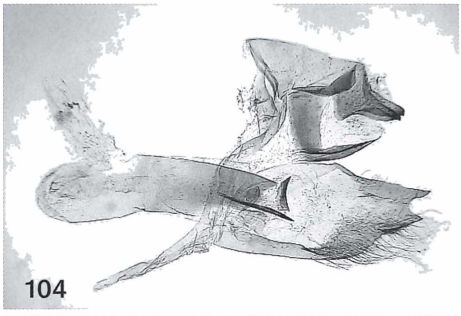
1. *Hasora vitta indica* EVANS, 1932. 1 ♀, Bapo, July; 1 ♂, 1 ♀, Nidadan, July.

2. *Hasora anura china* EVANS, 1949. 1 ♂, Qiqi, July; 1 ♂, Lishadi, June.

3. *Choaspes xanthopogon* (KOLLAR, 1844). 1 ♂, Gazu, July.

4. *Choaspes benjaminii japonica* (MURRAY, 1875). 1 ♂, Naqialo, May.





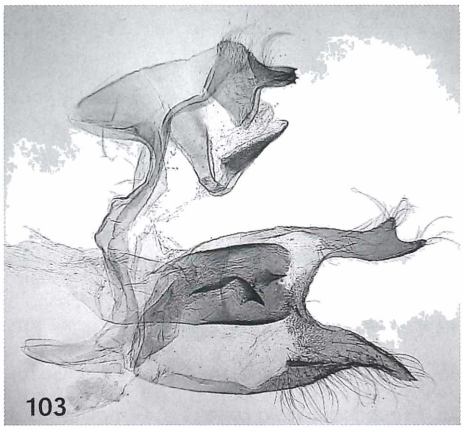


Fig. 102: Male genitalia of *Celaenorrhinus consanguinea consanguinea* (Nujiang, specimen illustrated on col. pl. VIII, fig. 16) consisting of genital capsule with left clasp removed.
Fig. 103: Male genitalia of *Celaenorrhinus consanguinea consanguinea* (Nujiang, specimen illustrated on col. pl. VIII, fig. 17) consisting of genital capsule with left clasp removed.
Fig. 104: Male genitalia of *Celaenorrhinus ratna nujiangensis* (Gazu, Nujiang, specimen illustrated on col. pl. VIII, fig. 18) consisting of genital capsule with left clasp removed.

Pyrginae

5. *Lobocla bifasciata* (Bremer & Grey, 1853. TL: Pekin, now Beijing, N. China) (= *L. bifasciata disparalis* Murayama, 1995. TL: Dali, Yunnan. **syn. nov.**). 22 ♂♂, 3 ♀♀, Nidadan to Longpo, May; 1 ♂, Gazu, July; 2 ♂♂, 3 ♀♀, Nidadan, July; 3 ♂♂, Gongshan, June; 3 ♂♂, Sijitong, July.
This species is very variable in individuals. An examination of large series of specimens from Yunnan, Sichuan and N. China indicates that the population from Yunnan cannot constitute a separate subspecies from the populations from N. China and other parts of China.

6. *Lobocla proximus* Leech, 1891. 1 ♂, Geyi, May.

7 *Lobocla simplex* Leech, 1891. 1 ♂, Geyi, May.

8. *Lobocla liliana liliana* Atkinson, 1871? 2 ♂♂, Gongshan, June.
The male genitalia of these two males are different from those in Evans' description and illustration of *liliana* in having the uncus bent at tip, not straight. However, these two males agree with those figures of *liliana* in literature (Seitz, 1909; Evans, 1926) very well in external features, I cannot find any reliable difference. Therefore, I suspect that Evans' description of male genitalia of *liliana* probably had some mistakes and treat my specimens temporarily as the true *liliana*. An examination of type material of *liliana* is necessary in the further study.

9. *Celaenorrhinus consanguinea consanguinea* Leech, 1891 (figs. 102, 103; col. pl. VIII, figs. 16, 17). 12 ♂♂, 3 ♀♀, Naqialo to Longpo, May; 2 ♂♂, Gazu, June; 1 ♂, Lishadi, June; 1 ♀, Nidadan, July.
Judging from the illustration of male genitalia (Hsu, 1990: 149, fig. 8), I believe *Celaenorrhinus chihhsiaoi* Hsu, 1990 from Taiwan should be placed under *C. consanguinea* Leech, 1891 as a subspecies. All my specimens from Nujiang valley usually have hindwing yellowish spots less marked than in the typical specimens of ssp. *consanguinea* from Sichuan and ssp. *chihhsiaoi* (**stat. nov.**), but I know little

about the individual variation of Sichuan's population and here treat the Nujiang's population temporarily as ssp. *consanguinea*.

10. *Celaenorrhinus patula* DE NICEVILLE, 1889. 1 ♂, 3 ♀♀, Sijitong, July; 4 ♂♂, 3 ♀♀, Gazu and Qiqi, July; 1 ♂, Gongshan, July.

11. *Celaenorrhinus "ratna" nujiangensis* HUANG, 2001 (fig. 104; col. pl. VIII, fig. 18). 1 ♂, Gazu, July.
An examination of male genitalia proves *nujiangensis* not to be a subspecies of *C. ratna* FRUHSTORFER, 1909 from Taiwan (a good figure of male genitalia of *ratna* can be found in SHIROZU, 1960: 380). However, I can not state *nujiangensis* as independent species at present because I don't know the male genitalia of *daphne* EVANS, 1949 from Kumaon and *tytleri* EVANS, 1926 from Naga Hills, both of which have been treated as subspecies of *C. ratna*.

12. *Celaenorrhinus tibetana* MABILLE, 1876. 1 ♂, Mabilo, July; 1 ♀, Yaojiaping, June.

13. *Coladenia buchananii* DE NICEVILLE, 1889. 1 ♂, Lishadi, June.
This very rare species has been previously known only from Burma and Thailand and is new to Chinese fauna. The unique male captured, when being encountered in the gorge of a tributary of Nujiang near Lishadi, was flying lowly and very rapidly along the path under the shadow of trees where streams flowed by. It liked to repeat its flight time after time and sometimes stopped to drink on the ground until being captured. Its male genitalia have been dissected and agree with EVANS' drawings of genitalia in general. Another male, most probably belonging to this species, was encountered at an open ground in a valley near Gongshan where a stream flowed by, it stopped on the sandy ground to drink and flew away when I tried to capture it.

14. *Coladenia maeniata* OBERTHÜR, 1896. 1 ♂, Naqialo, May.

15. *Coladenia uemurai* spec. nov. 4 ♂♂, Gazu, July.

16. *Pseudocoladenia* spec. 1 ♂, Gongshan, June.

17. *Satarupa splendens* TYTLER, 1914. 1 ♂, Maku, July.
This single male differs a little from the syntype male figured by TYTLER (1926: plate 3: 7) in having upperside hindwing black marginal band broader and merging the blackish postdiscal spots. However, such difference may not run out of the individual variation. Its male genitalia have been examined and agree with EVANS' (1949) description and figure in general.
This species is previously only known from Naga Hills, Assam and is new to Chinese fauna.

18. *Daimio tethys birmana* EVANS, 1926. 7 ♂♂, Nidadan, May; 1 ♂, Lishadi, June; 2 ♂♂, Bingzhongluo, May.

19. *Gerosis yuani* spec. nov. 1 ♀, Nidadan, July.

20. *Gerosis phisara rex* (EVANS, 1949). 1 ♂ (intermediate form), 3 ♀♀ (intermediate form), Nidadan, May and July.

21. *Gerosis sinica narada* (MOORE, 1884). 3 ♂♂, Longyuan to Xiongdang, July.
These three males represent an intermediate form between the well marked DSF and WSF mentioned by EVANS (1949), with upperside hindwing white discal band as wide as dark border and upperside forewing spot in space 1b much bigger than spot in 2.

22. *Abraximorpha esta* EVANS, 1949 (fig. 105; col. pl. VIII, fig. 15). 1 ♂, Gongshan, July.
Four subspecies have been described under *Abraximorpha davidii* (MABILLE, 1876), viz. ssp. *davidii* from Sichuan, Shaanxi, Hubei, Zhejiang, Jiangxi and Anhui, ssp. *esta* EVANS, 1949 from Tonkin, N. Vietnam, ssp. *ermasis* FRUHSTORFER, 1914 from Taiwan, and ssp. *elfina* EVANS, 1949 from "Java" and S. Vietnam (the unique holotype male of *elfina* was doubtfully from Java, maybe wrongly labeled, INOUE & KAWAZOE (1964) rediscovered this taxon in S. Vietnam). Just very recently, DEVYATKIN & MONASTYRSKII (2002) raised *esta* to full species rank, based upon the examination of type of *esta* in BMNH and the collecting data of both *esta* and *elfina* in Laos and Vietnam. My single male from Gongshan, Nujiang

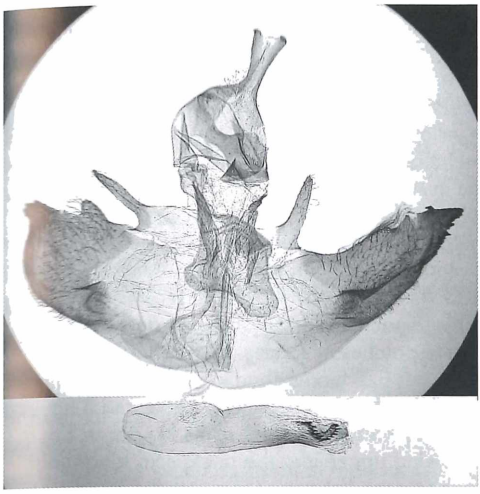


Fig. 105: Male genitalia of *Abraximorpha esta* (Gongshan, Nujiang, specimen illustrated on col. pl. VIII, fig. 15) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom).

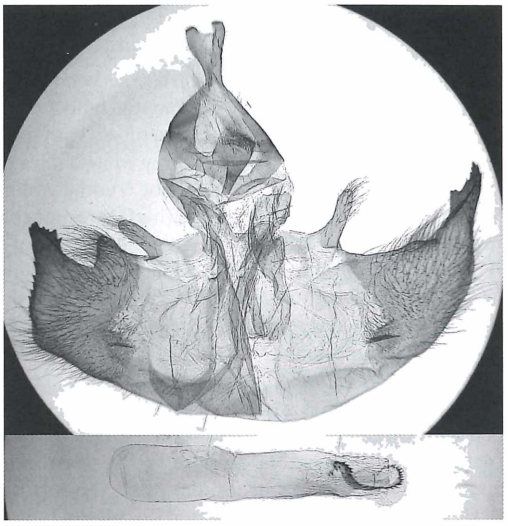


Fig. 106: Male genitalia of *Abraximorpha davidii* (Qingchengshan, Sichuan, specimen not illustrated) consisting of genital capsule spread with tegumen and uncus in ventral view and both clasps in inner lateral view (top), and of aedeagus in lateral view (bottom).

valley agrees with the type of *esta* figured by DEVYATKIN & MONASTYRSKII almost exactly, and a careful comparison of both external features and male genitalia between *esta* (1 ♂ from Nujiang valley examined and dissected) and *davidii* (fig. 106) (4 ♂♂ from Sichuan and 2 ♂♂ from Anhui of *davidii* examined and dissected) confirms DEVYATKIN & MONASTYRSKII's conclusion to be sound.

Judging from the literatures, *A. esta* can be distinguished from all subspecies of *A. davidii* by the following combination of characters in males.

1) On both sides of forewing, the marginal black spots are completely conjoined, forming a marginal band, with its inner margin rather smooth, not waved as in all subspecies of *A. davidii*.

2) On both sides of forewing, the postdiscal black spots in spaces 2 and 3 are rectangular in shape and placed upright to the veins, whereas in all subspecies of *A. davidii*, such spots are irregular in shape with their inner margins oblique to the veins.

3) In space 7 of hindwing, the whitish patch between basal and postdiscal black spots is longer than or as long as the basal black spot, whereas in all subspecies of *A. davidii*, such white patch is shorter than basal black spot.

4) Male genitalia are different from all subspecies of *A. davidii* (4 ♂♂ from Sichuan and 2 ♂♂ from Anhui of ssp. *davidii* dissected, male genitalia of ssp. *ermasis* illustrated by SHIROZU in 1960, ssp. *elfina* illustrated by INOUE & KAWAZOE in 1964 and misidentified as ssp. *esta* by IKEDA, NISHIMURA & INAGAKI in 2001) as follows: the excavation on tip of uncus is shallower; style of left clasp is decidedly longer, extended beyond the origin of dorsal process of cuiller; the right clasp is much narrower at middle and more obtusely pointed at apex of cuiller, with style much longer, nearly as long as the width of middle portion of clasp.

A detailed description of *A. esta* (compared with *A. davidii davidii*) is as follows.

Male. Eyes as in *A. davidii davidii*, smooth and blackish in dried condition. Labial palpi as in *A. davidii davidii*, 2nd segment more or less porrect and densely clad with yellow hairs, 3rd segment porrect, black and rather long as in *A. davidii davidii*. Antennae nearly as in *A. davidii davidii*, shorter than half the length of forewing, wholly black on both upper and under sides (not pale on inner side of club as in *A. davidii davidii*), with club arcuate. Thorax clad with brownish yellow hairs below as in *A. davidii davidii*. Legs: fore femora as in *A. davidii davidii*, clad with blackish and yellow scales above and

densely with yellow hairs beneath; fore tibiae darker than in *A. davidii davidii*, clad with more blackish long scales and less yellowish scales than in *A. davidii davidii*, with tibial epiphysis similar to that of *A. davidii davidii*; fore tarsi as in *A. davidii davidii*, with three rows of reddish spines below; (mid leg missing from the specimen examined); hind femora remarkably shorter than in *A. davidii davidii*, densely clad with black scales above mixed with a few yellow ones, and with yellow hairs beneath (hind femora of *davidii* all clad with creamy white scales and hairs above and beneath); hind tibiae clad with brownish yellow and gray scales (not creamy white as in *A. davidii davidii*), with two pair of spurs as long as those of *A. davidii davidii*; hind tarsi sparsely (this maybe due to the worn condition of specimen) clad with yellow scales, with three rows of reddish spines which are usually longer than in *A. davidii davidii*; claws as in *A. davidii davidii*. Wing venation and wing shape as in *A. davidii davidii*. Length of forewing: 24.5 mm. Wing pattern similar to *A. davidii davidii*, but different in following points: on forewing upperside, the black spot at base of space 1b lacking a white dot, the base of space 3 lacking a black triangular patch, the discal white patches in spaces 1b–3 remarkably longer than in *A. davidii davidii*, the subapical white spots in spaces 6–8 longer than in *A. davidii davidii*, the marginal black band smooth at inner margin, the submarginal white spots in spaces 2 and 3 not in a line with white spots in spaces 4 and 5, but shifted-out, the postdiscal black spots in spaces 2 and 3 rectangular in shape and upright to the veins; on hindwing upperside, the postdiscal black spot in space 7 remote from basal black spot, leaving the white area between them much larger than in *A. davidii davidii*, the marginal and postdiscal black spots smaller and less conjoined than in *A. davidii davidii*; on hindwing underside, the lower half of space 8 wholly black and conjoined with the black spot at base of space 7, not white as in *A. davidii davidii*.
Besides *A. davidii* and *A. esta*, two other species have been described under the genus *Abraximorpha*, viz. *A. heringi* MELL, 1922 and *A. pieridoides* LIU & GU, 1994, both of which may represent a separate genus from *Abraximorpha*, with uncus not bifurcate at tip but with an additional process below, with clasp more complicated and branched, and with a hair tuft on hind tibia. Judging from its original description, I suspect that *A. pieridoides* from Hainan is probably conspecific with *A. heringi* from Guangdong and Fujian.

Hesperiinae

23. *Barca bicolor* (OBERTHÜR, 1896). 3 ♂♂, Qiqi, June.

24. *Ochus subvittatus subvittatus* MOORE, 1878. 1 ♂, Lishadi, June; 5 ♂♂, Bapo, June and July.

25. *Aeromachus kali* DE NICEVILLE, 1895. 1 ♂, Lishadi, June; 1 ♀, Gongshan, June; 1 ♀, Maku, July.
This species has been previously known from Sikkim, Assam and N. Burma and is new to Chinese fauna.

26. *Aeromachus catocyanea amplifascia* subspec. nov. 5 ♂♂, Qiqi and Gazu, July; 1 ♂, Heiwadi, July; 1 ♂, Sijitong, July.

27. *Aeromachus catocyanea curvifascia* subspec. nov. 3 ♂♂, Longyuan to Xianjiudang, July.

28. *Aeromachus piceus* (LEECH, 1894). 5 ♂♂, 3 ♀♀, Nidadan, July; 3 ♂♂, Gazu, July; 2 ♂♂, Qiqi, July; 1 ♀, Maku, July.
This species has been previously known only from Sichuan. These specimens from Nujiang valley usually show more or less darker ground color on both sides of wings and clearer spots on underside than in typical specimens from Sichuan (1 ♂ from Qing-cheng-shan examined).

29. *Aeromachus propinquus tali* EVANS, 1932. 3 ♂♂, Naqialo, May; 4 ♂♂, Nidadan and Sijitong, July; 2 ♂♂, Gazu, July.

30. *Aeromachus stigmata obsoleta* (MOORE, 1878). 1 ♂ (WSF), Gongshan, June 5th 2002.
The subspecies name is determined on account of the distribution of this population. According to EVANS (1949), all the three subspecies of *A. stigmata* have no difference in WSF, only differ from one another in DSF. Thus an accurate subspecific classification of this Nujiang population is impossible at present, but since EVANS has treated the population from N. Burma as ssp. *obsoleta*, and because

Nujiang valley is very similar to N. Burma in butterfly fauna, I tentatively regard this population as *obsoleta*.

31 *Sebastonyma medoensis albostriata* subspec. nov. 7 ♂♂, Qiqi, July.

32. *Sebastonyma medoensis medoensis* Lee, 1979. 8 ♂♂, Bapo, June; 3 ♂♂, Maku, July; 2 ♂♂, Longyuan to Ban, July.

33 *Sovia separata magna* Evans, 1932. 7 ♂♂, Bapo and Maku, June; 3 ♂♂, Longyuan, July; 2 ♂♂, Yaojiaping, August; 2 ♂♂, Mabilo, July.

34. *Sovia grahami miliaohuae* subspec. nov. 4 ♂♂, Yaojiaping, August.

35. *Pedesta "masuriensis" cuneomaculata* Murayama, 1995. (TL: Tuguancun, NW. Yunnan). 1 ♂, Qiqi to Dongshaofang, June.
This single male agrees very exactly with the unique holotype male of *cuneomaculata* from Tuguancun in external features. Its male genitalia examined show conspicuous difference from those of *P. masuriensis* (Moore, 1878) in having the left footstalk much broader, the left cuiller with a well developed dorsal process which is absent in *masuriensis*, and with the terminal end not so broad and serrate as in *masuriensis*, the right cuiller with its dorsal process not so bent back towards base of clasp as in *masuriensis*. Therefore *cuneomaculata* is not conspecific with *masuriensis*. However, I have no material of *tali* examined and the taxonomic relationship between *tali* and *cuneomaculata* remains unknown. Nonetheless, I strongly suspect that *cuneomaculata* is an independent species whilst *tali* is a good subspecies of *masuriensis*, because both *masuriensis* and *tali* have underside hindwing more or less marked with a series of discal spots which are totally absent in *cuneomaculata*, and *cuneomaculata* is probably sympatric with *tali* in zoogeography.

36. *Pedesta baileyi baileyi* (South, 1913). 4 ♂♂, Sijitong, June.

37 *Pedesta serena* Evans, 1937. 8 ♂♂, Yaojiaping, May and June.

38. *Pedesta viridis* spec. nov. 2 ♂♂, Nidadan, May; 1 ♂, Sijitong, June.

39. *Thoressa bivitta* (Oberthür, 1886). 1 ♂, Sijitong, June.
This male has been dissected and its genitalia show a little variation from Evans' figure in having the dorsal process of left cuiller much reduced, the left footstalk much shorter than the right footstalk, and the dorsal process of right cuiller more pointed. The species of *Thoressa* seem to be more variable in shape of cuiller than in other groups.

40. *Thoressa fusca senna* Evans, 1937. 3 ♂♂, Lishadi, June.
According to Evans (1949: 256), ssp. *senna* has no cell spot on upperside of forewing and has underside of hindwing light ochreous brown and unmarked, all my specimens from Lishadi, Nujiang valley agree with such description and Evans' figure, apparently paler on underside than the following subspecies. It should be noted that ssp. *senna* is most probably a synonym of ssp. *caenis* (Leech, 1894).

41. *Thoressa fusca fusca* (Elwes, 1892). 2 ♂♂, Bapo. June.
These two males from Dulong valley differ from the Nujiang population of ssp. *senna* in having underside ground color much darker and more blackish. They generally agree with Evans' description of ssp. *fusca*, but have double cell spot on upperside of forewing. However, I regard them as ssp. *fusca* without any doubt, because the examination of specimens from Metok, SE. Tibet clearly indicates that the presence or absence of cell spot is not constant in a single population of the species. It is very possible that ssp. *senna* is only a synonym of ssp. *caenis* (Leech, 1894), because both of them are described from Sichuan (Chia Kou Ho and Siao Lou respectively) and only different from each other in the presence or absence of cell spot. It should be noted that for ssp. *caenis* there is only a single male known in B.M. (N.H.) according to Evans (1949).
The subspecific name of Metok population is still uncertain. It is close to ssp. *debilis* (Elwes & Edwards, 1897) from Khasia Hills, Assam in distribution, but differs from the latter in having underside hindwing

unmarked. However, I hesitate to regard it as new because for ssp. *debilis* there is only one pair recorded in B.M.(N.H.) thus the individual variation of *debilis* is nearly unknown.

42. *Thoressa gupta gupta* (DE NICEVILLE, 1886). 2 ♂♂, Bapo, June.

43. *Thoressa gupta nujiangensis* subspec. nov. 7 ♂♂, Qiqi, June; 6 ♂♂, Gazu, June; 4 ♂♂, Gongshan, June; 3 ♂♂, Lishadi, June; 1 ♂, Sijitong, June.

44. *Halpe handa* EVANS, 1949 (fig. 49; col. pl. III, fig. 17). 2 ♂♂, Gongshan, June.
This species was originally described from N. Burma as a subspecies of *Halpe homolea* in EVANS' revision, and subsequently recorded from Thailand (KIMURA, 1997), Laos (OSADA et al., 1999) and Vietnam (DEVYATKIN, 2002). Here it is firstly recorded for Chinese fauna. It is very close to *H. filda* from Sikkim and SE. Tibet (4 ♂♂ from Metok examined), but can be easily distinguished from the latter by the following combination of characters in males.
1) Forewing is more elongated, with termen apparently longer than in *filda*.
2) All legs are exactly as long as in *nephele*, conspicuously longer than in *filda*, though the examined specimens are as big as in *filda* and conspicuously smaller than in *nephele*.
3) Male genitalia are different from those of *filda* (fig. 50): footstalk of clasp is constantly much broader at middle and base; two branches of cuiller bear smaller teeth; the distal branch of cuiller is slender and more sharply pointed at tip, bent abruptly upwards at middle, not gradually curved upwards as in *filda*.

The following comparative description of *H. aucma, H. molta, H. filda, H. handa, H. dizangpusa, H. nephele* and *H. muoi* (*Halpe muoi* is placed here in convenience, though it does not belong to this group, with outer ciliae not appearing darkened at vein-ends, excavation on tip of uncus deeper than in *homolea*-group, lateral process of uncus not nearly even in width throughout and footstalk without a branch directed backwards.) is based upon the examination of specimens in my collection.
The following description is applicable to all the above-mentioned taxa except those noted. General appearances of eyes, frons, palpi and legs the same as in *H. kumara*-group. Antennae: club hooked or angled or arcuate (according to individuals) beyond its thickest part, above entirely blackish before nudum, below yellow; shaft black above, but chequered with black and yellow on its inner lateral side and sometimes also below. 2nd segment of palpus different in length between species. No constant difference in length of mid-tibial spurs and lower hind-tibial spurs between species. Spines on tarsi varying individually, not constantly different between species. Outer ciliae grayish or whitish or pale brown, more or less appearing darkened at vein-ends on both sides of both wings except in *muoi*, clearly chequered only on forewing of *nephele* and *dizangpusa*.
No difference in wing-venation between these taxa. Ground color on upperside basically dark brown, variable according to condition of specimens, not constantly different between species. Upperside: in all taxa, bases of spaces 1a and 1b of forewing powdered with greenish brown scales, basal and discal areas of hindwing clad with greenish brown hairs, a black male brand marked from vein 1b to the base of space 2 on forewing, associated with paler brownish gray scales, two discal spots and usually two subapical spots (sometimes three in some individuals) placed at bases of spaces 2, 3, 6 and 7 on forewing, sub-hyaline and whitish in color, a single forewing cell spot placed just below radius in the upper half of cell in most species except *filda* and *handa*, the two discal spots separated by blackish vein, overlapping or not according to species, subapical spots subequal to cell spot (if present) in size and smaller than discal spots, hindwing unmarked. Underside: costal and apical areas of forewing and most parts of hindwing powdered with tawny scales, a submarginal series of small pale spots on forewing clearly marked in *nephele* and *dizangpusa*, but only traceable or even absent in other species, all pale spots on upperside of forewing repeated, a discal series and a submarginal series of yellowish spots on hindwing clearly marked in *nephele* and *dizangpusa*, but ill-defined and very obscure in all other species.
The main differences in the external features of males and male genitalia between these species are shown in the following table.

