

Description of a new subspecies of *Loxerebia sylvicola* (OBERTHÜR, 1886)

from S. Sichuan, S.W. China

(Lepidoptera, Nymphalidae, Satyrinae)

by

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received 4.I.2025

Abstract: In this paper, *Loxerebia sylvicola* (OBERTHÜR, 1886), which is a local species from Hengduan Mountains, S.W. China, is studied. *Loxerebia sylvicola funahashi* SAKAI, 2024 **syn. nov.** is sunk to a junior synonym of *L. sylvicola gregoryi* WATKINS, 1927 from N.W. Yunnan. A new subspecies, viz. *Loxerebia sylvicola huidongensis* **subspec. nov.**, is described from Huidong, S. Sichuan.

Loxerebia WATKINS, 1925 (Satyrini: Ypthimina), with the type species *Callerebia pratorum* OBERTHÜR, 1886, is a Palearctic genus with 19 species known from E. Tibet (S.W. China) to N. China, and most of its species have been recorded from the Hengduan Mountains (W. Sichuan, N. Yunnan and E. Tibet), S.W. China (DELLA BRUNA et al., 2000, 2002; LANG, 2020, 2022; WANG & LANG, 2024). Within the genus, *Loxerebia sylvicola* (OBTH.) is a typical Hengduanese with two subspecies known, namely *subspec. sylvicola* OBTH. (= *stotzneriana* DRAESEKE, 1925; *ubari* SAKAI, 2016) from W. Sichuan and *subspec. gregoryi* WATKINS, 1927 (= *degenensis* LI, 1994) from N.W. Yunnan (LANG, 2022). For the nominate subspecies, there are two forms present: the first is f. *sylvicola* OBTH., which has well developed postdiscal ocelli on the hindwing underside, and the second is f. *stotzneriana* DRAES. (= *ubari* SAKAI), which has its ocelli on the hindwing underside more or less reduced (LANG, 2022). Recently, a new subspecies, viz. *Loxerebia sylvicola funahashi* SAKAI, 2024, was described from Zayu, S.E. Tibet. It might be a wrongly labelled (a dubious locality) specimen of *subspec. gregoryi* WATKINS from N.W. Yunnan, and is sunk to a junior synonym thereafter. Furthermore, a new subspecies is described below from Huidong, S. Sichuan, and previously, a ♂ specimen of this new taxon, which was identified as *Loxerebia sylvicola* (OBTH.), from Dongchuan, N.E. Yunnan, was illustrated in WU & HSU (2017).

Materials: Specimens in this study are kept in Chongqing Museum of Natural History, Beibei, CHINA (CMNH) and SONG-YUN LANG's private collection, Beibei, CHINA (LSY). Photographs of a ♂ cotype of *Loxerebia sylvicola gregoryi* WATKINS kept in Staatliches Museum für Naturkunde Karlsruhe, Karlsruhe, GERMANY (SMNK) were provided by V. V. TSHIKOLOVETS (Pardubice). Photographs of the holotype of *Loxerebia sylvicola degenensis* LI, kept in Kunming Institute of Zoology, Chinese Academy of Sciences, Kunming, CHINA (KIZCAS) were provided by XUE-YAN LI and her colleagues (KIZCAS). Photographs of 3 ♀ *Loxerebia sylvicola* OBTH. illustrated in this work, were provided by G. C. BOZANO (Milano).

Taxonomic account

Loxerebia sylvicola sylvicola (OBERTHÜR, 1886) (figs. 2, 5, 7b)

Callerebia sylvicola OBERTHÜR, 1886, Ét. ent. 11: 24, pl. 4: 25. Type locality (TL): Chapa [Shaba, Luding]; LEECH, 1892, Butt. China (1): 103; SOUTH, 1902, Cat. coll. Pal. butt. LEECH: 52; SEITZ, 1907, Großschmett. Erde (1): 94, t. 35a; DRAESEKE, 1925, Dt. Ent. Z. Iris. 39: 54; GAEDE in SEITZ, 1930, Großschmett. Erde, Suppl. 1: 131.

