

A new species of *Chitoria* MOORE, 1896 from Central China

(Lepidoptera, Nymphalidae)

by

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Abstract: A new species, *Chitoria leei* LANG **spec. nov.**, from Hubei Province of Central China is described and illustrated. The new species is different from those previously known in both external and genitalia characters. A check list including all known taxa of *Chitoria* MOORE, 1896 is provided along with their distribution.

Introduction: *Chitoria* MOORE, 1896 is an oriental genus belonging to the nymphalid subfamily Apaturinae. Until now, 8 species are known for the genus *Chitoria*. Among all species of this genus, *C. ulupi* (DOHERTY, 1889) and *C. chrysolora* (FRUHSTORFER, 1908) can form a separate species group, namely the *ulupi* group. Species of the *ulupi*-group are sexual dimorphic, their ground colour on the dorsal surface of both wings in ♂♂ are orange yellow or tawny. Recently, a ♂ specimen collected from Mt. Shennongjia of the Central China has been studied by the first author. It obviously belongs to the *ulupi*-group, but both its external and ♂ genital features are quite different from that of all known species and it appears to be new.

The holotype of the new species is deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing, China (IZCAS).

Abbreviations: FW - forewing; HW - hindwing.

Chitoria leei LANG **spec. nov.** (colour plate 8: 7, 8)

Holotype ♂: Hubei Province, Mt. Shennongjia, Songluo, 900 m, 18.VI.1981, coll. HAN YINHENG (IZCAS).

Description ♂: Head: Antenna about three-fifths the length of FW, with its tip gradually clubbed forward, dorsally black, ventrally yellowish brown with the clubbed tip black. Head and frons yellowish brown. Labial palpus blackish dorsally, orange white laterally and ventrally, with its third segment very tiny. Compound eyes naked. Thorax: Dorsally dark yellowish brown, tinged with shining bronze, ventrally yellowish white. Wings: FW length (base to apex): 32 mm. Wing shape: FW apex round and extremely elongated; tornus nearly a right angle. HW termen waved; tornus slightly pointing backwards. Wing pattern: Dorsal FW with ground colour orange yellow with developed dark markings; basal one third of anterior area dark yellowish brown; cell with basal half darker; space 1b with basal half blackish brown; posterior area dark grey; discal black band wide, obliquely extending from costal margin to vein 2 and bending downwards from veins 2 to 1b at submarginal area, this band almost broken by a large black oval postdiscal spot in space 2; apical and subapical triangular area black; subapical spots in spaces 5 and 6 orange white, the first-mentioned smaller; marginal area blackish grey. Dorsal HW with ground colour as in FW; space 7 almost entirely blackish; space 1b dark grey; posterior area grey; discal line grey, slender and indistinct; postdiscal spot in space 2 black, with an orange iris which is surrounded by a black ring;

a row of black spots inside of the submarginal line irregularly shaped, continuous, and gradually decrescent; submarginal line black and thick; marginal area blackish grey. Ventral FW with ground colour light orange yellow, the markings of the dorsal surface reappearing as dark yellowish green shadows; black postdiscal spot in space 2 distinct; subapical spots in spaces 5 and 6 white; submarginal line yellowish brown, blurred and thick. Ventral HW with ground colour and dark shading as in FW; a narrow and white discal band tapering backwards, with its inner edge outlined by a dark yellowish brown line; postdiscal spots in spaces 3 to 6 white, small and indistinct; postdical spot in space 2 black, with a whitish blue pupil and a yellowish iris; submarginal line as in FW. Abdomen: Dorsally brownish, ventrally yellowish white. ♂ genitalia (Fig. 3): Uncus short, bent downwards. Gnathos short and thin. Valva tongue-shaped, with its tip round; a dog's tooth-like terminal hook appears near the end of costa. Saccus slender, about one and a half times the length of the valva, with its tip distinctly swollen. Aedeagus twice the length of the valva, somewhat 'S'-shaped.

♀ unknown.

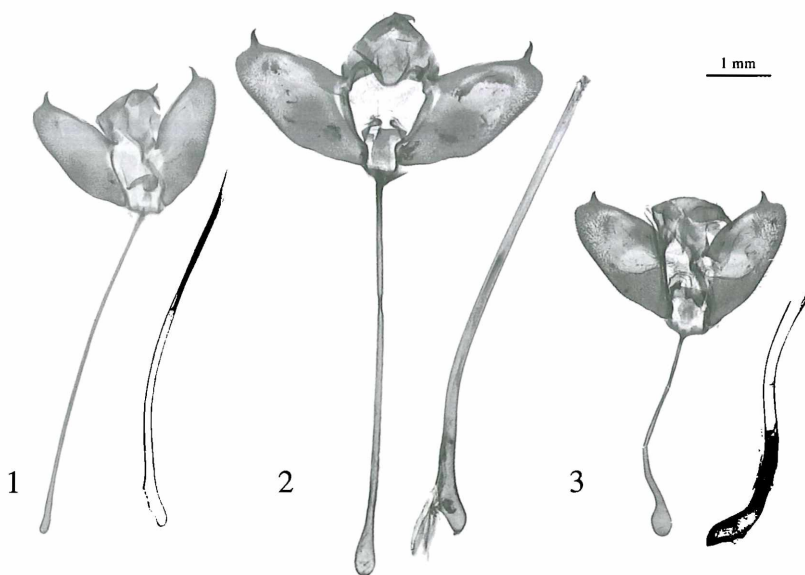


Fig. 1: ♂ genitalia of *Chitoria chrysolora chrysolora* (FRUHSTORFER, 1908)

Fig. 2: ♂ genital of *Chitoria ulupi subcaerulea* (LEECH, 1891)

Fig. 3: ♂ genitalia of *Chitoria leei* LANG spec. nov.

