Additional notes on the *Ypthima praenubila* LEECH, 1891-group sensu SHIRÔZU & SHIMA, 1979, with descriptions of a new species from China

(Lepidoptera, Nymphalidae, Satyrinae)

by Song-Yun Lang received 19.VI.2023

Abstract: 9 genitalia of *Ypthima praenubila* LEECH, 1891 and its closely related species, viz. taxa in the *Praenubila*-group sensu SHIRÔZU & SHIMA, 1979, are studied. Basing upon characters of the 9 genitalia, the σ androconia and the σ sclerotic pouch of genitalia, the *Praenubila*-group is divided into two subgroups in this paper, viz. the *Praenubila*-subgroup and the *Elwesi*-subgroup. According to additional new information from Taiwan provided by Hsu et al. (2021) and rejudging from the above mentioned characters, both two Taiwanese taxa involved, viz. *Ypthima kanonis* MATSUMURA, 1929 and *Y. neobilia* MURAYAMA, 1980, are included in the *Praenubila*-subgroup. Therefore, *Ypthima neobilia houae* LANG, 2022 from Hubei, which is found to be a component of the *Elwesi*-subgroup, is raised to specific status, viz. *Y. houae* LANG **stat. nov.**, against *Y. neobilia* MURAYAMA from the counterpart subgroup. The status of *Ypthima neobilia* MURAYAMA from Taiwan and *Y. kanonis shibingensis* LANG, 2022 from Guizhou are discussed. A new species of the *Elwesi*-subgroup, viz. *Ypthima julana* spec. nov., is described from E. Guizhou, S.W. China, and it is sympatric with *Y. elwesi yuntaishana* LANG, 2022 (the *Elwesi*-subgroup) and *Y. kanonis shibingensis* LANG (the *Praenubila*-subgroup). Finally, a revised checklist of the *Praenubila*-group is provided.

In this paper, the concept of the *Ypthima praenubila* LEECH, 1891-group (Satyrini: Ypthimina) was defined by SHIRÔZU & SHIMA (1979). For a long time since the species group was established by SHIRÔZU & SHIMA (1979), it had been recognised as a monotypic group. However, SHIMA (1988) merged *Y. praenubila* LEECH into the *Chenu* GUÉRIN-MÉNEVILLE, 1843-group sensu TALBOT, [1949], and this treatment is still a competitive classification plan. MONASTYRSKII et al. (2022) described an additional species closely related to *Y. praenubila* LEECH in the *Chenu*-group sensu SHIMA, 1988. A few months later, LANG (2022) followed SHIRÔZU & SHIMA (1979) and recognised five species in the *Praenubila*-group sensu SHIRÔZU & SHIMA, 1979. To explain some mainland taxa discovered at that time, LANG (2022) raised two Taiwanese subspecies of *Y. praenubila* LEECH to species status, viz. *Y. kanonis* MATSUMURA, 1929 and *Y. neobilia* MURAYAMA, 1980, and described and appointed their corresponding continental subspecies respectively, viz. *Y. kanonis shibingensis* LANG, 2022 and *Y. neobilia houae* LANG, 2022. But this arrangement was only based upon superficial similarity without enough anatomical data. New book <Butterfly Fauna of Taiwan, vol. V> by Hsu et al. (2021) was available for the present author thereafter and in which the σ and φ genitalia figures of both two Taiwanese taxa are illustrated. Therefore, basing upon a recent study of φ genitalia and additional information from Taiwan (Hsu et al., 2021), a more sound classification for the species group can be provided. Furthermore, from the type locality (Shibing, E. Guizhou) of *Y. kanonis shibingensis* LANG and *Y. elwesi yuntaishana* LANG, a new species was discovered in a recent survey and it is described below.

Materials. In the *Praenubila*-group, 9 taxa (7 species and 2 subspecies) including a new species, have been known. In this study, φ genitalia of *Ypthima praenubila* LEECH (1 φ , Shaanxi; 1 φ , Chongqing), *Y. kanonis shibingensis* LANG (3 $\varphi\varphi$, Guizhou), *Y. elwesi yuntaishana* LANG (1 φ , Guizhou) and new species (1 φ , Guizhou) were dissected and photographed; figured φ genitalia of *Y. kanonis kanonis* MATSUMURA and *Y. neobilia* MURAYAMA from Taiwan (Hsu et al., 2021; SHIRÔZU & SHIMA, 1979) and *Y. thao* MONASTYRSKII & LANG from N. Vietnam (MONASTYRSKII et al., 2022) are cited; φ *Y neobilia houae* LANG and *Y. elwesi elwesi* LEECH are temporarily unavailable. Studied materials are kept in Chongqing Museum of Natural History, Beibei, CHINA (CMNH) and Dr. SONG-YUN LANG's private collection (LSY), Beibei, CHINA.