Loxerebia sylvicola: WATKINS, 1925, Ann. Mag. Nat. Hist. (9) 16: 237; id., 1927, ibid. (9) 19: 327; GAEDE, 1931, Lep. Cat. (43): 40; GOLTZ, 1939, Ent. Rundsch. 56 (13): 126; D'ABRERA, 1992: Butt. Hol. Reg. (2): 197; CHOU, 1994, Mon. Rho. Sin. (1): 400; DELLA BRUNA et al. in BOZANO, 2000, Guide Butt. Pal. Reg., Sat. (2): 21; id., 2002, ibid. (2nd ed.): 21; WU & HSU, 2017, Butt. China (2): 614, f. 02 (a ♂ from Yajiang, Sichuan); LANG, 2022, Nym. China (3): 192.

Callerebia sylvicola ab. *stotzneriana* DRAESEKE, 1925, l. c.: 54. TL: Tatsienlu [Kangding].

Callerebia sylvicola f. *stotzneriana*: GAEDE in SEITZ, 1930, l. c.: 131, t. 10a [actually not figured].

Loxerebia sylvicola ab. *stotzneriana*: GAEDE, 1931, l. c.: 40.

Loxerebia sylvicola stotzneriana: DELLA BRUNA et al. in BOZANO, 2000, l. c.: 21; id., 2002, l. c.: 21.

Loxerebia sylvicola ubari SAKAI, 2016, Pallarge 10: 7, figs. 71-74. TL: Sichuan, Garze, Luhuo. [synonymised by LANG (2022)]

Loxerebia sylvicola sylvicola: LANG, 2022, l. c.: 193, pl. XXI: 7.

Material: 1 ♂, [Tatsienlu] 1930 (CMNH); 1 ♂, Mongan [Maogong = Xiaojin] JUL 1932 (CMNH); 4 ♂♂, CHINA: Sichuan, Jinchuan, 6.VII.2016, leg. HAO HUANG (LSY).

Distribution: China (W. Sichuan).

Loxerebia sylvicola gregoryi WATKINS, 1927 (figs. 3, 6, 7c)

Loxerebia sylvicola gregoryi WATKINS, 1927, Ann. Mag. nat. Hist. (9) 19: 327. TL: Loma Valley [Bijiang vally in Yunlong (GREGORY & GREGORY, 1923)], N. Yunnan; GOLTZ, 1939, Ent. Rundsch. 56 (13): 126.

Loxerebia sylvicola var. *gregoryi*: GAEDE, 1931, Lep. Cat. (43): 41.

Loxerebia sylvicola degenensis LI, 1994, J. Southwest Agr. Uni. 16 (2): 97. TL: Deqin, Yunnan. [synonymised by LANG (2022)]

Loxerebia sylvicola gregoryi [sic]: DELLA BRUNA et al. in BOZANO, 2000, Guide Butt. Pal. Reg., Sat. (2): 21; id., 2002, ibid. (2nd ed.): 21; LANG, 2022, Nym. China (3): 193, pl. XXI: 8.

Loxerebia sylvicola: WU & HSU, 2017, Butt. China (2): 614, f. 01 (a ♂ from Lijiang, Yunnan), f. 04 (a ♀ from Lijiang).

Loxerebia sylvicola funahashi SAKAI, 2024, Pallarge 12: 6, figs. 45-46. TL: Zayu alt. 4000 m, S.E. Tibet [dubious locality] **syn. nov.**

Material: 1 ♂, Co-type/ *sylvicola gregoryi*, WATK. cotype ♂/ S. W. China: Yunnan. Prof. J. W. GREGORY. B.M. 1923-114./ # 6.464 SMNK TSHIKOLOVETS (SMNK); 1 ♂, Holotype KIZ, CAS/ *Loxerebia sylvicola degenensis* ssp. n. ♂ CHANG-LIAN LI/ 0058647/ Deqin, 1985.VII.18, leg. CHANG-LIAN LI (KIZCAS); 1 ♂, Lijiang, Dongbagu, 2700 m, 12.VIII.2005, leg. GUO-XI XUE (LSY).

Notes: SAKAI (2024) described *Loxerebia sylvicola funahashi* SAKAI basing upon a single specimen (Holotype ♂: Zayu alt., 4000 m, S.E. Tibet, 22.VI.2005, AKIO SHINKAI leg.). No obvious difference can be found between the specimen collected from Zayu (S.E. Tibet) and the typical specimens of *subspec. gregoryi* WATK. from N.W. Yunnan. The locality of the taxon *funahashi* SAKAI is suspected, though a clear collector was given. Even if the specimen was actually collected from Zayu, it is still impossible that a

Loxerebia-species lives in an altitude of 4000 meters. And, furthermore, even if the specimen was actually collected from Zayu, its wing pattern suggests that it does not form a different subspecies.

