

Description of a new subspecies of *Lethe baucis* Leech, 1891 (Lepidoptera: Nymphalidae) from N. Yunnan, China

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Abstract. The species status of *Lethe baucis* Leech, 1891 from China is confirmed based upon male genitalia characters and a new subspecies, *L. baucis huanghaoi* ssp. nov. from N. Yunnan province, is described and illustrated in this paper.

Samenvatting. De soortstatus van *Lethe baucis* Leech, 1891 uit China wordt door de eigenschappen van de mannelijke genitalia bevestigd en een nieuwe ondersoort, *L. baucis huanghaoi* ssp. nov. uit de provincie N. Yunnan wordt beschreven en geïllustreerd.

Résumé. Le statut spécifique de *Lethe baucis* Leech, 1891 de Chine est confirmé sur base des caractères des génitalia et une nouvelle sous-espèce, *L. baucis huanghaoi* ssp. nov. en provenance de la province du Yunnan septentrional, est décrite et illustrée.

Key words: Nymphalidae – Satyrinae – Satyrini – *Lethe* – new subspecies – China – Yunnan – Jizushan.

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Introduction

Lethe baucis Leech, 1891 (Satyrinae: Satyrini) with its junior synonym *L. procris* Leech, 1891 is a species which has been known from western and central China region, Sichuan (Chia-kou-ho, Moupin, Wa-shan, Omei, Wassekou) and W. Hubei (Chang-yang) (Leech 1892; South 1902; Seitz 1907; Draeseke 1925). It is regarded by Fruhstorfer (1911) as the West Chinese local race of *L. insana* [sic] (Kollar, 1844), viz. *L. insana* [sic] *baucis*, and this viewpoint was followed by D'Abra (1990). It deserves to be mentioned that the name *insana*, an incorrect spelling of *isana*, is a junior synonym of *L. hyrания* (Kollar, 1844) (Lang & Lamas 2016). Chou (1994) recorded *L. insana* [sic] *baucis* from SE China (Zhejiang and Fujian) but it is only a misidentification of *L. hyrания caeruleascens* Mell, 1923 and, at the same time, Chou (1994) recorded a couple of *L. insana* [sic] *brisanda* de Nicéville, 1886 from Yunnan province which are actually misidentifications of *L. baucis*. It is worth to mention that the specimens illustrated by Chou (1994) were also the first known records of *L. baucis* from Yunnan. In this research, the following taxa from China have been studied including *L. hyrания dinarbas* (Hewitson, 1863), *L. hyrания caeruleascens* Mell, 1923 and *L. baucis*. The male genitalia of *L. baucis* can be easily separated from those of *L. hyrания*, therefore the species status of *L. baucis* can be confirmed. A series of *L. baucis* from Sichuan, Chongqing and Yunnan have been studied in this research, and the population from Yunnan can be distinguished from typical *L. baucis* by some superficial characters and it is herein described as a new subspecies.

Material

Materials studied in this research are deposited in the following public or private collections in China: Chongqing Museum of Natural History, Beibei, Chongqing (Coll. CMNH), Dr. S-Y. Lang's private collection, Shuangliu, Chengdu, Sichuan (Coll. LSY), Mr. H. Huang's private collection, Qingdao, Shandong (Coll. HH).

For comparing with *Lethe baucis*, the following specimens of *L. hyrания* have been studied: *L. hyrания*

dinarbas (figs. 4, 12): 14♂ 1♀, CHINA: Tibet, Medog, from Medog town to 80K, 1100–2000 m, 20.VII–12.VIII.2012, leg. S-y. Lang (Coll. LSY); 1♀, CHINA: Yunnan, Gongshan, Dulong-jiang, Maku, 1600 m, 25.VI.2015, leg. S-y. Lang (Coll. LSY); *L. hyrания caeruleascens* (figs. 5–8): 3♂, CHINA: Jiangxi, Longnan, Mt. Jiulianshan, 21.V.2012, 27.VIII.2012, 30.VII.2013, leg. Hua-lin Hu (Coll. LSY); 2♂ 3♀, CHINA: Guangdong, Ruyuan, Nanling, 1000–1200 m, 25–26.V.2014, leg. S-y. Lang (Coll. LSY); 8♂ 1♀, CHINA: Hainan, Mt. Wuzhishan, 1300–1839 m, 14–18.IV.2015, leg. S-y. Lang (Coll. LSY); 4♂, CHINA: Hainan, Lingshui, Mt. Diaoluoshan, 20–21.IV.2015, leg. S-y. Lang (Coll. LSY); 32♂ 2♀, CHINA: Guangxi, Tianlin, Mt. Cenwang-laoshan, 1300–1700 m, 7–10.V.2015, leg. S-y. Lang (Coll. LSY); 1♀, CHINA: Guangxi, Xing'an, Mt. Maoer-shan, 1600 m, 29.V.2015, leg. S-y. Lang (Coll. LSY).