Methods and terminology. Treatment and observation of the φ genitalia follow the methods in Coutsis (1984) and Lang (2023). Terminology of the σ and φ genitalia in this paper follows that of KLOTS (1970), SHIRÔZU & SHIMA (1979), COUTSIS (1984) and LANG (2023).

Abbreviation. The lamella postvaginalis (llp), the mid-dorsal process (mdp), the lamella antevaginalis (lla), the ductus bursae (du. bu), the antrum (antr), the ductus seminalis (du. sml), the corpus bursae (crp. bu), the cervix bursae (cvx), the signa (sig.), the intersegmental cuticula of 7th-8th sternites (IC7-8S), the papillae anales (pap. a), forewing (FW), hindwing (HW).

 φ genitalia of the *Praenubila*-group. The structure of the φ genitalia (figs: 1-8): 1) The corpus bursae (fig: 2): it is simply oval; a pair of parallel signa (figs: 2, 8) present near the cvx, and they are largely fused together. 2) The ductus bursae (fig: 2): it is divided by its junction with the ductus seminalis into two sections, the cephalic section is the ductus bursae sensu stricto which is totally membranous, and the caudal section is the antrum which is sclerotized medially. 3) The sterigma (figs: 3-6): 3a) the posterior unit (= llp): it is a heavily sclerotized wall and has a robust mid-dorsal process; the process is lengthily protruding, its cauda is bent upwards nearly vertically and expanded bilaterally and upwardly as a thin slice; the dorsal edge of llp has a middle concave; on both sides of the concave, the sclerites can be treated as a pair of dorsal lamellae; each of the lamella extends outwards and fully fused with the dorso-lateral lobe of lla. 3b) The anterior unit (= lla): It is composed by a pair of expanded dorso-lateral lobes on both sides and a ventral lamella on center; the ventral lamella (fig: 7) is expanded caudally, it is petiolate (figs: 7a-d) or sessile (figs: 7e-g). 4) The abdomen (fig: 1): the sternites V and VI are very short; the segment VII and the IC7-8S are extremely elongated ventro-cephalad and forming an immensely enlarged copulatory cavity; the IC7-8S is the inner wall of the cavity and its center is a very long and sclerotized ventral tray.

Subgroups of the *Praenubila*-group. Basing upon characters of σ sclerotic pouch of genitalia, σ and roconia and features of φ genitalia, the *Praenubila*-group can be divided into two subgroups (see Table 1).

A) the *Praenubila* LEECH, 1891-subgroup: A1) the σ sclerotic pouch of genitalia is nearly straight, its ventro-cephalic end is not enlarged and ended far beyond the dorso-cephalic end; A2) the lamina of androconia is often longer; A3) the concave on the dorsal edge of llp is large or small in different species; A4) the mid-dorsal process has a robutst stem; A5) the ventral lamella is petiolate. B) the *Elwesi* LEECH, 1893-subgroup: B1) the σ sclerotic pouch of genitalia is curved with its dorsal edge, its ventro-cephalic end is obviously enlarged and ended together with the dorso-cephalic end; B2) the lamina of androconia is shorter; B3) the concave on the dorsal edge of llp is small; B4) the mid-dorsal process has a narrow stem; B5) the ventral lamella is sessile (stemless).

The Praenubila-group from Taiwan Island:

SHIRÓZU & SHIMA (1979) illustrated fine line drawings of both σ and φ genitalia of the Praenubila-group from Taiwan, but their affiliations to whether *Ypthima kanonis* MATSUMURA or *Y. neobilia* MURAYAMA are uncertain. So, LANG (2022) could hardly clarify the true relationship between the Taiwanese taxa and their corresponding continental taxa. In fact, a year before, Hsu et al. (2021) had already published <Butterfly Fauna of Taiwan, vol. V>, in which both σ and φ genitalia of the two Taiwanese taxa, viz. *kanonis* MATSUMURA and *neobilia* MURAYAMA, are illustrated. Genitalia photographs in Hsu et al. (2021) are taken from pressed objects on slides, therefore, three-dimensional structures are nearly destroyed. Moreover, the figure 642 in Hsu et al. (2021) with a legend "*Ypthima praenubila kanonis* MATSUMURA ..." is in fact a φ genitalia belonging to the genus *Lethe* HÜBNER, [1819]. And yet the figure 652 with a legend "*Lethe rohria daemoniaca* FRUHSTORFER, 1908 ..." is obviously a kind of the Praenubila-group. So, figures 642 and 652 in Hsu et al. (2021) are misplaced for each other. But, despite all this, useful information still can be obtained from Hsu et al. (2021). Basing upon structure of the σ sclerotic pouch and shape of the φ ventral lamella, both Taiwanese *Ypthima kanonis* MATSUMURA and *Y. neobilia* MURAYAMA are included into the Praenubila-subgroup.

