

Descriptions of one new species and one new subspecies of the genus *Lethe* HÜBNER, 1819 from SW. China

(Lepidoptera, Nymphalidae)

by

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Abstract: In this paper, one new species and one new subspecies of the satyrid genus *Lethe* HÜBNER, 1819 from southwest China are described and illustrated, they are *L. paraprocne* **spec. nov.** from Sichuan and *L. paraprocne kawagarboensis* **subspec. nov.** from N. Yunnan.

Lethe procne (LEECH, 1891), belonging to the subgenus *Zophoessa* DOUBLEDAY, 1849, is a common satyrid butterflies known from mountainous areas of SW. China (W. Sichuan, N. Yunnan and S. Shaanxi). Here, a cryptic new species of *L. procne* (LEECH) is described from Sichuan, it is *L. paraprocne* **spec. nov.** This new species is very similar to *L. procne* (LEECH) flying together with the later in the type locality. As the population of the new species, occurring in N. Yunnan looks different, it is described as a new subspecies: *kawagarboensis* **subspec. nov.**

Lethe paraprocne **spec. nov.** (figs. 1-2)

Holotype ♂: Length of the forewing (FWL) 27 mm, Sichuan, Ebian, Heizhugou [Black bamboo valley], 1800-2000 m, 17.VIII.2013, leg. SONG-YUN LANG, deposited in Dr. SONG-YUN LANG's private collection in Shuangliu, Chengdu, Sichuan, China (LSY).

Diagnosis: The new species can be easily distinguished from the closely related species *Lethe procne* (LEECH) by the following combination of characters:

1. The ground colours are more darkish than those of *L. procne* (LEECH) on both sides.
2. On the forewing upperside, the yellowish subapical spots in spaces 4 and 5 are vestigial whereas in *L. procne* (LEECH) the spots are well developed.
3. On the forewing upperside, the brand (fig. 10) is weakly present, not enters into the cell, and distantly interrupted in space 1b, whereas in *L. procne* (LEECH) the brand (fig. 9) is large in size, dense, enters into the cell from the bases of spaces 2 and 3, and is continuous or only weakly interrupted in space 1b.
4. On the forewing upperside, the blackish fascia alongside the inner margin of the yellowish postdiscal spots can be easily observed, whereas in *L. procne* (LEECH) the blackish fascia is vestigial or absent.
5. On the forewing underside, the yellowish postdiscal spots in spaces from 1b to 4 are small and well separated from each other, whereas in *L. procne* (LEECH) the postdiscal spots in spaces from 1b to 4 are large in size and nearly continuous with each other.

Notes: No remarkable and steady difference in ♂ genitalia (figs: 12-17) can be found between the new species and *L. procne* (LEECH), but basing upon the distinct superficial differences, especially the different characters of the forewing brand, a conclusion can be made that they are two distinct species. The ♀ of the new species is unknown.

Etymology: The specific name *paraprocne* composed by the Greek prefix para- and the name *procne*, means “near to *procne*”.

Distribution (map: 1): China (Sichuan).

Lethe paraprocne kawagarboensis **subspec. nov.** (figs. 3-5)

Holotype ♂, FWL 26 mm, Yunnan, Deqin, Mingyong village, 2500 m, 10.VIII.2013, leg. ZI-HAO LIU, deposited in LSY. Paratypes: 8 ♂♂, FWL 27-28 mm, Yunnan, Deqin, Mingyong village, 2500 m, 10.VIII.2013, leg. ZI-HAO LIU, 1 paratype deposited in Chongqing Museum of Natural History, Beibei, Chongqing, China (CMNH), 3 paratypes deposited in LSY, 4 paratypes deposited in ZI-HAO LIU's private collection in Fengtai, Huainan, Anhui, China (LZH).

