A new hairstreak from China: *Satyrium tshikolovetsi* sp. n. (Lepidoptera, Lycaenidae)

Gian Cristoforo Bozano

Gian Cristoforo Bozano, Viale Romagna 76, 20133 Milano, Italia, giancristoforo.bozano@fastwebnet.it

Abstract: In spite of many ancient and recent surveys the Chinese butterfly fauna seems far from being fully known. A recently found new *Satyrium* species is here described with comparison to congeneric similar species: *Satyrium* ***tshikolovetsi*** **sp. n.,** holotype male deposited in Museo Civico di Storia Naturale Giacomo Doria, Genoa, Italy.

Ein neuer Zipfelfalter von China: *Satyrium tshikolovetsi* sp. n. (Lepidoptera, Lycaenidae)

Zusammenfassung: Trotz verschiedener Forschungsreisen im 19. Jahrhundert und wieder in den letzten Jahrzehnten kommen immer wieder neue Tagfalterarten in China zum Vorschein. Eine kürzlich erkannte neue Art der Gattung *Satyrium* wird hier als neu beschrieben und mit ähnlichen kongenerischen Arten verglichen: *Satyrium* ***tshikolovetsi*** **sp. n.,** Holotypus Männchen im Museo Civico di Storia Naturale Giacomo Doria, Genua, Italien.

Introduction

The Chinese eastern pre-Tibetan area, comprising southern Gansu, Sichuan and northern Yunnan, is well known for its extraordinary biodiversity. The butterfly fauna there is very rich, with many endemic species, often localised in small areas.

At the end of the 19th century some European lepidopterists (notably Leech, Oberthür, Poujade and Grum-Grshimailo) had the opportunity to study large series of specimens collected in those areas, finding many new taxa. Then almost one century elapsed before new entomological surveys could take place in China.

In the 1980s a few adventurous lepidopterists, from Japan and from Europe, could again visit China and it became evident that a lot had to be discovered yet. So the interest on the Chinese butterfly fauna, together with the more and more easy possibilities to travel there, attracted many more entomologists from various countries. In the 1990s some skilled young Chinese entomologists (notably Huang Hao and Song-Yun Lang) started their own research activities.

Many additional new species have been discovered in the last 30 years and many more will surely be found, their ranges and habitats being extremely small and elusive.

The new species here described surprisingly had not been noticed before, even though it is very different from any other known related taxon found in the area and with a quite large distribution.

Satyrium tshikolovetsi was first found by the author in 1994, 1995 and 2004 and found again by V. Tshikolovets in 2010 and 2014.

Material and methods

A series of 11 ♂♂ and 10 ♀♀ was available for the diagnosis of the new species. Male genitalia have been extracted after softening with a KOH solution and photographed without flattening them.

Satyrium tshikolovetsi sp. n.

Holotype ♂: China, Sichuan, SW of Dujiangyan, 1600 m, 30°47′30″ N, 103°13′50″ E, 25. vi. 2004, leg. et coll. G. C. Bozano. Deposited at the Museo Civico di Storia Naturale Giacomo Doria, Genoa, Italy.

Paratypes (in total 10 ♂♂, 10 ♀♀), all from **China:** 2 ♀♀, Sichuan, Juding Shan, 2000 m, Maowen, 27. vii. 1994. 1 ♂, 1 ♀, N Sichuan, Qingchuan, 1100 m, Longmen Shan, 27. v. 1995. 3 ♂♂, Sichuan, Xilin Mts., 1300 m, 30°42′10″ N, 103° 14′55″ E, 20. vi. 2004. 1 ♂, 5 ♀♀, Sichuan, SW of Dujiangyan, 1600 m, 30°47′30″ N, 103°13′50″ E, 25. vi. 2004. All these leg. et coll. G. C. Bozano. – 2 ♂♂, 2 ♀♀, S Gansu, Wenxian vic., 1500 m, 10. vii. 2010. 3 ♂♂, S Gansu, Wenxian vic., 1500 m, 5. vi. 2014. All these leg. et coll. V. Tshikolovets.