Other taxonomic notes:

A) *Ypthima houae* LANG, 2022 **stat. nov.**: Its φ is still unknown. This taxa was described as a continental subspecies of Taiwanese *Ypthima neobilia* MURAYAMA basing upon their superficial similarity. However, under the concept of the two subgroups system, the taxa *houae* LANG should belong to the *Elwesi*-subgroup, and meanwhile, the nominate *neobilia* MURAYAMA is a component of the *Praenubila*-subgroup. Therefore, *Y. neobilia houae* LANG should be a distinct species against Taiwanese *Y. neobilia* MURAYAMA, and is raised to a specific status, viz. *Y. houae* LANG **stat. nov.** In the *Elwesi*-subgroup, *Y. houae* LANG **stat. nov.** from W. Hubei can be easily distinguished from its allopatric relatives, viz. *Y. elwesi* LEECH from Sichuan and Guizhou, and *Y. thao* MONASTYRSKII & LANG from N. Vietnam and S.E. Yunnan (see details in LANG, 2022: 350-355).

B) *Ypthima elwesi yuntaishana* LANG, 2022: This taxon is also a member of the *Elwesi*-subgroup, and it was described based upon a series of worn specimens the last year. In this study, a large series of fresh specimens (figs: 19-24) were collected. On its dorsal FW, the subapical ocellus is often absent or vestigal as in original description, besides it is seldom present in some individuals but with its yellowish ring ill-defined.

C) Comparing with the *Elwesi*-subgroup, the specific definitions in the *Praenubila*-subgroup are not so clear and still can be challenged, because 1) limited features can be used as diagnoses and 2) limited information is known from the Taiwanese taxa.

C1) *Ypthima kanonis* MATSUMURA, 1929 and *Y. neobilia* MURAYAMA, 1980: According to Hsu et al. (2021), the llp concave of *Ypthima neobilia* MURAYAMA (fig: 5d) is smaller than that of *Y. kanonis* MATSUMURA (fig: 5c1), but maybe the former is distorted by pressure when mounting the slide. SHIRÔZU & SHIMA (1979: Pl. 47: 66A-D) figured a \Im genitalia from Taiwan, and without exact locality, its affiliation is unknown. On the figure (SHIRÔZU & SHIMA, 1979: Pl. 47: 66B), the llp concave (fig: 5c2) is very small, and maybe it belongs to *Y. neobilia* MURAYAMA. Contours of the ventral lamellae of *Y. kanonis* MATSUMURA (fig: 7c1) and *Y. neobilia* MURAYAMA (fig: 7d) are traced from Hsu et al. (2021: figs. 652 [sic, 642], 643), the former is more stout and shorter than the latter. However, deformation caused by coverslips when mounting has to be noticed for genitalia figures in Hsu et al. (2021). If all related figures in Hsu et al. (2021) and SHIRÔZU & SHIMA (1979) are accurate and stable, species status of both *Y. kanonis* MATSUMURA and *Y. neobilia* MURAYAMA can be confirmed.

C2) *Ypthima kanonis shibingensis* LANG, 2022: The status of this taxon is not adjusted, because available data from Taiwan can only be used for subgroup division but not for specific classification in a subgroup. *Ypthima kanonis shibingensis* LANG can be distinguished from its neighbour *Y. praenubila* LEECH by the combination of the following characters: 1) On hindwing underside, the ocellus in space 6 is obviously larger than that in the latter; 2) On underside, the earth-yellow tinge is weaker than that in the latter; 3) the lamina of androconia (fig: 31b) is relatively more robust than that of the latter (fig: 31a); 4) the σ sclerotic pouch (fig: 26) is relatively more elongated than that of the latter (fig: 25); 5) the stem of the ventral lamella (fig: 7b1-3) with its relative length is slightly shorter than that of the latter (fig: 7a1-2). Of course, excepting the size of the hindwing underside ocellus in space 6, other abovementioned diagnoses are more or less weakly supported. Therefore, it is possible that the relationship between the taxon *shibingensis* LANG and *Y. praenubila* LEECH is more closer than its relationship with *Y. kanonis* MATSUMURA. In other words, the taxon *shibingensis* LANG is possibly a subspecies of *Y. praenubila* LEECH, and moreover, it is even possibly a distinct species.

Descriptions of a new species in the Elwesi LEECH, 1893-subgroup.

Ypthima j u l a n a spec. nov. (figs: 4-8g, 14-18, 30, 31f)

Holotype: ♂, CHINA, Guizhou, Shibing, Yuntai-shan, 800 m, 10.VI.2023, leg. Hou Jiang, CMNH. Paratypes: 6 ♂♂, 7 ↔, ditto, 9.-24. VI.2023, legs. Song-yun Lang & Hou Jiang, LSY.