Diagnosis: The new subspecies can be easily distinguished from the nominate subspecies by the following combination of characters:

1. On the forewing upperside, the yellowish subapical spots in spaces 4 and 5 are well developed as in *L. procne* (LEECH), whereas in the nominate subspecies the spots are vestigial.
2. On the forewing upperside, the postdiscal yellowish series are well developed, whereas in the nominate subspecies, they are smaller.
3. On the forewing upperside, the brand (fig. 11) is more dense than that of the nominate subspecies, but it not reaches the bases of spaces 2 and 3.
4. On the hindwing upperside, the black round postdiscal spots are usually larger in size than those of the nominate subspecies.
5. On the forewing underside, the yellowish postdiscal spots in spaces from 1b to 4 are somewhat larger in size than

those of the nominate subspecies.

Notes: The ♀ of the new subspecies is unknown.

Etymology: The specific name *kawagarboensis* is named after a peak at the type locality, it is the Kawagarbo Peak of Meri Snow Mountain. Kawagarbo, with 6740 m in altitude, is the highest peak in Yunnan Province.

Distribution: China (N. Yunnan).

***Lethe procne* (LEECH, 1891) (figs. 6-8)**

Zophoessa procne LEECH, 1891. Entomologist **24** (Suppl.): 2. TL: Wa-shan [Mt. Dawashan, Sichuan].

Material: 60 ♂♂, Sichuan, Omei, from Leidongping to Xixinsuo, 2430-1460 m, 5.-10.VIII.2013, leg. SONG-YUN LANG, LSY; 11 ♂♂, Sichuan, Ebian, Heizhugou, 1800-2000 m, 17.-18.VIII.2013, leg. SONG-YUN LANG, LSY; 2 ♂♂, Sichuan, Tianquan, Labahe, 5.VIII.2009, leg. SONG-YUN LANG, LSY; 1 ♂, Sichuan, Tianquan, Mt. Erlang-shan, 2.IX.2010, leg. JIAN-QING ZHU, LSY; 12 ♂♂, 1 ♀, Sichuan, Muli, 30.VII.-9.IX.1992, leg. WEN-PING LIU, CMNH; 1 ♂, Yunnan, Dongchuan, 2360 m, 14.VII.2012, LZH.

Notes: The population from S. Sichuan (Muli) and N. Yunnan is usually much smaller in size, with the FWL from 23 to 27 mm, than the common population from C. Sichuan, with the FWL from 27 to 30 mm. It is possible that the southern population of *Lethe procne* (LEECH) deserves a separated subspecies.

Distribution: China (N. Yunnan, Sichuan, S. Shaanxi).

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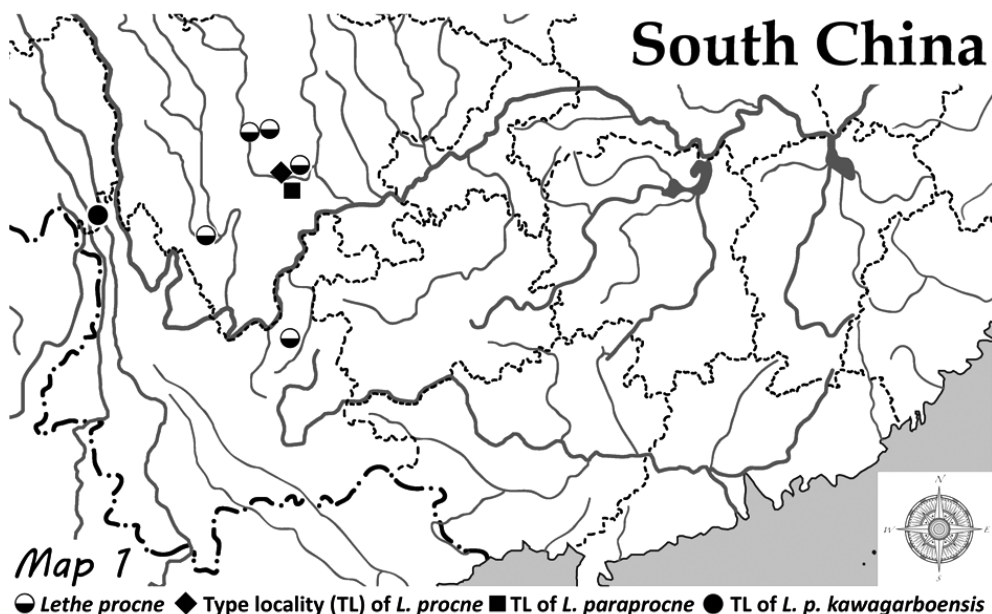
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Map. 1: Distribution map (South China) of *Lethe procne* (LEECH, 1891) and *Lethe paraprocne* spec. nov.

