

**Notes on the Genus *Solus* WATSON, 1913 from Yunnan and Tibet, China  
with the description of new taxa**

(Lepidoptera, Saturniidae)

by

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**Abstract:** One new species and two new subspecies of the genus *Solus* WATSON, 1913 are described and illustrated in this paper, they are *Solus wui spec. nov.* and *Solus parvifenestratus loba subspec. nov.* from Medog, S.E. Tibet, and *Solus drepanoides houae subspec. nov.* from Yaojiaping, Lushui, N.W. Yunnan. A check list of the genus *Solus* WATSON is given.

**Introduction:** *Solus* WATSON, 1913 is a small oriental genus, until only with two species, viz. *S. drepanoides* (MOORE, [1866]) from C. Himalaya (Darjeeling, Sikkim, Bhutan) and *S. parvifenestratus* BRYK, 1944 from N. & W. Myanmar, S.W. China (Yunnan, Sichuan), N. Vietnam (NÄSSIG, 1989, 1994; BRECHLIN, 2007). Except for the nominate subspecies from N. Myanmar and W. Yunnan, the other three subspecies of *S. parvifenestratus* BRYK have been recognised, they are *S. parvifenestratus sinjaevi* NÄSSIG, 1994 from N. Vietnam, *S. parvifenestratus gabaidanus* NÄSSIG, 1989 from W. Myanmar and *S. parvifenestratus sichuanus* BRECHLIN, 2007 from Sichuan. Among them, BRECHLIN (2007) sunk *S. p. sinjaevi* NÄSSIG to a junior synonym of the nominate subspecies. In this research, material of *Solus* WATSON from Tibet and Yunnan was studied, and a new species from S.E. Tibet, a new subspecies of *S. parvifenestratus* BRYK from S.E. Tibet, and a new subspecies of *S. drepanoides* (MOORE) from W. Yunnan are described.

**Materials:** All specimens in this research are preserved in SONG-YUN LANG's private collection, Chengdu, Sichuan, China. The holotypes are preserved in the Chongqing Museum of Natural History, China (CMNH).

**New taxa description**

***Solus wui spec. nov.* (figs 4, 9, 12d)**

Holotype ♂: China, Tibet, Medog, Hanmi, 2000 m, 17.VII.2013, leg. WU CHAO, SATU0002.

**Diagnosis:** The new species is phenotypically very close to *S. drepanoides* (MOORE) (figs 1, 7, 12a, 12b) and can be distinguished from the latter by the combination of the following characters of the ♂ genitalia:

1. Dorsal hook (figs 9bd, 12d) of valva is bent as a circular arc, whereas it is bent as a right-angle in *S. drepanoides* (MOORE) (figs 7bd, 12a, 12b).
2. Transtilla (fig. 9d) is straight dorsally in ventro-caudal view, whereas it is strongly concaved as a U-shaped shield in *S. drepanoides* (MOORE) (Fig. 7d).
3. Bifurcated uncus (fig. 9e) is U-shaped in dorsal view with its two processes separated from each other basally, whereas it is V-shaped with its processes close with each other basally in *S. drepanoides* (MOORE) (fig. 7e).

**Etymology:** The specific name *wui* is dedicated to my friend Mr. WU CHAO from Beijing.

**Distribution:** S.E. Tibet (Medog).

***Solus drepanoides houae* subspec. nov. (figs 2, 3, 8, 12c)**

*Cricula drepanoides*: CHU & WANG, 1996, Fauna Sinica Insecta 5: 149 (partim).

Holotype ♂: China, Yunnan, Lushui, Yaojiaping, 2700 m, 9.VI.2015, leg. et coll. SONG-YUN LANG, SATU0005. Paratype: 1 ♂, ditto, SATU006.

**Diagnosis:** The new subspecies can be distinguished from the nominate subspecies from N. India (Darjeeling, Sikkim), Bhutan, and S.C. Tibet (Cona) by the combination of the following characters:

1. On the dorsal side, the ground colour is paler than in the nominate subspecies.
2. The falcate forewing apex is more protruding than in the nominate subspecies.
3. The forewing transparent patch, beyond the discal cell, is smaller than in the nominate subspecies.
4. The dorsal hook (figs 8bd, 12c) of the valva is bent as a circular arc, whereas it is bent as a right-angle in the nominate subspecies (figs 7bd, 12a, 12b).