Name	*aucma*	*molta*	*filda*	*handa*	*dizangpusa*	*nephele*	*muoi*
Length of forewing	16–16.5 mm	16 mm	16 mm	17 mm	15.5–16.5 mm	18.5–19 mm	16 mm
Length of antennae	7–8 mm	8 mm	8 mm	8 mm	7.3–8 mm	9 mm	7.5 mm
Number of nudum	14	14	14	15	14	15	14
Size of eyes	smaller	smaller	smaller	smaller	smaller	larger	smaller
2nd segment of palpi	larger	smaller	smaller	smaller	larger	largest	smaller
Foreleg	medium	medium	medium	longer	shorter	longer	medium
Midleg	medium	medium	medium	longer	shorter	longer	(missing)
Hindleg	medium	medium	medium	longer	shorter	longer	medium
Inner upper hind-tibial spur	shorter	longer	shorter	medium or shorter	longer	longer	longer
Color of yellowish scales on legs	tawny	tawny	tawny	tawny	more whitish	tawny	tawny
Outer ciliae on both sides	brownish gray	paler gray	brownish gray	brownish gray	very whitish	very whitish	pale brown
Forewing cell spot	smaller	medium	absent or smaller	absent	medium	larger	absent
Forewing spots in spaces 2 and 3	not overlapping	overlapping	overlapping or not	not overlapping	overlapping	overlapping	widely overlapping
Hindwing spots	obscure	obscure	obscure	obscure	clear	clear	obscure
Base of footstalk of clasp	narrower	broader	narrower	broader	broader	broadest	narrowest
Upper branch of footstalk of clasp	narrower	broader	narrower	narrower	broader	broader	absent
Dorsal branch of cuiller	slender, pointed	stout, obtuse	slender, pointed	slender, pointed	stout, pointed	largest, stout, pointed	long, broad, pointed
Distal branch of cuiller	crested at base, pointed	stout, less pointed, pointed, slightly curved	more pointed, bent abruptly	stout, pointed, slightly curved	largest, stout, obtuse	pointed, strongly curved	
Aedeagus	medium	shorter	shorter	shorter	shorter	longer	shorter
Distribution	Assam, Metok, N. Burma	Sikkim, Metok	Sikkim, Metok	Nujiang valley	SE. China	Sichuan	N. Yunnan

Some of the examined specimens of *H. filda, H. aucma, H. molta, H. nephele* and *H. dizangpusa* have been illustrated in my previous papers (HUANG, 1998, 2002), and photos of male genitalia of *H. nephele* and *H. dizangpusa* have been published (HUANG,, 2002). In this paper the following species

have the photos of male genitalia published: *filda* (fig. 50), *aucma* (fig. 52), *molta* (fig. 51), *handa* (fig. 49) and *muoi* (fig. 53).

45. *Halpe kumara micromacula* subspec. nov. 1 ♂, Maku, July.

46. *Halpe parakumara* spec. nov. 3 ♂♂, Qiqi, July.

47. *Halpe mixta* spec. nov. 1 ♂, Qiqi, July.

48. *Stimula swinhoei swinhoei* ELWES & EDWARDS, 1897. 1 ♂, Bapo, June.

49. *Notocrypta feisthamelii alysos* MOORE, 1865. 6 ♂♂, Gongshan, June and July; 4 ♂♂, Bapo, June.

50. *Notocrypta curvifascia* (FELDER, 1862). TL: E. China. (= *Notocrypta eitschbergeri* HUANG, 2001, TL: Nujiang valley. **syn. nov.**). 6 ♂♂, Nidadan to Naqialo, May; 1 ♂, 1 ♀, Sijitong, July.
The examination of more male genitalia shows that *eitschbergeri* is only a synonym of *curvifascia*. The male genitalia of this species seem to be rather variable in the length of inner process of clasp, the relative length of apical process of cuiller and the shape of cuiller, especially the posterior angle of cuiller.

51. *Ochlodes thibetana thibetana* OBERTHÜR, 1886. 2 ♂♂, 3 ♀♀, Nidadan, July; 2 ♂♂, 3 ♀♀, Gongshan, June; 2 ♂♂, 2 ♀♀, Naqialo, May; 1 ♂, 1 ♀, Maku, July; 2 ♂♂, Longyuan, July; 2 ♂♂, 3 ♀♀, Gazu and Qiqi, July; 1 ♀, Yaojiaping, August.

52. *Ochlodes lanta* EVANS, 1939. 1 ♂, Longpo, May.

53. *Potanthus trachala tytleri* EVANS, 1914. 3 ♂♂, 1 ♀, Naqialo, May; 4 ♂♂, Gongshan, June.

54. *Potanthus tibetana* HUANG, 2002. 3 ♂♂, 1 ♀, Dizhengdang, July; 2 ♂♂, Xiongdang to Ban, July; 4 ♂♂, Kongdang, July.

55. *Potanthus flavus* MURRAY, 1875. 6 ♂♂, 1 ♀, Sijitong, July.

56. *Potanthus riefenstahli* spec. nov. 1 ♂, Lishadi, July; 1 ♂, Maku, July.

57. *Parnara guttatus mangala* MOORE, 1865. 2 ♂♂, Nidadan, May.

58. *Pelopidas sinensis* (MABILLE, 1877). 1 ♂, Gongshan, June.

59. *Polytremis caerulescens* (MABILLE, 1876). 1 ♂, Gazu, July.

60. *Polytremis theca macrotheca* subspec. nov. 3 ♂♂, Qiqi, July; 4 ♂♂, Gazu, July.

61. *Polytremis discreta discreta* (ELWES & EDWARDS, 1897). 3 ♂♂, Bapo and Maku, July; 1 ♀, Lishadi, June; 6 ♂♂, Gongshan, June and July; 1 ♂, Mabilo, July.

62. *Polytremis micropunctata* spec. nov. 1 ♂, Qiqi, July.

63. *Caltoris cahira carina* EVANS, 1937. 1 ♂, Gongshan, June.

64. *Pseudoborbo bevani* (MOORE, 1878). 2 ♂♂, 1 ♀, Nidadan, July; 1 ♂, Bingzhongluo, July; 3 ♂♂, Naqialo, May.

Papilionidae

Papilioninae

65. *Troides aeacus aeacus* (FELDER, 1860). 4 ♂♂, Bapo, June and July.

66. *Byasa latreillei genestieri* (OBERTHÜR, 1918). 13 ♂♂, 5 ♀♀, Gazu, June; 1 ♂, Nidadan, May; 1 ♀, Longyuan, July.

67. *Byasa polyeuctes polyeuctes* (DOUBLEDAY, 1842). 5 ♂♂, 2 ♀♀, Gazu, June and July.
This population from Nujiang valley has red spot at end of hindwing tail remarkably smaller than in the typical specimens of ssp. *polyeuctes*, otherwise as in the latter.

68. *Byasa dasarada ouvrardi* (Oberthür, 1920) (col. pl. IX, fig. 13) (= *Byasa dasarada nujiangana* Huang, 2001. TL: Nujiang valley. **syn. nov.**). 2 ♀♀, Naqialo, May.
I described *nujiangana* as new on the basis of one pair taken from early September, which should be regarded as the summer form (WSF). This time two females of the spring form (DSF) were captured in May and they agree very well with the type material of ssp. *ouvrardi* in external features (a female of ssp. *ouvrardi* was illustrated by D'Abrera in 1982: 37). Therefore I consider *nujiangana* as a synonym of *ouvrardi*. Both forms in my collection have their female genitalia dissected and proved to be the same species. In external features, the spring form has forewing much broader in shape, the white postdiscal patches on hindwing more extensive, often entering space 6, and the red spot at end of tail not divided by black veins as in the summer form.

69. *Byasa plutonius plutonius* (Oberthür, 1876). 1 ♂, Naqialo, May.

70. *Papilio bianor ganesa* Doubleday, 1842. 2 ♂♂, Longpo to Naqialo, May; 1 ♂, Bapo, June; 1 ♂, Longyuan, July; 1 ♂, Dizhengdang, July; 1 ♂, Gazu, July; 1 ♂, Nidadan, July; 1 ♂, Lishadi, July.

71. *Papilio paris paris* Linnaeus, 1758. 1 ♂, Sijitong, June.

72. *Papilio krishna thawgawa* Tytler, 1939. TL: Hthawgaw, NE. Burma. (= *Papilio krishna nu* Yoshino, 1995. TL: Gaoligongshan, Yunnan, **syn. nov.**). 1 ♂, Gongshan, June; 1 ♂, Bapo, June; 1 ♂, Kongdang, July.
Yoshino overlooked the publication of ssp. *thawgawa* when describing his *nu*. The original figures and description of *nu* agree very exactly with the original description of *thawgawa*. Moreover Thawgaw is very close to Gaoligongshan in geography. It is not reasonable to regard *nu* as the separated race from *thawgawa*.
Recently another new taxon was described upon a single ♂ from N. Vietnam, viz. ssp. *mayumiae* Mitsuta & Shinkai, 2002. The taxonomic relationship between *thawgawa* and *mayumiae* needs a further research in future.

73. *Papilio xuthus xuthus* Linnaeus, 1767. 1 ♂, 1 ♀, Nidadan, May.

74. *Papilio machaon montanus* Alpheraky, 1897. 2 ♂♂, Nidadan, May; 1 ♂, Naqialo, May; 4 ♂♂, Sijitong, June; 4 ♂♂, Nidadan, July.
Astonishingly this population from Nujiang agrees in general with the typical population of *montanus* from the higher Tibetan areas of Sichuan (TL: Ta-tsien-lu), Gansu and Qinghai, however has nothing to do with ssp. *verityi* Fruhstorfer, 1907 from S. Yunnan and ssp. *taliensis* Eller, 1939 from N. Yunnan. The name *montanus* that was considered as a homonym and replaced by Hemming (1934) as *hieromax*, had been reconsidered to be valid and readopted by Seyer (1976). In the same paper on *Papilio machaon*, Seyer regarded all the following taxa as junior synonyms of *montanus*: ssp. *alpherakyi* Bang-Haas, 1933 from Gansu, ssp. *minschani* Bang-Haas (nomen nudum), ssp. *chinensomandschuriensis* Eller, 1939 (nomen nudum). Here I follow Seyer's treatment on these names tentatively. Nonetheless, Seyer's work is very rough and based upon very limited material and poor knowledge on Asian geography, a reliable and thorough revision of all Chinese taxa of *P. machaon* is still untouched.
All subspecies inhabiting areas around Yunnan, Sichuan and East Tibet can be divided into three subspecies-groups and a checklist is as follows:

sikkimensis sub-group, with tail shorter and tornal ocellus surmounted by two black crescents.
ssp. *sikkimensis* Moore, 1844 from all Tibetan area in the current Xizang on east of Mt. Everest at high elevation. Size larger, black markings more developed. (Specimens from Namjagbarwa area and Chayu, the extreme SE. of Tibet examined).
ssp. *montanus* Alpheraky, 1897 from Tibetan area in the current W. Sichuan, NW. Yunnan, SW. Gansu and E. Qinghai at high elevation. Size smaller, black markings less developed. The specimens from Nujiang have tail a little longer and hindwing upperside space 1C less dusted by dark scales and hairs than in specimens from Sichuan, more similar to specimens from Qinghai. From Ta-tsien-lou area, a very dark form was described by Oberthür (1914) as "*Papilio machaon* = *sikkimensis* = *erebennis*",

which should be treated as either a synonym or an aberration of *montanus*. A revision based upon large series of specimens from all high areas of Qinghai, Sichuan and Yunnan is vital.

verityi sub-group, with tail longer and tornal ocellus surmounted by two black crescents. All the following subspecies are very close to one another in external features and based upon very limited numbers of type specimens, they may only represent a single valid subspecies, but a thorough revision based upon large series of specimens and knowledge on generations is still untouched.
ssp. *verityi* FRUHSTORFER, 1907 from S. Yunnan and N. Shan States, Burma.
ssp. *taliensis* ELLER, 1939 from N. Yunnan (TL: Dali).
ssp. *archias* FRUHSTORFER, 1907 from S. Sichuan (TL: Fou-Lin).
ssp. *kunkalaschani* ELLER, 1939 from Kunkalashan, W. Sichuan.

machaon sub-group, with hindwing tornal ocellus surmounted by only one black crescent.
ssp. *chinensis* VERITY, 1905 from Sichuan (TL: Venchuan) and C. & E. China at lower elevation. (Notes: ssp. *schantungensis* ELLER, 1936, based upon a male specimen from Tsingtau (Qingdao), which is most probably either wrongly labelled or aberrant, is not well established. I have collected a good series of specimens in two generations of *P. machaon* at Qingdao and all of them belong to *chinensis*. The holotype of *schantungensis* belongs to *verityi* subspecies-group.)
ssp. *birmanicus* ROTHSCHILD, 1908 from S. Shan States, Burma. According to its original description, *birmanicus* has only one black crescent above tornal ocellus thus can not be regarded as a synonym of ssp. *verityi*.
ssp. *suroia* TYTLER, 1939 from Manipur, Assam, NE. India. According to its original description, *suroia* has hindwing tornal spot surmounted by only one black crescent and space 1 of hindwing covered with long greyish-brown hairs, not clear yellow as *birmanicus*.

75. *Papilio helenus helenus* LINNAEUS, 1758. 1 ♂, Gazu, June; 1 ♂, Bapo, June.

76. *Papilio polytes liujidongi* subspec. nov. 7 ♂♂, 1 ♀, Nidadan, May; 2 ♂♂, Nidadan, July.

77. *Papilio protenor euprotenor* (FRUHSTORFER, 1908). 1 ♂, Nidadan, May; 1 ♂, Gongshan, June; 1 ♂, Bapo, June.

78. *Papilio bootes parcesquamata* VON ROSEN, 1929. 4 ♂♂, Nidadan, May; 1 ♂, Gongshan, June; 3 ♂♂, Gazu, June; 1 ♂, Lishadi, June.

79. *Chilasa epycides epycides* (HEWITSON, 1864). 1 ♂, Nidadan, May.

80. *Graphium cloanthus cloanthus* (WESTWOOD, 1841). 1 ♂, Nidadan, May.

81. *Graphium sarpedon sarpedon* (LINNAEUS, 1758). 1 ♂, Bapo, June.

82. *Pazala eurous eurous* (LEECH, 1893). 1 ♂, Nidadan, May; 1 ♂, Naqialo, May.

83. *Pazala tamerlana taliensis* (O. BANG-HAAS, 1927). 1 ♂, Nidadan, May; 1 ♂, Gongshan, June.
These two males agree exactly with the original figure of *taliensis*, their male genitalia have been examined and proved to be identical with those of nominotypical *tamerlana* (OBERTHÜR, 1876) from Sichuan (1 ♂ from Panzhihua dissected, agreeing with the figure illustrated in KOIWAYA, 1993). Therefore I think KOIWAYA (1993) wrongly treated *taliensis* as a synonym of *Pazala incerta* (O. BANG-HAAS, 1927).

84. *Lamproptera meges amplifascia* (TYTLER, 1939). 3 ♂♂, Bapo, June; 1 ♂, Maku, July.

Pieridae

Pierinae

85. *Pieris brassicae nepalensis* DOUBLEDAY, 1846. 1 ♂, Yaojiaping, May.

86. *Pieris rapae orientalis* OBERTHÜR, 1880. 1 ♂, Yakou above Yaojiaping, May.

87 *Pieris canidia indica* Evans, 1926. 1 ♂, Lishadi, June; 3 ♂♂, 1 ♀, Bapo, June; 1 ♂, Gazu, June; 1 ♂, Dizhengdang, July.

88. *Pieris erutae erutae* Poujade, 1888. 1 ♀, Bingzhongluo, May; 2 ♂♂, 1 ♀, Nidadan to Longpo, May; 8 ♂♂, 2 ♀♀, Qiqi, June and July; 3 ♂♂, Bapo, June; 1 ♂, Dizhengdang, July; 2 ♂♂, Ban, July; 1 ♂, Mabilo, July.

89 *Sinopieris davidis davidis* (Oberthür, 1876). 1 ♂, Nidadan, May.

90 *Sinopieris stoetzneri* (Draeseke, 1924). 1 ♂, Nidadan, May; 3 ♂♂, Qiqi to Dongshaofang, June.
These four males agree exactly with the typical specimens of *stoetzneri* from Sichuan in external features. Watkins (1927), in his report on butterflies collected by Gregorys from NW. Yunnan, on the basis of his examination of specimens deposited in B.M. (N.H.), treated *stoetzneri* as a synonym of *Pieris davidina* Oberthür, 1891 and stated *stoetzneri* as summer form whilst *davidina* as spring form. In the same paper he stated *Sinopieris venata* (bona species) as a form of *Sinopieris davidis*. Because the type of *davidina* figured by Oberthür has all veins of hindwing underside much more broadly marked with black than in *stoetzneri* and because I have no specimen of typical *davidina* in my collection, I doubt very much that *davidina* is conpecific with *stoetzneri* and temporarily treat them as independent taxa. The true stati of *davidina* and *stoetzneri* should be based upon an examination of female genitalia of type material in future, in the case that the male genitalia vary very little between species of *Sinopieris*.

91 *Sinopieris dubernardi dubernardi* (Oberthür, 1884). 1 ♂, Mabilo, July.

92. *Pontia daplidice moorei* (Röber, 1907). 1 ♂, Bingzhongluo, July.

93. *Aporia genestieri genestieri* (Oberthür, 1902). 2 ♂♂, Nidadan, May; 1 ♂, 1 ♀, Gongshan, June.

94. *Aporia delavayi delavayi* (Oberthür, 1890). 1 ♂, Mabilo, July.

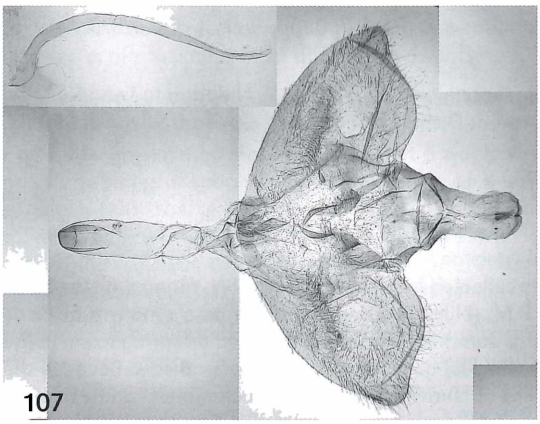
95. *Aporia goutellei* (Oberthür, 1886). 1 ♂, Naqialo, May.

96. *Aporia bernardi yunnana* Koiwaya, 1989. 1 ♂, Nidadan, May.

97 *Aporia agathon bifurcata* Tytler, 1939. 7 ♂♂, Nidadan to Longpo, May.

98. *Aporia harrietae paracraea* (De Niceville, 1900) (? = *Aporia baileyi* South, 1914). 3 ♂♂, Qiqi, June.
According to South's description, I suspect that *Aporia baileyi* is only a synonym of *paracraea*. Besides this, a very similar taxon namely *Aporia monbeigi meiliensis* Yoshino, 1995 has been described from a nearby area in NW. Yunnan. It seems that *paracraea* is sympatric with *meiliensis*. In my collection, several males of *Aporia harrietae* De Niceville, 1893 from Metok have been dissected and their male genitalia are identical with those of specimens of ssp. *paracraea* from Nujiang valley in general, thus *paracraea* has been correctly placed under *Aporia harrietae* in the previous works. However, in external features, *paracraea* is very sharply different from *harrietae* in the forewing apex more pointed and underside ground colour creamy white, not so deep orange as in the latter.

99. *Aporia kaolinkonensis* Yoshino, 1997 **stat. nov.** (fig. 107; col. pl. IX, fig. 12) (= *Aporia larrardei* [sic] *kaolinkonensis* Yoshino, 1997. TL: Gaoligongshan, W. Yunnan). 1 ♂, Xiongdang, July.
This male agrees with the holotype male of *Aporia larraldei kaolinkonensis* in general, except for the absence of forewing discal spot in space 3, which is often appeared in individual variation of *Aporia* species. An examination of male genitalia shows that *kaolinkonensis* (1 ♂ from Dulong valley dissected) is independent from *Aporia larraldei* (Oberthür, 1876) (fig. 108) (1 ♂ from Sichuan dissected), as well as *A. gigantea* Koiwaya, 1993 (2 ♂♂ from Sichuan dissected) and *A. agathon* (Gray, 1832) (3 ♂♂ from Metok and Nujiang dissected). In male genitalia, *A. kaolinkonensis* differs from *A. larraldei* in having uncus remarkably broader in dorsal view, not so apparently concave and forming a shallow V at tip as in *A. larraldei*, and valva much broader and more protruded at posterior angle. In *Aporia gigantea* (with ssp. *cheni* Hsu & Chou, 1999 from Taiwan) and *Aporia largeteaui* (Oberthür, 1881), the uncus is very narrow at tip in dorsal view, bearing a pair of small lateral processes, the valva is similar to that of *A. kaolinkonensis* but with posterior angle rounded, and the saccus is remarkably shorter



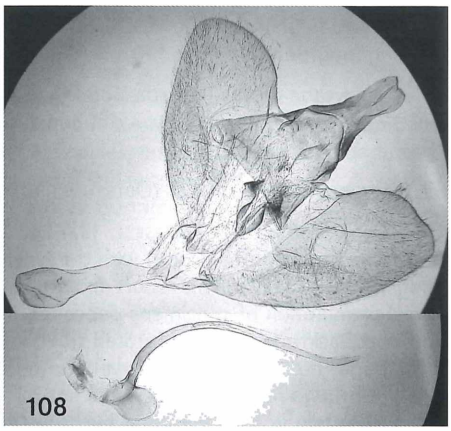


Fig. 107: Male genitalia of *Aporia kaolinkonensis* (Dulongjiang, specimen illustrated on col. pl. IX, fig. 12) consisting of genital capsule spread with tegumen and uncus in dorsal view and both clasps in outer lateral view (right bottom), and of aedeagus in lateral view (left top).
Fig. 108: Male genitalia of *Aporia larrardei* (Wasigou, near Kangding, Sichuan, specimen not illustrated) consisting of genital capsule spread with tegumen and uncus in dorsal view and both clasps in outer lateral view (top), and of aedeagus in lateral view (bottom).

than in either *larraldei* or *kaolinkonensis*. In *A. agathon*, the uncus is apparently bifurcate at tip in dorsal view, but narrower than in both *larraldei* and *kaolinkonensis*. In external features, *A. kaolinkonensis* can be distinguished from its mostly allied species, *A. larraldei* by the postdiscal blackish markings on underside of hindwing flat at outer margin, so forming a smoothly curved band, not pointed at outer margin in each space as in *A. larraldei*.

100. *Delias sanaca perspicua* FRUHSTORFER, 1910. 8 ♂♂, 1 ♀, Gazu and Qiqi, June; 2 ♂♂, Gongshan, June; 3 ♂♂, Bapo, June; 3 ♂♂, Longyuan, July.
This taxon is very variable in the size of pale spots on upperside of both wings and the yellowish spots on underside of hindwing. I have examined the extreme forms among these specimens from Nujiang in male genitalia and proved them to be ture *perspicua*. In my collection, a series of specimens from Metok, SE. Tibet of this taxon were also examined and compared with the specimens from Nujiang, it seems that the population from Nujiang is always smaller than the population from Metok.

101. *Delias belladonna* ssp. 2 ♂♂ (form similar to ssp. *lugens* JORDAN, 1925), Gongshan, June; 2 ♂♂ (form similar to ssp. *hedybia* JORDAN, 1925), Gongshan, June; 3 ♂♂ (intermediate form), Gongshan, June.
Two extreme forms can be easily distinguished from each other among these examples: one has hindwing tornal yellow area broadly marked on both sides, closely resembling ssp. *hedybia* from Burma, another has no trace of yellow scales at tornus at all, closely resembling ssp. *lugens* from Assam and Metok. Between these two extreme forms, the intermediate specimens are more common, with the yellow tornal patch variable in size and often black-dusted. All these specimens have been dissected and examined in male genitalia and proved to be *Delias belladonna* (FABRICIUS, 1793). After a survey in literature and an examination of specimens of some known subspecies in my collection, I found that it rather difficult to give a correct subspecific name to the population of Nujiang. It only can be safely said that it does not belong to ssp. *zelima* MITIS, 1893 from Sichuan. Although the Nujiang population seems to form transition between ssp. *lugens* and ssp. *hedybia*, it always has the upperside ground colour more bluish and less blackish than in both ssp. *lugens* and ssp. *hedybia* and has size always as small as in ssp. *hedybia*, thus probably represents a new subspecies. Nevertheless, I suspect it may not run out of the ecological variation of ssp. *hedybia*.

102. *Delias lativitta yunnana* TALBOT, 1937. TL: Yunnan (= *Delias lativitta tai* YOSHINO, 1999, TL: Xishuangbanna, S. Yunnan. **syn. nov.**). 4 ♂♂, Gazu, June; 2 ♂♂, Nidadan, July; 2 ♂♂, Bapo, June; 1 ♂, Maku, July; 4 ♂♂, Ban and Mabilo, July.
YOSHINO (1999) declared that ssp. *tai* had postdiscal white stripes of upperside of both wings smaller than those of *yunnanensis* (incorrect subsequent spelling of *yunnana*). However, even in such a small number of specimens in my collection from Nujiang and Dulongjiang, the postdiscal pale stripes can be small as in *tai* or big as in *yunnana*. Therefore I regard *tai* as a synonym of *yunnana*. Another recently described taxon, *yuani* HUANG, 2000 from Metok, SE. Tibet, should be retained because of its much narrower pale stripes on both wings.

103. *Appias lalage lalage* (DOUBLEDAY, 1842). 2 ♂♂, Qiqi, June; 2 ♂♂, 1 ♀, Bapo, June.

Coliadinae

104. *Dercas lycorias lycorias* (DOUBLEDAY, 1842). 1 ♂, Lishadi, June; 2 ♂♂, Bapo, June.

105. *Gonepteryx mahaguru alvinda* (BLANCHARD, 1871). 2 ♂♂, Ban, July.

106. *Gonepteryx amintha limonia* MELL, 1943. 1 ♂, Nidadan, May.

107. *Catopsilia pomona pomona* (FABRICIUS, 1775). 1 ♂, Nidadan, May.

108. *Colias erate sinensis* VERITY, 1911. 1 ♂, Longpo, May.

109. *Colias fieldii fieldii* MÉNÉTRIÉS, 1855. 3 ♂♂, Yakou, May; 1 ♂, 1 ♀, Nidadan, May; 1 ♂, Bapo, June; 1 ♂, 1 ♀, Ban, July.

110. *Eurema hecabe hecabe* (LINNAEUS, 1758). 3 ♂♂, 1 ♀, Nidadan, May; 3 ♂♂, Gongshan, June; 2 ♂♂, Bapo, June; 1 ♂, Longyuan, July; 3 ♂♂, 1 ♀, Sijitong, July.

Nymphalidae

Danainae

111. *Parantica sita sita* (KOLLAR, [1844]). 1 ♂, Longpo to Nidadan, May; 1 ♂, Gongshan, June; 1 ♀, Qiqi, June; 6 ♂♂, Bapo, June and July; 1 ♂, Mabilo, July.

12. *Parantica swinhoei szechuana* (FRUHSTORFER, 1899). 1 ♂, Qiqi, June; 3 ♂♂, Bapo, June; 1 ♂, Mabilo, July.

113. *Parantica melaneus* (CRAMER, 1775). 3 ♂♂, Bapo, June and July; 1 ♂, Xishaofang, June.

114. *Parantica aglea melanoides* MOORE, 1883. 1 ♂, 1 ♀, Bapo and Kongdang, July.

115. *Euploea mulciber mulciber* (CRAMER, [1777]). 2 ♂♂, 1 ♀, Bapo, June and July.

Acraeinae

116. *Acraea issoria sordice* (FRUHSTORFER, 1914). 2 ♂♂, Lishadi, June; 1 ♂, Gongshan, June; 3 ♂♂, 1 ♀, Qiqi, June; 1 ♀, Nidadan, July.

Nymphalinae

117. *Pseudergolis wedah wedah* (KOLLAR, 1844). 1 ♂, 1 ♀, Nidadan, May; 1 ♂, Lishadi, June; 1 ♂, Bapo, June; 2 ♂♂, Qiqi, June; 1 ♂, Sijitong, July.