Etymology: The new species is dedicated to Vadim Tshikolovets, well known as author and publisher of the "Butterflies of Palaearctic Asia" series. He, having recently discovered in southern Gansu a population of this taxon, immediately sensed that it was an undescribed species, inspiring me to study the specimens that I had found many years ago and that I had let for future examination.

Description

Eyes hairy; forewing costa and outer margin rounder than in any other *Satyrium* species except *S. dejeani* Riley, 1939.

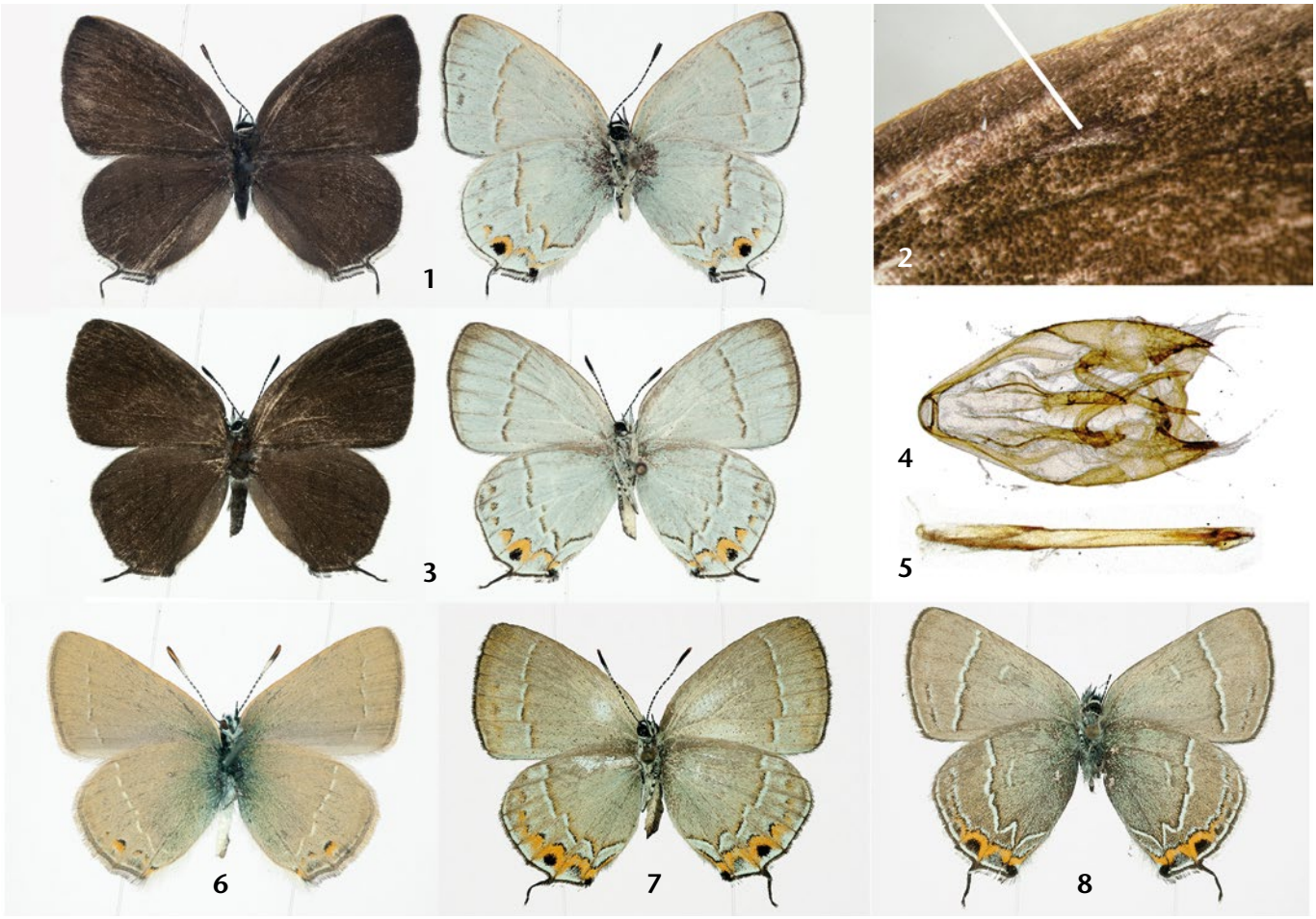
♂ (Fig. 1): forewing with a small androconial patch, discernible only under a microscope, composed of small roundish scales, lighter and smaller than the normal scales (Fig. 2). Hindwing with a filamentous tail on vein 2, anal lobe little evident. Upperside ground colour uniformly dark brown; underside ground colour light bluish grey, almost white, postdiscal line irregular, margin outlined with black. Hindwing underside with pale orange-yellow submarginal lunules.