**Notes:** CHU & WANG (1996) recorded *Cricula drepanoides* MOORE from Tibet and Yunnan (Yaojiaping [the type locality of the new subspecies]), and the specimen from Yaojiaping examined by the authors possibly belongs to the new subspecies.

**Etymology:** The subspecific name *houae* is dedicated to my friend Mrs. HOU JIANG from Chongqing.

**Distribution:** Yunnan (Nu-jiang Valley).

***Solus parvifenestratus loba* subspec. nov. (figs 5, 10)**

Holotype ♂: China, Tibet, Medog, 80K, 2000 m, 6.VIII.2012, leg. et coll. SONG-YUN LANG, SATU0003.

**Diagnosis:** Biogeographically, the range of the new Himalayan subspecies is on the northwest of the nominate subspecies (Kachin and Yunnan) and is far away from the ranges of other subspecies. The new subspecies can be distinguished from the nominate subspecies by the combination of the following characters:

1. The falcate forewing apex is less protruding and more bent than in the nominate subspecies.
2. The hindwing transparent discal spot is larger than in the nominate subspecies.
3. The dorsal hook (fig. 10bd) of valva is less angled than in the nominate subspecies (fig. 11bd).

**Etymology:** The subspecific name *loba* is named after the Loba people which belong to a primitive tribe from S.E. Himalayas. Loba means the southern people in Tibetan language.

**Distribution:** S.E. Tibet (Medog).

**Check list of the genus *Solus* WATSON, 1913**

1. *Solus drepanoides* (MOORE, [1866]), Type locality (TL): Darjeeling.
- 1a. *Solus drepanoides drepanoides* (MOORE, [1866])
- 1b. *Solus drepanoides houae* subspec. nov., TL: Yaojiaping, Lushui, N.W. Yunnan.
2. *Solus parvifenestratus* BRYK, 1944, TL: Kambaiti.
- 2a. *Solus parvifenestratus parvifenestratus* BRYK, 1944
- 2b. *Solus parvifenestratus sinjaevi* NÄSSIG, 1994, TL: Fansipan, N. Vietnam.
- 2c. *Solus parvifenestratus gabaidanus* NÄSSIG, 1989, TL: [Burma], Mt. Victoria, Pako[k]ku/Chin Hills.
- 2d. *Solus parvifenestratus sichuanus* BRECHLIN, 2007, TL: Sichuan Prov., Qingchenghou Mts.
- 2e. *Solus parvifenestratus loba* subspec. nov., TL: Medog, S.E. Tibet.
3. *Solus wui* spec. nov., TL: Medog, S.E. Tibet.