Distribution: China (N.W. Yunnan, ?S.E. Tibet).

Loxerebia sylvicola huidongensis subsp. nov. (figs. 1, 4, 7a)

Loxerebia sylvicola: WU & HSU, 2017, Butt. China (2): 614, f. 03 (1 ♂ from Dongchuan, Yunnan).

Holotype ♂, CHINA, Sichuan: Huidong, 2130 m, 16.VII.2024, leg. SONG-YUN LANG (CMNH). Paratypes: 3 ♂♂, 1 ♀, CHINA, Sichuan: Huidong, 2130 m, 13.-16.VII.2024, legs. JIANG HOU & SONG-YUN LANG (LSY).

Diagnosis: The new subspecies is similar to the typical form (i.e. f. *sylvicola* OBTH.) of the nominated subspecies, but it can be distinguished from the nominated subspecies by the combination of the following characters: 1) on both sides of ♀ forewing, the subapical ocellus is smaller and with its edge smooth, whereas it is obviously large and with its outer edge more or less irregular in the nominated subspecies; 2) on the ♀ forewing upperside, the discal area is totally brownish, whereas it is strongly tinged with reddish cloud in the nominated subspecies; 3) on the ♀ forewing underside, the postdiscal line inside the subapical ocellus is nearly straight, whereas it is obviously incurved in the nominated subspecies; 4) on both sides, the postdiscal ocellus of the hindwing in the space 2 is slightly larger or as large as the ocellus in the space 3, whereas the ocellus in the space 2 is smaller than the ocellus in the space 3 in the nominated subspecies (f. *sylvicola* OBTH.); 5) on the hindwing underside, the discal line is less wavy than that of the nominated subspecies; 6) the ♂ valva (figs. 7a) has a shorter and slender apical process as in subspec. *gregoryi* WATK. (figs. 7c), whereas the finger like apical process is more elongated and robust in the nominated subspecies (figs. 7b).

The range of the new subspecies is next to that of subspec. *gregoryi* WATK., but it can be distinguished from the latter by the combination of the following characters: 1) on the ♀ forewing upperside, the discal area is totally brownish, whereas it is strongly tinged with reddish cloud in subspec. *gregoryi* WATK.; 2) on the ♀ forewing underside, the postdiscal line inside the subapical ocellus is nearly straight, whereas it is obviously incurved in subspec. *gregoryi* WATK.; 3) on the hindwing underside, the discal line is less wavy than that of subspec. *gregoryi* WATK.; 4) on the hindwing underside, the postdiscal ocelli are well developed and connected to each other, whereas they are smaller and discontinuous from each other in subspec. *gregoryi* WATK.

Notes: The wing pattern of the new subspecies is similar to that of the typical form (i.e. f. *sylvicola* OBTH.) of the nominated subspecies, but the contour of its ♂ valva is similar to that of subspec. *gregoryi* WATK. from nearby region.

Etymology: The subspecific name *huidongensis* is named after its type locality, viz. Huidong (means East Huili), a county in S. Sichuan.

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

Acknowledgements: The present author thanks Mr. GIAN C. BOZANO (Milano), Mr. VADIM V. TSHIKOLOVETS (Pardubice/Kiev), Mr. HITOSHI SUGIYAMA (Gifu), Mr. SI-YAO HUANG (Bonn), Ms. XUE-YAN LI (Kunming), Ms. KAI-QIN LI (Kunming), Mr. ZHI-WEI DONG (Kunming), Ms. JIANG HOU (Beibei) and Mr. YI LANG (Shuangliu) for their various helps.

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Fig. 1: *Loxerebia sylvicola huidongensis* subsp. nov.: (a) holotype ♂, Sichuan, Huidong, SATY1359, CMNH; (b) paratype ♂, ditto, SATY1360, LSY.
 Fig. 2: *Loxerebia sylvicola sylvicola* (OBERTHÜR, 1886): (a) syntype ♂, f. *sylvicola* OBERTHÜR, Chapa [Sichuan, Luding, Shaba], after OBERTHÜR (1886: pl. 4, f. 25); (b) ♂, f. *stotzneriana* DRAESEKE, Sichuan, Jinchuan, SATY1008, LSY.
 Fig. 3: *Loxerebia sylvicola gregoryi* WATKINS, 1927: (a) ♂, Yunnan, Lijiang, SATY0228, LSY; (b) cotype ♂, Yunnan, #6.464, SMNK.