118. *Phalanta phalanta phalanta* (DRURY, [1773]). 1 ♀, Bapo, July.

119. *Childrena childreni* (GRAY, 1831). 2 ♂♂, Gongshan, June; 2 ♂♂, Lishadi, June; 1 ♂, Bapo, June.

120. *Argyreus hyperbius hyperbius* (LINNAEUS, 1763). 1 ♀, Bapo, June.

121. *Argyronome laodice rudra* (MOORE, 1857). 2 ♂♂, Lishadi, June; 1 ♂, 1 ♀, Bapo, June; 1 ♂, Gazu, July.

122. *Damora sagana sagana* (DOUBLEDAY, [1847]). 3 ♂♂, Nidadan, May; 2 ♂♂, Gongshan, June; 2 ♀♀, Nidadan and Sijitong, July.

123. *Argynnis paphia megalegoria* FRUHSTORFER, 1907. 1 ♂, Ban, July; 1 ♂, Mabilo, July; 1 ♂, Nidadan, July.

124. *Fabriciana adippe* ssp. 1 ♂, Longpo to Nidadan, September 2000.
This male was captured during my last expedition in 2000 but overlooked in my previous report. The subspecific name is uncertain because the specimen is worn out.

125. *Issoria lathonia issaea* (DOHERTY, 1886). 1 ♂, Yakou, May; 1 ♂, Geyi, May.

126. *Aglais urticae chinensis* (LEECH, 1892). 1 ♂, Yakou, May.

127. *Vanessa indica indica* (HERBST, 1794). 1 ♂, Gongshan, June.

128. *Vanessa cardui cardui* (LINNAEUS, 1758). 1 ♂, Bingzhongluo, July.

129. *Kaniska canace canace* (LINNAEUS, 1763). 1 ♂, Nidadan, May; 1 ♂, Gazu, July.

130. *Junonia almana almana* (LINNAEUS, 1758). 1 ♂, Longpo to Naqialo, May; 1 ♂, Nidadan, July.

131. *Symbrenthia hippoclus lucina* (CRAMER, 1780). 1 ♂, Gazu, June.

132. *Symbrenthia hypselis cotanda* MOORE, 1874. 1 ♀, Bapo, June.

133. *Brensymthia niphanda niphanda* (MOORE, 1872). 1 ♂, Gongshan, July.

134. *Araschnia dohertyi* MOORE, 1899. 1 ♂, Kongdang, July; 1 ♂, Ban, July.

135. *Kallima inachus inachus* (BOISDUVAL, 1846). 3 ♂♂, Nidadan and Naqialo, May; 1 ♂, Sijitong, July.

136. *Stibochiona nicea nicea* (GRAY, 1846). 1 ♂, Naqialo, May; 1 ♂, Sijitong, July.

137. *Dichorragia nesimachus nesimachus* (DOYERE, [1840]). 1 ♂, Sijitong, July; 1 ♂ (aberration), Gongshan, June.

138. *Cyrestis thyodamas thyodamas* BOISDUVAL, 1846. 1 ♂, Sijitong, June; 1 ♂, Gongshan, June; 1 ♂, Bapo, July.

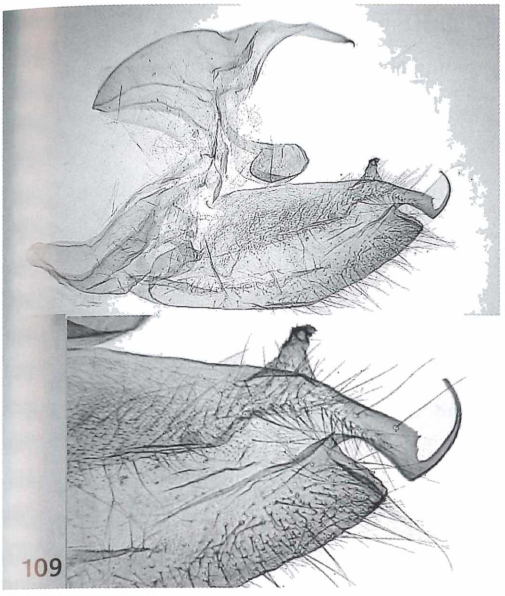
139. *Pantoporia bieti lixingguoi* HUANG, 2002. 2 ♂♂, Naqialo to Nidadan, May.

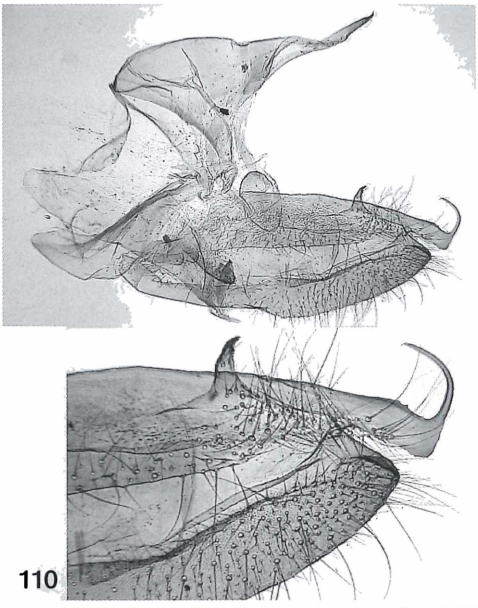
140. *Neptis miah miah* MOORE, 1857. 2 ♂♂, Lishadi, July.
It is rather astonishing but these two males from Nujiang belong to ssp. *miah* without doubt, they agree very exactly with the illustration of ssp. *miah* by D'ABRERA (1985: 306), with spots in spaces 1 and 2 on upperside of forewing separated by black vein and underside markings more washed by lilac. In my collection, one pair of this species from S. Yunnan have also been examined and they only differ from Nujiang specimens in having underside of both wings without lilac colouring. Hitherto three subspecies have been described from areas around S. China, viz. ssp. *miah* from Sikkim, Bhutan and Assam, ssp. *disopa* SWINHOE, 1893 from Sichuan and ssp. *nolana* DRUCE, 1874 from Siam (type locality). According to EVANS' key (EVANS, 1932), ssp. *nolana* differs from ssp. *miah* chiefly in having forewing spots in spaces 1 and 2 completely conjoined. I think my specimens from S. Yunnan at better should be placed under ssp. *miah*, not ssp. *nolana*. It is interesting that specimens from Hainan are much closer to ssp. *nolana* than to ssp. *miah*.

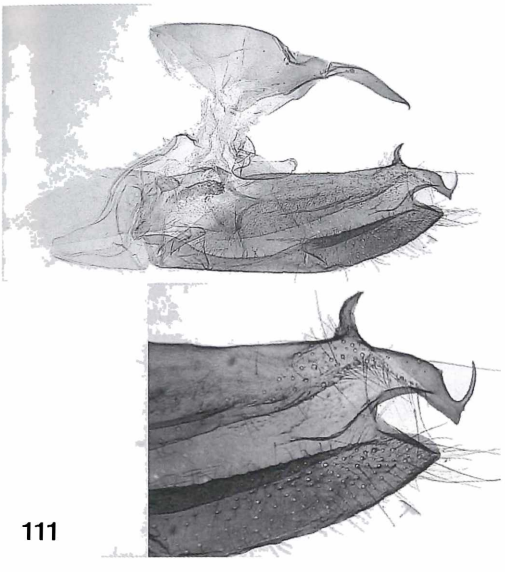
141. *Neptis sankara guiltoides* TYTLER, 1940. 1 ♂, Gongshan, June; 3 ♂♂, Gazu, June; 1 ♂, Maku, July.

142. *Neptis clinia susruta* MOORE, 1872. 2 ♂♂, lishadi, July.

143. *Neptis sappho astola* MOORE, 1872. 3 ♂♂, Nidadan, May; 3 ♂♂, Bapo, June; 1 ♂, 1 ♀, Nidadan, July.







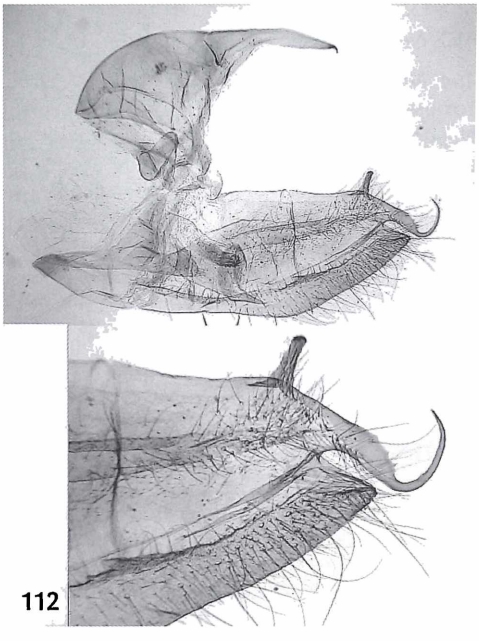


Fig. 109: Male genitalia of *Neptis themis theodora* f. *theodora* (Qiqi, Nujiang, specimen illustrated in Atalanta **33** (3/4): 437, figs 1, 5) consisting of genital capsule in lateral view with left valva removed (top), and of enlarged tip of valva in lateral view (bottom). Fig. 110: Male genitalia of *Neptis themis theodora* f. *sylvarum* (Qiqi, Nujiang, specimen illustrated in Atalanta **33** (3/4): 437, figs. 2, 6) consisting of genital capsule in lateral view with left valva removed (top), and of enlarged tip of valva in lateral view (bottom). Fig. 111: Male genitalia of *Neptis nemorum* (Gazu, Nujiang, specimen illustrated in Atalanta **33** (3/4): 437, figs 3, 7) consisting of genital capsule in lateral view with left valva removed (top), and of enlarged tip of valva in lateral view (bottom). Fig. 112: Male genitalia of *Neptis qianweiguoi* (holotype, Nujiang, specimen illustrated in Atalanta **33** (3/4): 437, figs 4, 8) consisting of genital capsule in lateral view with left valva removed (top), and of enlarged tip of valva in lateral view (bottom).

144. *Neptis hylas kamarupa* MOORE, 1874. 4 ♂♂, Nidadan and Naqialo, May.

145. *Neptis soma shania* EVANS, 1924. 2 ♂♂, Nidadan and Naqialo, May; 1 ♂, Bapo, July.

146. *Neptis mahendra ursula* ELIOT, 1969. 1 ♂, Lishadi, June; 1 ♂, Nidadan, May; 2 ♂♂, Gazu, June.

147. *Neptis mahendra dulongensis* HUANG, 2002. 3 ♂♂, Longyuan to Mabilo, July.

148. *Neptis speyeri genulfa* OBERTHÜR, 1908. 5 ♂♂, Sijitong, June and July; 1 ♂, Nidadan, May.

149. *Neptis zaida* ssp. 10 ♂♂, Gazu and Qiqi, June.
TYTLER (1940) described his *thawgawa* on a single male taken from NE. Burma and ELIOT (1969) reported a single male from NW. Yunnan and stated that the male differs a little from the unique holotype of ssp. *thawgawa*. It is possible these specimens from Nujiang valley represent a new subspecies.

150. *Neptis armandia manardia* ELIOT, 1969. 8 ♂♂, Nidadan and Naqialo, May; 2 ♂♂, Bingzhongluo and Sijitong, June; 4 ♂♂, Gongshan, June; 2 ♂ ♂, Lishadi, June; 4 ♂♂, Bapo, June; 2 ♂♂, Gazu, July.
This subspecies is very variable: specimens from Dulong valley seem to have hindwing underside discal band more whitish than in those from Nujiang valley.

151. *Neptis antilope wuhaii* HUANG, 2002. 3 ♂♂, 2 ♀♀, Nidadan to Bingzhongluo, June; 3 ♂♂, Nidadan, May and July; 2 ♂♂, Gongshan, June.

152. *Neptis namba namba* TYTLER, 1915. 3 ♂♂, Gazu and Qiqi, June; 2 ♂♂, Bapo, June; 2 ♂♂, Longyuan, July; 1 ♂, Mabilo, July.

153. *Neptis sylvana sylvana* OBERTHÜR, 1906. 1 ♂, Gazu, July.

154. *Neptis thetis pumi* YOSHINO, 1998. 3 ♂♂, Sijitong, June; 7 ♂♂, Gazu and Qiqi, June.
YOSHINO (1998) described ssp. *pumi* on s single male from Weixi, NW. Yunnan. All my specimens from Nujiang agree very well with YOSHINO's description, and they differ constantly from specimens of ssp. *thetis* LEECH, 1890 from Sichuan and central China in having reddish discal fascia on underside of hindwing very clearly defined and much narrower.

155. *Neptis themis theodora* OBERTHÜR, 1906 (figs. 109, 110). 4 ♂♂ (f. *theodora*), Qiqi, June; 1 ♂ (f. *sylvarum*), Qiqi, June; 1 ♂ (f. *theodora*), Mabilo, July.

156. *Neptis nemorum nemorum* OBERTHÜR, 1906 (fig. 111). 1 ♂, Gazu, June.

157. *Neptis qianweiguoi* HUANG, 2002 (fig. 112). 14 ♂♂, Qiqi and Gazu, June; 1 ♂, Longyuan, July.

158. *Neptis lixinghei* HUANG, 2002 (fig. 113). 1 ♂, Longyuan, July.

159. *Neptis arachne giddeneme* OBERTHÜR, 1891. 2 ♂♂, Nidadan, May; 2 ♂♂, Gongshan, June; 7 ♂♂, Gazu and Qiqi, June.

160. *Neptis nemorosa diqingensis* YOSHINO, 1999. 1 ♀, Nidadan, July.

161. *Neptis manasa narcissina* OBERTHÜR, 1906. 4 ♂♂, 1 ♀, Nidadan, May; 7 ♂♂, 1 ♀, Sijitong, June; 2 ♂♂, Gongshan, June.
The male genitalia are illustrated here (fig. 114), together with those of *N. manasa shinkaii* KOIWAYA, 1996 (fig. 115) from SE. Tibet.

162. *Neptis cydippe yongfui* HUANG, 2002. 1 ♂, Nidadan, June; 5 ♂♂, Gazu, June and July.
In my original description, the difference between ssp. *yongfui* and ssp. *kirbariensis* TYTLER, 1915 from Naga Hills is not fully discussed. It should be noted here that *yongfui* differs from *kirbariensis* in having hindwing discal band narrower and hindwing postdiscal band somewhat serrate or waved at outer margin, not smooth.

163. *Neptis yunnana yunnana* OBERTHÜR, 1906 (fig. 116). 2 ♂♂, Sijitong, June; 4 ♂♂, Gazu and Qiqi, June; 1 ♂, Mabilo, July.

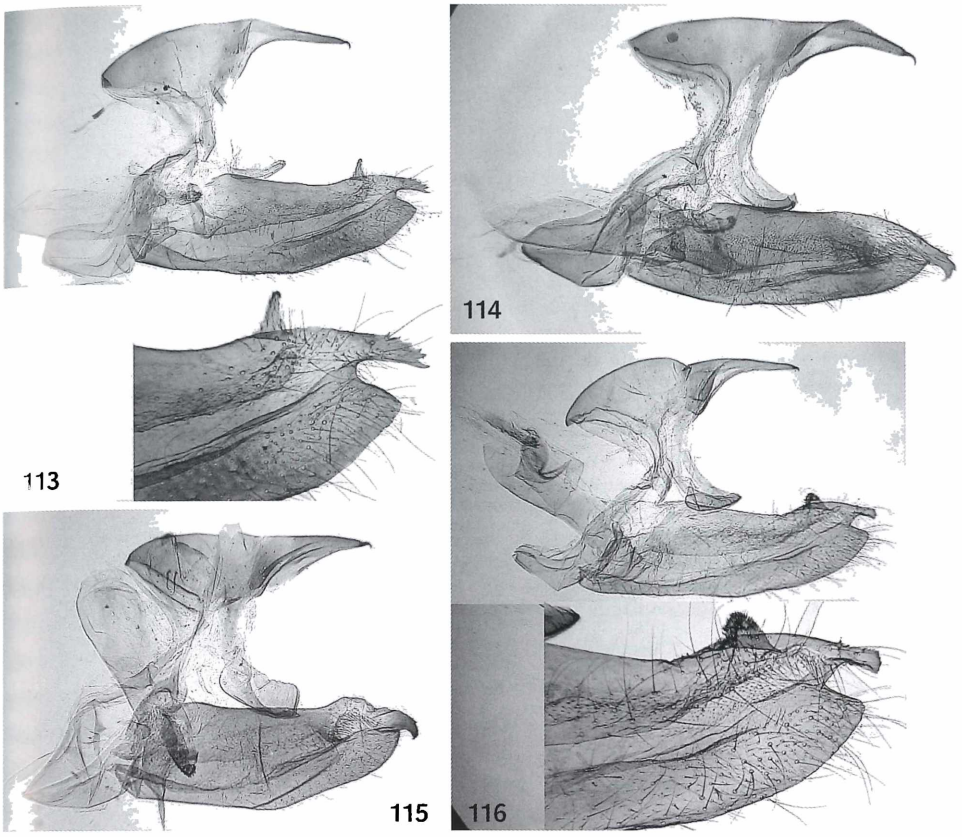


Fig. 113: Male genitalia of *Neptis lixinghei* (holotype, Dulongjiang, specimen illustrated in Atalanta **33** (3/4): 439, figs 3, 7) consisting of genital capsule in lateral view with left valva removed (top), and of enlarged tip of valva in lateral view (bottom).
Fig. 114: Male genitalia of *Neptis manasa narcissina* (Nujiang, specimen not illustrated) consisting of genital capsule in lateral view with left valva removed.
Fig. 115: Male genitalia of *Neptis manasa shinkaii* (Tongmai, SE. Tibet, specimen illustrated in Neue Ent. Nachr. **41**: 257, figs. 1b, 2b) consisting of genital capsule in lateral view with left valva removed.
Fig. 116: Male genitalia of *Neptis yunnana* (Nujiang, specimen not illustrated) consisting of genital capsule in lateral view with left valva removed (top), and of enlarged tip of valva in lateral view (bottom).

The single male from Dulong valley has all bands on both sides of both wings apparently more whitish than in typical specimens from Tsekou and those from Nujiang valley.

164. *Neptis beroe* Leech, 1890. 3 ♂♂, Gazu, June; 1 ♂, Sijitong, June.

165. *Neptis dejeani* Oberthür, 1894. 6 ♂♂, Nidadan and Naqialo, May; 2 ♂♂, Gongshan, June; 1 ♂, Lishadi, June; 2 ♂♂, Bapo, June.

166. *Neptis divisa* Oberthür, 1908. 1 ♂, Nidadan, May; 1 ♀, Sijitong, June; 1 ♂, Nidadan, July.

167. *Phaedyma aspasia aspasia* (Leech, 1890). TL: Sichuan. (= *Neptis aspasia weisiensis* Yoshino, 1997. TL: Weixi, NW. Yunnan. **syn. nov.**). 3 ♂♂, Gazu, June.
Yoshino (1997) described the population from Weixi as a new subspecies. However, the diagnostic characters mentioned by Yoshino do not run out of the individual variation of ssp. *aspasia*. I prefer to regard all the populations from NW. Yunnan and SE. Tibet as the nominotypical *aspasia*.

168. *Athyma opalina opalina* KOLLAR, 1844. 1 ♂, Longpo to Nidadan, May; 5 ♂♂, Gazu and Qiqi, June and July; 2 ♂♂, Ban, July.

169. *Athyma jina jina* MOORE, 1857. 1 ♂ (DSF), Lazan, south of Gongshan, June.

170. *Sumalia daraxa daraxa* (DOUBLEDAY, 1848). 1 ♂, Xishaofang, June; 1 ♂, Bapo, June.

171. *Parasarpa zayla* (DOUBLEDAY, 1848). 2 ♂♂, Longyuan, July; 7 ♂♂, Gazu, July.

172. *Parasarpa dudu dudu* (WESTWOOD, 1850). 1 ♂, Kongdang, July; 1 ♂, Gazu, June.

173. *Parasarpa houlberti* (OBERTHÜR, 1912). 4 ♂♂, Gazu, July.

174. *Auzakia danava danava* (MOORE, 1857). 1 ♂, Kongdang, July; 2 ♂♂, Longyuan, July.
This population has underside hindwing subbasal spots more greenish than in examples from SE. Tibet, but does not constitute a separate subspecies. The taxon, *Limenitis brunnea* TYTLER, 1939 is only a synonym of *A. danava*.

175. *Limenitis homeyeri meridionalis* HALL, 1930 (fig. 63; col. pl. V, fig. 4). 3 ♂♂, Nidadan, May; 2 ♂♂, Bingzhongluo, May; 2 ♂♂, Nidadan, July.
According to HALL's description, this subspecies has all bands on wings broader and underside hindwing more yellowish brown in ground color than in ssp. *venata* LEECH, 1892 (= ssp. *sugiyamai* YOSHINO, 1997, TL: Siguniang Shan, Sichuan) from Sichuan and Shaanxi. I have examined the male genitalia of Nujiang specimens and found no difference from those of *venata* from Sichuan.

176. *Limenitis misuji wenpingae* subspec. nov. 3 ♂♂, 1 ♀, Nidadan, May; 2 ♂♂, 3 ♀♀, Nidadan, July.

177. *Limenitis (Litinga) mimica gaolingonensis* YOSHINO, 1995 (figs. 117, 118; col. pl. IX, fig. 1) (= *Limenitis mimica gaolingonshanus* YOSHINO, 1997; incorrect subsequent spelling). 1 ♂, Ban, July; 1 ♂, Mabilo, July.
These specimens agree exactly with the original description and figures of *gaolingonensis*. In my previous report on butterflies from Namjagbarwa area, I wrongly treated *gaolingonensis* as a synonym of *Limenitis rileyi* TYTLER, 1940. An examination of male genitalia proves *gaolingonensis* to be a good subspecies of *L. mimica*, not *L. rileyi*.
The exact type locality of *gaolingonensis* is unknown; YOSHINO only gave "Gaolingon Mts., midwest Yunnan prov., China". As all his new taxa were obtained from the area around Lushui County, the central portion of Nujiang valley, it is possible that his types of *gaolingonensis* were taken from the mountain area between Lushui and Pianma, near Sino-Burman border, most probably on the west slope of Gaoligongshan Mts. All my specimens were taken from Dulong valley, the west slope of Gaoligongshan Mts.

178. *Limenitis (Litinga) mimica meilius* YOSHINO, 1997 (figs. 119–122; col. pl. IX, fig. 4). 1 ♂, Nidadan, May; 9 ♂♂, Gazu and Qiqi, June and July.
This subspecies was originally described from Mt. Meilixueshan, Deqin, NW. Yunnan and very similar to ssp. *mimica* POUJADE, 1885 (figs. 123, 124; col. pl. IX, fig. 7) from Sichuan, C. and N. China, but differs from the latter in having all blackish markings grayer, without any reddish hue in certain light. All my specimens from east slope of Gaoligongshan Mts. (Nujiang valley) agree in general with the YOSHINO's type series and only differ a little in having the submarginal pale spots on upperside of wings much darker (such a difference may not run out of individual or ecological variation).
An examination of male genitalia of *xizangana* (HUANG, 1998), *mimica, gaolingonensis* and *meilius* in my collection suggests that *xizangana* belongs to *L. rileyi* TYTLER, 1940 with serrate apical portion of male valva comparatively shorter whilst *gaolingonensis* and *meilius* belong to *L. mimica* with serrate portion of valva comparatively longer. A checklist of *L. rileyi* and *L. mimica* is as follows.

Limenitis rileyi. This species has apex of discocellular cell on forewing upperside entirely whitish and male valva narrowly serrate at apex.
ssp. *rileyi* (TL: Htawgaw, NE. Burma). According to MONASTYRSKII et al. (2000: 475), this subspecies has forewing apex rounded, all pale areas between veins on both sides of wings longer and wider than in

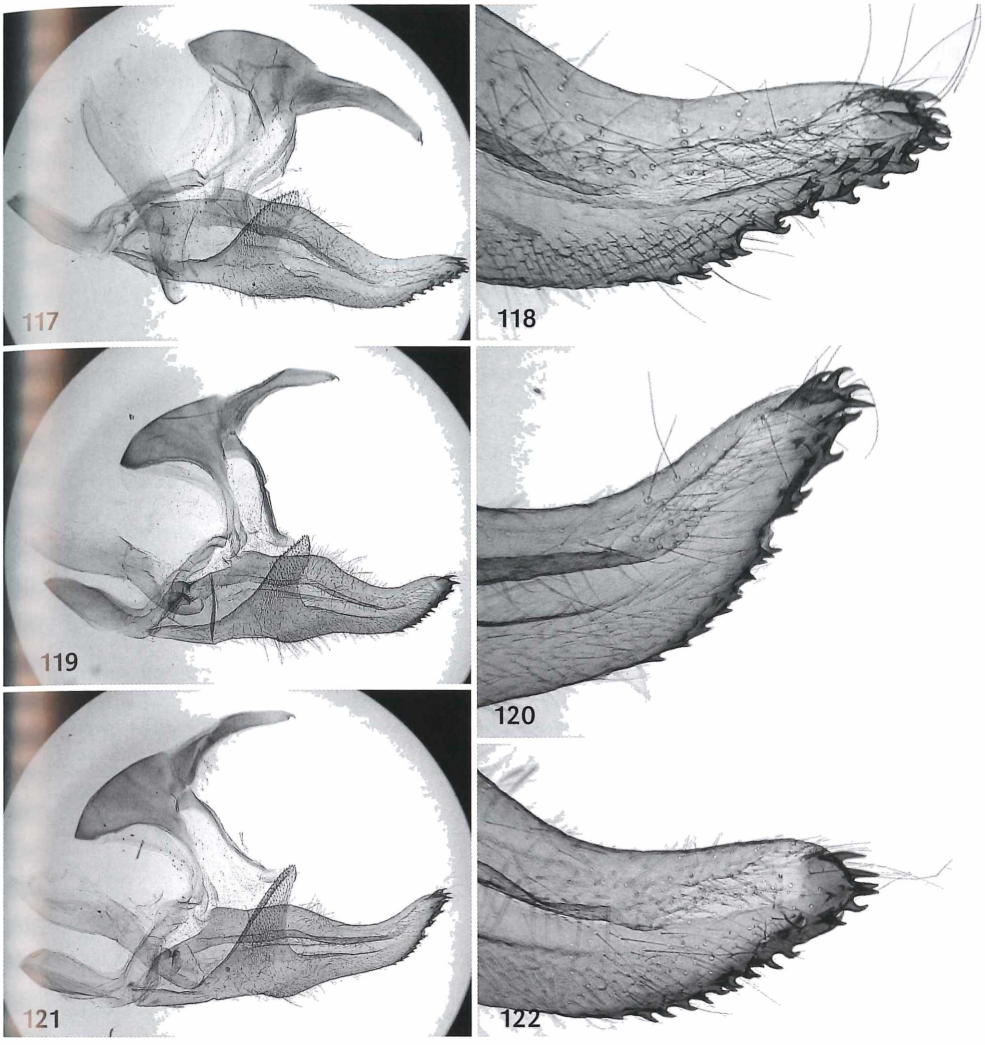


Fig. 117: Male genitalia of *Limenitis mimica gaolingonensis* (Dulongjiang, specimen illustrated on col. pl. IX, fig. 1) consisting of genital capsule in lateral view with left valva removed.
Fig. 118: Enlarged tip of right valva of *Limenitis mimica gaolingonensis* (Dulongjiang, specimen illustrated on col. pl. IX, fig. 1) in lateral view.
Fig. 119: Male genitalia of *Limenitis mimica meilius* (Nujiang, specimen not illustrated) consisting of genital capsule in lateral view with left valva removed.
Fig. 120: Enlarged tip of right valva of *Limenitis mimica meilius* (Nujiang, specimen illustrated on col. pl. IX, fig. 4) in lateral view.
Fig. 121: Male genitalia of *Limenitis mimica meilius* (Nujiang, specimen illustrated on col. pl. IX, fig. 4) consisting of genital capsule in lateral view with left valva removed.
Fig. 122: Enlarged tip of left valva of *Limenitis mimica meilius* (Nujiang, specimen not illustrated) in lateral view.

ngoclinensis (thus wider than in *xizangana* too), and both postdiscal and submarginal spots well marked on both wings.