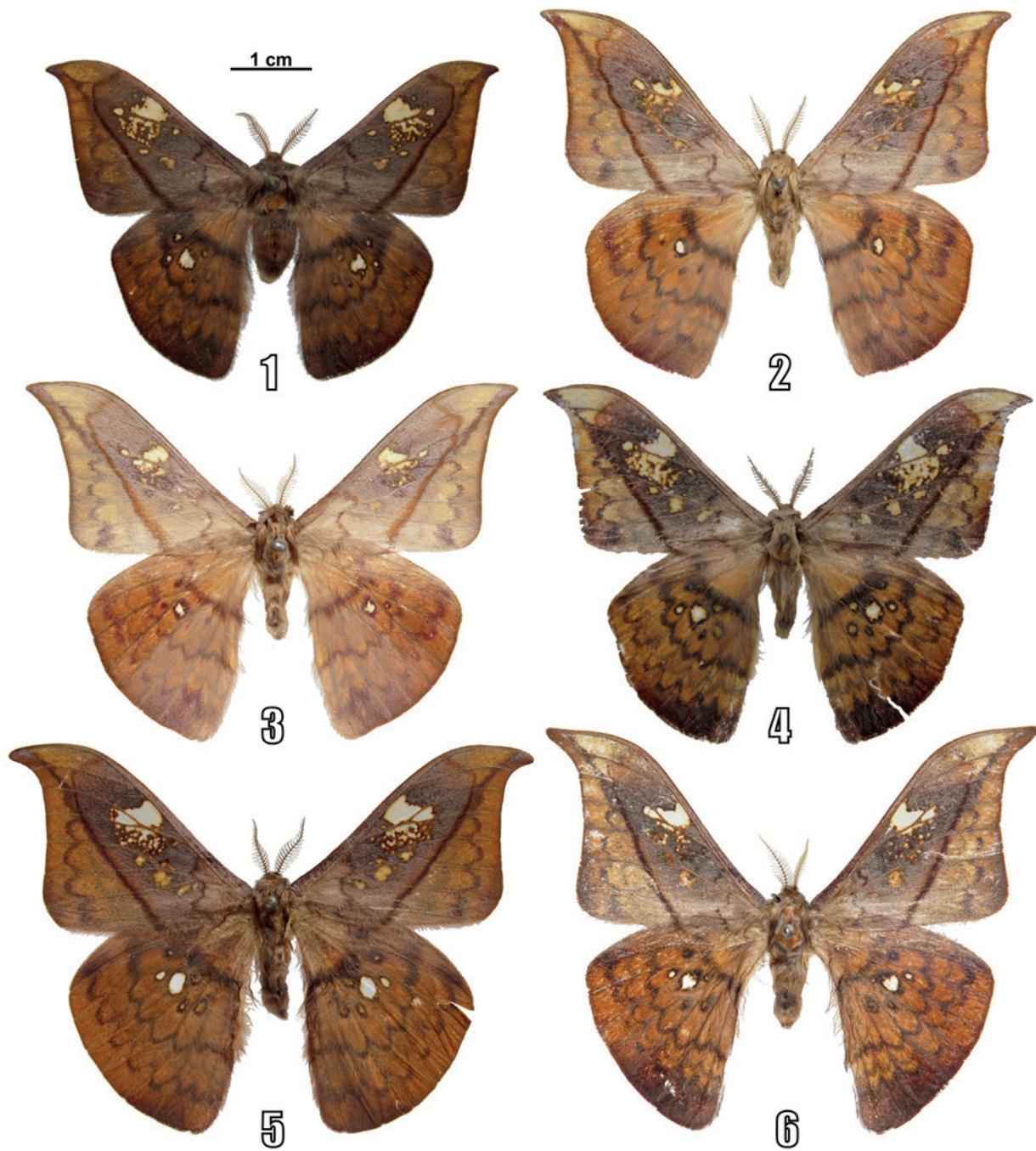
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**References**

- BRECHLIN, R. (2007): Anmerkungen zur Gattung *Solus* WATSON, 1913 mit Beschreibung eines neuen Taxons aus China (Lepidoptera: Saturniidae). - Entomofauna (Monographie 1): 44-49, Ansfelden.
- BRYK, F. (1944): Entomological results from the Swedish expedition 1934 to Burma and British India. Lepidoptera: Saturniidae, Bombycidae, Eupterotidae, Epiplemidae und Sphingidae. - Arkiv för Zoologi 35 A (8): 1-55, 6 pls, Stockholm.
- CHU, H. F. & L. Y. WANG (1996): Fauna Sinica Insecta 5, Lepidoptera: Bombycidae, Saturniidae, Thyrididae. - Science Press, Beijing.
- NÄSSIG, W. A. (1989): Systematisches Verzeichnis der Gattung *Solus* WATSON, 1913 (Lepidoptera, Saturniidae). - Entomologische Zeitschrift 99 (23): 337-345, Essen.
- NÄSSIG, W. A. (1994): Vorläufige Anmerkungen zur Saturniiden- und Brahmaidenfauna von Vietnam mit Neubeschreibungen (Lepidoptera). - Nachrichten des Entomologischen Vereins Apollo 15 (3): 339-358, Frankfurt am Main.
- MOORE, F. ([1866]): On the Lepidopterous insects of Bengal. - Proceedings of the Zoological Society of London (1865): 755-823, pls. 41-43, London.
- WATSON, J. H. (1913): A new genus, a new species of *Antherea*, and some geographical races of the genus *Cricula* (Saturniidae) from the Indo-Malayan region. - Notes from the Leyden Museum (35): 181-185, pl. 8, Leyden.