Taxonomic accounts

Lethe baucis Leech, 1891 (figs. 3, 11)

Lethe baucis Leech, 1891. *Entomologist* 24 (Suppl.): 3, Type locality: Chia-kou-ho; Leech, 1892. Butt. China: 22, pl. IV: 5, 6; South, 1902. Cat. coll. Pal. butt. Leech: 4; Seitz, 1907. *Macrolep. World* 1: 84, pl. 30: c; Draeseke, 1925. *Dt. ent. Z. Iris* 39: 52; Gaede in Strand, 1931. *Lep. Cat.* 43: 283.

Lethe insana [sic] *baucis*: Fruhstorfer in Seitz, 1911. *Macrolepid. world* 9: 318; D'Abra, 1990. Butt. Hol. 1: 126.

Lethe insana [sic] var. *baucis*: Gaede in Strand, 1931. *Lep. Cat.* 43: 295.

Lethe procris Leech, 1891. *Entomologist* 24 (Suppl.): 2, Type locality: Wa-shan.

Lethe baucis var. *procris*: Leech, 1892. Butt. China: 22, pl. IV: 7; South, 1902. Cat. coll. Pal. butt. Leech: 4; Gaede in Strand, 1931. *Lep. Cat.* 43: 283.

Lethe baucis ab. *procris*: Seitz, 1907. *Macrolep. World* 1: 84.

Lethe insana [sic] *baucis* ab. *procris*: Fruhstorfer in Seitz, 1911. *Macrolepid. world* 9: 318.