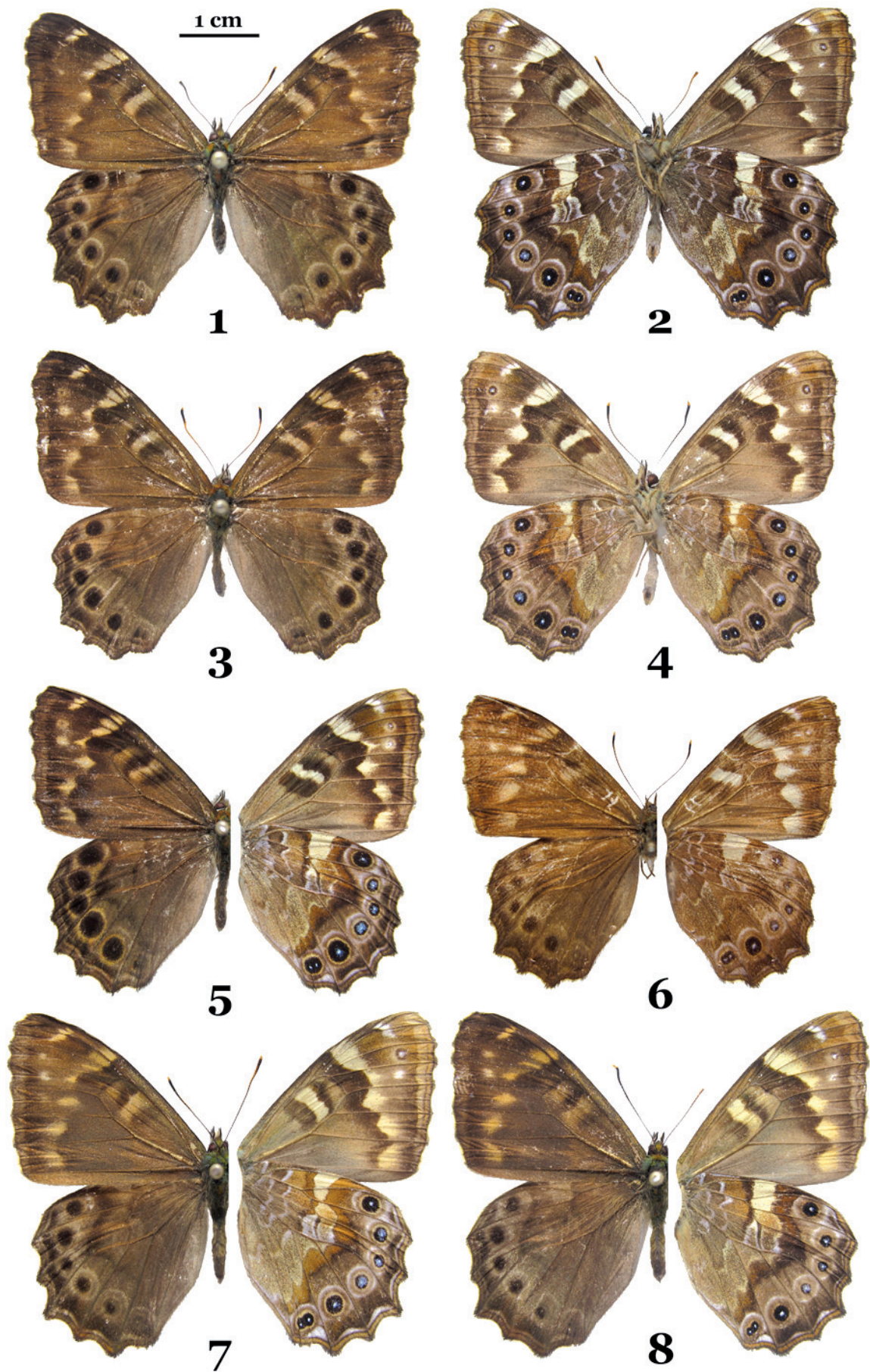


Fig. 1, 2: *Lethe paraprocné* **spec. nov.**, holotype ♂, Sichuan, Ebian, LSY, upper- and underside.
 Fig. 3, 4: *Lethe paraprocné kawagarboensis* **subspec. nov.**, holotype ♂, Yunnan, Deqin, LSY, upper- and underside.
 Fig. 5: *Lethe paraprocné kawagarboensis* **subspec. nov.**, paratype ♂, Yunnan, Deqin, LSY, upper- and underside.