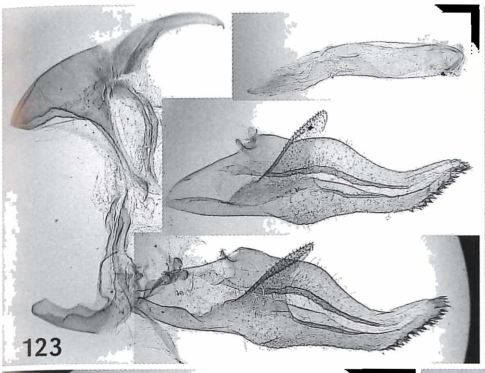
ssp. *xizangana* HUANG, 1998 **comb. nov.** (TL: Yigong and Metok, SE. Tibet) (figs. 125, 126; col. pl. IX, fig. 10). This subspecies is very similar to ssp. *ngoclinensis* in the extension of pale markings on wings, differs from *ngoclinensis* in having forewing apex more pointed and both postdiscal and submarginal spots well marked on upperside of hindwing. Male genitalia are illustrated here.
ssp. *ngoclinensis* MONASTYRSKII, DEVYATKIN & NGUYEN, 2000 (TL: Kon Tum prov., C. Vietnam). This subspecies has forewing apex very much rounded, pale markings on wings developed as in ssp. *xizangana* and the submarginal spots better marked than postdiscal spots on hindwing upperside.

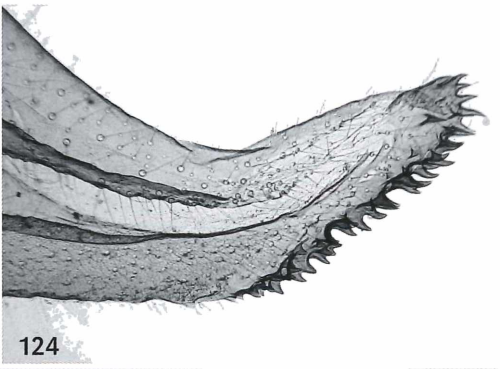
Limenitis mimica. This species has apex of cell on forewing upperside black-dusted and male valva broadly serrate at apex.
ssp. *mimica* (TL: Sichuan; also known from C. & N. China.) (= *Hestina oberthuri* LEECH, 1892, TL: Sichuan). This subspecies has all pale bands between veins on both sides of wings comparatively narrower, underside ground color dark gray and all blackish coloring on upperside with a reddish hue in certain light. Its male genitalia are illustrated here.
ssp. *pe* YOSHINO, 1997 (TL: Zhongdian, NW. Yunnan; Dali, N. Yunnan). This subspecies has all pale bands between veins on wings much broader and fully developed than in all other subspecies, underside ground color dark gray and both submarginal and postdiscal pale spots on hindwing upperside clearly marked. I wrongly treated this subspecies as synonym of *meilius* in my previous work (HUANG, 2000).
ssp. *meilius* (TL: Deqin, NW. Yunnan, also known from the east slope of Gaoligongshan, Nujiang valley). This subspecies is similar to ssp. *mimica* but differs a little in having upperside blackish coloring much grayer, without reddish hue in certain light. It has underside ground color dark gray and only submarginal spots well marked on upperside of hindwing. Male genitalia dissected from Nujiang specimen are illustrated here.
ssp. *gaolingonensis* YOSHINO, 1995 (TL: Gaoligon, Mts. NW. Yunnan, known from the west slope of Gaoligongshan Mts. including Dulong valley). This subspecies has underside ground color reddish brown, resembling that of *L. rileyi*, and has pale bands between veins comparatively narrower and only submarginal spots developed on hindwing upperside. Male genitalia dissected from Dulongjiang specimen are illustrated here.

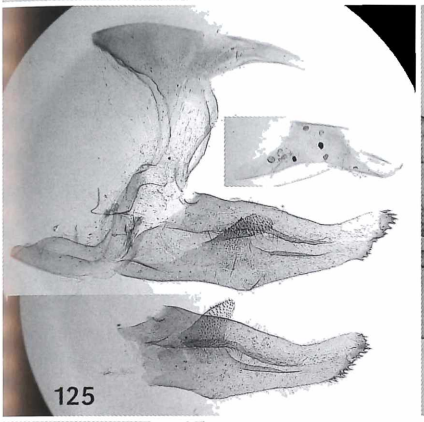
179. *Limenitis (Chalinga) elwesi* (OBERTHÜR, 1883). 3 ♂♂, Nidadan, May; 1 ♂, Geyi, May; 3 ♂♂, Sijitong, June; 3 ♂♂, Gongshan, June; 2 ♂♂, Nidandan, July.

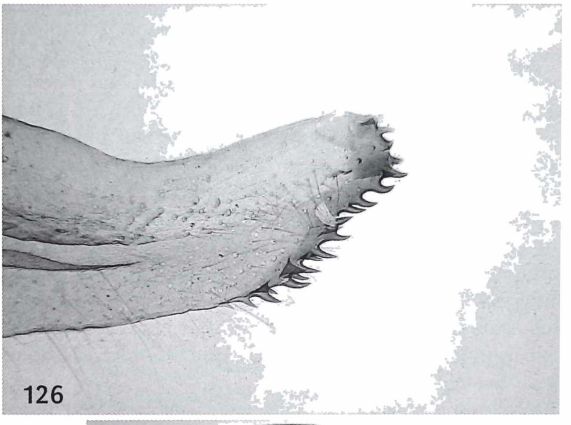
180. *Limenitis (Patsuia) sinensium minor* HALL, 1930. TL: Tsekou, NW. Yunnan. (= *Limenitis sinensium lisu* YOSHINO, 1997, TL: Zhongdian, NW. Yunnan. **syn. nov.**). 1 ♂, Sijitong, June.
When describing ssp. *lisu* from Zhongdian, YOSHINO completely overlooked all the known subspecies except the nominotypical *sinensium*. According to HALL's original description (1930: 158), *Limenitis sinensium minor* has size "smaller than the average size of *sinensium* OBERTH.; all the yellow markings above paler and slightly larger; the underside is especially characterized by the complete absence of the marginal dark brown band of the hind wings, while the median band is also much narrower and ill-defined, sometimes nearly obsolete" The original description and figures of *lisu* agree exactly with *minor* and the type locality of *lisu* is very close to that of *minor*. Therefore *lisu* should be regarded as a junior synonym of *minor*. Hitherto the following subspecies have been described: ssp. *sinensium* OBERTHÜR, 1879 from Sichuan, ssp. *cinereus* BANG-HAAS, 1937 from Gansu, ssp. *fulvus* BANG-HAAS, 1937 from Gansu, ssp. *sengei* KOTZSCH, 1929 from Gansu, ssp. *minor* from NW. Yunnan.

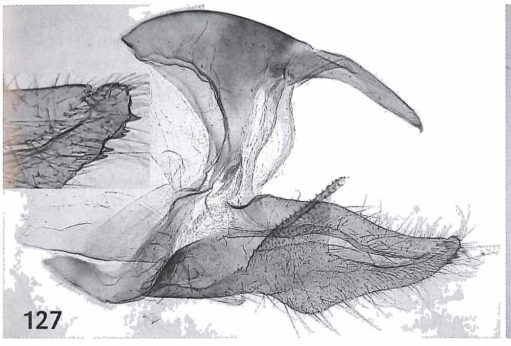
181. *Limenitis albidior* HALL, 1930. **stat. nov.** (fig. 127; col. pl. IX, fig. 2) (= *Limenitis albomaculata albidior* HALL, 1930, TL: Tsekou, NW. Yunnan). 1 ♂, Longyuan, July.
This single specimen from Dulong valley agrees with the original description of *albidior*. According to HALL's original description (1930: 157), the male of *Limenitis albomaculata albidior* "differs from typical *L. albomaculata* LEECH (fig. 128; col. pl. IX, fig. 5) in the extension of the white bands of both wings: on the fore wings above the band extends from the subcostal vein to vein 2 instead of terminating just below vein 3 as in *albomaculata*, and is at least 4 mm. wide at the middle; there are nearly always two distinct subapical spots; on hind wings the band extends well below vein 2 and is 5 mm wide"











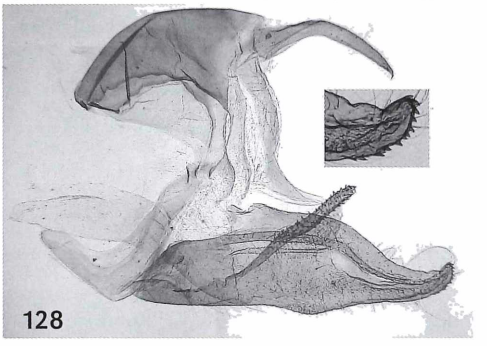


Fig. 123: Male genitalia of *Limenitis mimica mimica* (Gonggashan, Sichuan, specimen illustrated on col. pl. IX, fig. 7) consisting of genital capsule in lateral view with left valva and aedeagus removed (bottom), of aedeagus in lateral view (top right), and of left valva in lateral view (center right). Fig. 124: Enlarged tip of right valva of *Limenitis mimica mimica* (Gonggashan, Sichuan, specimen illustrated on col. pl. IX, fig. 7) in lateral view. Fig. 125: Male genitalia of *Limenitis rileyi xizangana* (paratype, Yigong, SE. Tibet, specimen illustrated on col. pl. IX, fig. 10) consisting of genital capsule in lateral view with left valva and aedeagus removed (center), of aedeagus in lateral view (top right), and of left valva in lateral view (bottom). Fig. 126: Enlarged tip of left valva of *Limenitis rileyi xizangana* (paratype, Yigong, SE. Tibet, specimen illustrated on col. pl. IX, fig. 10) in lateral view. Fig. 127: Male genitalia of *Limenitis albidor* (Dulongjiang, specimen illustrated on col. pl. IX, fig. 2) consisting of genital capsule in lateral view with left valva removed (right), and of the enlarged tip of left valva in lateral view(left). Fig. 128: Male genitalia of *Limenitis albimaculata* (Gonggashan, Sichuan, specimen illustrated on col. pl. IX, fig. 5) consisting of genital capsule in lateral view with left valva removed (left), and of the enlarged tip of right valva in lateral view (right).

An examination of male genitalia strongly suggests *albidior* to be independent from *Limenitis albomaculata* LEECH, 1891 from Sichuan (TL: Siaolou), Hunan, Shaanxi and Henan, with valva much broader at distal half and bearing less teeth at tip than in *albomaculata*. In external features, *L. albidior* differs remarkably from *L. albomaculata* in having discal white spots on upperside of both wings much bigger and longer, and discal white band on underside of forewing more oblique and directed to tornus of forewing, not directed to dorsum well before tornus as in *L. albomaculata*.

182. *Abrota ganga pratti* LEECH, 1891 (fig. 130). 8 ♂♂, 5 ♀♀, Nidadan to Bingzhongluo, July; 2 ♂♂, Gazu, July.
This population has been wrongly identified as ssp. *ganga* MOORE, 1857 (figs. 129, 131) in my previous report on my 2000 expedition based on a female. The examination of males proves that the Nujiang population should be placed into ssp. *pratti* because in males the upperside ground color is more yellowish and less reddish and the hindwing upperside postdiscal black band is remoter from the submarginal black band than in ssp. *ganga*. A detailed examination of external features shows that the Nujiang population of ssp. *pratti* has antennae more blackish above and all black markings on upperside usually more developed than in typical population of ssp. *pratti* from Sichuan. However, it should be noted that ssp. *pratti* is rather variable in black markings on upperside of wings and a few examples from Sichuan have well marked black markings as in Nujiang population. The females however do not differ apparently between ssp. *ganga* and ssp. *pratti*.
Hitherto five subspecies of *A. ganga* have been described, viz. ssp. *ganga* from Sikkim, Bhutan, Assam, Burma and Metok, ssp. *pratti* from Sichuan and Yunnan, ssp. *formosana* FRUHSTORFER, 1908 (= *A. pratti candidii* WILEMAN, 1911) from Taiwan, ssp. *flavina* MELL, 1923 from Guangdong and ssp. *riubaensis* YOSHINO, 1997 from Shaanxi. Ssp. *flavina* is very similar to ssp. *pratti* and only differs from the latter in having forewing broader in shape, upperside ground color more reddish and hindwing upperside postdiscal black band less developed, its lectotype has been designated by YOKOCHI in 1999 and deposited in ZMHU; ssp. *formosana* is characterized by its broader and more rounded wings and heavily marked black wing-pattern; ssp. *riubaensis* is doubtfully different from ssp. *partti* and does not merit being retained.
The following specimens have been dissected and show no constant difference from one another: 2 ♂♂ of ssp. *pratti* from Gonggashan, Sichuan, 3 ♂♂ from Nujiang valley, and 2 ♂♂ of ssp. *ganga* from Metok, SE. Tibet.

183. *Euthalia sakota* FRUHSTORFER, 1928. 3 ♂♂, Sijitong, July; 2 ♂♂, 1 ♀, Nidadan, July; 3 ♂♂, Qiqi, July.

184. *Euthalia staudingeri nujiangensis* HUANG, 2001. 1 ♂, Sijitong, July.

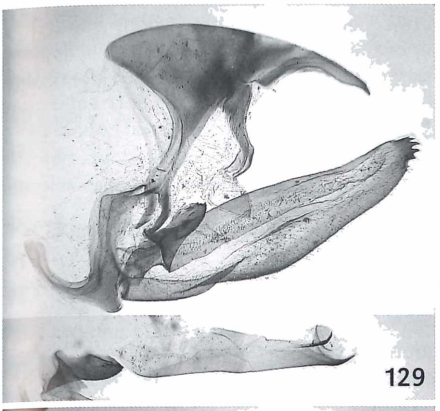
185. *Euthalia heweni* HUANG, 2002. 1 ♂, Ban, July; 1 ♀, Bapo to Kongdang, July.

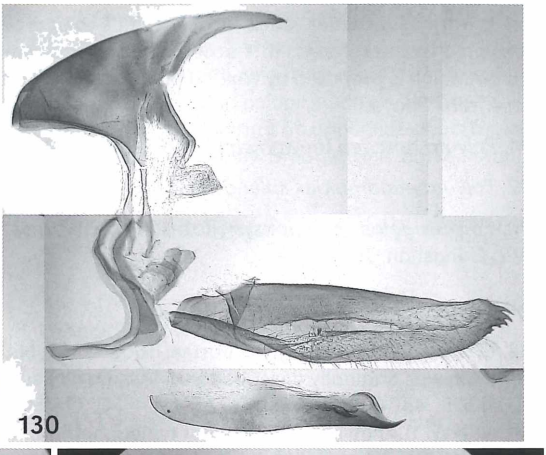
186. *Euthalia mingyiae* HUANG, 2002. 2 ♂♂, Nidadan, July.

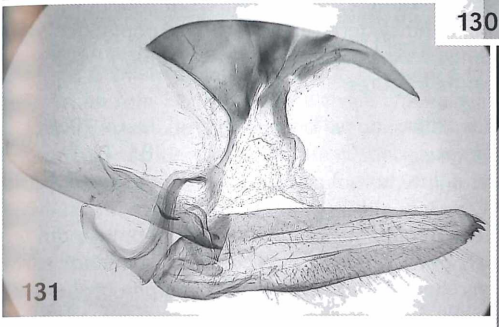
187. *Euthalia confucius sadona* TYTLER, 1940. 2 ♂♂, Gazu, July; 1 ♂, Lishadi, July.

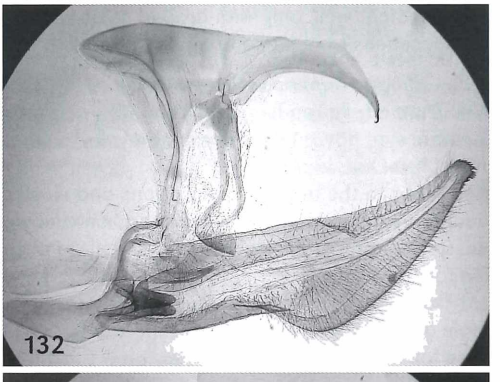
188. *Euthalia sahadeva yanagisawai* SUGIYAMA, 1996 **stat. nov.** (fig. 132; col. pl. IX, fig. 8) (= *Euthalia yanagisawai* SUGIYAMA, 1996, TL: Kunming, N. Yunnan and Panzhihua, S. Sichuan). 2 ♂♂, Gazu and Gongshan, July.
This taxon was originally described from N. Yunnan and S. Sichuan as new species, and all these two males from Nujiang valley agree with the holotype in both external features and male genitalia. SUGIYAMA (1996) regarded *yanagisawai* as independent species from *E. sahadeva* (MOORE, 1859) and illustrated male genitalia of both taxa for comparison. However, his illustration of *sahadeva* was apparently taken from another species, not *sahadeva*. I have examined the male genitalia of true *E. sahadeva sahadeva* (fig. 133; col. pl. IX, fig. 11) from Metok, SE.Tibet, and there is no reliable genital difference found between *sahadeva* and *yanagisawai*.

189. *Euthalia khama dubernardi* OBERTHÜR, 1907. 1 ♂, Mabilo, July.
Two subspecies of *Euthalia khama* ALPHERAKY, 1895 have been described: ssp. *khama* (= *E. perlella* CHOU & WANG, 1994, synonymised by YOKOCHI, 2000) from Sichuan (Omei, Tatsienlu, Tianquan, Erlangshan, etc.), Gansu, Hunan and E. Yunnan, and ssp. *dubernardi* OBERTHÜR, 1907 from NW.









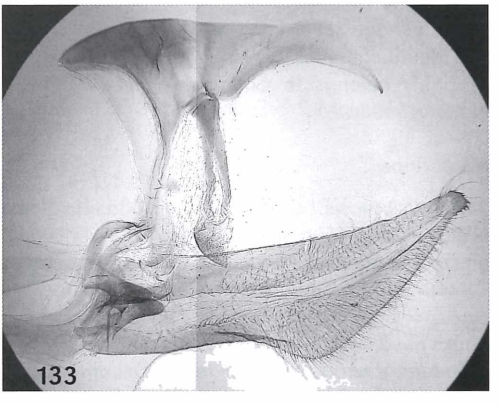


Fig. 129: Male genitalia of *Abrota ganga ganga* (Metok, SE. Tibet, specimen not illustrated) consisting of genital capsule in lateral view with left valva and aedeagus removed (top), and of aedeagus in lateral view (bottom). Fig. 130: Male genitalia of *Abrota ganga pratti* (Gonggashan, Sichuan, specimen not illustrated) consisting of genital capsule in lateral view with left valva and aedeagus removed (top), and of aedeagus in lateral view (bottom). Fig. 131: Male genitalia of *Abrota ganga ganga* (Metok, SE. Tibet, specimen not illustrated) consisting of genital capsule in lateral view with left valva removed. Fig. 132: Male genitalia of *Euthalia sahadeva yanagisawai* (Gongshan, Nujiang, specimen illustrated on col. pl. IX, fig. 8) consisting of genital capsule in lateral view with left valva removed. Fig. 133: Male genitalia of *Euthalia sahadeva sahadeva* (Metok, SE. Tibet, specimen illustrated on col. pl. IX, fig. 11) consisting of genital capsule in lateral view with left valva removed.

Yunnan (Tsekou), S. Sichuan and N. Burma (Kachin State). This single male from Dulong valley shows slight difference from the syntypes of ssp. *dubernardi* (illustrated by Yokochi, 2000: 23, plate 2) in discal bands on both wings a little broader. Its male genitalia have been dissected and show no difference from the nominated *khama* (3 ♂♂ from Sichuan dissected).

190. *Euthalia nara nara* (Moore, 1859). TL: N. India. (? = *Euthalia nara chayuana* Huang, 2001. TL: Chayu). 2 ♂♂, Gazu and Qiqi, July; 1 ♀, Gongshan, July.
According to Yokochi (pers.comm.), even in such a small area as Burma, this species varies remark-

ably in various localities, each locality seems to sport its own peculiar population, many apparently connected by intergrades. It is acceptable to regard most of the described subspecies as synonyms and a revision is prepared by YOKOCHI. It should be noted that specimens from Nujiang are identical to those from Chayu.

191. *Polyura narcaea thawgawa* (TYTLER, 1940). 2 ♂♂, Nidadan, July.

192. *Polyura eudamippus splendens* (TYTLER, 1940). 1 ♀, Gongshan, June.

193. *Polyura dolon magniplaga* (ROTHSCHILD, 1899). 2 ♂♂, Nidadan, May; 1 ♂, Lishadi, June; 3 ♂♂, 2 ♀♀, Gongshan, June.

Calinaginae

194. *Calinaga buddha brahma* BUTLER, 1885. 3 ♂♂, Nidadan, May; 2 ♂♂, Gongshan, June.
This taxon was originally described from Assam and subsequently illustrated by OBERTHÜR (1920: plate dxiii, 4303, 4304) and EVANS (1923: fig. F.14). OBERTHÜR's figures were taken from two males from Tsekou, NW. Yunnan and they are not typical *brahma*, but they agree with the typical population from Assam rather well, only with ground color less darkened. EVANS' figure was most probably typical. All my specimens from Nujiang agree better with OBERTHÜR's figures.

195. *Calinaga buphonas* OBERTHÜR, 1920 (syntype localities: Lou tse kiang (Nujiang), Tsekou, Bahand, NW. Yunnan, Pe-Yen-Tsing, N. Yunnan) (= *C. buddha yunnana* OKANO & OKANO, 1984. TL: Dali, N. Yunnan. **syn. nov.**). 1 ♂, Nidadan, May; 2 ♂♂, Bingzhongluo, June; 3 ♂♂, Gongshan, June; 4 ♂♂, Gazu, June; 1 ♂, Qiqi, June.
According to the original descriptions and illustrations of *buphonas* and *yunnana*, both taxa are undoubtedly the same thing. OKANO & OKANO obviously overlooked the publication of *buphonas* when describing their *yunnana*. In Nujiang valley I observed both *C. buphonas* and *C. buddha brahma* flying together in the same season. An examination of male genitalia shows that both taxa are independent from each other. A detailed study including the comparative description of wing-venation and male genitalia will be given in a separate paper, in which I will provide a tentative review on most Chinese taxa.

196. *Calinaga* spec. 1 ♂, Geyi, May.
The identification of this single male is still under study and will be given in a separate paper. It most probably belongs to *Calinaga genestieri* OBERTHÜR, 1922, which was originally described from Nujiang valley.

Apaturinae

197. *Apatura iris bieti* OBERTHÜR, 1885. TL: Sichuan. (? = *A. iris likiangensis* MELL, 1952. TL: Lijiang, NW. Yunnan)
I incline to regard *likiangensis* as synonym of *bieti*, however I have only a few specimens from Sichuan, Yunnan and SE. Tibet, which are insufficient to prove my supposal.

198. *Apatura ilia yunnana* MELL, 1952. 1 ♀, Sijitong, July.

199. *Mimathyma schrenckii laeta* (OBERTHÜR, 1906). 2 ♂♂, Mabilo, July.

200. *Sephisa princeps tamla* SUGIYAMA, 1999. 6 ♂♂, Nidadan and Sijitong, July; 1 ♂, Gazu, July.
These newly added specimens confirm *tamla* to be a good subspecies distinct from the nominate *princeps*.

201. *Hestina nama nama* (DOUBLEDAY, 1844). 1 ♂, Lishadi, June.

Amathusiinae

202. *Faunis aerope longpoensis* HUANG, 2001. 2 ♀♀, Nidadan, May and July; 3 ♂♂, 2 ♀♀, Gazu and Qiqi, July.

In addition to the unique holotype ♀, seven specimens of both sexes were obtained this time. The males are rather similar to those of ssp. *aerope* but differ remarkably in having upperside ground colour darker and more grayish, forewing upperside apical blackish cloudy colouring more extensive, hindwing upperside marginal black border broader, and underside ground colour much darker brown. The lately added females from May and July have marginal blackish colouring on upperside of both wings not so extensive as in holotype female from September, but decidedly broader and darker than in females of ssp. *aerope*.

203. *Stichophthalma sparta gongshana* subspec. nov. 5 ♂♂, 2 ♀♀, Gongshan, July; 2 ♀♀, Lishadi, July.

Satyrinae

204. *Melanitis leda ismene* (Cramer, 1775). 1 ♂, Lishadi, June; 1 ♂, Longyuan, July.

205. *Zophoessa dura dura* Marshall, 1882. 1 ♂, Gongshan, June.

206. *Zophoessa neofasciata* (Lee, 1985) (figs. 134, 135). 13 ♂♂, Yaojiaping, May and June.
With the help of Dr. Wu Chun-Sheng, I have examined the type material preserved in the Institute of Zoology, Academia Sinica, including holotype ♂ from Gengma, 1 ♂ (paratype) from Pianma and 1 ♂ (paratype) from Dongchuan. All these type specimens apparently had their abdomens dissected by Prof. Lee Chuan-Long, but the male genitalia were lost. The examination of external features proves all these type specimens to be the same species, only with slight difference in the extension of male brand on forewing upperside from one another. All my specimens from Yaojiaping belong to this species without doubt. The rare type material of this species will be illustrated in another cooperating work.

207. *Zophoessa baileyi* (South, 1913) (fig. 136). 2 ♂♂, Qiqi, June.

208. *Zophoessa lisuae* Huang, 2002 (fig. 137). 1 ♂, Kongdang to Gongshan, July.
The male genitalia of *Z. lisuae* (fig. 137) and its allied species, *Z. neofasciata* (figs. 134, 135), *Z. baileyi* (fig. 136), *Z. nigrifascia* (fig. 138), *Z. wui* (fig. 139) and *Z. ocellata* (fig. 140) are illustrated here.