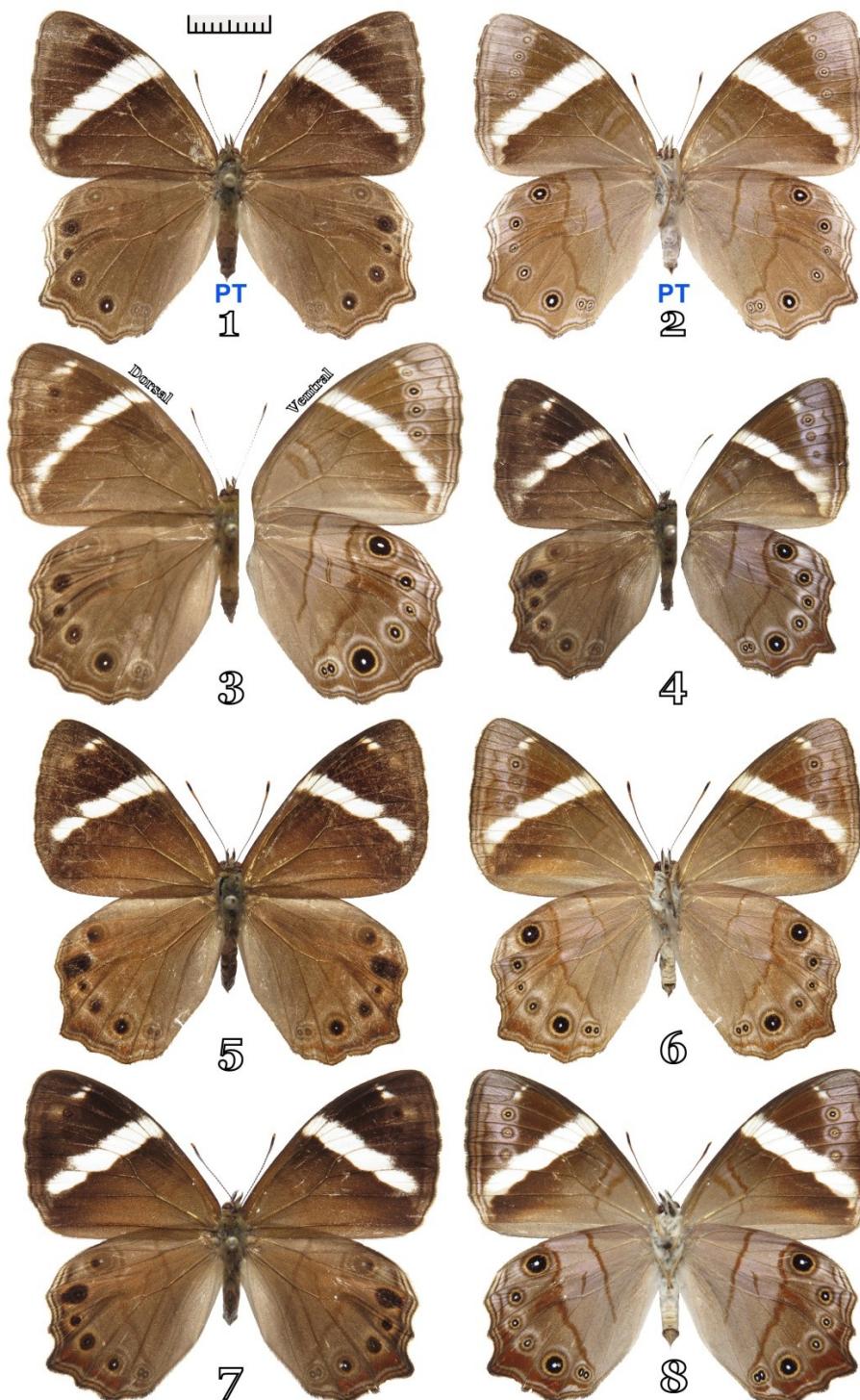


Fig. 1, 2.—*Lethe baucis huanghaei* ssp. nov. ♀, paratype, dorsal- and ventral side, Jizu-shan, Yunnan (Coll. LSY).

Fig. 3.—*Lethe baucis* ♀, dorsal- and ventral side, Omei, Sichuan (Coll. LSY).

Fig. 4.—*Lethe hyrana dinarbas* ♀, dorsal- and ventral side, Dulongjiang, Yunnan (Coll. LSY).

Fig. 5, 6.—*Lethe hyrana caerulescens* ♀, dorsal- and ventral side, Wuzhi-shan, Hainan (Coll. LSY).

Fig. 7, 8.—*Lethe hyrana caerulescens* ♀, dorsal- and ventral side, Tianlin, Guangxi (Coll. LSY).

Material. 17♂ 2♀ CHINA: Sichuan, Omei, 1460–1200 m, 10–11.VIII.2013, leg. LSY (Coll. LSY); 1♂, ditto, 1750 m, 17.VI.2014, leg. LSY (Coll. LSY); 1♂, CHINA: Chongqing, Chengkou, 1180 m, 17.VIII.2008, leg. Xiao-dong Yang (Coll. CMNH); 2♂, CHINA: Chongqing, Jiangjin, Mt. Simianshan, 1000–1500 m, 2.IX.2008, 9.VIII.2009, leg. Aiming Li (Coll. CMNH).

Male genitalia (figs. 14–19). Uncus: in lateral view, it is ridgy dorsally, whereas in *L. hyrana* it is normal in

width with its dorsal ridge not protruding upwards. Valva: in lateral view, it is tapering towards the tip, whereas in *L. hyrana* it is rounded at the end; in dorsal view, it is gradually sharpened towards the tip and with its apex bent inwards, whereas in *L. hyrana* the tip is round or triangular and with a tiny sharp spine on its inner edge. Aedeagus: It is slightly longer than that of *L. hyrana*.

Distribution. China (W. Hubei, Sichuan, Chongqing).