 Fig. 6: *Lethe procne* (LEECH, 1891), ♂, Sichuan, Muli, CMNH, upper- and underside.
 Fig. 7: *Lethe procne* (LEECH, 1891), ♂, Sichuan, Omei, LSY, upper- and underside.
 Fig. 8: *Lethe procne* (LEECH, 1891), ♂, Sichuan, Ebian, LSY, upper- and underside.

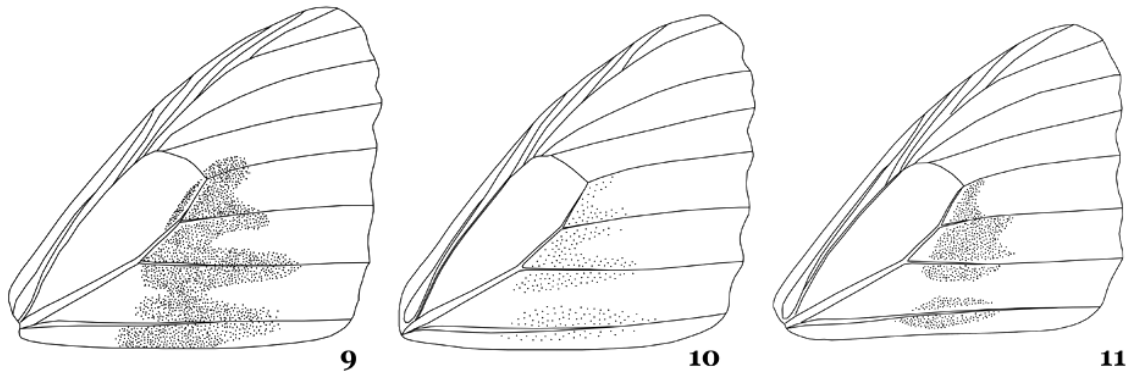


Fig. 9: Forewing brand of *Lethe procne* (LEECH, 1891).