209. *Zophoessa maitrya thawgawa* (Tytler, 1939). 1 ♂, Gongshan, July.

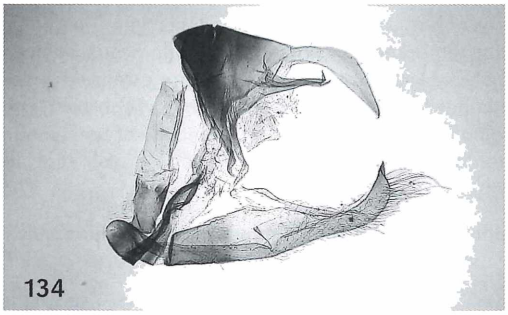
210. *Zophoessa nicetas* (Hewitson, 1863) (fig. 141). 2 ♂♂, Qiqi, June.
These two males are much smaller than those from Metok, SE. Tibet in my collection.

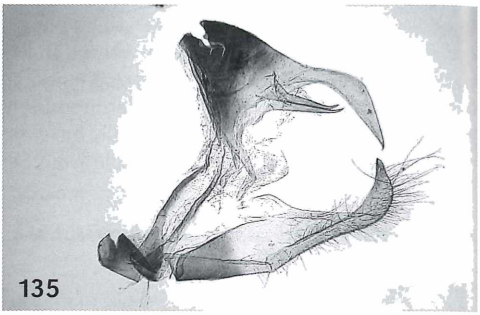
211. *Zophoessa sidonis* (Hewitson, 1863). 5 ♂♂, Qiqi, June; 1 ♂, Bapo, June; 2 ♂♂, Maku, July; 2 ♂♂, Miabilo, July.

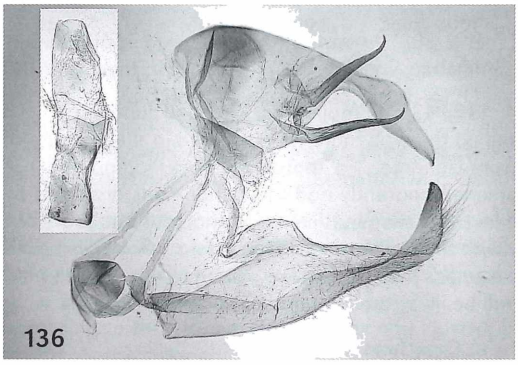
212. *Zophoessa kanjupkula burmana* (Tytler, 1939) (fig. 142). 5 ♂♂, Qiqi, June.
All these specimens very closely resemble the unique holotype of *burmana* from NE. Burma in external features, only differ a little from the latter in having hindwing tornal ocelli with two pupils, not one, and all submarginal ocelli a little bigger. I believe such difference is due to individual variation and all my specimens belong to *burmana*.
In its original description, *burmana* was described as a subspecies of *Lethe violaceopicta* Poujade, 1884. Several males of the true *Z. violaceopicta* (fig. 143) from Sichuan and Guizhou have been examined and dissected, however they show different male genital structures from Nujiang samples of *burmana* in having no swollen portion on uncus, uncus broader at tip, and tip of valva less serrate than in *burmana*. In male genitalia, *burmana* forms the transition from *Z. violaceopicta* Poujade, 1884 to *Z. nicetas*, with uncus a little swollen near base on its dorsal margin as in *Z. nicetas* (not swollen in *Z. violaceopicta*) and tip of valva broadly serrate as in *Z. violaceopicta* (narrowly serrate in *Z. nicetas*). It is very possible that *burmana* is conspecific with *Z. kanjupkula* (Tytler, 1914) from Naga Hills whilst *kanjupkula* is independent from *violaceopicta*.

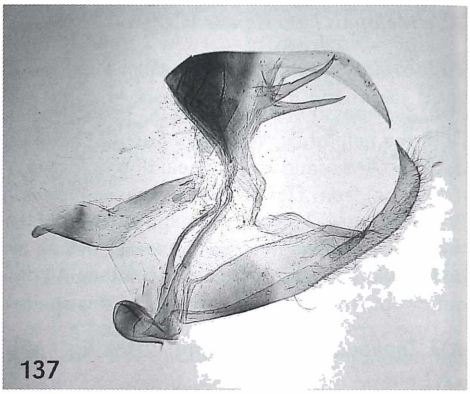
213. *Lethe andersoni* (Atkinson, 1871). 1 ♂, Nidadan, May.

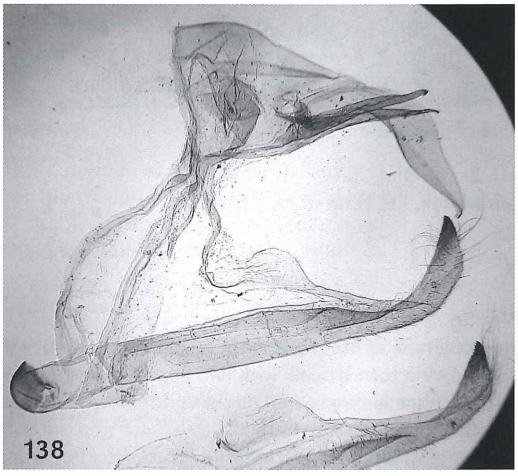
214. *Lethe ramadeva* (De Niceville, 1888). 1 ♂, Yaojiaping, August.











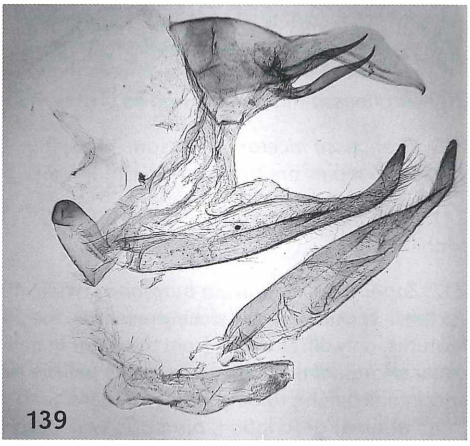
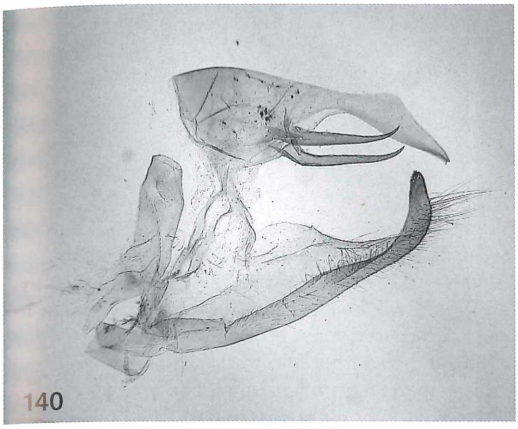
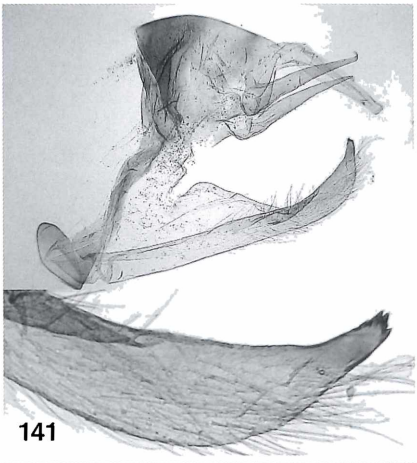


Fig. 134: Male genitalia of *Zophoessa neofasciata* (Yaojiaping, Nujiang, specimen illustrated in Atalanta **33** (3/4): 447, figs. 2, 6) consisting of genital capsule in lateral view with right valva removed. Fig. 135: Male genitalia of *Zophoessa neofasciata* (Yaojiaping, Nujiang, specimen not illustrated) consisting of genital capsule in lateral view with right valva and aedeagus removed. Fig. 136: Male genitalia of *Zophoessa baileyi* (Qiqi, Nujiang, specimen illustrated in Atalanta **33** (3/4): 447, figs. 3, 7) consisting of genital capsule in lateral view with right valva and aedeagus removed (right), and of aedeagus in dorsal view (left). Fig. 137: Male genitalia of *Zophoessa lisuae* (holotype, Nujiang, specimen illustrated in Atalanta **33** (3/4): 447, figs. 1, 5) consisting of genital capsule in lateral view with right valva removed. Fig. 138: Male genitalia of *Zophoessa nigrifascia* (Henan, C. China, specimen not illustrated) consisting of genital capsule in lateral view with right valva and aedeagus removed. Fig. 139: Male genitalia of *Zophoessa wui* (holotype, Metok, SE. Tibet) consisting of genital capsule in lateral view with right valva and aedeagus removed (top), of right valva flattened (right), and of aedeagus in lateral view (bottom).





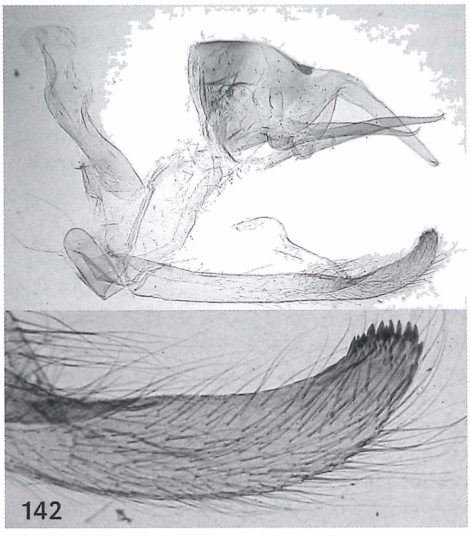


Fig. 140: Male genitalia of *Zophoessa ocellata* (Panzhihua, S. Sichuan, specimen illustrated in Atalanta **33** (3/4): 447, figs. 4, 8) consisting of genital capsule in lateral view with right valva removed.
Fig. 141: Male genitalia of *Zophoessa nicetas* (Qiqi, Nujiang, specimen not illustrated) consisting of genital capsule in lateral view with right valva and aedeagus removed (top), and of the enlarged tip of left valva (bottom).
Fig. 142: Male genitalia of *Zophoessa kanjupkula burmana* (Qiqi, Nujiang, specimen not illustrated) consisting of genital capsule in lateral view with right valva removed (top), and of the enlarged tip of left valva (bottom).
Fig. 143: Male genitalia of *Zophoessa violaceopicta* (Omei, Sichuan, specimen not illustrated) consisting of genital capsule in lateral view with right valva removed (top), and of the enlarged tip of left valva (bottom).

215. *Lethe umedai albofasciata* Huang, 2002 (figs. 144, 145). 14 ♂♂, Ban, July: 1 ♀, Xiongdang to Mabilo, July.
The male genitalia are illustrated here.

216. *Lethe liae* Huang, 2002 (fig. 146). 1 ♂, Qiqi, July.
The male genitalia are illustrated here.

217. *Lethe verma sintica* FRUHSTORFER, 1911. 1 ♂, 1 ♀, Nidadan, May; 3 ♂♂, Nidadan and Sijitong, July.

218. *Lethe confusa confusa* AURIVILLIUS, 1898. 2 ♂♂, Lishadi, July.

219. *Lethe chandica chandica* (MOORE, 1857). 2 ♂♂, Lishadi, July.

220. *Lethe latiaris latiaris* (HEWITSON, 1863) (figs. 147–149). 1 ♂, 1 ♀, Bapo, June.
The male genitalia are illustrated here.

221. *Lethe latiaris lishadii* HUANG, 2002. 3 ♂♂, Lishadi, June.
With the help of Dr. CHUN-SHENG WU, the unique holotype of *Lethe unistigma* LEE, 1985 (Shizong, E. Yunnan) preserved in IZAS was examined, its abdomen had been dissected by Prof. LEE but the genitalia were lost. The color photos of holotype of *unistigma* will be published in another cooperating work. According to the external features, I think that *unistigma* is most probably a junior synonym of *Lethe latiaris perimele* FRUHSTORFER, 1911 from S. Burma, having nothing to do with *Lethe konkakini* MONASTYRSKII & DEVYATKIN, 2000 and *L. latiaris lishadii*, with male brand on upperside of forewing present as well as *Lethe latiaris latiaris*, not absent as LEE said in original description. The only peculiar character of *unistigma* is the hair tuft on hindwing upperside remoter from the discocellular cell than in other related taxa, but the unique holotype is a very worn specimen thus such character may be due to the worn condition of specimen. In external features, *lishadii* differs remarkably from *unistigma* in having discal line much remoter from antediscal line on underside of hindwing. The male genitalia of *lishadii* are illustrated here, with saccus and aedeagus somewhat shorter than in ssp. *latiaris*.

222. *Lethe marginalis obscurofasciata* HUANG, 2002. 8 ♂♂, 2 ♀♀, Gazu, July; 4 ♂♂, Sijitong, July.
The male genitalia as illustrated (fig. 150), have aedeagus more strongly spined at dorsal margin than in ssp. *marginalis* (fig. 151) and uncus relatively longer than in ssp. *marginalis*.

223. *Neope pulaha nuae* HUANG, 2002. 1 ♂, Qiqi to Dongshaofang, June.
When describing *Neope pulaha nuae* and *Neope chayuensis* as new, I overlooked the publication of *Neope pulahoides leechi* OKANO & OKANO, 1984 from Sichuan (Omei). With the help of Mr. ZHEN-JUN WU, 3 ♂♂ of *leechi* (col. pl. IX, figs. 6, 9) from W. Sichuan have been examined and they agree with the original description. In external features, *leechi* has male brand absent on upperside of forewing, not visible as in *N. pulaha nuae*, with length of forewing in males 33–34 mm against 37 mm in *N. chayuensis*. In male genitalia, *leechi* is much closer to *N. pulahoides* than to all other taxa within the genus, with process at apex of valva short and stout, sometimes absent. Therefore *leechi* should be treated as a subspecies of *N. pulahoides*. In addition, *chuni* MELL, 1923 from Fujian, E. China most probably should be treated as a good subspecies of *Neope pulahoides* as FUJIOKA (1970) considered, very closely resembling *leechi* in external features. *Neope pulahoides xizangana* WANG, 1994 from Linzhi has been considered in my previous works as a synonym of *Neope pulaha pulaha* (MOORE, 1857) because its unique holotype can not be distinguished from some samples of *pulaha* taken from Metok in external features, however the male genitalia of holotype of *xizangana* have not been examined yet; it should be emphasized that the male genitalia are the most reliable and constant diagnostic characters whereas the male brand and discocellular bar on forewing upperside are comparatively

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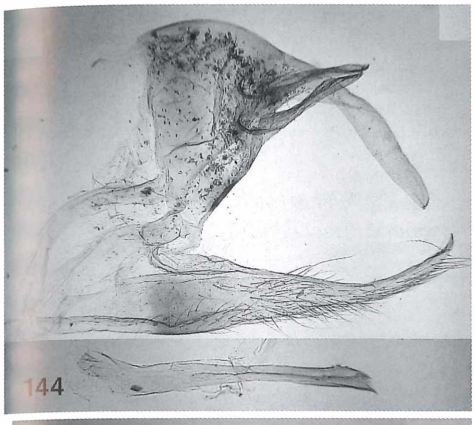
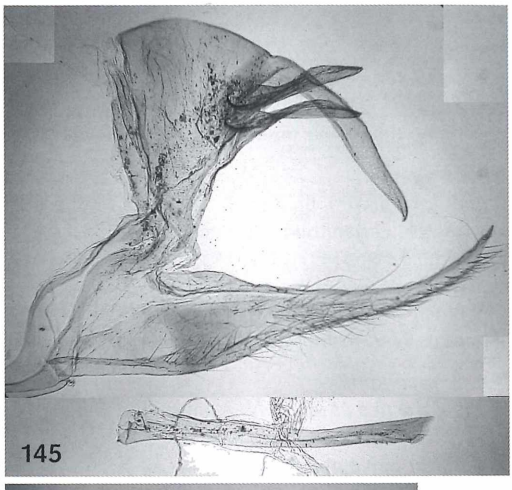
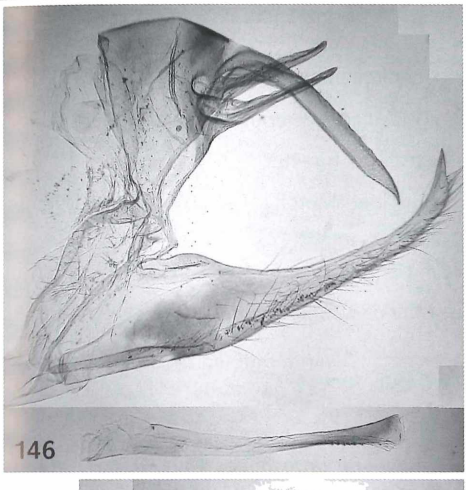
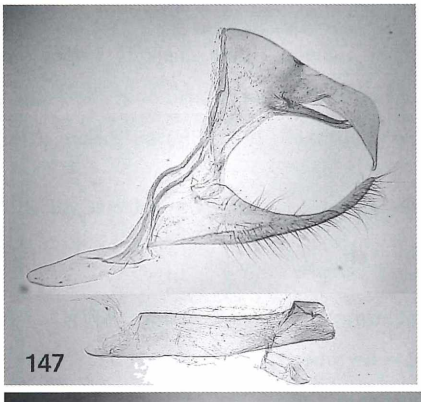
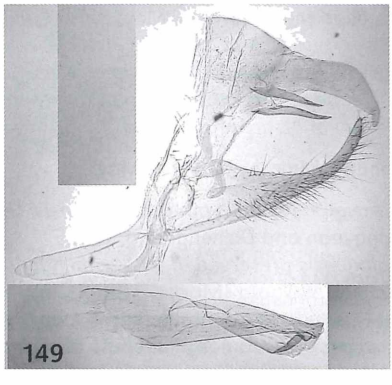
Fig. 144: Male genitalia of *Lethe umedai albofasciata* (holotype, Dulongjiang, specimen illustrated in Atalanta **33** (3/4): 445, figs. 2, 6) consisting of genital capsule in lateral view with right valva and aedeagus removed (top), and of aedeagus in lateral view (bottom).
Fig. 145: Male genitalia of *Lethe umedai albofasciata* (paratype, Dulongjiang, specimen illustrated in Atalanta **33** (3/4): 445, figs. 4, 8) consisting of genital capsule in lateral view with right valva and aedeagus removed (top), and of aedeagus in lateral view (bottom).
Fig. 146: Male genitalia of *Lethe liae* (holotype, Dulongjiang, specimen illustrated in Atalanta **33** (3/4): 445, figs. 1, 5) consisting of genital capsule in lateral view with right valva and aedeagus removed (top), and of aedeagus in lateral view (bottom).
Fig. 147: Male genitalia of *Lethe latiaris lishadii* (holotype, Lishadi, Nujiang, specimen illustrated in Atalanta **33** (3/4): 449, figs. 4, 8) consisting of genital capsule in lateral view with right valva and aedeagus removed (top), and of aedeagus in lateral view (bottom).











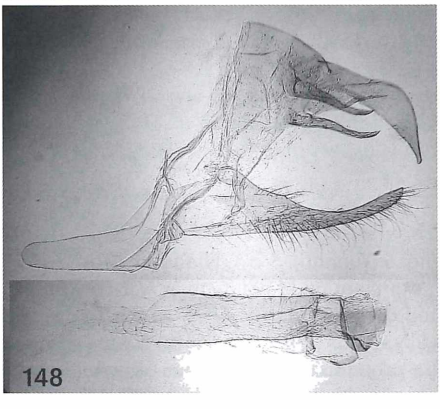


Fig. 148: Male genitalia of *Lethe latiaris latiaris* (Sandui, Dulongjiang, specimen illustrated in Atalanta **33** (3/4): 449, figs. 3, 7) consisting of genital capsule in lateral view with right valva and aedeagus removed (top), and of aedeagus in lateral view (bottom).
Fig. 149: Male genitalia of *Lethe latiaris latiaris* (Metok, SE. Tibet, specimen not illustrated) consisting of genital capsule in lateral view with right valva and aedeagus removed (top), and of aedeagus in lateral view (bottom).

variable in individuals and seasonal forms. Here I'd like to illustrate a male of DSF of *pulaha* from Yadong, S. Tibet (col. pl. IX, fig. 3), which shows the full discocellular bar on forewing upperside as in *pulahoides* but belongs to *pulaha* in male genitalia. A tentative checklist of all members of *Neope pulaha, Neope pulahoides* and their mostly allied species is as follows (only *emeinsis, chuni* and *xizangana* have their male genitalia unknown in literatures till now):

Neope pulaha
ssp. *pulaha* Sikkim, Bhutan, E. Nepal, S. Tibet (Yadong, ♂-genitalia illustrated – figs. 153, 154), SE. Tibet (Metok, ♂-genitalia illustrated – fig. 153) (syn. *xizangana* SE. Tibet (Linzhi))
ssp. *didia* Taiwan
ssp. *pandyia* NW. Himalayas, W. Nepal
ssp. *emeinsis* W. Sichuan (Omei)
ssp. *nuae* NW. Yunnan (Nujiang valley, ♂-genitalia illustrated – fig. 152)

Neope pulahoides
ssp. *pulahoides* Assam, NW. Yunnan (Nujiang valley, ♂-genitalia illustrated – figs. 155, 156)
? ssp. *chuni* Fujian , Guangdong
ssp. *tamur* E. Nepal
ssp. *leechi* W. Sichuan (col. pl. IX, figs. 6, 9) (TL: Omei, ♂-genitalia illustrated – figs. 157, 158)

Neope ramosa Sichuan, Hubei, Zhejiang, Henan, Fujian (Wuyishan, ♂-genitalia illustrated – fig. 159)

Neope chayuensis SE. Tibet (Chayu only, ♂-genitalia illustrated – fig. 160)

Neope pulahina (EVANS, 1923) Bhutan, Sikkim, Assam, SE. Tibet (Metok only), NW. Yunnan (Nujiang valley)

224. *Neope pulahoides pulahoides* (MOORE, 1892). 2 ♂♂, Lishadi, June and July.

225. *Neope pulahina* (EVANS, 1923). 3 ♂♂, Yaojiaping, May and June; 4 ♂♂, Qiqi to Dongshaofang, June.

226. *Neope armandii khasiana* MOORE, 1881. 1 ♂ (WSF), Qiqi, June.

227. *Neope oberthueri qiqia* HUANG, 2002. 7 ♂♂, Qiqi, June.

228. *Neope argestis* (OBERTHÜR, 1876) TL: Sichuan (? = *Neope argestoides* MURAYAMA, 1995. TL: Tuguancun, NW. Yunnan). 1 ♂, Yaojiaping, May; 4 ♂♂, Nidadan to Longpo, May; 5 ♂♂, Qiqi to Dongshaofang, June.
This species is very variable in external features so that I had to dissect all these specimens to confirm my identification and found that all of them belong to *Neope argestis*. According to the information in literatures, I suspect that *N. argestoides* is only a synonym of *N. argestis*.

229. *Neope simulans simulans* LEECH, 1890. 3 ♂♂, Longpo, May; 1 ♂, Zanian, May.

230. *Neope serica kinpingensis* LEE, 1962 **comb. nov.** (= *Neope yama kinpingensis* LEE, 1962, TL: Jinping, S. Yunnan). 3 ♂♂, Nidadan, May; 3 ♂♂, Longyuan and Dizhengdang, July.
After an examination of holotype of *Neope yama kinpingensis* preserved in IZAS, *kinpingensis* should be treated as a subspecies of *N. serica* LEECH, 1892, not *N. yama* (MOORE, [1858]), in the light of SUGIYAMA's revision (1994: 13–15) on *Neope yama* and *N. serica*. In external features, *kinpingensis* has upperside ground colour fuliginous-brown, hindwing upperside submarginal spots absent and forewing underside postdiscal oblique band not straight. All specimens from Nujiang valley agree with the holotype of *kinpingensis*, with an eyespot in space 1b on forewing underside; all specimens from Dulong valley have no eyespot in space 1b, but don't deserve a separate subspecies.

231. *Penthema darlisa darlisa* (MOORE, 1880). 1 ♂, Gongshan, June.

232. *Ragadia crito* DE NICEVILLE, 1890. 1 ♀, Bapo, June.

233. *Mycalesis suavolens konglua* TYTLER, 1939. 2 ♂♂, Xiongdang, July.

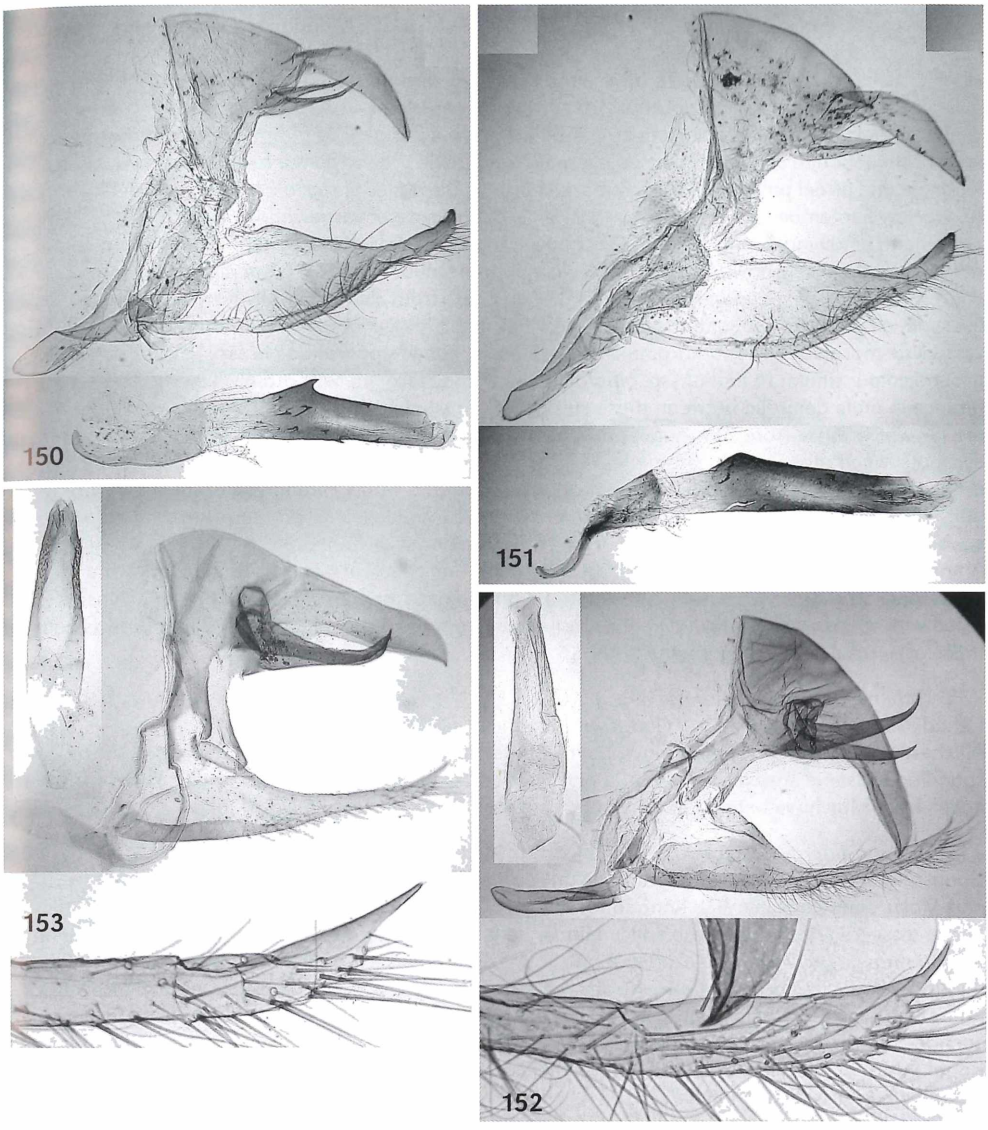


Fig. 150: Male genitalia of *Lethe marginalis obscurofasciata* (holotype, Gazu, Nujiang, specimen illustrated in Atalanta **33** (3/4): 449, figs. 2, 6) consisting of genital capsule in lateral view with right valva and aedeagus removed (top), and of aedeagus in lateral view (bottom).
Fig. 151: Male genitalia of *Lethe marginalis marginalis* (Qingchengshan, Sichuan, specimen illustrated in Atalanta **33** (3/4): 449, figs. 1, 5) consisting of genital capsule in lateral view with right valva and aedeagus removed (top), and of aedeagus in lateral view (bottom).
Fig. 152: Male genitalia of *Neope pulaha nuae* (holotype, Nujiang, specimen illustrated in Atalanta **33** (3/4): 443, figs. 2, 6) consisting of genital capsule in lateral view with left valva and aedeagus removed (top right), of aedeagus in lateral view (top left), and of the enlarged tip of right valva in lateral view (bottom).
Fig. 153: Male genitalia of *Neope pulaha pulaha* (WSF, Metok, SE. Tibet, specimen illustrated in Atalanta **33** (3/4): 443, figs. 4, 8) consisting of genital capsule in lateral view with left valva and aedeagus removed (top right), of aedeagus in lateral view (top left), and of the enlarged tip of right valva in lateral view (bottom).

