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● A new species of *Polycaena* Staudinger, 1886 from W. Sichuan, China (Lepidoptera: Riodinidae)

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Abstract: A new species of *Polycaena* Staudinger, 1886 from Mt. Balang, W. Sichuan is described, namely *P. chenchuani* sp. nov. based on morphological characters. The male adult, male genitalia, and diagnoses of the new species, along with a distributional map of *P. lua*-group, to which the new species belongs, are provided.

Keywords: Nemeobiinae, Nemeobiini, new species, genitalia

● 中国川西小蛱蝶属一新种（鳞翅目：蛱蝶科）

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摘要: 基于形态学特征, 本文描述了产自我国四川西部巴郎山的小蛱蝶属 *Polycaena* Staudinger, 1886 一新种, 即陈川小蛱蝶 *Polycaena chenchuani* sp. nov.。本文提供了该新种的雄性成虫形态、雄外生殖器图和鉴别特征, 并附有其所在的露蛱小蛱蝶种团 *P. lua*-group 的分布图。

关键词: 古蛱蝶亚科, 古蛱蝶族, 新物种, 外生殖器

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● Introduction

The small butterfly genus *Polycaena* Staudinger, 1886 belongs to the tribe Nemeobiini within the subfamily Nemeobiinae with two recognized subgenera (Zhang *et al.* 2021). The nominal subgenus *Polycaena* encompasses seventeen described species in China, with new taxa continuously discovered (Huang & Li 2016; Huang 2021; Lang 2024). Based on morphological and molecular evidence, Krupitsky *et al.* (2024) established *P. lama*-group to include four related species, i.e., *P. lama* Leech, 1893, *P. kansuensis* (Nordström, 1934), *P. sakaii* Sugiyama, 2015, and *P. eckweileri* Krupitsky, Shapoval & Shapoval, 2024.

The monophyletic *P. lama*-group is primarily characterized by the presence of the vertical part on the central plate (Huang & Li 2016; Krupitsky *et al.* 2024). Accordingly, *P. matuta* Leech, 1893 should also be considered a member of this group. In the contrary, the vertical part of the central plate is absent in a sister clade, here designated as *P. lua*-group, which comprises *P. lua* Grum-Grshimailo, [1890], *P. minor* Forster, 1951, *P. wangjiaqii* Huang, 2016, *P. sejila* Huang & Li, 2016, and *P. houjiangae* Lang, 2024 based on genital or superficial resemblance.

Recently, an unusual specimen from Mt. Balang, bearing highly reduced submarginal spots on both wings, was discovered and the examination of male genitalia assigns it to *P. lua*-group. Therefore, the present study aims to describe it as a new species.

● Material and methods

One male of *Polycaena* sp. collected from Mt. Balang was examined (Collection of Chuan Chen, CCC). Congeners in *P. lama*- and *P. lua*-groups were compared by the fine illustrations in D'Abrera (1993), Huang & Li (2016), Wang (2017), Huang (2021), Krupitsky *et al.* (2024), and Lang (2024). Terminology for genitalia follows Huang & Li (2016).

The dates on publications of Grum-Grshimailo's work are demonstrated by the index of Horae Societatis Entomologicae Rossicae Vol. XXV, in which pages 383 to 465 are issued on 20th October 1890. Thus, the date of *lua* is given as [1890], rather than 1891 cited by Bridges (1994) and subsequent works.

● Results

Considering wing patterns, this specimen from Mt. Balang can be readily distinguish from all similar species in both *P. lama*- and *P. lua*-groups, such as *P. eckweileri* and *P. wangjiaqii*, by the obsolete submarginal black and yellow spots on the underside (Figs 1, 3). Examination of the male genitalia indicates that the specimen clearly belongs to *P. lua*-group, characterized by the absence of the vertical part on the central plate (Fig. 2). Within this group, however, species exhibiting similar genital structures display different wing patterns, while those with comparable appearance possess with distinct genitalia (Huang & Li 2016; Huang 2021; Lang 2024) (Figs 1, 2). For example, *P. wangjiaqii* is the most similar species to the focal specimen in terms of overall appearance, but its genitalia differ remarkably, such as lacking the dorsal projection on the phallus (Fig. 2). In contrast, the genitalia of the Mt. Balang specimen more closely resemble those of other species in *P. lua*-group (Huang & Li 2016; Huang 2021). Despite this, the specimen can be easily distinguished from these remaining congeners just by wing markings (Fig. 1).