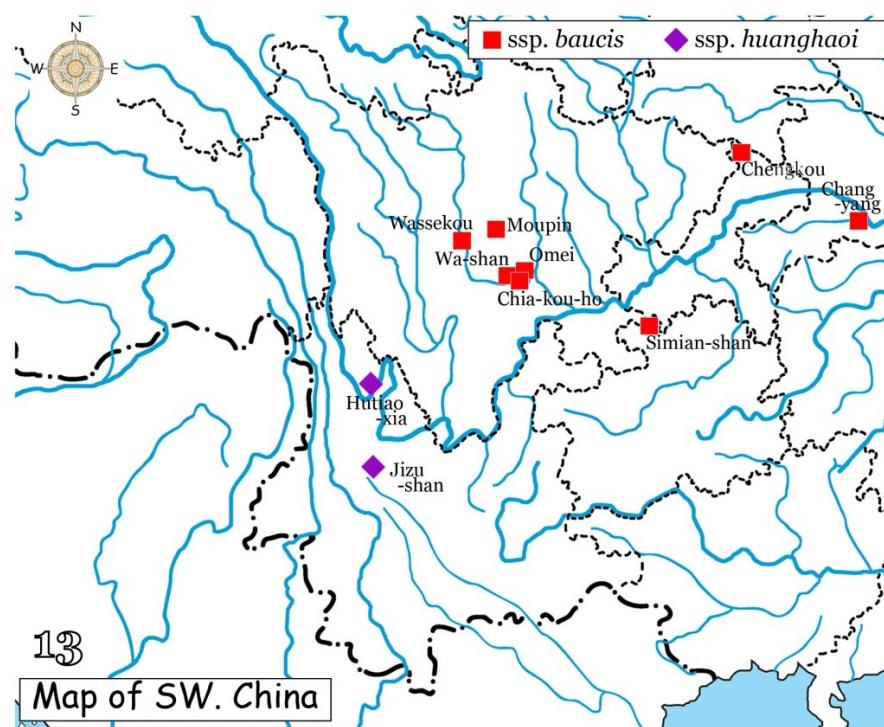
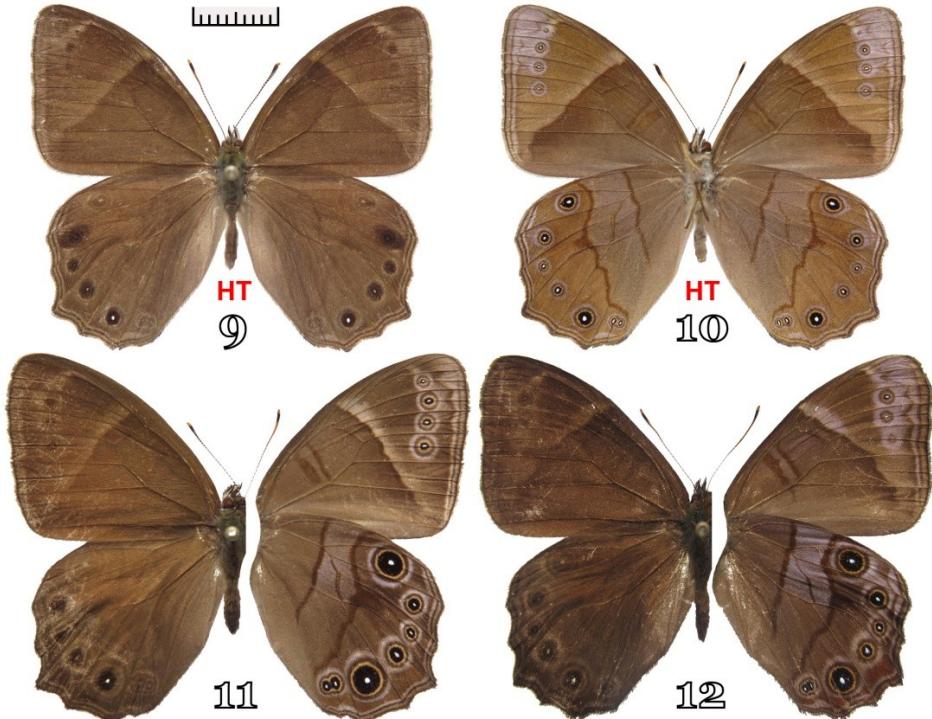


Fig. 9, 10.—*Letha baucis huanghaoi* ssp. nov. ♂, holotype, dorsal- and ventral side, Jizu-shan, Yunnan (Coll. LSY).