Description. σ : FW length (FWL): 23.5-25 mm. Upperside: ground colours blackish; FW: subapical ocellus vestigial or absent. HW: anal ocelli present in space 2, small. Underside: ground colours greyish, densely covered with deep brownish coarse striae; subbasal fascia deep brownish on both wings; discal and submarginal fasciae vague. FW: subapical ocellus well present. HW: distal half with its ground colour more whitish; postdiscal ocelli composed of one subapical ocellus in space 6 and two anal ocelli in spaces 1b and 2; the subapical ocellus often enlongated downwards with an extra pupil in space 5; an additional anal ocellus in space 3 sometimes present, but tiny or vestigial. Androconia: Lamina shortened, with its base obviously widened. σ genitalia: The same as the *Praenubila*-group type. Sclerotic pouch the same as the *Elwesi*-subgroup type. Valva somewhat narrower.

9: FWL: 24.5-27 mm. Upperside: ground colours deep brownish; FW: subapical ocellus well present, nearly round. HW: anal ocelli

well present in space 2. Underside: similar to \circ genitalia but somewhat paler. \circ genitalia: The same as the *Praenubila*-group type. Dorsal edge of llp with its middle concave very small. Mdp with its stem relatively narrow and short. Ventral lamella sessile, nearly oval.

Diagnosis: The new species belongs to the *Elwesi*-subgroup, and it can be distinguished from other taxa in the species subgroup by the combination of the following characters: 1) \circ FWL is the shortest in the *Elwesi*-subgroup; 2) On \circ FW upperside, the subapical oecllus is vestigial as in most individuals of *Ypthima elwesi* LEECH, whereas they are well present in *Y. houae* LANG **stat. nov.** and *Y. thao* MONASTYRSKII & LANG; 3) On HW underside, the subapical oecllus is nearly equal-sized with the anal ocellus in space 2 as in *Y. thao* MONASTYRSKII & LANG, whereas it is obviously bigger than the ocellus in space 2 in *Y. houae* LANG **stat. nov.** and *Y. elwesi* LEECH; 4) On HW underside, the anal ocellus in space 3 is absent or vestigial as in *Y. elwesi* elwesi LEECH and *Y. thao* MONASTYRSKII & LANG, whereas they are well present in *Y. houae* LANG **stat. nov.** and *Y. elwesi* (fig: 31f) are tapering upwards as in *Y. thao* MONASTYRSKII & LANG (fig: 31e), whereas they are equally width throughout in *Y. houae* LANG **stat. nov.** (fig: 31c) and *Y. elwesi yuntaishana* LANG (fig: 31d); 6) Laminae of androconia are thicker and shorter than those of *Y. thao* MONASTYRSKII & LANG; 7) \circ valva (fig: 30) is more slender than those of *Y. elwesi yuntaishana* LANG (fig: 27) and *Y. thao* MONASTYRSKII & LANG (fig: 5g) with its middle concave is obviously smaller than that in *Y. elwesi yuntaishana* LANG (fig: 5e) and *Y. thao* MONASTYRSKII & LANG (fig: 5f); 9) \circ ventral lamella (fig: 7g) is more rounded than that of *Y. elwesi yuntaishana* LANG (fig: 5e) and *Y. thao* MONASTYRSKII & LANG (fig: 5f); 9).

Etymology: The specific name *julana* is named after Julan, which was an ancient emirate in nowadays E. Guizhou about two thousand years ago.

Distribution: China (E. Guizhou).

Biogeographical notes:

1) The *Praenubila*-subgroup and the *Elwesi*-subgroup are often sympatric. *Ypthima praenubila* LEECH and *Y. elwesi* LEECH were known from Omei, W. Sichuan (LEECH, 1892-1894); *Y. praenubila* LEECH and *Y. thao* MONASTYRSKII & LANG were recorded from Tam Dao, N. Vietnam (MONASTYRSKII et al., 2022); *Y. praenubila* LEECH and *Y. houae* LANG **stat. nov.** fly together in Wufeng, W. Hubei (LANG, 2022); *Y. kanonis shibingensis* LANG and *Y. elwesi yuntaishana* LANG/*Y. julana* **spec. nov.** are sympatric in Shibing, E. Guizhou.

2) In the *Elwesi*-subgroup, a sympatric pattern of 2 species are discovered in Shibing, E. Guizhou in this study. Moreover, even 3 species of the *Praenubila*-group are sympatric here including 2 of the *Elwesi*-subgroup, they are *Ypthima julana* spec. nov. (fly period approximately from early May to late June), *Y. elwesi yuntaishana* LANG (fly period approximately from early June to late July) and *Y. kanonis shibingensis* LANG (fly period approximately from early July to late August). Therefore, in E. Guizhou, it can be observed that worn *Y. julana* spec. nov. (*Elwesi*-subgroup) flies together with fresh *Y. elwesi yuntaishana* LANG (*Elwesi*-subgroup) in mid-June; and in a later worn *Y. elwesi yuntaishana* LANG (*Elwesi*-subgroup) flies together with fresh *Y. kanonis shibingensis* LANG (*Praenubila*-subgroup) in mid-July.