Notably, the juxta of this peculiar specimen is unique within *P. lua*-group, featuring a single elongated horn in caudal section (Fig. 2). In other members of this group, the caudal section is either quite short in *P. luna*, or long but bifurcate in other species (Fig. 3). Moreover, in the focal specimen, the caudal section is positioned at the lower end of the juxta, whereas in other species, it occurs at the upper end (Huang & Li 2016; Huang 2021).

Taken together, both external and genital characteristics support the recognition of the Mt. Balang specimen as a new species, which is described below.

***Polycaena chenchuani* H-Z Li sp. nov. 陈川小蛱蝶**

<https://zoobank.org/6536DF33-4E4D-4626-8D44-2C579C10BE93>

Figs 1–4

Holotype: ♂, Mt. Balang, W. Sichuan, China, 4480 m, 30.VII.2017, leg. Chuan Chen (CCC).

Diagnoses. The new species can be distinguished from all species in *P. lama*-group by (Figs 1–2):

(1) Submarginal yellow spots more obsolete, even on underside.

And can be separated from all other species in *P. lua*-group by (Figs 1–3):

(1) Lower cell spot on hindwing underside clearly extends to base as in *P. wangjiaqii*.

(2) Submarginal black and yellow spots more obsolete than *P. wangjiaqii*.

(3) Lateral wings on coecum penis absent as in *P. wangjiaqii* and *P. sejila*, but present in others.

(4) Phallus with dorsal projection as in other species except *P. wangjiaqii*.

(5) Juxta caudal section long and single, whereas either quite short in *P. lua* or long but bifurcate in others.

(6) Juxta caudal section at lower end, but at upper end in others.

Distribution. Mt. Balang, Aba, W. Sichuan, China (Fig. 4).

Etymology. The new name is dedicated to Mr. Chuan Chen, a friend of the authors who also provided the holotype of the new species.

Remarks. Although the male genitalia of *P. houjiangae* are unknown, this new species can be easily distinguished by the yellow spots on the forewing and the elongated lower cell spot on hindwing underside (Lang 2024).



FIGURE 1. Habitus of *Polycaena chenchuani* sp. nov.

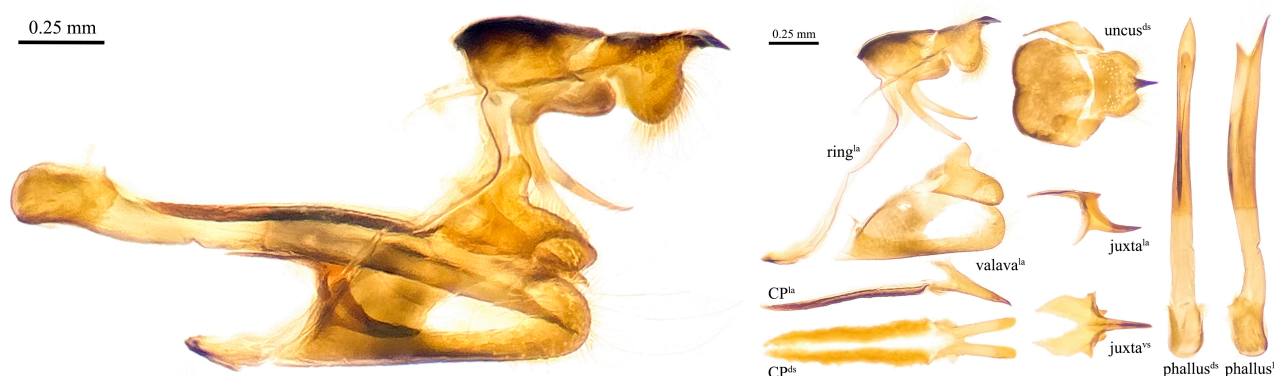


FIGURE 2. Male genitalia of *Polycaena chenchuani* sp. nov. la = lateral view, ds = dorsal view, vs = ventral view.