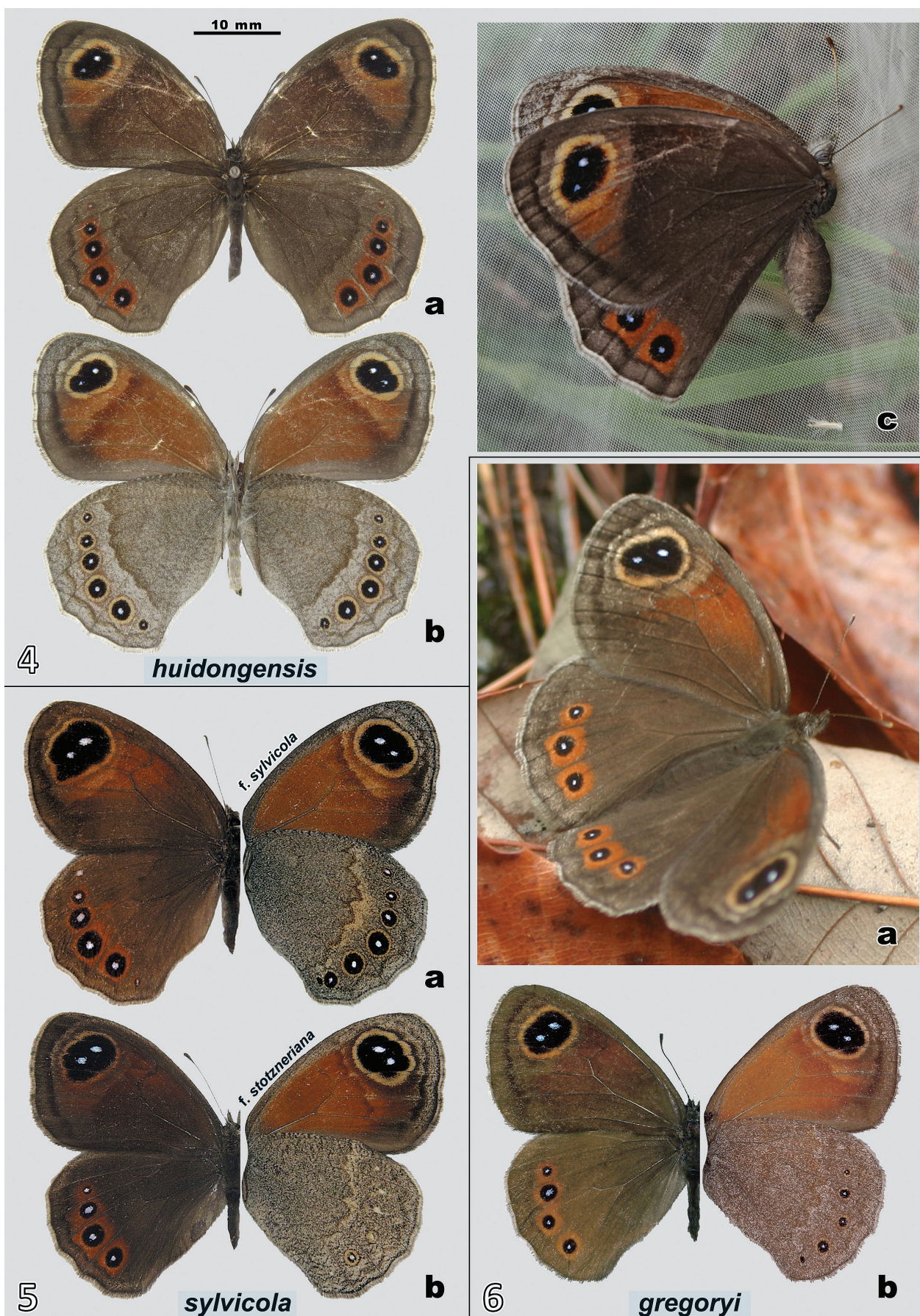


Fig. 4: *Loxerebia sylvicola huidongensis* subsp. nov., ♀, paratype, Sichuan, Huidong, LSY, (a) dorsal, (b) ventral, (c) in net.

Fig. 5: *Loxerebia sylvicola sylvicola* (OBERTHÜR, 1886): (a) ♀, *f. sylvicola* OBERTHÜR, Sichuan, Yajiang, after DELLA BRUNA et al. (2002), BOZANO[©]; (b) ♀, *f. stotzneriana* DRAESEKE, Sichuan, Xiaojin, after DELLA BRUNA et al. (2002), BOZANO[©].