3) In the *Praenubila*-subgroup, though their specific definitions are not so clear as species in the *Elwesi*-subgroup, an allopatric distributional pattern presents basing upon current data. In Taiwan island, *Ypthima kanonis kanonis* MATSUMURA is known from the north of the island, whereas *Y. neobilia* MURAYAMA is known from the central and the south of the island. In mainland China, the limited range of *Y. kanonis shibingensis* LANG is nearly encircled by the wide range of *Y. praenubila* LEECH.

A revised checklist of the Praenubila-group sensu SHIRÔZU & SHIMA, 1979:

The Praenubila LEECH, 1891-group

- I. the Praenubila LEECH, 1891-subgroup
 - I-1. Ypthima praenubila LEECH, 1891
 - I-2a. Ypthima kanonis kanonis MATSUMURA, 1929
 - I-2b. Ypthima kanonis shibingensis LANG, 2022
 - I-3. Ypthima neobilia MURAYAMA, 1980
- II. the *Elwesi* LEECH, 1893-subgroup
 - II-4a. Ypthima elwesi elwesi LEECH, 1893
 - II-4b. *Ypthima elwesi yuntaishana* LANG, 2022
 - II-5. Ypthima thao Monastyrskii & Lang, 2022
 - II-6. *Ypthima julana* spec. nov.
 - II-7. *Ypthima houae* LANG, 2022 **stat. nov.**

Acknowledgements: The present author thanks Mr. V. V. TSHIKOLOVETS (Pardubice), Dr. A. L. MONASTYRSKII (Hanoi), Mr. S. Y. HUANG (Bonn), Mr. H. HUANG (Qingdao) and Ms. J. HOU (Beibei) for their various helps.

References

Coutsis, J. G. (1984): Description of the \circ genitalia of *Hipparchia fagi* Scopoli, *Hipparchia semele* Linnaeus (Satyridae) and their related taxa. - The Journal of Research on the Lepidoptera **22** (3): 161-203, Santa Barbara.

Hsu, Y. F. (2013): The butterflies of Taiwan. 3. Nymphalidae. - Morning Star Publishing Inc., Taipei.

Hsu, Y. F., LIANG, J. Y., HUANG, C. W. & Z. Y. SHEN (2021): Butterfly Fauna of Taiwan, Vol. V, Nymphalidae. - Forestry Bureau, Council of Agriculture, Executive Yuan, Taipei.

KLOTS, A. B. (1970): Lepidoptera. - In TUXEN, S. L. (Ed.), Taxonomist's glossary of genitalia in insects. - Munksgaar, Copenhagen. LANG, S. Y. (2022): Notes on the *Ypthima praenubila* LEECH, 1891-group sensu SHIRÔZU & SHIMA, 1979, with descriptions of three

new subspecies (Lepidoptera, Nymphalidae, Satyrinae). - Atalanta **53** (3/4): 350-355, Marktleuthen.

LANG, S. Y. (2023): Notes on the 9 genitalia of satyrid butterflies (I): *Hipparchia autonoe* (ESPER, 1783) (Lepidoptera, Nymphalidae, Satyrinae). - Atalanta **54** (1/2): 132-136, Marktleuthen.

LEECH, J. H. (1891): New species of Rhopalocera from Western China. - Entomologist 24 (Suppl.): 57-61, 66-68, London.

LEECH, J. H. (1892-1894): Butterflies from China, Japan, and Corea 1, 2. - R. H. Porter, London.

MATSUMURA, S. (1929): Some new butterflies from Japan, Korea and Formosa. - Insecta matsumurana 3 (4): 139-142, Sapporo.

MONASTYRSKII, A. L., LANG, S. Y., UÉMURA, Y. & V. L. VU (2022): A new species related to *Ypthima praenubila* LEECH, 1891 in Vietnam and China (Lepidoptera, Nymphalidae, Satyrinae). - Zootaxa **5141** (1): 71-78, Aukland.

MURAYAMA, S. (1980): On some butterflies of Simingshan in Prov. Zhejiang, East China, with descriptions of 4 new subspecies. -New entomologist **29** (2): 23-27, Ueda.

SHIMA, H. (1988): Phylogenetic relationships of the genus *Ypthima* HÜBNER (Lepidoptera, Satyridae). - Special Bulletin of Lepidopterological Society of Japan 4: 69-81, Tokyo.

SHIRÔZU, T. & H. SHIMA (1979): On the natural groups and their phylogenetic relationships of the genus *Ypthima* HÜBNER mainly from Asia (Lepidoptera: Satyridae). - Sieboldia 4: 231-295, Fukuoka.

TALBOT, G. (1947 [1949]): The Fauna of British India, Ceylon and Burma, Butterflies 2. - Taylor & Francis, Ltd., London.