Fig. 11.—*Letha baucis* ♂, dorsal- and ventral side, Omei, Sichuan (Coll. LSY).

Fig. 12.—*Letha hyrania dinarbas* ♂, dorsal- and ventral side, Medog, Tibet (Coll. LSY).

Fig. 13. Distribution map (SW. China) of *Letha baucis*.

Letha baucis huanghaoi ssp. nov.

(figs. 1, 2, 9, 10)

Letha insana [sic] *brisanda*: Chou (nec de Nicéville), 1994. Mono. Rho. Sin.: 331.

Holotype. ♂, CHINA: Yunnan, Binchuan, Mt. Jizushan, Muxiangping, 2300 m, 23.IV.2015, leg. H. Huang (Coll. LSY).

Paratypes. 1♂ 1♀, the same dates as the holotype (Coll. LSY); 1♂, ditto (Coll. CMNH); 5♂ 2♀, ditto (Coll. HH); 1♂, CHINA: Yunnan, Shangri-la, Hutiaoxia, Jinxing

village, 1700 m, 28–29.V.2004, leg. H. Huang (Coll. HH); 1♀, ditto, 1800 m, 22.V.2004, leg. H. Huang (Coll. HH).

Description. Male. Dorsal: ground colour uniformly brown with markings the same as in *L. baucis*. Ventral: ground colour pale brown with forewing apical half and hindwing distal half strongly tinged with orange; wing pattern the same as in *L. baucis*. Female. Dorsal: forewing apical half blackish, crossed by an oblique whitish discal band. Ventral: forewing discal band the same as on the dorsal surface, broad and straight.