Fig. 10: Forewing brand of *Lethe paraprocne spec. nov.*

Fig. 11: Forewing brand of *Lethe paraprocne kawagarboensis subspec. nov.*

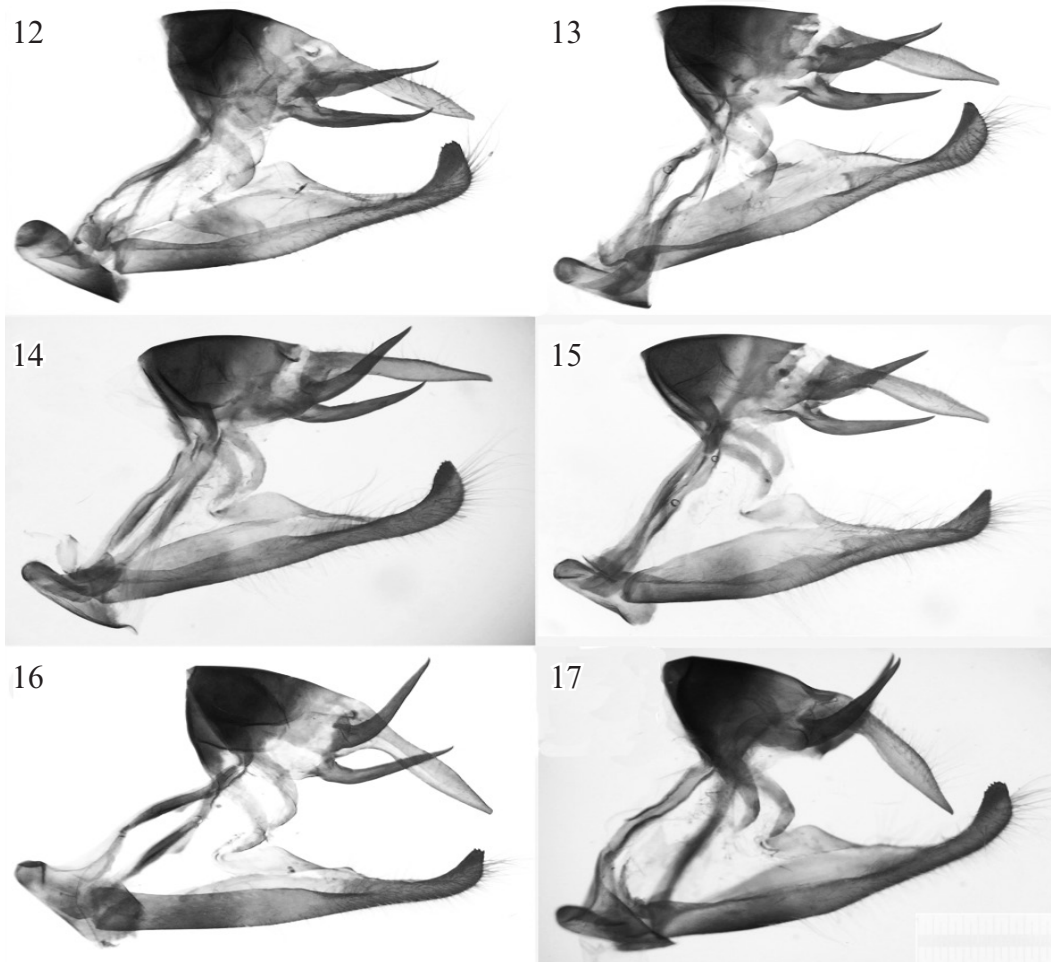


Fig. 12: ♂ genitalia of *Lethe paraprocne spec. nov.* in lateral view with left valva and aedeagus removed, holotype, Sichuan, Ebian, LSY.

Fig. 13: ♂ genitalia of *Lethe paraprocne kawagarboensis subspec. nov.* in lateral view with left valva and aedeagus removed, holotype, Yunnan, Deqin, LSY.

Fig. 14: ♂ genitalia of *Lethe paraprocne kawagarboensis subspec. nov.* in lateral view with left valva and aedeagus removed, paratype, Yunnan, Deqin, LSY.

Fig. 15: ♂ genitalia of *Lethe paraprocne kawagarboensis subspec. nov.* in lateral view with left valva and aedeagus removed, paratype, Yunnan, Deqin, LSY.

Fig. 16: ♂ genitalia of *Lethe procne* (LEECH, 1891) in lateral view with left valva and aedeagus removed, Sichuan, Omei, LSY.

Fig. 17: ♂ genitalia of *Lethe procne* (LEECH, 1891) in lateral view with left valva and aedeagus removed, Sichuan, Omei, LSY.

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