Address of the author

Song-Yun Lang Chongqing Museum of Natural History, 400700, Beibei, China e-mail: langsongyun@126.com

Characters	the Praenubila -subgroup	the <i>Elwesi</i> -subgroup
♂ sclerotic pouch	dorsal edge straight ventro-cephalic end (vce) small vce ended far beyond the dorsal end	dorsal edge curved ventro-cephalic end enlarged vce ended together with the dorsal end
androconia	lamina often longer	lamina always shorter
dorsal edge of llp	middle concave large or small	middle concave small
mdp	stem robust	stem narrow
ventral lamella	petiolate	sessile

Table 1: Diagnoses of the Praenubila LEECH, 1891-subgroup and the Elwesi LEECH, 1893-subgroup.

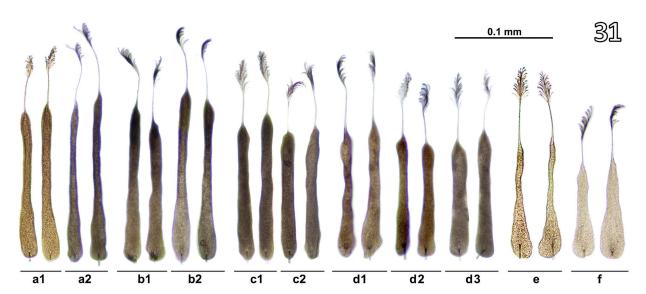


Fig. 31: Androconia. a1-2. Ypthima praenubila LEECH, 1891: (a1) CHINA, Jiangxi, Longnan, SATY0285, ANDR0235, LSY; (a2) CHINA, Hubei, Wufeng, SATY1144, ANDR0288, LSY. b1-2. Ypthima kanonis shibingensis LANG, 2022: (b1) paratype, CHINA, Guizhou, Shibing, SATY1145, ANDR0290, LSY; (b2) paratype, ditto, SATY1139, ANDR0291, LSY. c1-2. Ypthima houae LANG, 2022 stat. nov.: (c1) paratype, CHINA, Hubei, Wufeng, SATY1146, ANDR0283, LSY; (c2) paratype, ditto, SATY1138, ANDR0284, LSY. d1-3. Ypthima elwesi yuntaishana LANG, 2022: (d1) holotype, CHINA, Guizhou, Shibing, SATY1140, ANDR0292, CMNH; (d2) CHINA, ditto, SATY1196, ANDR0309, LSY; (d3) ditto, SATY1197, ANDR0310, LSY. e. Ypthima thao MONASTYRSKII & LANG, 2022, paratype, CHINA, Yunnan, Malipo, SATY0795, ANDR0236, LSY. f. Ypthima julana spec. nov., paratype, CHINA, Guizhou, Shibing, SATY1194, ANDR0303, LSY.

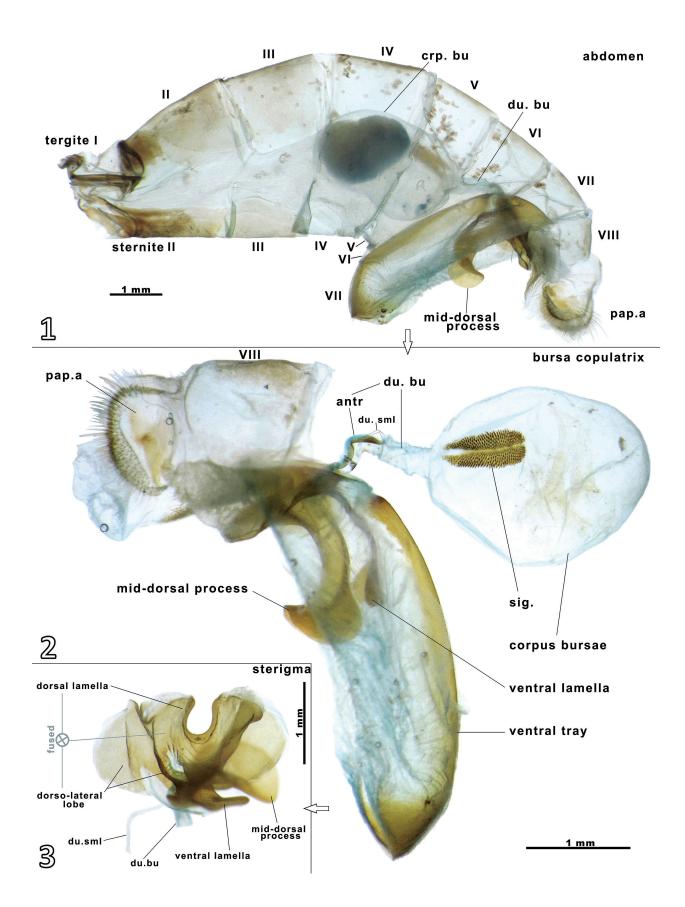


Fig. 1-3: ♀ genitalia. (1) Abdomen of *Ypthima kanonis shibingensis* LANG, 2022 (paratype, CHINA, Guizhou, Shibing, SATY117, LSY 2) in lateral view; (2) Bursa copulatrix of *Ypthima praenubila* LEECH, 1891 (CHINA, Shaanxi, Lan'gao, SATY1174, LSY) in lateral view; (3) Sterigma of *Ypthima kanonis shibingensis* LANG (paratype, CHINA, Guizhou, Shibing, SATY1172, LSY) in caudal view.