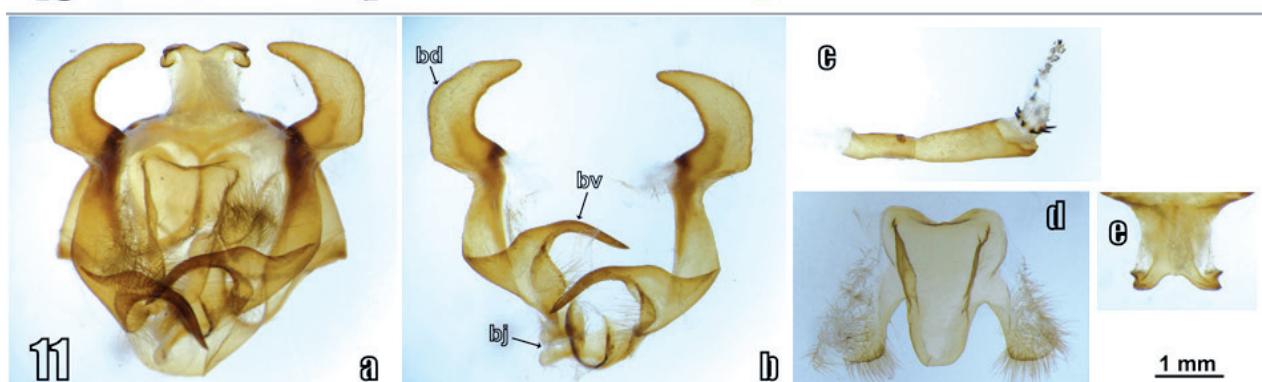
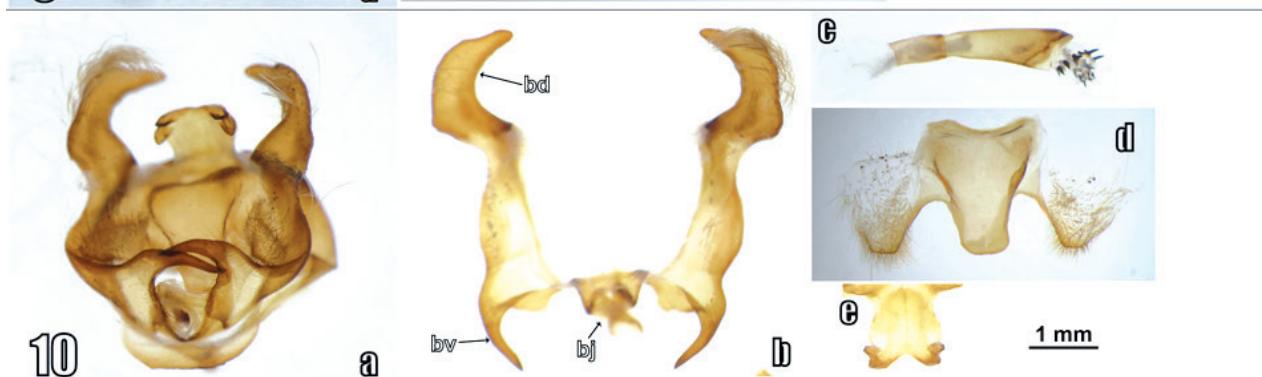
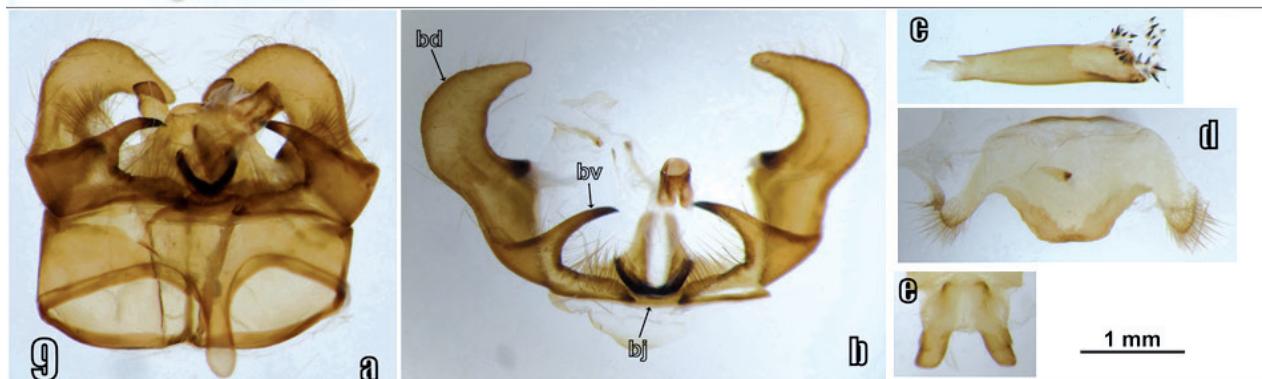
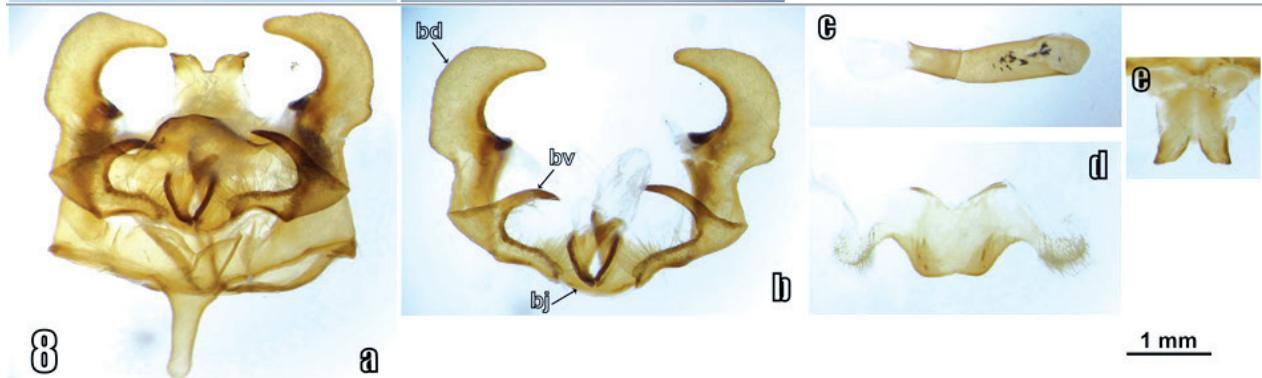
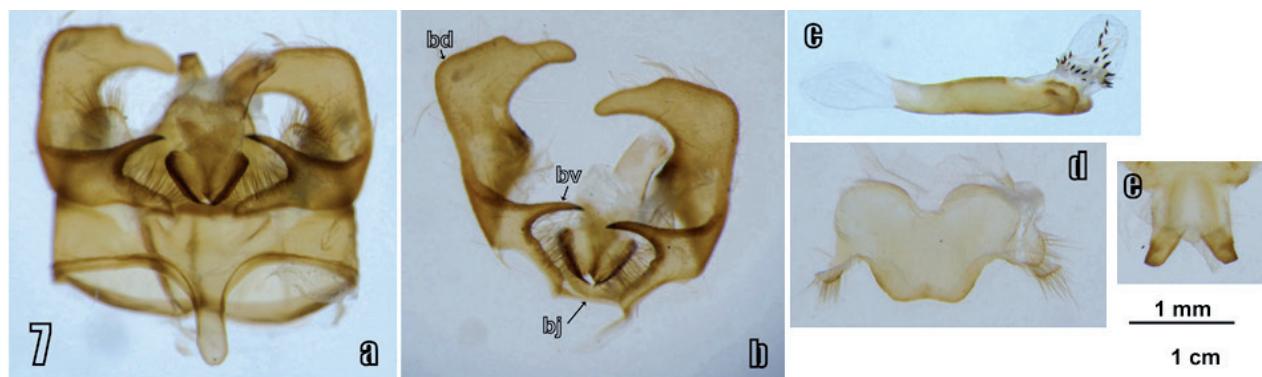
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- Fig. 1: *Solus drepanoides drepanoides* (MOORE, [1866]), ♂, China, Tibet, Cona, le, SATU0001, dorsal side.  
 Fig. 2: *Solus drepanoides houae* subspec. nov., holotype ♂, China, Yunnan, Lushui, Yaojiaping, SATU0005, dorsal side.  
 Fig. 3: *Solus drepanoides houae* subspec. nov., paratype ♂, China, Yunnan, Lushui, Yaojiaping, SATU0006, dorsal side.  
 Fig. 4: *Solus wui* spec. nov., holotype ♂, China, Tibet, Medog, SATU0002, dorsal side.  
 Fig. 5: *Solus parvifenestratus loba* subspec. nov., holotype ♂, China, Tibet, Medog, SATU0003, dorsal side.  
 Fig. 6: *Solus parvifenestratus parvifenestratus* BRYK, 1944, ♂, China, Yunnan, Lushui, Pianma, SATU0007, dorsal side.