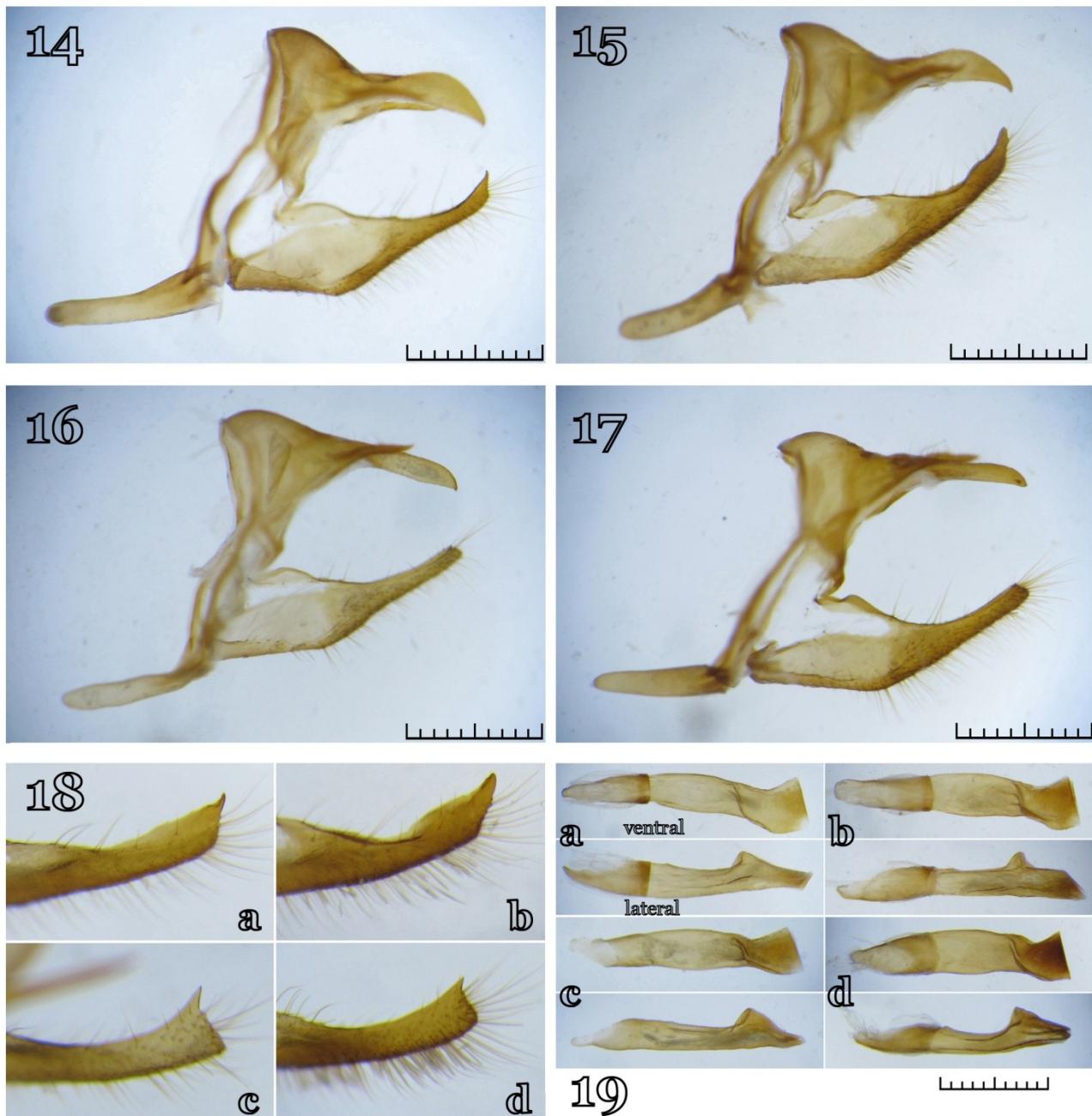


Fig. 14–17.— Male genitalia in lateral view with left valva and aedeagus removed. Fig. 14.— *Letha baucis huanghaoi* ssp. nov., paratype, SATY0377, Jizu-shan, Yunnan (Coll. LSY). Fig. 15.— *Letha baucis*, SATY0378, Omei, Sichuan (Coll. LSY). Fig. 16.— *Letha hyrana dinarbas*, SATY0365, Medog, Tibet (Coll. LSY). Fig. 17.— *Letha hyrana caerulescens*, SATY0379, Tianlin, Guangxi (Coll. LSY).

Fig. 18—Tip of the male valva in dorsal view. a.—*Letha baucis huanghaoi* ssp. nov., paratype, SATY0377, Jizu-shan, Yunnan (Coll. LSY). b.—*L. baucis*, SATY0378, Omei, Sichuan (Coll. LSY). c.—*L. hyrana dinarbas*, SATY0365, Medog, Tibet (Coll. LSY). d.—*L. hyrana caerulescens*, SATY0379, Tianlin, Guangxi (Coll. LSY).

Fig. 19—Aedeagus in ventral and lateral view. a.—*Letha baucis huanghaoi* ssp. nov., paratype, SATY0377, Jizu-shan, Yunnan (Coll. LSY). b.—*L. baucis*, SATY0378, Omei, Sichuan (Coll. LSY). c.—*L. hyrana dinarbas*, SATY0365, Medog, Tibet (Coll. LSY). d.—*L. hyrana caerulescens*, SATY0379, Tianlin, Guangxi (Coll. LSY).

Diagnosis. The new subspecies can be distinguished from the nominate ssp. *baucis* by the combination of the following characters: 1) Both sex are smaller in size. 2) Male: 2a) On the ventral forewing, the apical area is light purple, whereas in *baucis* it is more greyish; 2b) On the ventral forewing, the discal line is almost straight near the costa, whereas in *baucis* it is always bent inwards near the costa; 2c) On the ventral forewing, the outer edge of the discal line is obscure, whereas in *baucis* it is a more distinct creamy white line; 2d) On the ventral

hindwing, the discal area is less purple coloured than *baucis*; 2e) On the ventral surface, the ground colours of the forewing apical half beyond the discal line and the hindwing distal half outside the discal line are strongly tinged with orange, whereas in *baucis* they are dark reddish brown. 3) Female: 3a) On both surfaces of forewing, the whitish discal band is straight and more broad in width, whereas in *baucis* it is bent inwards near the costa and narrow in width; 3b) On the dorsal forewing, the ground colour of the apical half is more

blackish than *baucis*; 3c) On the ventral hindwing, the ground colour of the outer half outside the discal line is strongly orange as in the male but not tinged with dark reddish as in *baucis*.

Etymology. The subspecific name *huanghaoi* is named after my friend Mr. Huang Hao who collected the typical specimens.

Distribution. China (N. Yunnan).

Acknowledgements

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