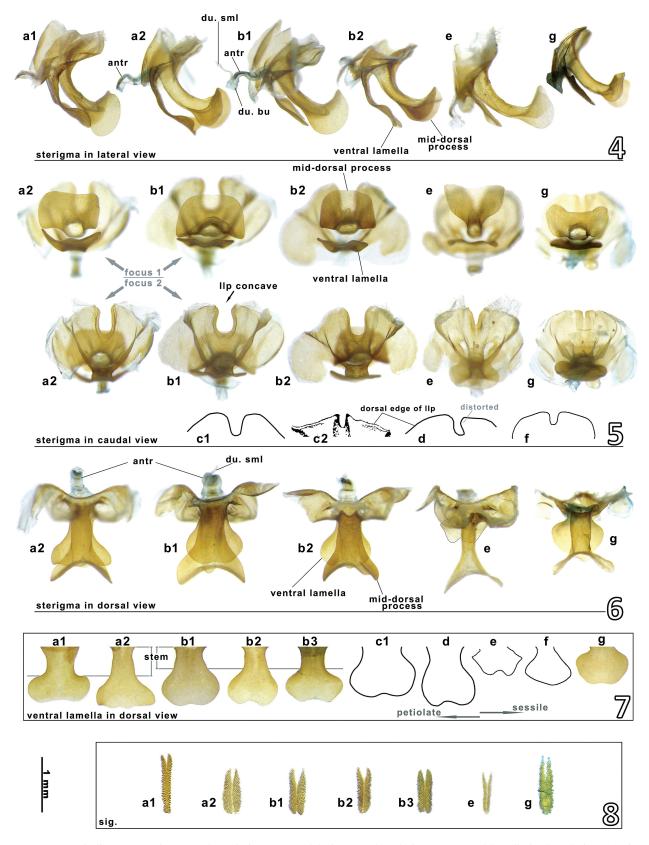


Fig. 4-8: ♀ genitalia. (4-6) sterigma; (4) lateral view; (5) caudal view; (6) dorsal view; (7) ventral lamella in dorsal view; (8) sig.
a. *Ypthima praenubila* LEECH, 1891: (a1) CHINA, Chongqing, Jiangjin, SATY1108, LSY; (a2) CHINA, Shaanxi, Lan'gao, SATY1174, LSY.
b. *Ypthima kanonis shibingensis* LANG, 2022: (b1) paratype, CHINA, Guizhou, Shibing, SATY1172, LSY; (b2) ditto, SATY1173, LSY; (b3) ditto, SATY1178, LSY.
c. *Ypthima kanonis kanonis Matsumura*, 1929: (c1) CHINA, Taiwan, Beitou, traced from Hsu et al. (2021: fig. 642 [sic, 652]); (c2) "*Ypthima praenubila kanonis* Matsumura", CHINA, Taiwan, after SHIRÔZU & SHIMA (1979: Pl. 47: 66B).
d. *Ypthima neobilia* MURAYAMA, 1980, CHINA, Taiwan, Taidong, traced from Hsu et al. (2021: fig. 643).
e. *Ypthima elwesi yuntaishana* LANG, 2022, paratype, CHINA, Guizhou, Shibing, SATY1175, LSY.
f. *Ypthima thao* MONASTYRSKII & LANG, 2022, paratype, VIETNAM, Vinh Phuc, Tam Dao, traced from MoNASTYRSKII et al. (2022).
g. *Ypthima julana* spec. nov., paratype, CHINA, Guizhou, Shibing, SATY1191, LSY.