234. *Mycalesis francisca albofasciata* TYTLER, 1914. 13 ♂♂ (DSF), Nidadan to Longpo, May; 1 ♂ (aberration), Zanian, May; 3 ♂♂ (DSF), Lishadi, June; 3 ♂♂ (WSF), Nidadan, July.
In my collection, three subspecies have been examined and they are easily distinguishable from one another: the males of ssp. *sanatana* MOORE, 1857 from Metok in August and September have forewing upperside discal eyespot in space 2 smaller, hindwing upperside marginal and submarginal dark lines prominent and surrounded by pale streaks, underside ground colour fuliginous-brown, with a violet tingle and discal pale streak clearly marked in lilac; the males of ssp. *albofasciata* from Nujiang valley in May-September have forewing upperside discal eyespot larger and subapical eyespot rather prominent, hindwing upperside marginal and submarginal lines obsolete, underside ground colour extensively and densely powdered with yellowish or greenish brown scales and discal pale streak not so sharply defined; the males of ssp. *francisca* (STOLL, 1780) from Sichuan in July have forewing upperside eyespots as big as in ssp. *albofasciata*, hindwing upperside usually with a spot in space 2, hindwing upperside marginal and submarginal lines visible but not so apparent as in ssp. *sanatana*, underside ground colour similar to that of ssp. *albofasciata* but the marginal area more yellowish. There is no difference in male genitalia between these subspecies. The specimens taken from May and June belong to DSF whilst those from July, August and September belong to WSF; the WSF usually has underside eyespots much more developed in size and number than in the DSF. The subspecies, *sanatana* was originally described from N. India and also known from the whole Himalayan areas on west of Manipur, Assam where it is replaced by ssp. *albofasciata*. The subspecies, *albofasciata* was originally described from Manipur and also known from N. Burma and NW. Yunnan.
Among examples from Nujiang valley, an aberration has been captured from Zanian, with underside discal pale streaks ill-defined at outer margins and the postdiscal areas out of them extensively suffused with whitish scales, its male genitalia have been examined and only show slight difference from those of normal males in apex of valva.

235. *Ypthima baldus luoi* HUANG, 1999. 5 ♂♂, 3 ♀♀, Nidadan to Longpo, May and July; 3 ♂♂, 2 ♀♀, Lishadi, June and July; 1 ♂, 1 ♀, Gongshan, June.
All these specimens of ssp. *luoi* have their underside ground colour much darker than in the corresponding seasonal specimens from S. Yunnan, which belong to ssp. *baldus* (FABRICIUS, 1775). The specimens from May have underside ocelli much smaller than in specimens from July.

236. *Ypthima tiani nuae* HUANG, 2001. 17 ♂♂, 6 ♀♀, Nidadan to Longpo, May and July; 4 ♂♂, 3 ♀♀, Gongshan, June; 3 ♂♂, 3 ♀♀, Lishadi, June and July; 7 ♂♂, 2 ♀♀, Gazu and Qiqi, June; 6 ♂♂, 3 ♀♀, Bapo and Maku, June and July; 1 ♀, Kongdang, July.
I have dissected nearly all these specimens in both sexes to identify them, found that all of them belong to *nuae* in genitalia. The examination shows that *nuae* is extremely variable in external features: the underside ground colour varies from yellowish gray to grayish brown, the underside ocelli vary very much in size, the pale rings to ocelli vary in width, and the striation and submarginal fascia on underside of both wings vary in appearance. Here I illustrate some extreme forms to show the great individual variation within the species. Nevertheless *nuae* always has dark striation blacker and pale ground color grayer than in *confusa*.

237. *Ypthima muotuoensis dulongae* subspec. nov. 3 ♂♂, Xiongdang, July; 3 ♂♂, 1 ♀, Longyuan to Ban, July; 2 ♂♂, Mabilo, July.

238. *Ypthima sakra austeni* (MOORE, 1892). 7 ♂♂, 3 ♀♀, Bapo, June; 5 ♂♂, Maku, July; 4 ♂♂, Longyuan to Mabilo, July.

239. *Ypthima sakra nujiangensis* HUANG, 2001. 6 ♂♂, 2 ♀♀, Bingzhongluo, May; 17 ♂♂, 3 ♀♀, Nidadan to Longpo, May and July; 5 ♂♂, Qiqi, June; 2 ♂♂, Lishadi, June.
These specimens of *Y. sakra*, in addition to my previous collection, show that both ssp. *nujiangensis* and ssp. *austeni* are very variable in size, underside ground colour and size of ocelli. However, ssp. *nujiangensis* has striation on hindwing underside constantly denser than in ssp. *austeni*.

240. *Ypthima parasakra mabiloa* subspec. nov. 3 ♂♂, Xiongdang to Mabilo, July.

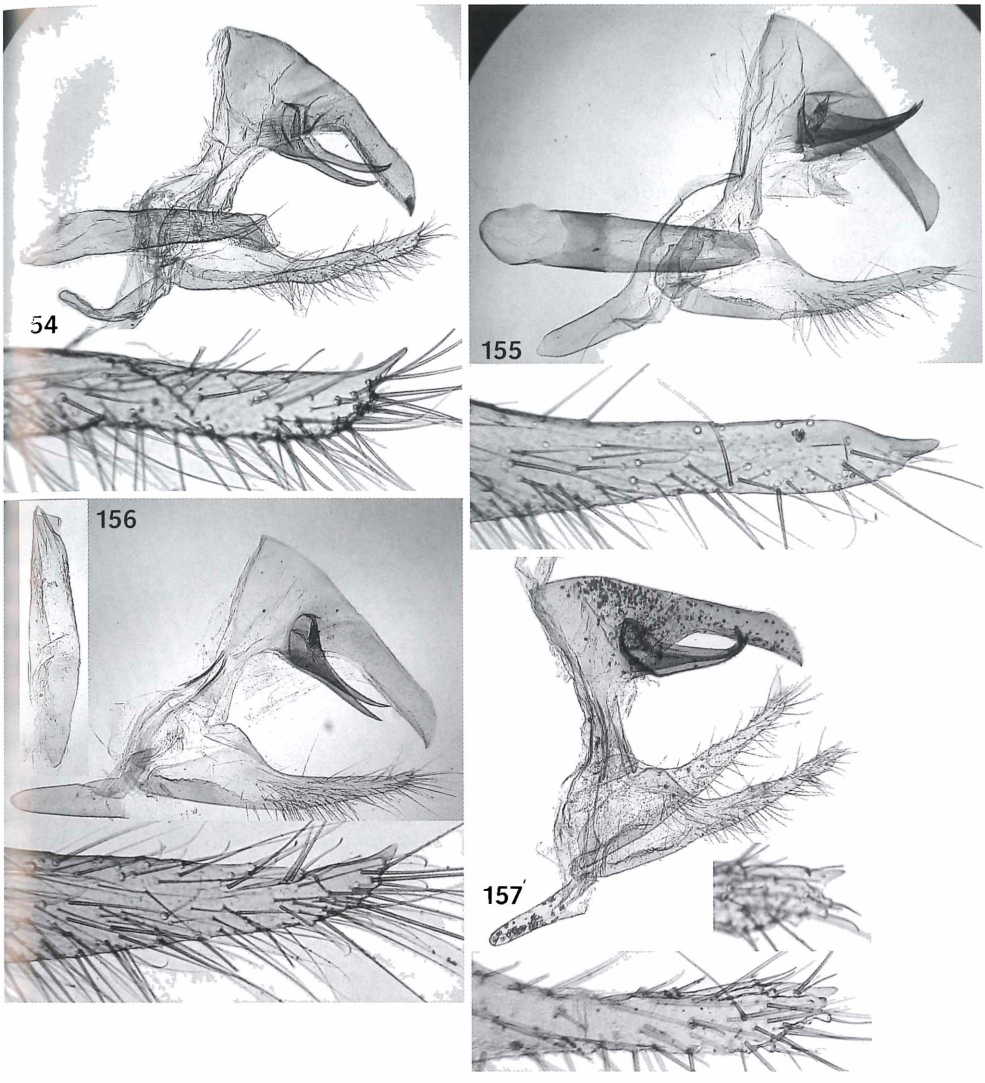


Fig. 154: Male genitalia of *Neope pulaha pulaha* (DSF, Yadong, SC. Tibet, specimen illustrated on col. pl. IX, fig. 3) consisting of genital capsule in lateral view with left valva removed (top), and of the enlarged tip of right valva in lateral view (bottom).
Fig. 155: Male genitalia of *Neope pulahoides pulahoides* (Lishadi, Nujiang, specimen illustrated in Atalanta **33** (3/4): 443, figs. 1, 5) consisting of genital capsule in lateral view with left valva removed (top), and of the enlarged tip of right valva in lateral view (bottom).
Fig. 156:. Male genitalia of *Neope pulahoides pulahoides* (Lishadi, Nujiang, specimen not illustrated) consisting of genital capsule in lateral view with left valva and aedeagus removed (top right), of aedeagus in lateral view (top left), and of the enlarged tip of right valva in lateral view (bottom).
Fig. 157: Male genitalia of *Neope pulahoides leechi* (Sichuan, specimen illustrated on col. pl. IX, fig. 9) consisting of genital capsule in lateral view with aedeagus removed (top), of the enlarged tip of left valva in lateral view (center right), and of the enlarged tip of right valva in lateral view (bottom).

241. *Ypthima conjuncta monticola* UEMURA & KOIWAYA, 2000. 5 ♂♂, 3 ♀♀, Nidadan and Sijitong, July; 2 ♂♂, Qiqi, July.
These specimens have underside ocelli a little bigger than in type series of ssp. *monticola* from Dali, N. Yunnan, but agree with them in all other characters.

242. *Ypthima iris naqialoa* subspec. nov. 7 ♂♂, 2 ♀♀, Naqialo to Zanian, May.

243. *Ypthima ciris clinioides* OBERTHÜR, 1891. 4 ♂♂, Xiongdang, July; 1 ♂, Mabilo, July.

244. *Ypthima tappana continentalis* MURAYAMA, 1981. 8 ♂♂, Nidadan and Sijitong, July.
This population from Nujiang does not differ from the topotypical population from Qingchengshan, Sichuan (type locality).

245. *Ypthima yangjiahei* HUANG, 2001 (fig. 161; col. pl. VII, figs. 5, 6). 5 ♂♂, 1 ♀, Nidadan, July.
This species was described on the basis of a single male, which had been worn out. This time both sexes in fresh condition have been obtained and I illustrate here one pair of fresh specimens and their genitalia. The examination of male and female genitalia proves this species to be a member of the *Y. motschulskyi*-group (sensu SHIMA, 1988).

246. *Callerebia polyphemus annadina* WATKINS, 1927. 5 ♂♂, 1 ♀, Nidadan, May; 2 ♂♂, Bingzhongluo, June; 6 ♂♂, Gongshan, June; 16 ♂♂, 5 ♀♀, Sijitong and Nidadan, July.

247. *Callerebia ulfi* spec. nov. 8 ♂♂, Xianjiudang to Ban, July.

Riodinidae

Riodininae

248. *Zemeros flegyas indicus* FRUHSTORFER, [1904]. 1 ♂ (DSF), Nidadan, May; 1 ♂ (WSF), Lishadi, June; 1 ♂ (WSF), 1 ♂ (DSF), Qiqi and Gazu, June; 1 ♀ (WSF), Maku, July.

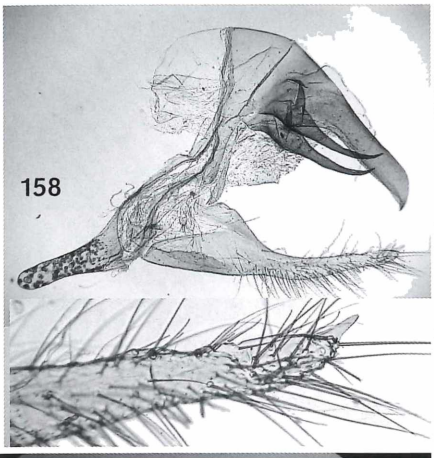
249. *Dodona adonira* ssp. 4 ♂♂, Bapo, June.
This new population may represent a new subspecies. Hitherto five subspecies of *D. adonira* HEWITSON, [1866] are known. And TYTLER (1940) presented a good key to separate these subspecies. The new population from Dulongjiang is very similar to ssp. *kala* TYTLER, 1940 from Hthawgaw, NE. Burma, but differs a little in having silvery markings on underside hindwing not so apparent. On upperside the new population has base of both wings very dark, almost the same colour as the marginal border of forewing, so differs from ssp. *adonira* from Sikkim, Nepal and Metok and ssp. *naga* TYTLER, 1940 from Naga Hills and Manipur, Assam. On underside of hindwing, the new population has all dark lines black as in ssp. *adonira*, not brown or fulvous as in ssp. *argentea* FRUHSTORFER, [1904] from Ruby Mine of Upper Burma and ssp. *learmondi* TYTLER, 1940 from Loimwe, S. Shan States of Burma, and has all silvery markings very slight as in ssp. *naga*, not so conspicuous as in ssp. *argentea*, ssp. *kala* and ssp. *learmondi*. Nevertheless, I don't like to name this population at present, because it is rather imprudent to establish so many subspecies in such a small area around Northern Burma and the seasonal variation is very little known for the species.

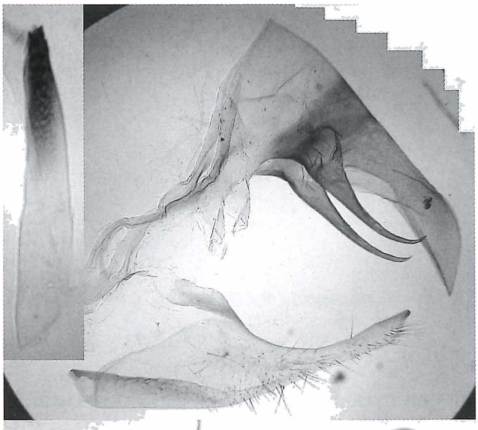
250. *Dodona dracon putaoa* TYTLER, 1940. TL: Putao, NE. Burma. (? = *Dodona dipoea dipoeides* MURAYAMA, 1995. TL: Tuguancun, NW. Yunnan). 2 ♂♂, Nidadan and Longpo, May; 6 ♂♂, Qiqi, June; 1 ♂, Xishaofang, June.
According to the information in literature, I suspect that *dipoeides* belongs to *D. dracon* and is probably a synonym of *putaoa*.

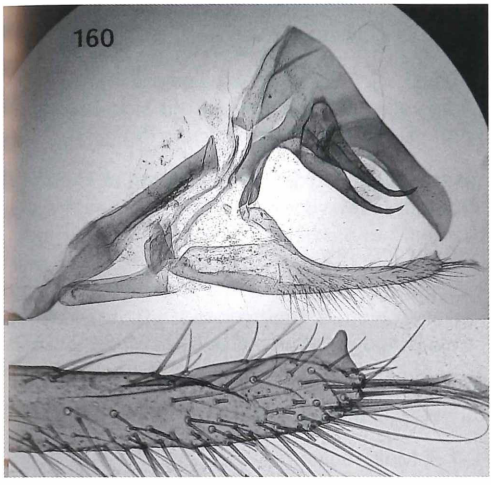
251. *Dodona eugenes venox* FRUHSTORFER, 1912. 2 ♂♂, Nidadan and Naqialo, May; 1 ♂, Gongshan, June; 5 ♂♂, Qiqi and Gazu, June; 2 ♂♂, Bapo, June; 1 ♂, Lishadi, August.

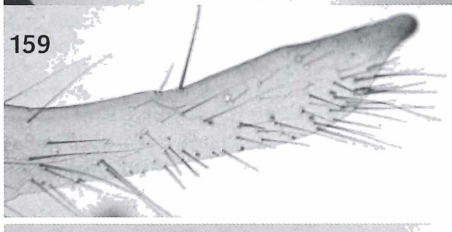
252. *Dodona ouida ouida* MOORE, [1866]. 3 ♂♂, Nidadan and Naqialo, May; 1 ♀,Gongshan, June; 4 ♀♀, Qiqi and Dongshaofang, June.

253. *Abisara fylla fylla* (WESTWOOD, [1851]). 1 ♀, Nidadan, May; 2 ♂♂, 2 ♀♀, Gazu, June and July.









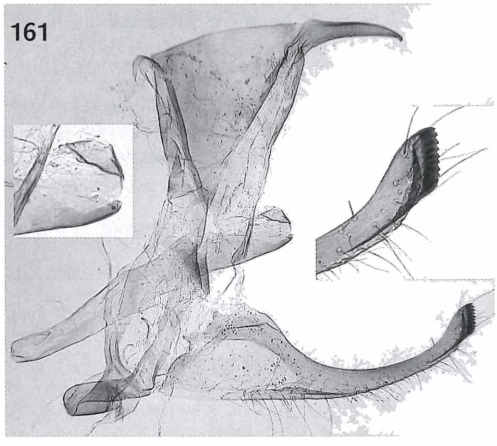


Fig. 158: Male genitalia of *Neope pulahoides leechi* (Sichuan, specimen illustrated on col. pl. IX, fig. 6) consisting of genital capsule in lateral view with aedeagus and left valva removed (top), and of the enlarged tip of right valva in lateral view (bottom)
Fig. 159: Male genitalia of *Neope ramosa* (Guadun, Fujian, specimen illustrated in Atalanta **33** (3/4): 451, figs. 2, 4) consisting of genital capsule in lateral view with left valva and aedeagus removed (top right), of aedeagus in lateral view (top left), and of the enlarged tip of right valva in lateral view (bottom).
Fig. 160: Male genitalia of *Neope chayuensis* (holotype, Chayu, SE. Tibet, specimen illustrated in Atalanta **33** (3/4): 451, figs. 1, 3) consisting of genital capsule in lateral view with left valva removed (top), and of the enlarged tip of right valva in lateral view (bottom).
Fig. 161: Male genitalia of *Ypthima yangjiahei* (Nidadan, Nujiang, specimen illustrated on col. pl. VII, fig. 5) consisting of genital capsule in lateral view with left valva removed (center), of the enlarged tip of aedeagus in lateral view (left), and of the enlarged tip of right valva flattened to show teeth (right).

254. *Abisara chelina chelina* (Fruhstorfer, [1904]). 2 ♀♀, Bapo and Maku, June.
These two females agree well with D'Abrera's (1986: 658) illustration of *chelina*.

255. *Abisara chelina duanhuii* Huang, 2001. 1 ♂, 1 ♀, Longpo to Naqialo, May; 1 ♂, Lishadi, June.
These specimens agree well with the type series from September. They do differ constantly from ssp.

chelina in having forewing underside apical area much darker and more blackish and hindwing underside ground colour much paler and grayer, not warm brown.

Libytheidae

256. *Libythea celtis lepita* MOORE, [1858]. 1 ♂, Ban, July.

Lycaenidae

Miletinae

257. *Taraka hamada mendesia* FRUHSTORFER, 1918. 1 ♀, Sijitong, July.

Curetinae

258. *Curetis acuta naga* EVANS, 1954. 1 ♂, Lishadi, June; 3 ♂♂, Bapo, June; 1 ♂, Maku, July; 2 ♂♂, Qiqi, June.

Theclinae

259. *Esakiozephyrus neis* (OBERTHÜR, 1914) (col. pl. VIII, fig. 10). 1 ♂, Naqialo to Longpo, May.
This little known species is firstly recorded from Nujiang valley. The genitalia of this single male, as illustrated (fig. 162), are nearly indistinguishable from those of *Esakiozephyrus icana* (fig. 163).

260. *Chrysozephyrus smaragdinus yunnanensis* (HOWARTH, 1957). 6 ♂♂, Naqialo, May; 1 ♂, Nidadan, May; 2 ♂♂, Sijitong, June; 2 ♂♂, Gongshan, June; 1 ♂, Gazu, June.

261. *Arhopala bazalus teesta* (DE NICEVILLE, 1886). 1 ♂, Sijitong, July.

262. *Arhopala rama rama* (KOLLAR, [1844]). 2 ♂♂, Lishadi, July.

263. *Spindasis rukma sophia* D'ABRERA, 1993. 7 ♂♂, 6♀♀, Nidadan to Sijitong, July; 2 ♂♂, 2 ♀♀, Gazu, July.

264. *Spindasis syama peguanus* MOORE, 1884. 3 ♂♂, 1 ♀, Lishadi, June.

265. *Spindasis zhengweilie chayuensis* HUANG, 2001. 1 ♂, Maku, July.

266. *Pratapa icetas extensa* EVANS, 1925. 2 ♂♂, Naqialo, May.

267. *Tajuria illurgis illurgis* HEWITSON, 1869. 1 ♀, Qiqi to Dongshaofang, June.

268. *Hypolycaena kina kina* HEWITSON, 1869. 4 ♂♂, 3 ♀♀, Bapo and Maku, July; 3 ♂♂, 1 ♀, Kongdang to Ban, July; 4 ♂♂, 3 ♀♀, Qiqi, July; 2 ♂♂, Nidadan, July.

269. *Rapala varuna orseis* HEWITSON, 1863. 1 ♀, Maku, July.

270. *Rapala nissa ranta* SWINHOE, 1897. 2 ♀♀, Bapo, June.

271. *Rapala subpurpurea* LEECH, 1890. 5 ♂♂, Gongshan, June and July; 1 ♂, 1 ♀, Gazu, June; 3 ♂♂, 2 ♀♀, Nidadan, May and July.
All these specimens have hindwing underside sub-tornal *Thecla*-spot generally much smaller than in specimens from Sichuan, Anhui and Guangdong.

272. *Rapala caerulea* (BREMER & GREY, 1853). 5 ♂♂, 4 ♀♀, Nidadan, May; 1 ♂, 2 ♀♀, Gazu, June.
This species was originally described from N. China. The population from Nujiang is inseparable from the populations from N. China and W. Sichuan in external features. The male genitalia of these specimens from Nujiang have been examined and show no difference from those of specimens from N. China. The taxon, *betuloides* (BLANCHARD, 1871) from W. Sichuan is only a junior synonym of *caerulea*.

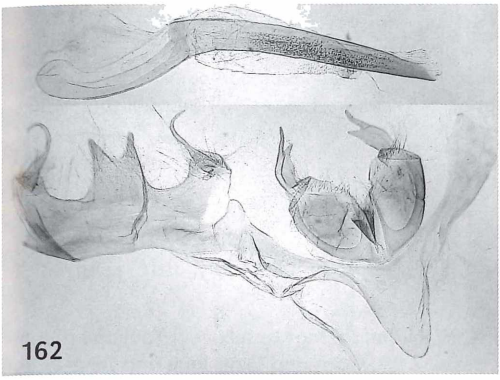


Fig. 162: Male genitalia of *Esakiozephyrus neis* (Nujiang, specimen illustrated on col. pl. VIII, fig. 10) consisting of the ring cut off, spread and flattened (bottom), and of aedeagus in lateral view (top).
Fig. 163: Male genitalia of *Esakiozephyrus icana paiensis* (holotype, Pai, SE. Tibet, specimen illustrated in Lambillionea **2000** (2): 253, figs. 6a, 6b) consisting of the ring cut off, spread and flattened (bottom), and of aedeagus in lateral view (top).

273. *Rapala rectivitta* (Moore, 1879) (fig. 164; col. pl. VIII, fig. 11). 3 ♂♂, Gongshan, July.
These three males agree exactly with D'Abrera's figures (1986: 625, 629) of "*R. ?rectivitta*" from Assam and "*R. buxaria*" from Sikkim or Bhutan. D'Abrera (1986: 629) wrongly treated *rectivitta* as a form of *R. nissa nissa* (Kollar, 1844). However, in a more stable work by Cantlie (1962: 151), *rectivitta* was treated as an independent species and *R. buxaria* De Niceville, 1888 was stated as a synonym of *R. rectivitta*. The examination of male genitalia proves *Rapala rectivitta* to be independent from *R. nissa*, with a very shallow cleft between male valvae, and with cornuti very peculiar, a little similar to those of *Rapala micans* (Bremer & Grey, 1853). This species is new to the Chinese fauna.

274. *Sinthusa chandrana grotei* (Moore, [1884]). 1 ♂ (DSF), Nidadan, May; 3 ♂♂ (WSF), 4 ♀♀ (WSF), Nidadan to Sijitong, July; 1 ♀, Gazu, July.

275. *Sinthusa virgo* Elwes, 1887. 1 ♀, Maku, July.

276. *Ahlbergia pluto cyanus* Johnson, 1992. 7 ♂♂, 3 ♀♀, Nidadan, May.

277. *Ahlbergia lynda nidadana* subspec. nov. 11 ♂♂, 1 ♀, Nidadan, May.