- Fig. 7: ♂ genitalia of *Solus drepanoides drepanoides* (MOORE, [1866]), China, Tibet, Cona, le, SATU0001.  
 Fig. 8: ♂ genitalia of *Solus drepanoides houae* subspec. nov., holotype, China, Yunnan, Lushui, Yaojiaping, SATU0005.  
 Fig. 9: ♂ genitalia of *Solus wui* spec. nov., holotype, China, Tibet, Medog, SATU0002.  
 Fig. 10: ♂ genitalia of *Solus parvifenestratus loba* subspec. nov., holotype, China, Tibet, Medog, SATU0003.  
 Fig. 11: ♂ genitalia of *Solus parvifenestratus parvifenestratus* BRYK, 1944, China, Yunnan, Lushui, Pianma, SATU0007.  
 a = ♂ genitalia in ventro-caudal view with valvae spread laterad and aedeagus removed; b = valvae spread laterad + juxta; bd = dorsal hook of valva; bv = ventral hook of valva; bj = juxta in ventro-caudal view; c = aedeagus; d = transtilla in ventro-caudal view; e = uncus in dorsal view.



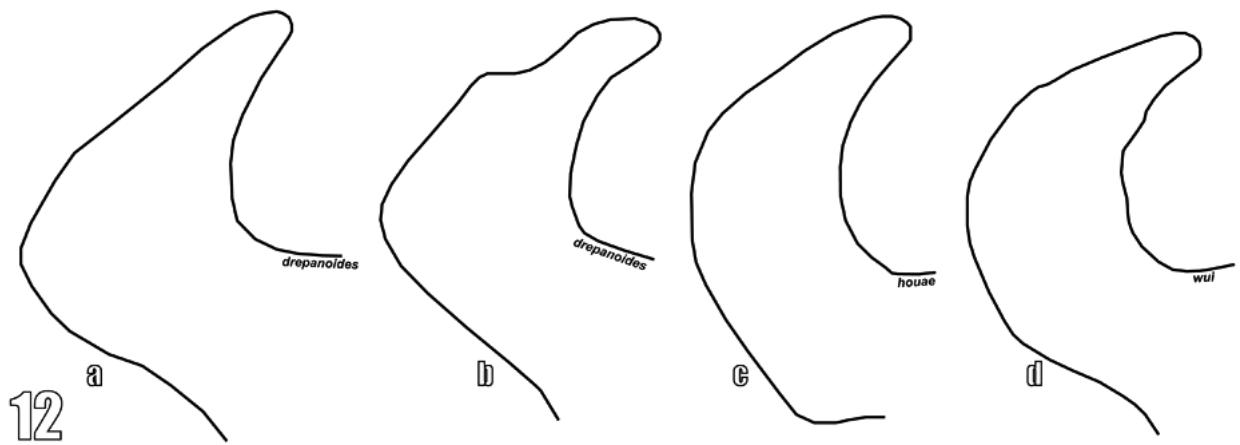


Fig. 12: Dorsal hook of valva.