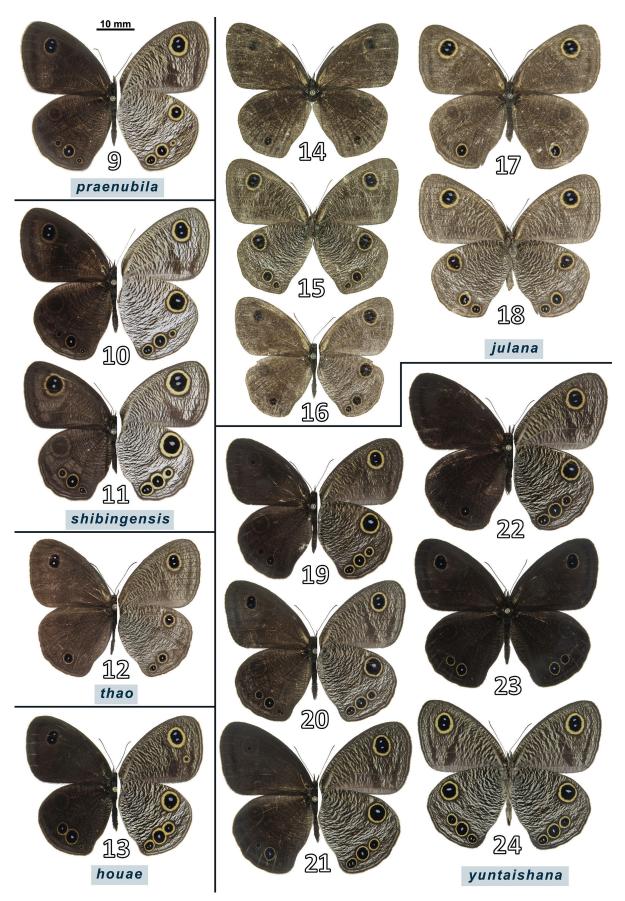


Fig. 9: *Ypthima praenubila* LEECH, 1891, ♂, CHINA, Hubei, Wufeng, SATY1144, ANDR0288, LSY. Fig. 10-11: *Ypthima kanonis shibingensis* LANG, 2022: (10) holotype, ♂, CHINA, Guizhou, Shibing, CMNH; (11) paratype, ♀, ditto, SATY1175, LSY. Fig. 12: *Ypthima thao* MONASTYRSKII & LANG, 2022, paratype, ♂, CHINA, Yunnan, Malipo, SATY0795, ANDR0236, LSY. Fig. 13: *Ypthima houae* LANG, 2022 stat. nov., holotype, ♂, CHINA, Hubei, Wufeng, CMNH. Fig. 14-18: *Ypthima julana* spec. nov.: (14-15) holotype, ♂, CHINA, Guizhou, Shibing, SATY1190, CMNH; (16) paratype, ♂, ditto, LSY; (17-18) paratype, ♀, ditto, LSY. Fig. 19-24: *Ypthima elwesi yuntaishana* LANG, 2022: (19) ♂, CHINA, Guizhou, Shibing, LSY; (20) ♂, ditto, SATY1196, ANDR0309, LSY; (21) ♂, ditto, SATY1197, ANDR0310, LSY; (22) ♂, ditto, LSY; (23-24) ♂, ditto, SATY1195, LSY.

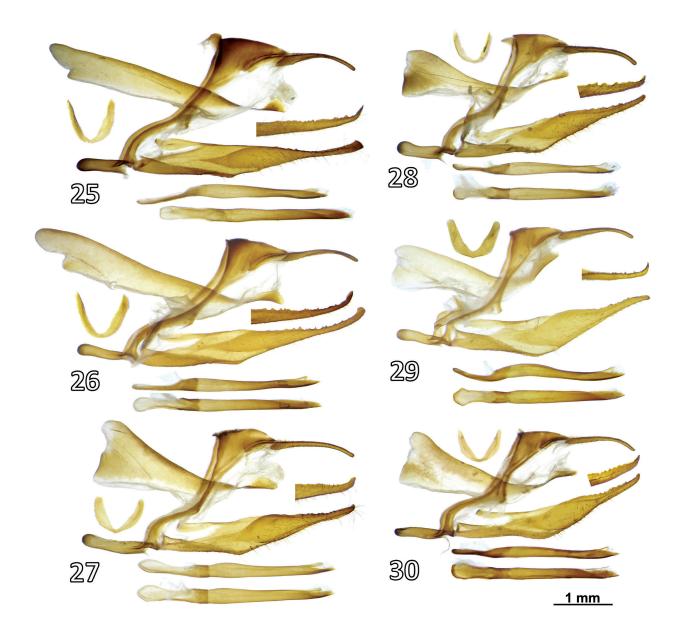


Fig. 25-30: S genitalia. Fig. 25: Ypthima praenubila LEECH, 1891, CHINA, Hubei, Wufeng, SATY1144, ANDR0288, LSY; Fig. 26: Ypthima kanonis shibingensis LANG, 2022, paratype, CHINA, Guizhou, Shibing, SATY1145, ANDR0290, LSY; Fig. 27: Ypthima elwesi yuntaishana LANG, 2022, holotype, CHINA, Guizhou, Shibing, SATY1140, ANDR0292, CMNH; Fig. 28: Ypthima houae LANG, 2022 stat. nov., paratype, CHINA, Hubei, Wufeng, SATY1138, ANDR0284, LSY; Fig. 29: Ypthima thao MONASTYRSKII & LANG, 2022, paratype, CHINA, Yunnan, Malipo, SATY0795, ANDR0236, LSY; Fig. 30: Ypthima julana spec. nov., holotype, CHINA, Guizhou, Shibing, SATY1190, CMNH.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: Atalanta

Jahr/Year: 2023

Band/Volume: 54_1-2

Autor(en)/Author(s): Lang Song-Yun

Artikel/Article: Additional notes on the Ypthima praenubila Lee ch, 1891-group sensu Shirôzu & Shima, 1979, with descriptions of a new species from China (Lepidoptera, Nymphalidae, Satyrinae) 136-143