278. *Ahlbergia prodiga* Johnson, 1992 (fig. 165; col. pl. VIII, fig. 12). 1 ♀, Nidadan, May.
Only a worn female specimen was obtained at end of May. It agrees with the original description and figures of allotype female of *prodiga*. The female genitalia examined show a little variation from Johnson's figure in having lamellae hemispherical, not conical as in allotype, but such variation is familiar in other *Ahlbergia* species such as *A. pluto* (Leech, 1893) and *A. frivaldszkyi* (Lederer, 1855), of which I have examined a good number of specimens. However, the female genitalia of this specimen agree with Johnson's figures and description in main structures: ductus bursae short, nearly 1.5 times as long as the breadth of lamellae and not constricted toward lamellae, lamella postvaginalis with ventral fold beneath present along its outer margin, signa single-pointed elongate spines.
This very rare species has been previously known only from Bahand (not Weisi) in Yangtse valley, NW. Yunnan on one pair of worn specimens.

279. *Ahlbergia* spec. 1 ♀, Qiqi, June (fig. 166; col. pl. VIII, fig. 13).
This single female most probably represents a new species. It closely resembles *Ahlbergia prodiga* Johnson, 1992 (1 ♀ from Nidadan examined) in external features, but can be distinguished from the latter in female by the heavier white costal and anal patches on discal line (margin of basal disc) of

hindwing underside, the lamella postvaginalis nearly 1.5 times as broad as in *prodiga*, causing length of ductus bursae nearly only one lamellal breadth, not one and one half as in *prodiga*, and the signum much bigger than in *prodiga*. Such considerable difference in size of lamellae can not be simply explained by individual variation. The formal description of this new species will be published when I have examined the type material of *Ahlbergia prodiga* in the near future.

280. *Ahlbergia distincta* spec. nov. 1 ♂, Nidadan, May.

Lycaeninae

281. *Heliophorus androcles rubida* RILEY, 1929. 7 ♂♂, 3 ♀♀, Bapo, June and July; 3 ♂♂, Longyuan to Ban, July.

282. *Heliophorus eventa* FRUHSTORFER, 1918. 23 ♂♂, 4 ♀♀, Nidadan, May to July; 1 ♂, Yaojiaping, June; 3 ♂♂, Lishadi, June; 10 ♂♂, 3 ♀♀, Gongshan, June; 5 ♂♂, 2 ♀♀, Gazu and Qiqi, June and July; 13 ♂♂, 3 ♀♀, Bapo, June; 3 ♂♂, 1 ♀, Longyuan to Ban, July; 2 ♂♂ (form *rufa* RILEY, 1929), Nidadan, July; 1 ♂ (f. *rufa*), Yaojiaping, August.

283. *Heliophorus brahma mogoka* EVANS, 1932. 3 ♂♂, Bapo, June.

Polyommatinae

284. *Orthomiella pontis rovorea* (FRUHSTORFER, 1918). 3 ♂♂, 1 ♀, Qiqi, June; 4 ♂♂, 2 ♀♀, Sijitong, July; 3 ♂♂, 3 ♀♀, Qiqi and Gazu, July; 1 ♂, Lishadi, July.

285. *Petrelaea dana* (DE NICEVILLE, 1884). 1 ♂, Bapo, June.
This species was originally described from Bhutan. It shows great geographical variation in male genitalia as FUJIOKA & CHIBA (1988) have indicated and illustrated. The single specimen from Dulong valley has been dissected and shows the similar male genitalia to the example from Nepal figured by FUJIOKA & CHIBA (1988: 143, fig. 2A), with valva longer and narrower than in examples figured by WANG (2002: 279) from S. Yunnan and those figured by TITE (1963: 89, fig. 18) and by FUJIOKA & CHIBA (1988: 143, fig. 2C) from SE. Aisa.

286. *Prosotas dubiosa indica* (EVANS, 1925). 1 ♂, Bapo, June.

287. *Prosotas bhutea* (DE NICEVILLE, 1883). 2 ♂♂, Gazu, July.

288. *Prosotas nora ardates* (MOORE, [1857]). 3 ♂♂, Gazu, July.

289. *Nacaduba beroe gythion* FRUHSTORFER, 1916. 1 ♂, Bapo, June; 2 ♂♂, Maku, July.

290. *Jamides bochus bochus* (STOLL, [1782]). 1 ♂, Sijitong, July.

291. *Lampides boeticus* (LINNAEUS, 1767). 2 ♂♂, Ban, July; 1 ♂, 1 ♀, Gongshan, June.

292. *Euchrysops cnejus* (FABRICIUS, 1798). 1 ♂, Yaojiaping, May.

293. *Pseudozizeeria maha diluta* (FELDER, 1865). 1 ♂, Nidadan, May; 1 ♂, Lishadi, June; 2 ♂♂, 1 ♀, Nidadan and Sijitong, July.

294. *Everes argiades nujiangensis* HUANG, 2001. 1 ♂, Nidadan, May; 3 ♂♂, 3 ♀♀, Sijitong and Nidadan, July.

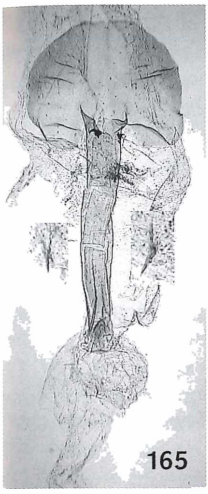
295. *Tongeia bella* HUANG, 2001. 3 ♂♂, Longpo, May.

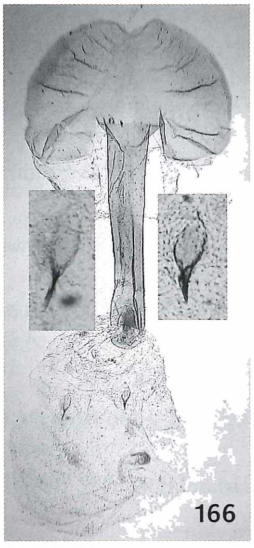
296. *Tongeia potanini potanini* (ALPHERAKY, 1889). 3 ♂♂, Longpo to Nidadan, May.

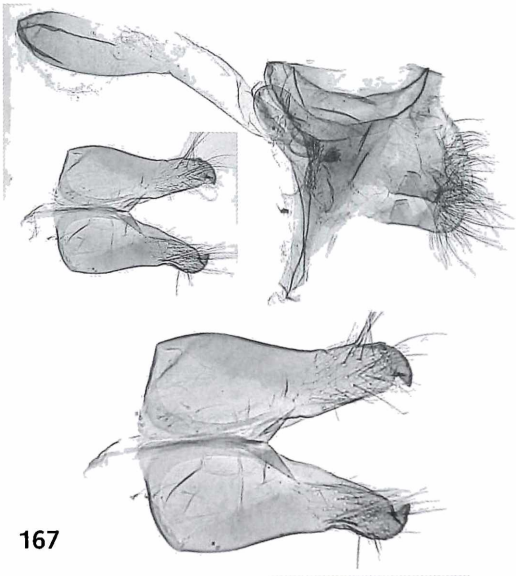
297. *Tongeia amplifascia* HUANG, 2001. 9 ♂♂, 2 ♀♀, Nidadan, May and July; 1 ♂, Lishadi, June.

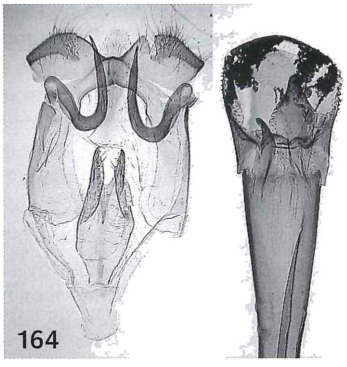
298. *Tongeia confusa* spec. nov. 2 ♂♂, Xiongdang, July.

299. *Bothrinia chennellii chennellii* (DE NICEVILLE, 1884). 1 ♀, Nidadan, May; 1 ♂, Nidadan, July; 2 ♂♂, Sijitong, July.









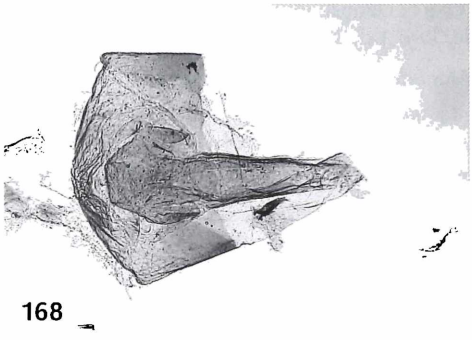


Fig. 164: Male genitalia of *Rapala rectivitta* (Nujiang, specimen illustrated on col. pl. VIII, fig. 11) consisting of the ring spread and flattened (left), and of enlarged tip of aedeagus in dorsal view to show cornuti (right).
Fig. 165: Female genitalia of *Ahlbergia prodiga* (Nidadan, specimen illustrated on col. pl. VIII, fig. 13) consisting of genital plates (lamella antevaginalis and lamella postvaginalis), ductus bursae and corpus bursae flattened (center), and of the enlarged signa (left and right).
Fig. 166: Female genitalia of *Ahlbergia* spec. (Qiqi, specimen illustrated on col. pl. VIII, fig. 12) consisting of genital plates (lamella antevaginalis and lamella postvaginalis), ductus bursae and corpus bursae flattened (center), and of the enlarged signa (left and right).
Fig. 167: Male genitalia of *Udara (Selmanix) selma* (Bapo, Dulongjiang, specimen illustrated on col. pl. VIII, fig. 14) consisting of ring and aedeagus in lateral view (top right), of valvae in ventral view (top left), and of enlarged valvae in ventral view (bottom).
Fig. 168: Female genitalia of *Oreolyce (Arletta) vardhana nepalica* (Yaojiaping, Nujiang, specimen not illustrated) consisting of circum-ostium region in ventral view.

300. *Udara (Selmanix) selma* ssp. 1 ♂, Bapo, June (fig. 167; col. pl. VIII, fig. 14).
This single male may represent a new subspecies, I hesitate to name it just because only one specimen is obtained. According to Eliot & Kawazoe's revision, only one subspecies is known from the Sino-Himalayan subregion, namely ssp. *cerima* (Corbet, 1937) distributed in Assam, Burma and Thailand. The male specimen from Dulong valley can be very easily distinguished from *cerima* as well as other subspecies except *mindanensis* by the upperside of forewing marked with a whitish discal patch and

forewing border expanding to 4–5 mm at apex, closely resembling the female of ssp. *mindanensis* ELIOT & KAWAZOE, 1983 from Mindanao, Philippines. It differs from the male of ssp. *mindanensis* in having upperside forewing black border much broader and upperside hindwing subapical whitish patch much bigger. It has been dissected and proved to be *Udara (Selmanix) selma*. This species is new to the Chinese fauna.

301. *Udara dilecta dilecta* (MOORE, 1879). 1 ♂, Nidadan, May; 1 ♂, Gongshan, June; 1 ♂, Qiqi, June; 1 ♀, Maku, July; 2 ♂♂, Mabilo, July; 1 ♂, Ban, July.

302. *Udara albocaerulea albocaerulea* (MOORE, 1879). 1 ♂, 2 ♀♀, Qiqi, June and July; 2 ♂♂, Bapo, June; 1 ♂, Gazu, July.

303. *Celastrina argiolus caphis* (FRUHSTORFER, 1922). 6 ♂♂, 2 ♀♀, Nidadan to Longpo, May; 1 ♂, Gazu, July; 1 ♀, Yaojiaping, August.

304. *Celastrina argiolus iynteana* (DE NICEVILLE, 1884). 1 ♂, Bapo, June.

305. *Celastrina lavendularis limbata* (MOORE, 1879). 1 ♂, Longpo to Naqialo, May; 1 ♂, Gazu, June; 1 ♂, Maku, July.

306. *Acytolepis puspa gisca* (FRUHSTORFER, 1910). 1 ♂, Lishadi, June; 1 ♂, Lishadi, August; 2 ♂♂, Bapo, June and July.

307. *Celatoxia marginata marginata* (DE NICEVILLE, [1884]). 2 ♂♂, 4 ♀♀, Nidadan and Sijitong, July; 2 ♀♀, Qiqi to Dongshaofang, June; 5 ♂♂, 3 ♀♀, Bapo, June; 2 ♂♂, Maku, July; 1 ♂, Kongdang, July; 1 ♂, Mabilo, July; 1 ♂, 1 ♀, Qiqi, July.

308. *Monodontides musina musinoides* (SWINHOE, 1910). 1 ♂, Gongshan, July.

309. *Oreolyce (Arletta) vardhana nepalica* (FORSTER, 1980). 1 ♀, Yaojiaping, August.
This single female has been dissected and its genitalia (fig. 168) agree with the illustration given by ELIOT & KAWAZOE (1983: 36, fig. 12). This species is new to the Chinese fauna.

310. *Phengaris atroguttata juenana* (FORSTER, 1940). 1 ♂, Qiqi, July; 1 ♀, Gazu, July; 1 ♀, Sijitong, July.
This subspecies was originally described from Dali, N. Yunnan. It is characterized by size bigger, upperside more suffused with metallic bluish scales and hindwing upperside submarginal black spots narrower and widely separated by veins. The population from Nujiang can not be separated from the topotypical population from Dali.

311. *Phengaris atroguttata lampra* (RÖBER, 1926). 1 ♀, Kongdang, July; 2 ♀♀, Longyuan, July; 1 ♀, Mabilo, July.
This subspecies was originally described from Naga Hills, Assam, and also known from N. Burma. It is characterized by forewing upperside black border remarkably broader, the hindwing submarginal spots conjoined as a band and forewing upperside subapical spots more heavily marked with black.

Discussion on YANG & QIAN's list in "The Nujiang Nature Reserve" (1998)

The following species in YANG & QIAN's list have not been encountered in their collecting localities during my expedition from May to August. It should be noted that all the specimens in this list were probably taken from October and November 1994.

Papilionidae
1. *Papilio demoleus*. Qiqi.
2. *Troides aeacus*. Qiqi.
3. *Byasa polyeuctes*. Dulong valley.
4. *Byasa nevilli*. Dulong valley.
5. *Teinopalpus imperialis*. Dulong valley.
6. *Bhutanitis lidderdalei*. Qiqi.

Pieridae
7. *Delias hyparete indica*. Fugong (south of Lishadi).
8. *Delias berinda adelma*. Dulong valley.
9. *Delias subnubila*. Dulong valley.
10. *Aporia hippia*. Fugong.
11. *Ixias pyrene yunnanensis*. Gongshan.
12. *Catopsilia pomona*. Fugong.
13. *Eurema brigitta*. Fugong.
14. *Eurema laeta*. Fugong.

Nymphalidae
15. *Danaus chrysippus*. Fugong.
16. *Ypthima praenubila kanonis*. Fugong. Probably misidentification of *Ypthima tappana continentalis*.
17. *Ypthima multistriata*. Dulong valley. Probably misidentification of *Ypthima tiani nuae* or *Ypthima muotuoensis dulongae*.
18. *Ypthima perfecta*. Qinlangdang (south of Maku). Probably misidentification of *Ypthima tiani nuae*.
19. *Ypthima beautei*. Gongshan.
20. *Ypthima conjuncta*. Dulong valley.
21. *Aulocera sybillina*. Fugong.
22. *Callerebia confusa*. Gongshan. Probably misidentification of *Callerebia polyphemus annadina*.
23. *Lethe violaceopicta*. Dulong valley. Probably misidentification of *Zophoessa kanjupkula burmana*.
24. *Neope agrestis* [sic]. Fugong.
25. *Neope christi*. Fugong.
26. *Rhaphicera moorei*. Bingzhongluo.
27. *Stichophthalma howqua*. Gongshan. Probably misidentification of *S. sparta gongshana*.
28. *Cethosia biblis*. Fugong.
29. *Precis lintingensis*. Fugong.
30. *Hypolimnas bolina*. Dulong valley.
31. *Taceraea asura*. Gongshan.
32. *Euthalia aconthea*. Qiqi.
33. *Apatura iria*. Fugong.
34. *Apatura iris yunnana*. Fugong.
35. *Sephisa dichron princeps*. Dulong valley.
36. *Parasarpa albomaculata*. Qiqi. Probably misidentification of *Limenitis albidior*.

Riodinidae
37. *Dodona egeon*. Fugong.

Lycaenidae
38. *Zizula hylax*. Fugong.
39. *Lycaena pang*. Fugong.
40. *Heliophorus epicles*. Fugong.
41. *Heliophorus androcles*. Fugong and Gongshan.
42. *Spindasis lohita*. Fugong.
43. *Neozephyrus taiwanus*. Qiqi. Apparently misidentification of another species of *Neozephyrus* or *Chrysozephyrus*.

Hesperiidae
44. *Celaenorrhinus dhanada affinis*. Fugong.
45. *Erionota torus*. Dulong valley.
46. *Potanthus flavum*. Gongshan. Probably misidentification of another species of *Potanthus*.

The following species in the list have been undoubtedly misidentified and also found in my expedition.
1. *Papilio verityi*. Misidentification of *Papilio machaon montanus*.
2. *Artogeia melete*. Misidentification of *Pieris erutae erutae*.

3. *Callerebia oberthuri* [sic]. Misidentification of *C. polyphemus annadina*.
4. *Labranga duda*. Misidentification of *Euthalia sakota*.

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Colour plate I

HUANG, H.: A list of butterflies collected from Nujiang (Lou Tse Kiang) and Dulongjiang, China with de scriptions of new species, new subspecies, and revisional notes (Lepidoptera, Rhopalocera). Neu Entomologische Nachrichten **55**: 3–114.

Fig. 1: *Coladenia uemurai* holotype ♂ (LF 20 mm), Gazu, Nujiang, July 2002.
Fig. 2: *Gerosis yuani* holotype ♀ (LF 20 mm), Nidadan, Nujiang, July 2002.
Fig. 3: *Gerosis phisara rex* ♂ (LF 20 mm), Nujiang, Yunnan, July 2002.
Fig. 4: *Gerosis phisara rex* ♀ (LF 20 mm), Nujiang, Yunnan, July 2002.
Fig. 5: *Gerosis sinica narada* ♂ (LF 20.5 mm), Dulongjiang, Yunnan, July 2002.
Fig. 6: *Gerosis sinica sinica* ♀ (LF 20.5 mm), Longmen River, Xingshan, Hubei, 1350 m, August 199: (IZAS).
Fig. 7: *Aeromachus catocyanea amplifascia* holotype ♂ (LF 14 mm), Qiqi, Nujiang, July 2002.
Fig. 8: *Aeromachus catocyanea amplifascia* paratype ♂ (LF 14.5 mm), Gazu, Nujiang, Yunnan, Jul 2002.
Fig. 9: *Aeromachus catocyanea catocyanea* ♂ (LF 14.5 mm), Er-lang-shan, Sichuan, July 2000.
Fig. 10: *Aeromachus catocyanea curvifascia* holotype ♂ (LF 14.5 mm), Longyuan to Xianjiudang Dulongjiang, July 2002.
Fig. 11: *Aeromachus catocyanea curvifascia* paratype ♂ (LF 14.5 mm), Dulongjiang, July 2002.
Fig. 12: *Aeromachus monstrabilus* holotype ♂ (LF 12 mm), Yigong, August 1996.
Fig. 13: *Aeromachus stigmata obsoleta* ♂ (LF 12 mm), Gongshan, Nujiang, Yunnan, June 2002.
Fig. 14: *Aeromachus stigmata obsoleta* ♂ (LF 10 mm), Metok, SE. Tibet, May 1983 (IZAS).
Fig. 15: *Aeromachus piceus* ♂ (LF 12 mm), Gazu, Nujiang, NW Yunnan, July 2002.
Fig. 16: *Aeromachus kali* ♂ (LF 14 mm), Lishadi, Nujiang, Yunnan, June 2002.
Fig. 17: *Aeromachus inachus formosanus* ♂ (LF 12 mm), Guniujiang, Anhui, August 2001.
Fig. 18: *Aeromachus stigmata shanda* ♂ (*Aeromachus propinquus hokowensis* holotype ♂, LF 12 mm Loa-fan-zai, Hekou, S. Yunnan, 450 m, June 13th 1956 leg. LEE CHUAN-LONG, preserved in IZAS).

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Colour plate II

HUANG, H.: A list of butterflies collected from Nujiang (Lou Tse Kiang) and Dulongjiang, China with d scriptions of new species, new subspecies, and revisional notes (Lepidoptera, Rhopalocera). Neu Entomologische Nachrichten **55**: 3–114.

Fig. 1: *Aeromachus propinquus tali* ♂ (LF 14 mm), Longpo to Naqiaolo, Nujiang, NW Yunnan, Ma 2002.
Fig. 2: *Aeromachus jhora* ♂ (LF 12.5 mm), Nanning, Guangxi, no collecting date (IZAS).
Fig. 3: *Aeromachus pseudojhora* holotype ♂ (LF 12 mm), Hetouzai, Jinping, S. Yunnan, 1700 m, Ma 16th 1956, leg. HUANG KE-REN, preserved in IZAS. Upperside.
Fig. 4: *Aeromachus pseudojhora* holotype ♂. Underside.
Fig. 5: *Sebastonyma medoensis albostriata* holotype ♂ (LF 15.5 mm), Qiqi, Nujiang, July 26th 2002.
Fig. 6: *Sebastonyma medoensis medoensis* ♂ (LF 15 mm), Bapo, Dulongjiang, July 2002.
Fig. 7: *Sebastonyma medoensis medoensis* ♂ (LF 15.5 mm), Metok, SE Tibet, July 1996
Fig. 8: *Sovia grahami miliaohuae* holotype ♂ (LF 15.5 mm), Yaojiaping, Gaoligongshan Mts., Augus 2002.
Fig. 9: *Sovia grahami miliaohuae* paratype ♂ (LF 17 mm), Yaojiaping, Gaoligongshan Mts., Augus 2002.
Fig. 10: *Sovia grahami grahami* ♂ (LF 16 mm), Cuona, near Bhutan-Tibet border, S. Tibet, 2600 m, Au gust 1974 (IZAS).
Fig. 11: *Sovia separata metokana* holotype ♂ (LF 16 mm), Hanmi, Metok, SE Tibet, July 1996.
Fig. 12: *Sovia separata metokana* paratype ♂ (LF 16 mm), Hanmi, Metok, SE Tibet, July 1996.
Fig. 13: *Sovia separata magna* ♂ (LF 17 mm), Yaojiaping, Gaoligongshan Mts., August 2002.
Fig. 14: *Sovia separata magna* ♂ (LF 16 mm), Bapo, Dulongjiang, July 2002.
Fig. 15: *Sovia lucasii* ♂ (LF 15.5 mm), Er-lang-shan, W. Sichuan, July 2000.
Fig. 16: *Pedesta viridis* holotype ♂ (LF 14 mm), Sijitong, Nujiang, June 1st 2002.
Fig. 17: *Pedesta baileyi* ♂ (LF 16 mm), Sijitong, Nujiang, June 1st 2002.
Fig. 18: *Pedesta serena* ♂ (LF 16.5 mm), Yaojiaping, Gaoligongshan Mts., June 2002.

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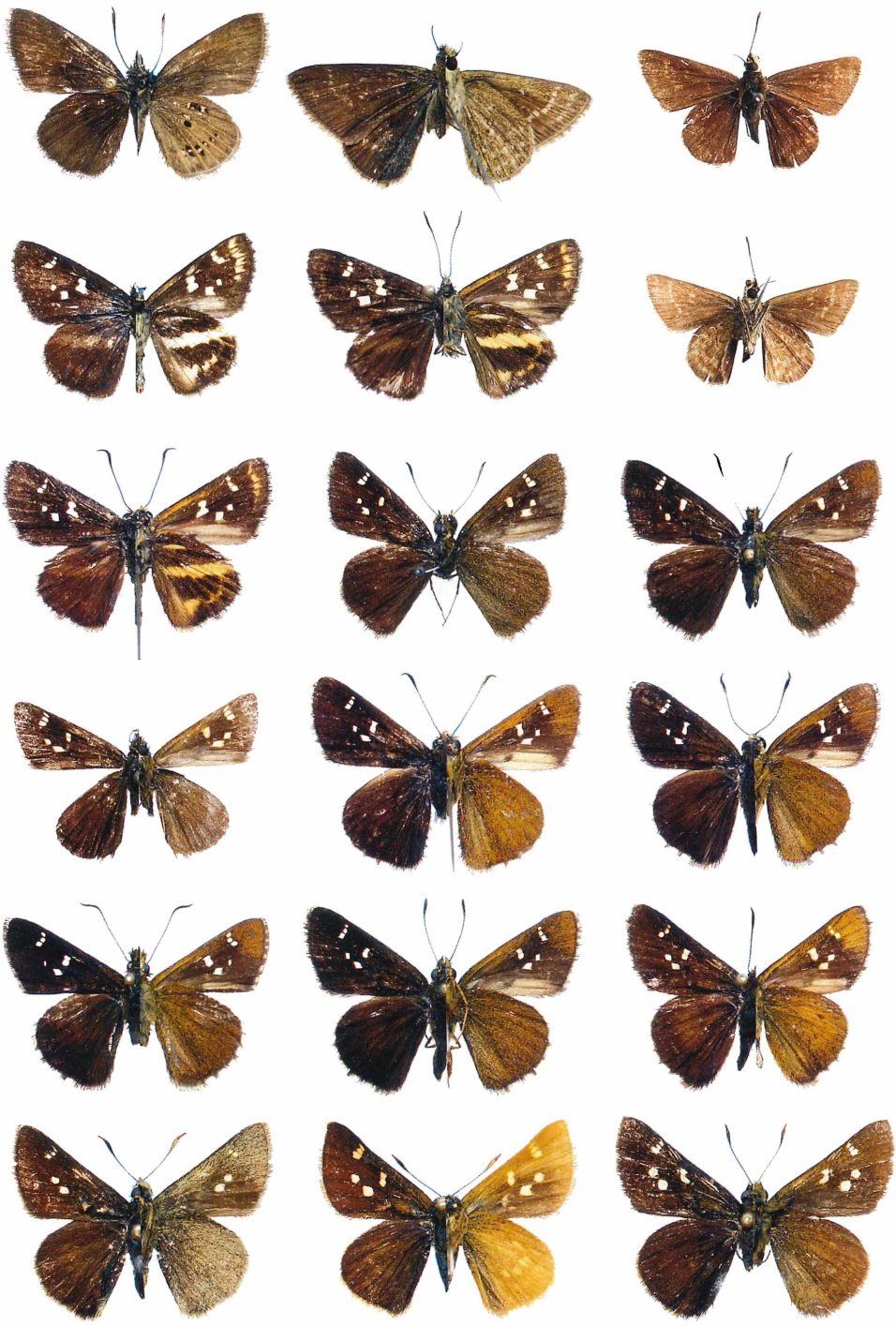

Colour plate III

HUANG, H.: A list of butterflies collected from Nujiang (Lou Tse Kiang) and Dulongjiang, China with descriptions of new species, new subspecies, and revisional notes (Lepidoptera, Rhopalocera). Neue Entomologische Nachrichten **55**: 3–114.