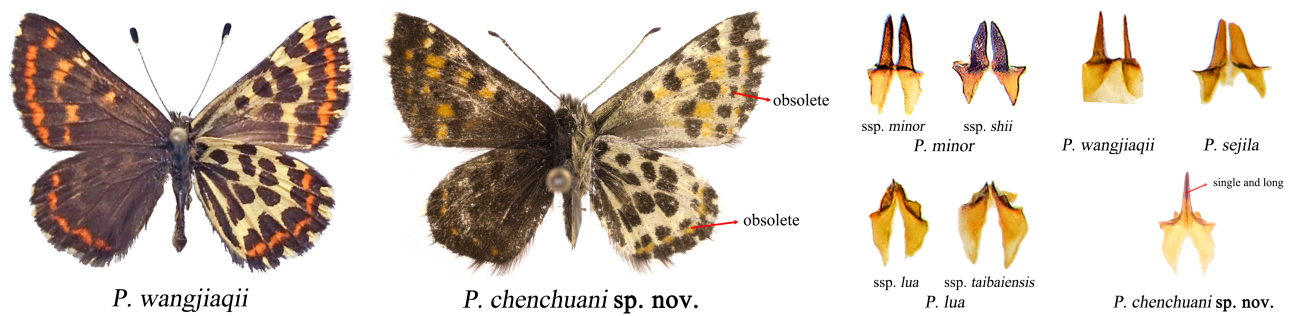


FIGURE 3. Diagnoses of *Polycaena chenchuani* **sp. nov.** Modified from Huang & Li (2016) and Huang (2021).

● Discussion

Both *P. lama*- and *P. lua*-groups, which are distributed across the Qinghai-Tibet Plateau, harbor considerable biodiversity, with many recognized species. The new species was initially assigned to *P. lama*-group based on appearance, but subsequent examination of the male genitalia confirmed its placement within *P. lua*-group. A peculiar individual recently illustrated by Sun & Huang (2026) as *P. sakaii* from Mt. Yala, Sichuan, also warrants further study, as examination of the male genitalia is required to verify its taxonomic identity. An additional issue concerns *P. sakaii* itself: the original drawings of the central plate show slight differences compared to specimens collected from Mt. Siguniang (Sugiyama 2015; Huang 2021). However, detailed information on the holotype of this little-known species remains unavailable.

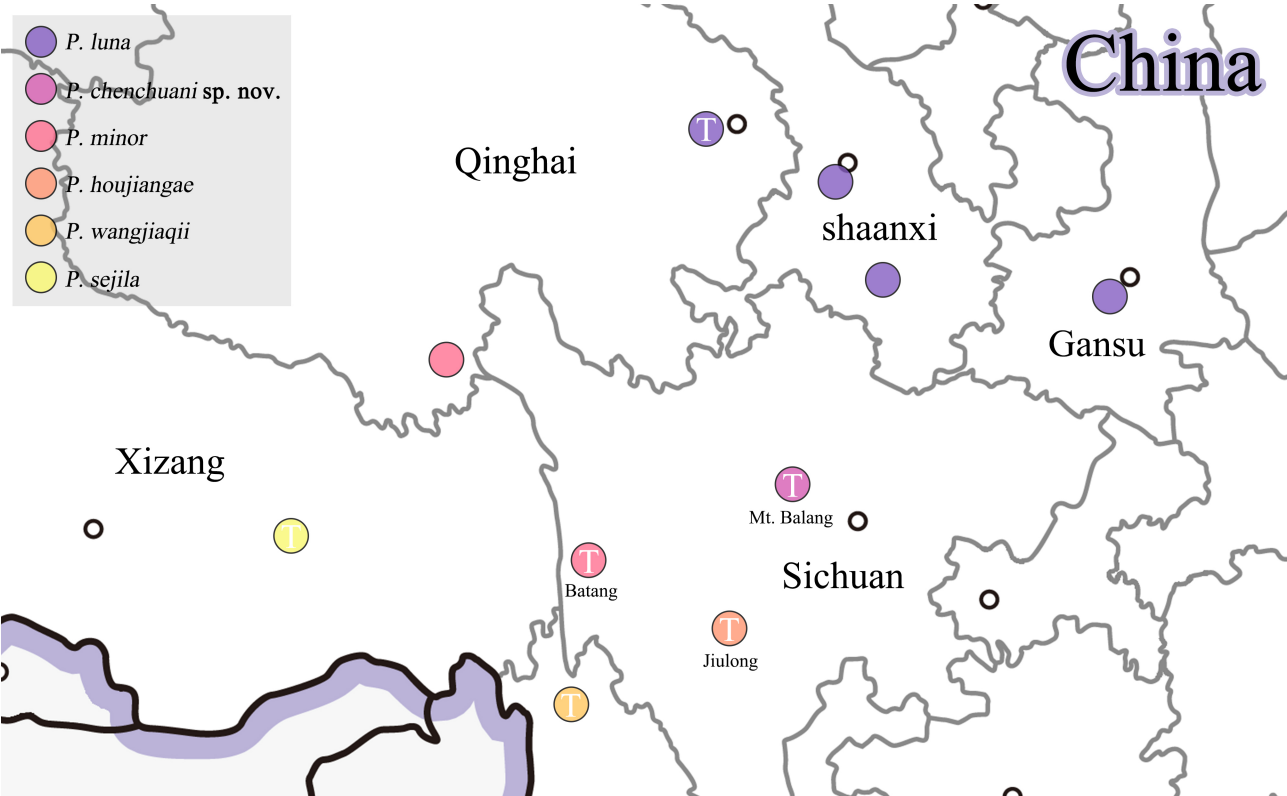


FIGURE 4. Distribution map of *Polycaena lua*-group. T = Type locality. Mainly modified from Huang & Li (2016).