♀ (Fig. 3): same as ♂, larger, wings more rounded.

♂ **genitalia** (Figs. 4–5): juxta absent, valvae narrow, falces long, phallus (Fig. 5) with two cornuti.

Distribution and habitat

China, mountains from central Sichuan (Xiling Shan) to southern Gansu (north of Wenxian) in woody areas, between 1100 and 2000 m.



Figs. 1–5: *Satyrium tshikolovetsi* sp. n. **Fig. 1:** ♂, upper- and underside, paratype, China, Sichuan, Longmen Shan, Jialing. **Fig. 2:** ♂ forewing upperside: androconial patch. **Fig. 3:** ♀, upper- and underside, paratype, China, Sichuan, SW of Dujiangyan. **Fig. 4:** ♂ genitalia: ventral view, phallus removed. **Fig. 5:** ♂ genitalia: phallus. — **Figs. 6–8:** other *Satyrium* species (undersides) for comparison. **Fig. 6:** *Satyrium myrtale*, ♂ underside, Lebanon, Bescharre Cedres. **Fig. 7:** *Satyrium dejeani*, ♂ underside, China, Sichuan, 25 km S of Wenchuan. **Fig. 8:** *Satyrium austrina giacomazzoi*, ♀ underside, paratype, China, Shaanxi, Jinshui, S Qin Ling.

Generic attribution

The new taxon looks quite different from most *Satyrium* species in both the wingshape and the underside ground colour, suggesting that it could belong to a different genus. The ♂ genitalia have, on the contrary, the typical structure found in all *Satyrium* species. Overall they are similar to those of the subgenus *Superflua*.

The attribution to the genus *Satyrium* seems to be a well-supported choice.

It would be interesting to investigate the genetic relationship of *S. tshikolovetsi* with the other numerous *Satyrium* species.

Diagnosis

The three *Satyrium* taxa somehow resembling the new species *S. tshikolovetsi* are *S. dejeani* Riley, 1939, *S. austrina giacomazzoi* Bozano, 1996 and *S. myrtale* Klug, 1834.

The last one (Fig. 6), found in the Middle East, is obviously out of question for geographic reasons.

S. dejeani (Fig. 7) has similar rounded wingshape and similar ♂ genitalia, but its underside ground colour is light brown (quoted "ochreous with a greysh tinge" in the original description) instead of lighter bluish grey, the ♂ androconial spot is much larger, the hindwing marginal lunules are more developed and darker orange, the blue spot at the anal angle is evident, while absent or obsolete in *S. tshikolovetsi*, the median series of spots is placed more distally especially on the hindwing.

S. austrina (Fig. 8) has, in both the subspecies *giacomazzoi* from central China and the nominotypical subspecies from Taiwan, quite different wingshape and underside markings. Typical of *S. austrina* are the white linear spots at cell end on the underside of both wings, absent in *S. tshikolovetsi*.

References

Hsu Y. (2013): The butterflies of Taiwan [in Chinese]. — Taipei (Morning Star), 336 pp.

Riley, N. D. (1939): Notes on oriental Theclinae with descriptions of new species. — Novitates zoologicae, Tring, **41:** 355–361.

Sugiyama, H. (2004): New taxa of Lycaenidae, Lepidoptera from China. — Pallarge, Gifu, **8:** 1–12.

Weidenhoffer, Z., Bozano, G. C., & Churkin, S. (2004): Lycaenidae, part II, Subfamily Theclinae, Tribe Eumaeini (partim). — *In:* Bozano, G. C. (serial ed.), Guide to the butterflies of the Palaearctic region. — Milano (Omnes Artes), (2) + 94 S.

Received: 4. viii. 2014

ISSN 0723-9912