Fig. 6: *Loxerebia sylvicola gregoryi* WATKINS, 1927: (a) ♀, in nature, Yunnan, Tse Kou, ©TSHIKOLOVETS; (b) ♀, Yunnan, Deqen, after DELLA BRUNA et al. (2002), BOZANO[©].

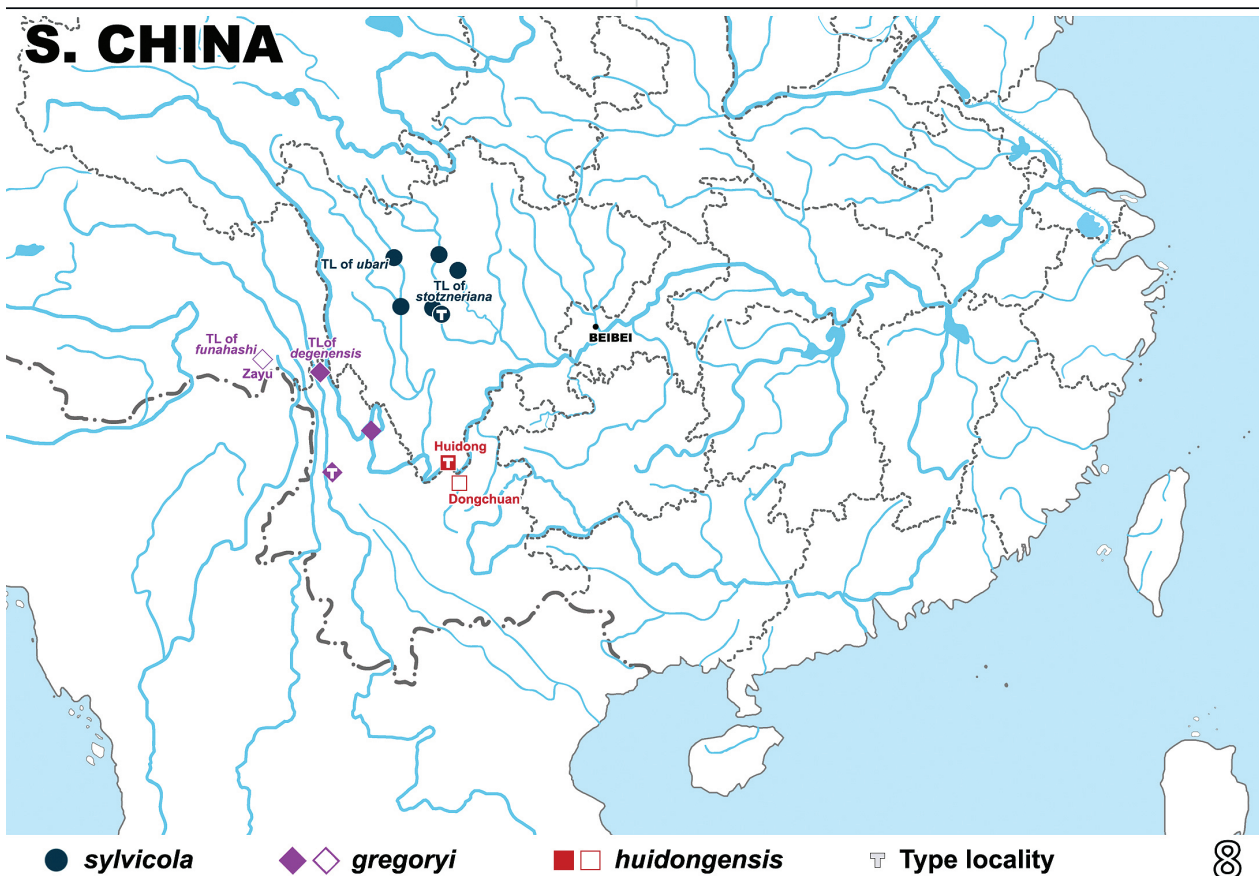
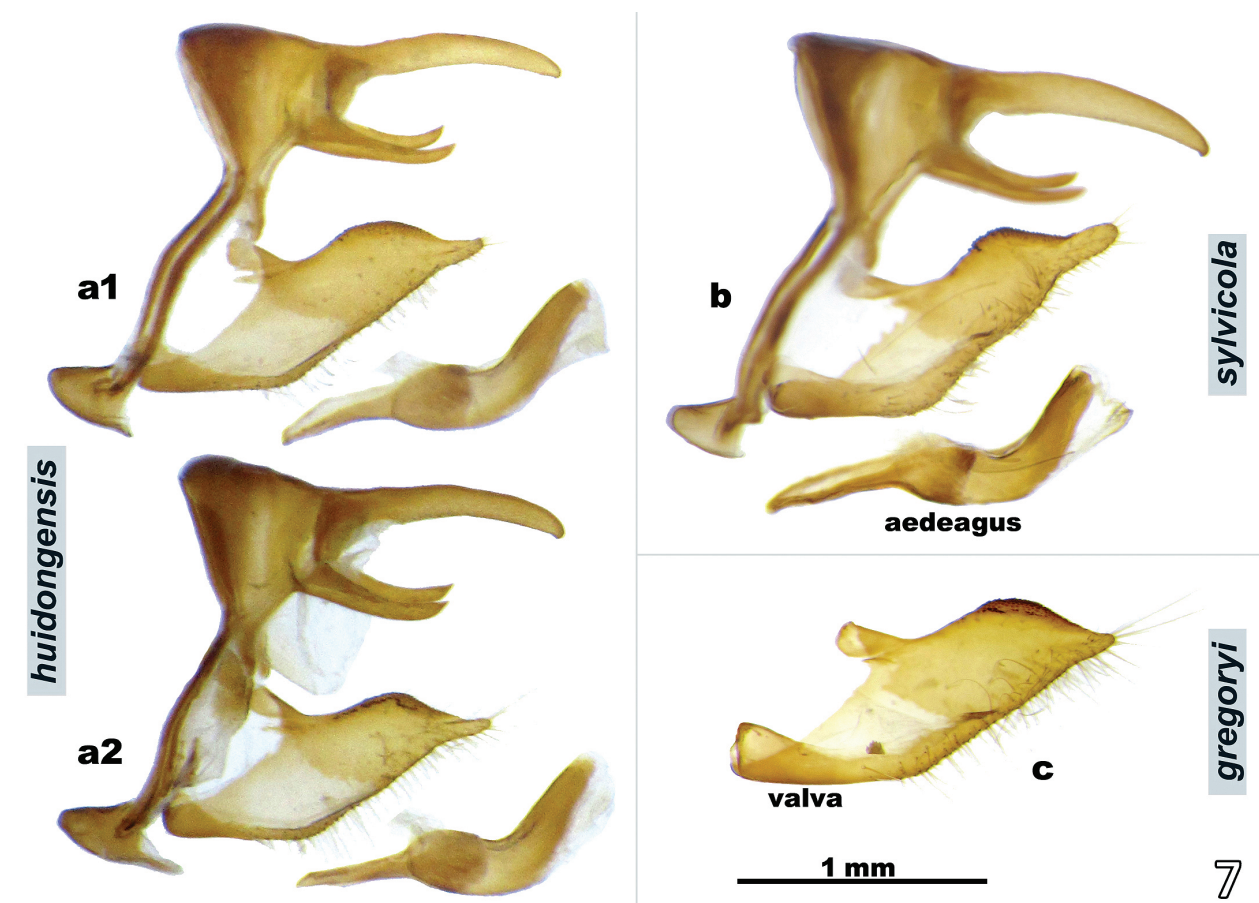


Fig. 7: ♂ genitalia in lateral view. **a.** *Loxerebia sylvicola huidongensis* subsp. nov.: (a1) holotype, Sichuan, Huidong, SATY1359, CMNH; (a2) paratype, ditto, SATY1360, LSY. **b.** *Loxerebia sylvicola sylvicola* (OBERTHÜR, 1886), Sichuan, Jinchuan, SATY1008, LSY. **c.** *Loxerebia sylvicola gregoryi* WATKINS, 1927, Yunnan, Lijiang, SATY0228, LSY.

Fig. 8: Distribution map of *Loxerebia sylvicola* (OBERTHÜR, 1886) [Sources of data: LSY; CMNH; LANG, 2022; LI, 1994; SAKAI, 2016, 2024; WU & HSU, 2017].

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Band/Volume: [56_1-2](#)

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

Artikel/Article: [Description of a new subspecies of *Loxerebia sylvicola* \(Oberthür, 1886\) from S. Sichuan, S.W. China \(Lepidoptera, Nymphalidae, Satyrinae\) 207-211](#)