- a = *Solus drepanoides drepanoides* (MOORE, [1866]), India, Darjeeling (traced from NÄSSIG, 1989: Abb. 4).
- b = *Solus drepanoides drepanoides* (MOORE, [1866]), China, Tibet, Cona, le, SATU0001.
- c = *Solus drepanoides houae* subspec. nov., holotype, China, Yunnan, Lushui, Yaojiaping, SATU0005.
- d = *Solus wui* spec. nov., holotype, China, Tibet, Medog, SATU0002.

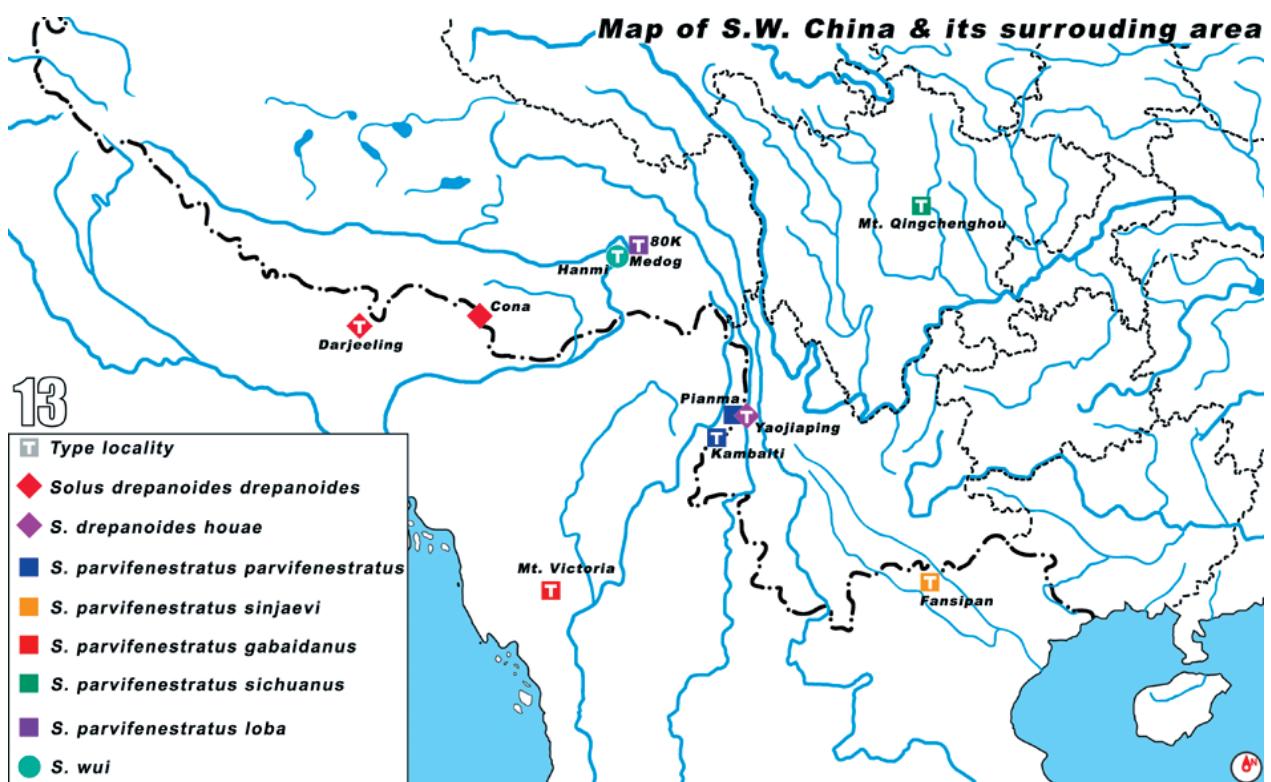


Fig. 13: Distribution map of the taxa of the genus *Solus* WATSON, 1913.

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