Fig. 1: *Pedesta cuneomaculata* ♂ (LF 16 mm), Qiqi, Nujiang, June 2002.
Fig. 2: *Pedesta blanchardii* ♂ (LF 16.5 mm), Omei, Sichuan, 1800 m, July 7th 1957 (IZAS).
Fig. 3: *Pedesta pandita* ♂ (LF 14.5 mm), Metok, SE Tibet, July 1996.
Fig. 4: *Thoressa gupta nujiangensis* holotype ♂ (LF 17 mm), Lishadi, Nujiang, June 7th 2002.
Fig. 5: *Thoressa gupta nujiangensis* paratype ♂ (LF 17 mm), Gazu, Nujiang, June 19th 2002.
Fig. 6: *Thoressa gupta gupta* ♂ (LF 17 mm), Bapo, Dulongjiang, June 2002.
Fig. 7: *Thoressa gupta leechii* ♂ (LF 18.5 mm), Qingchengshan, Sichuan, July 14th 1979 (IZAS).
Fig. 8: *Thoressa fusca fusca* ♂ (LF 17.5 mm), Bapo, Dulongjiang, June 2002.
Fig. 9: *Thoressa fusca senna* ♂ (LF 16.5 mm), Lishadi, Nujiang, June 2002.
Fig. 10: *Halpe kumara micromacula* holotype ♂ (LF 15.5 mm), Maku, Dulongjiang, July 3rd 2002.
Fig. 11: *Halpe kumara kumara* ♂ (LF 15 mm), Yigong, SE Tibet, August 1996.
Fig. 12: *Halpe parakumara* holotype ♂ (LF 15.5 mm), Qiqi, Nujiang, July 29th 2002.
Fig. 13: *Halpe parakumara* paratype ♂ (LF 15.5 mm), Qiqi, Nujiang, July 29th 2002.
Fig. 14: *Halpe mixta* holotype ♂ (LF 16.5 mm), Qiqi, Nujiang, July 29th 2002.
Fig. 15: *Halpe unicolora* paratype ♂ (LF 18 mm), Arniqiao, Metok, SE Tibet, August 25th 1995.
Fig. 16: *Halpe unicolora* ♂ (LF 18.5 mm), Tiyu, Chayu, SE Tibet, July 30th 2000.
Fig. 17: *Halpe handa* ♂ (LF 17 mm), Gongshan, Nujiang, June 2002.
Fig. 18: *Potanthus riefenstahli* holotype ♂ (LF 14.5 mm), Lishadi, Nujiang, July 30th 2002.

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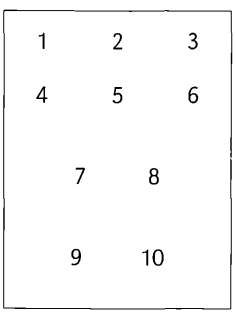
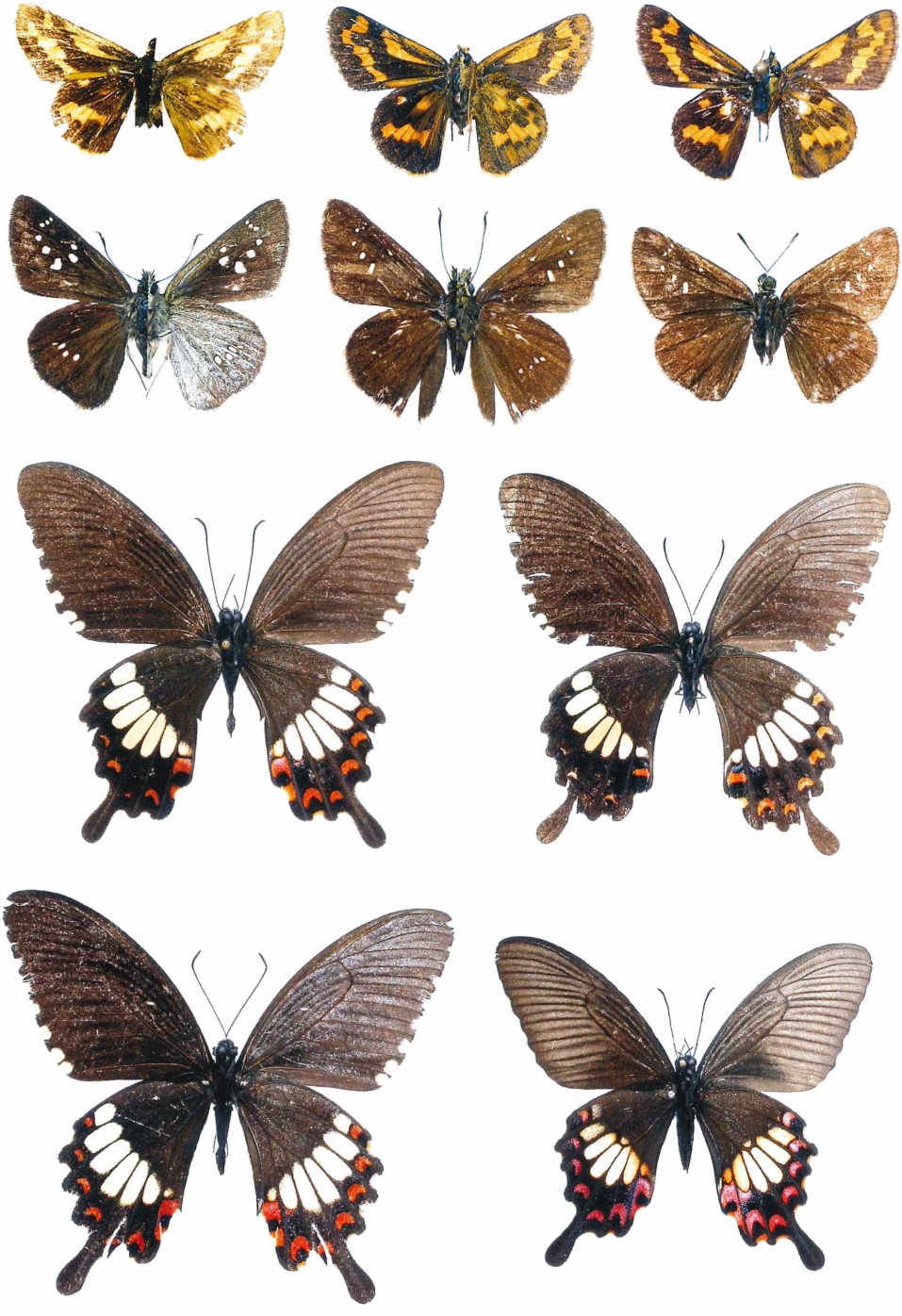
Colour plate IV

HUANG, H.: A list of butterflies collected from Nujiang (Lou Tse Kiang) and Dulongjiang, China with descriptions of new species, new subspecies, and revisional notes (Lepidoptera, Rhopalocera). - Neue Entomologische Nachrichten **55**: 3-114.

Fig. 1: *Potanthus riefenstahli* paratype ♂ (LF 14.5 mm), Maku, Dulongjiang, July 2002.
Fig. 2: *Potanthus flavus* ♂ (LF 15 mm), Nidadan, Nujiang, July 24th 2002.
Fig. 3: *Potanthus flavus* ♂ (LF 15 mm), Nidadan, Nujiang, July 24th 2002.
Fig. 4: *Polytremis theca macrotheca* holotype ♂ (LF 21.5 mm), Gazu, Nujiang, July 25th 2002.
Fig. 5: *Polytremis micropunctata* holotype ♂ (LF 21 mm), Qiqi, Nujiang, July 27th 2002.
Fig. 6: *Polytremis caerulescens* ♂ (LF 19 mm), Gazu, Nujiang, July 2002.
Fig. 7: *Papilio polytes liujidongi* holotype ♂ (LF 40 mm), Nidadan, Nujiang, July 21st 2002.
Fig. 8: *Papilio polytes liujidongi* paratype ♂ (LF 48.5 mm), Naqialo to Nidadan, Nujiang, September 2000.
Fig. 9: *Papilio polytes liujidongi* paratype ♂ (LF 45 mm), Nidadan, May 2002.
Fig. 10: *Papilio polytes liujidongi* ♀ (LF 45 mm), Nidadan, May 2002.





Colour plate V

HUANG, H.: A list of butterflies collected from Nujiang (Lou Tse Kiang) and Dulongjiang, China with descriptions of new species, new subspecies, and revisional notes (Lepidoptera, Rhopalocera). Neue Entomologische Nachrichten **55**: 3–114.

Fig. 1: *Limenitis misuji wenpingae* holotype ♂ (LF 28 mm), Nidadan, Nujiang, May 29th 2002.
Fig. 2: *Limenitis misuji wenpingae* paratype ♀ (LF 37 mm), Nidadan, July 2002.
Fig. 3: *Limenitis misuji misuji* ♂ (LF 31 mm), Qingchengshan, Sichuan, July 1991.
Fig. 4: *Limenitis homeyeri meridionalis* ♂ (LF 28 mm), Nidadan, September 2000.
Fig. 5: *Limenitis homeyeri meridionalis* ♀ (LF 34 mm), Nidadan, September 2000.
Fig. 6: *Stichophthalma sparta gongshana* holotype ♂ (LF 58 mm), Gongshan, Nujiang, July 27th 2002.
Fig. 7: *Stichophthalma sparta gongshana* paratype ♀ (LF 62 mm), Gongshan, July 2002.

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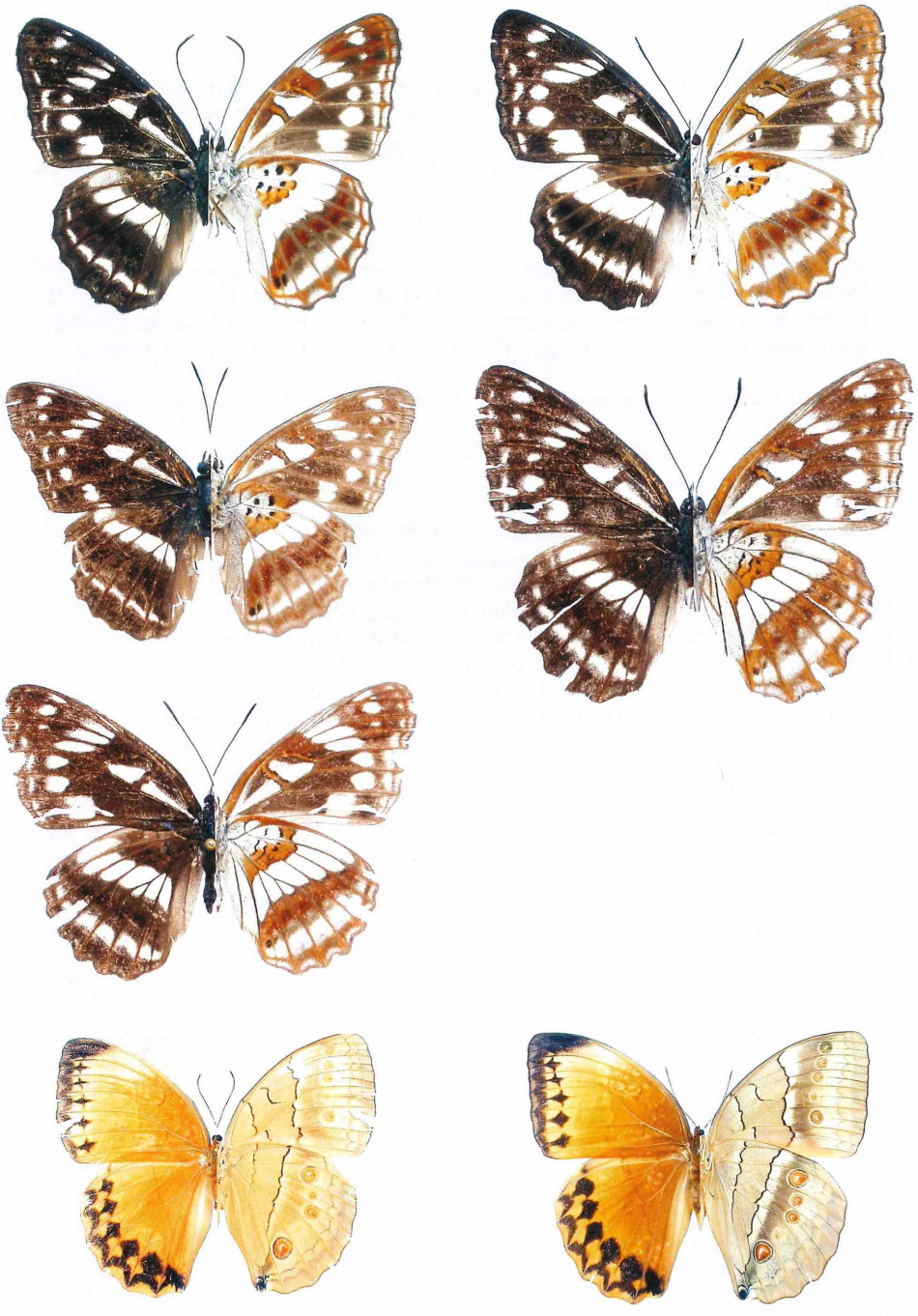

Colour plate VI

HUANG, H.: A list of butterflies collected from Nujiang (Lou Tse Kiang) and Dulongjiang, China with descriptions of new species, new subspecies, and revisional notes (Lepidoptera, Rhopalocera). Neue Entomologische Nachrichten **55**: 3–114.

Fig. 1: *Ypthima muotuoensis dulongae* holotype ♂ (LF 23.5 mm), Xianjiudang to Longyuan, July 9th 2002.
Fig. 2: *Ypthima muotuoensis dulongae* paratype ♂ (LF 23.5 mm), Dizhengdang to Longyuan, July 2002.
Fig. 3: *Ypthima muotuoensis dulongae* paratype ♀ (LF 22.5 mm), Longyuan to Ban, July 2002.
Fig. 4: *Ypthima muotuoensis muotuoensis* holotype ♂ (LF 20 mm), Hanmi, Metok, August 1995.
Fig. 5: *Ypthima muotuoensis muotuoensis* paratype ♂ (LF 20 mm), Hanmi, Metok, August 1995.
Fig. 6: *Ypthima muotuoensis muotuoensis* ♀ (LF 20 mm), Gedang, Metok, 1990 m, October 2nd 1982 (IZAS).
Fig. 7: *Ypthima muotuoensis muotuoensis* ♀ (LF 19 mm), Gedang, Metok, 2000 m, September 15th 1982 (IZAS).
Fig. 8: *Ypthima confusa* ♂ (LF 20 mm), Da-wei-shan, Pingbian, SE Yunnan, June 1956 (IZAS).
Fig. 9: *Ypthima confusa* ♀ (LF 20 mm), Jingdong, C. Yunnan, June 23rd 1956 (IZAS).
Fig. 10: *Ypthima confusa* ♀ (LF 20 mm), C. Nepal.
Fig. 11: *Ypthima tiani nuae* ♂ (LF 19.5 mm), Gongshan, Nujiang, July 29th 2002.
Fig. 12: *Ypthima tiani nuae* ♂ (LF 20.5 mm), Lishadi, Nujiang, June 5th 2002.
Fig. 13: *Ypthima tiani nuae* ♂ (LF 18.5 mm), Maku, Dulongjiang, July 4th 2002.
Fig. 14: *Ypthima tiani nuae* ♂ (LF 19 mm), Nidadan, Nujiang, July 23rd 2002.
Fig. 15: *Ypthima tiani nuae* ♂ (LF 20.5 mm), Nidadan, Nujiang, May 31st 2002.
Fig. 16: *Ypthima tiani nuae* ♀ (LF 20.5 mm), Lishadi, June 5th 2002
Fig. 17: *Ypthima tiani nuae* ♀ (LF 20.5 mm), Nidadan, May 31st 2002.
Fig. 18: *Ypthima tiani nuae* ♀ (LF 21.5 mm), Napo, Guangxi, 440 m, April 12th 1998.

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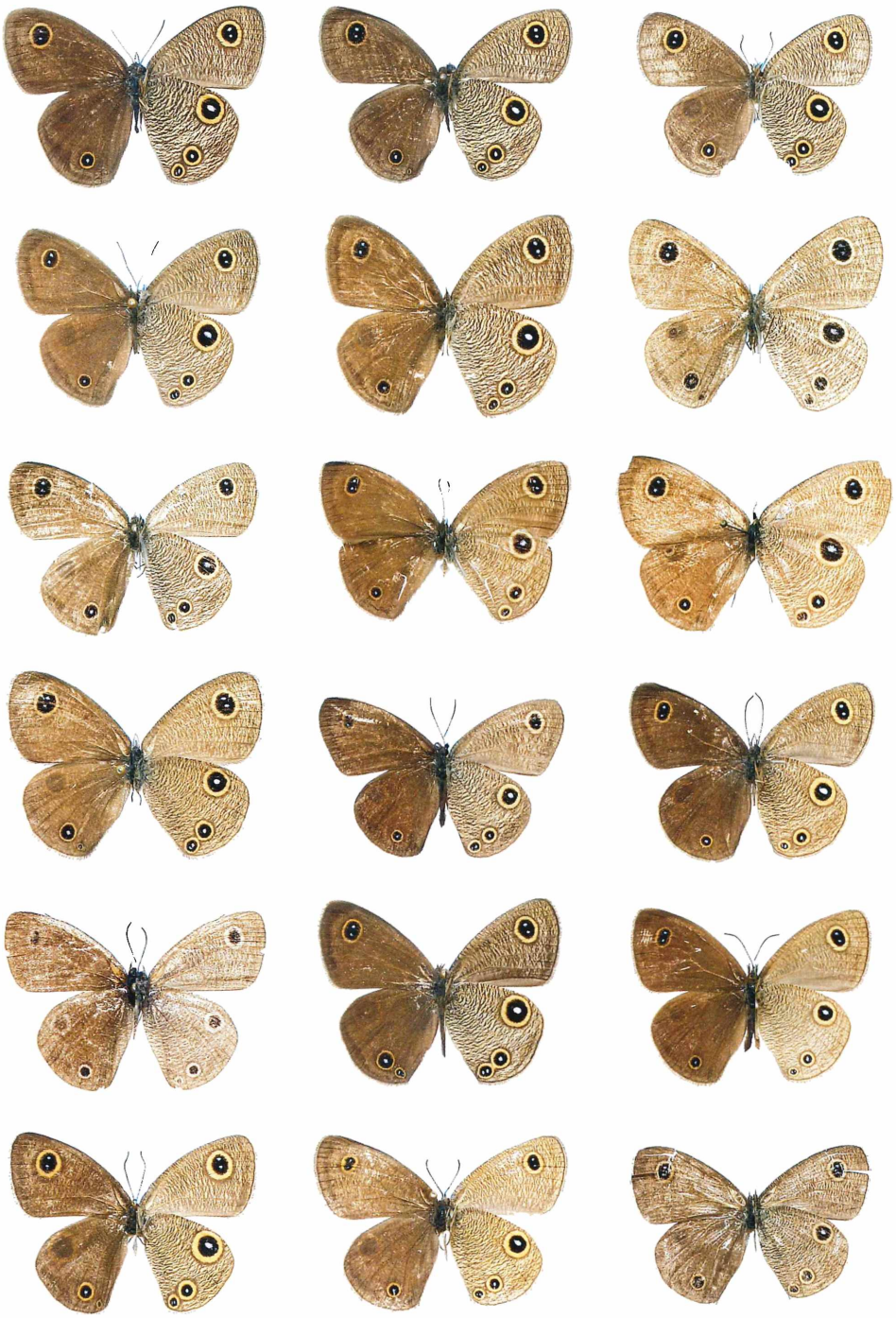

Colour plate VII

HUANG, H.: A list of butterflies collected from Nujiang (Lou Tse Kiang) and Dulongjiang, China with descriptions of new species, new subspecies, and revisional notes (Lepidoptera, Rhopalocera). Neue Entomologische Nachrichten **55**: 3–114.

Fig. 1: *Ypthima pemakoi* paratype ♂ (LF 20.5 mm), Hanmi, Metok, July 1996.
Fig. 2: *Ypthima pemakoi* paratype ♀ (LF 22.5 mm), Hanmi, Metok, July 1996.
Fig. 3: *Ypthima parasakra mabiloa* holotype ♂ (LF 28 mm), Xiongdang, Dulongjiang, July 15th 2002
Fig. 4: *Ypthima iris naqialoa* holotype ♂ (LF 24 mm), Naqialo to Longpo, May 24th 2002
Fig. 5: *Ypthima yangjiahei* ♂ (LF 22 mm), Nidadan, Nujiang, July 2002.
Fig. 6: *Ypthima yangjiahei* ♀ (LF 20.5 mm), Nidadan, July 2002.
Fig. 7: *Callerebia suroia* ♂ (LF 32.5 mm), Qujing, N. Yunnan, June 1992.
Fig. 8: *Callerebia suroia* ♂ (LF 31 mm), Xiaqiaotou, S. Yunnan, July 1958 (IZAS).
Fig. 9: *Callerebia polyphemus polyphemus* f. *polyphemus* ♂ (LF 32.5 mm), Lushan, W. Sichuan.
Fig. 10: *Callerebia polyphemus annadina* ♂ (LF 31 mm), Nidadan, Nujiang, NW Yunnan, July 2002.
Fig. 11: *Callerebia polyphemus ricketti* ♂ (LF 32 mm), Wuyishan, Fujian, June 1960 (IZAS).
Fig. 12: *Callerebia polyphemus confusa* ♂ (LF 32.5 mm), Chedong River, Hefeng, Hubei, 1400 m, July 31st 1989 (IZAS).
Fig. 13: *Callerebia polyphemus confusa* ♂ (LF 35 mm), Chedong River, Hefeng, Hubei, 1240 m, July 29th 1989 (IZAS).
Fig. 14: *Callerebia polyphemus confusa* ♂ (LF 30.5 mm), Fuling, Chongqing (previous E. Sichuan), 600 m, June 30th 1989.
Fig. 15: *Callerebia ulfi* holotype ♂ (LF 29 mm), Longyuan, Dulongjiang, July 10th 2002.
Fig. 16: *Callerebia suroia* ♂ (LF 30 mm), Qujing, N. Yunnan, June 1992.

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Colour plate VIII

HUANG, H.: A list of butterflies collected from Nujiang (Lou Tse Kiang) and Dulongjiang, China with descriptions of new species, new subspecies, and revisional notes (Lepidoptera, Rhopalocera). – Neue Entomologische Nachrichten **55**: 3–114.

Fig. 1: *Ahlbergia lynda nidadana* holotype ♀ (LF 14 mm), Nidadan, Nujiang, May 22nd 2002.
Fig. 2: *Ahlbergia lynda nidadana* paratype ♂ (LF 14 mm), Nidadan, May 2002.
Fig. 3: *Ahlbergia lynda nidadana* paratype ♂ (LF 14 mm), Nidadan, May 2002.
Fig. 4: *Ahlbergia distincta* holotype ♂ (LF 16 mm), Nidadan, Nujiang, May 23rd 2002.
Fig. 5: *Ahlbergia pluto cyanus* ♂ (LF 15 mm), Nidadan, May 2002.
Fig. 6: *Ahlbergia pluto cyanus* ♂ (LF 14.5 mm), Nidadan, May 2002.
Fig. 7: *Ahlbergia pluto cyanus* ♀ (LF 15 mm), Nidadan, May 2002.
Fig. 8: *Ahbergia clarofacia meridionalis* holotype ♀ (LF 14 mm), Xishuangbanna, S. Yunnan.
Fig. 9: *Tongeia confusa* holotype ♂ (LF 13 mm), Xiongdang, Dulongjiang, July 10th 2002.
Fig. 10: *Esakiozephyrus neis* ♂ (LF 19 mm), Naqialo to Longpo, May 2002.
Fig. 11: *Rapala rectivitta* ♂ (LF 18 mm), Gongshan, Nujiang, July 2002.
Fig. 12: *Ahlbergia* spec. ♀ (LF 15 mm), Qiqi, Nujiang, June 2002.
Fig. 13: *Ahlbergia prodiga* ♀ (LF 14 mm), Nidadan, Nujiang, May 2002.
Fig. 14: *Udara (Selmanix) selma* ♂ (LF 14.5 mm), Bapo, Dulongjiang, June 2002.
Fig. 15: *Abraximorpha esta* ♂ (LF 24.5 mm), Gongshan, Nujiang, July 2002.
Fig. 16: *Celaenorrhinus consanguinea consanguinea* ♂ (LF 22.5 mm), Naqialo, Nujiang, May 2002.
Fig. 17: *Celaenorrhinus consanguinea consanguinea* ♂ (LF 22.5 mm), Gazu, Nujiang, June 2002.
Fig. 18: *Celaenorrhinus ratna nujiangensis* ♂ (LF 22.5 mm), Gazu, July 2002.

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Colour plate IX

HUANG, H.: A list of butterflies collected from Nujiang (Lou Tse Kiang) and Dulongjiang, China with descriptions of new species, new subspecies, and revisional notes (Lepidoptera, Rhopalocera). – Neue Entomologische Nachrichten **55**: 3–114.

Fig. 1: *Limenitis mimica gaolingonensis* ♂ (LF 33 mm), Mabilo, Dulongjiang, July 2002.
Fig. 2: *Limenitis albidior* ♂ (LF 32.5 mm), Longyuan, Dulongjiang, July 2002.
Fig. 3: *Neope pulaha pulaha* ♂ DSF (LF 30 mm), A-sang-cun, Yadong, S.Tibet, 2800 m, May 31st 1975.
Fig. 4: *Limenitis mimica meilius* ♂ (LF 31 mm), Gazu, Nujiang, July 2002.
Fig. 5: *Limenitis albomaculata* ♂ (LF 33 mm), Gonggashan, W. Sichuan, July 1992.
Fig. 6: *Neope pulahoides leechi* ♂ (LF 31 mm), W. Sichuan.
Fig. 7: *Limenitis mimica mimica* ♂ (LF 35 mm), Gonggashan, W. Sichuan, July 1992.
Fig. 8: *Euthalia sahadeva yanagisawai* ♂ (LF 36 mm), Gongshan, Nujiang, July 2002.
Fig. 9: *Neope pulahoides leechi* ♂ (LF 31 mm), W. Sichuan.
Fig. 10: *Limenitis rileyi xizangana* paratype ♂ (LF 33 mm), Yigong, SE Tibet, August 1996.
Fig. 11: *Euthalia sahadeva sahadeva* ♂ (LF 41 mm), Metok, SE Tibet, July 1996.
Fig. 12: *Aporia kaolinkonensis* ♂ (LF 37 mm), Xiongdang, Dulongjiang, July 2002.
Fig. 13: *Byasa dasarada ouvrardi* ♀ (LF 57 mm), Naqialo, Nujiang, May 2002.