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References

- Bridges CA 1994: *Catalogue of the Family-group, Genus-group, and Species-group names of the Riodinidae & Lycaenidae (Lepidoptera) of the World*. Published by the author, Urbana, 1200 pp.
<https://doi.org/10.5962/bhl.title.15814>
- D'Abrera B 1993: *Butterflies of the Holarctic Region, Part III*. Hill house, Victoria, 524 pp.
- Draeseke J 1925: Die Schmetterlinge der Stötznerschen Ausbeute (4. Fortsetzung.). *Deutsche Entomologische Zeitschrift Iris*, 39: 211–245.
- Forster W 1951: Die Riodiniden der Ausbeuten Dr. Hönes aus China. *Zeitschrift der Wiener Entomologischen Gesellschaft*, 36: 62–66, 2 pls.
- Grum-Grshimailo G 1890: Lepidoptera nova in Asia centrali novissime lecta et descripta. *Horae Societatis Entomologicae Rossicae*, 25 (3–4): 445–465.
- Huang H & Li Y-F 2016: Notes on the genus *Polycaena* Staudinger (Lepidoptera: Riodinidae) with descriptions of two new species from China. *Zootaxa*, 4105 (6): 575–590.
<http://doi.org/10.11646/zootaxa.4105.6.4>
- Huang H 2021: New or little known butterflies from China - 4 (Lepidoptera: Pieridae, Nymphalidae, Riodinidae, Lycaenidae et Hesperiiidae). *Atalanta*, 52 (3): 338–406.
- Krupitsky AV, Shapoval NA & Shapoval GN 2024: Description of a new species of the genus *Polycaena* Staudinger, 1886 (Lepidoptera, Riodinidae) from China with designation of lectotype of *Polycaena lua* Grum-Grshimailo, 1891. *Zootaxa*, 5471 (1): 113–124.
<https://doi.org/10.11646/zootaxa.5471.1.7>
- Lang S-Y 2024: A new species of *Polycaena* Staudinger, 1886 from W. Sichuan, S.W. China (Lepidoptera, Riodinidae). *Atalanta*, 55 (3/4): 285–287.
- Leech JH 1892–1894: *Butterflies from China, Japan, and Corea*. R.H. Porter, London, 681 pp., 43 pls.
<https://doi.org/10.5962/bhl.title.86314>
- Nordström F 1934: Schwedisch-chinesische wissenschaftliche expedition nach den nordwestlichen provinzen Chinas, unter leitung von Dr. Sven Hedin und Prof. Sü Ping-chang. Insekten. gesammelt vom schwedischen arzt der expedition Dr. David Hummel 1927–1930. 21. Lepidoptera. 1. Diurna. 2. Sphinges. *Arkiv för Zoologi*, 27A (7): 1–37, 2 pls.
- Staudinger O 1886: Centralasiatische Lepidopteren. *Entomologische Zeitung*, 47 (7–9): 225–256.
- Sugiyama H 2015: Notes on New and Interesting Sino-Himalayan Butterflies. *Pallarge*, 9: 29–53.
- Sun W-H & Huang S-Y 2026: *Living Butterflies of China*. Chongqing University Press, Chongqing, 650 pp. [孙文浩 & 黄思遥 2026: 中国蝴蝶生态大图鉴. 重庆大学出版社, 重庆, 650 pp.]
- Wang C-H 2017: Genus *Polycaena*. In: Wu C-S & Hsu Y-F (Eds) *Butterflies of China*. The Straits Publishing & distribution Group, Fuzhou, pp. 1018–1020. [王春浩 2017: 小蛱蝶属. 见: 武春生 & 徐堉峰 (主编) 中国蝴蝶图鉴. 海峡出版发行集团, 福州, pp. 1018–1020.]
- Zhang J, Cong Q, Shen J-H, Opler PA & Grishin NV 2021: Genomics-guided refinement of butterfly taxonomy. *The Taxonomic Report of the International Lepidoptera Survey*, 9 (3): 1–54.

Additional information

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