Diagnosis: Compared with *C. chrysolora chrysolora* (FRUHST.) from Taiwan Island and *C. chrysolora eitschbergeri* YOSHINO from southern Chinese Mainland, the new species has well developed black wing markings on its dorsal surface. Compared with *C. ulupi ulupi* (DOHERTY), the new species is light in colour, especially on its ventral surface. The new species can be easily recognised from sympatric *C. ulupi subcaerulea* (LEECH) by the following characters: It is smaller in size; FW

is narrower; markings on dorsal surface are more developed; the black postdiscal spot with an orange iris in space 2 on dorsal surface of HW is surrounded by a black ring which is absent in *C. ulupi subcaerulea* (LEECH); discal white band on ventral surface of HW is clear, whereas it is indistinct in *C. ulupi subcaerulea* (LEECH).

The σ genitalia of the new species is quite different from *C. ulupi* (DOHERTY) (Fig. 2) and *C. chrysolora* (FRUHST.) (Fig. 1): It can be distinguished from them by the following characters: Valva is broader than *C. chrysolora* (FRUHST.); terminal hook of valva is shorter than *C. ulupi* (DOHERTY) and *C. chrysolora* (FRUHST.); saccus is short and only about one and a half times the length of the valva, whereas in *C. ulupi* (DOHERTY) and *C. chrysolora* (FRUHST.) they are about two and a half times the length of their valva; the tips of saccus are swollen and 'bulb'-shaped in *C. leeii* LANG **spec. nov.** and *C. ulupi* (DOHERTY), whereas in *C. chrysolora* (FRUHST.) it is only slightly widened; aedeagus is only about twice the length of the valva and somewhat 'S'-shaped, whereas in *C. ulupi* (DOHERTY) and *C. chrysolora* (FRUHST.) they are about three times the length of their valva and simply curved.

Etymology: The specific name *leeii* is named after late Chinese rhopalocero-logist Prof. LEE CHU-AN-LUNG (1910–2004).

Remarks: The type locality of the new species, Mt. Shennongjia which lies on the north bank of the Three Gorges of Yangtse River, is restricted within the wide distributional range of *C. ulupi subcaerulea* (LEECH). Hitherto, the continental *C. chrysolora eitschbergeri* YOSHINO have not been recorded from this area. The Mt. Shennongjia area is wild and has a well protected subtropical virgin forest. The new species is probably confined to a small limited area.

Check list of the genus *Chitoria* MOORE, 1896

Genus *Chitoria* MOORE, 1896

= *Sincana* MOORE, 1896, *Dravira* MOORE, 1896

1. *Chitoria sordida* (MOORE, 1866)
subspec. *sordida* (MOORE, 1866)
= *phaeacia* (HEWITSON, 1869)
Distribution: China (SE. Tibet), NE. India, Bhutan, and N. Myanmar.
subspec. *vietnamica* (NGUYEN, 1979)
Distribution: N. Vietnam and Laos.
2. *Chitoria modesta* (OBERTHÜR, 1906)
Distribution: China (W. Sichuan).
3. *Chitoria naga* (TYTLER, 1911)
= *hani* YOSHINO, 1999
Distribution: NE. India, N. Myanmar, N. Thailand, and N. Laos.
4. *Chitoria cooperi* (TYTLER, 1926)
Distribution: E. Myanmar and Laos.
5. *Chitoria pallas* (LEECH, 1890)
Distribution: China (W. Sichuan).
6. *Chitoria fasciola* (LEECH, 1890)
Distribution: China (S. Shaanxi, W. Hubei, and Sichuan).
7. *Chitoria ulupi* (DOHERTY, 1889)

- subspec. *ulupi* (DOHERTY, 1889) (colour plate 8: 3, 4)
 = *florenciae* (TYTLER, 1911), *kalaurica* (TYTLER, 1926), *albopunctata* (TYTLER, 1915), and *mai* (TYTLER, 1940)
 Distribution: China (S. Yunnan, SE. Tibet), NE. India, Bhutan, N. Myanmar, and N. Laos.
 subspec. *subcaerulea* (LEECH, 1891) (colour plate 8: 5, 6)
 = *fulva* (LEECH, 1891), *setia* (FRUHSTORFER, 1909)
 Distribution: China (S. Shaanxi, S. Gansu, Henan, Hubei, Sichuan, Guizhou, and N. Yunnan).
 subspec. *dubernardi* (OBERTHÜR, 1912)
 Distribution: China (NW. Yunnan).
 subspec. *albifasciata* (MELL, 1923)
 = *tong* YOSHINO, 1997
 Distribution: China (N. Guangdong and Guangxi).
 subspec. *arakii* (NARITOMI, 1959)
 = *esakii* SHIRÔZU, 1959
 Distribution: China (Taiwan).
 subspec. *morii* (SEOK, 1937)
 Distribution: Korea.
8. *Chitoria chrysolora* (FRUHSTORFER, 1908)
 subspec. *chrysolora* (FRUHSTORFER, 1908) (colour plate 8: 1, 2)
 = *una* (WILEMAN, 1908), *formosana* (MOLTRECHT, 1909), *pseudopallas* (FRUHSTORFER, 1909), and *pseudofasciola* (FRUHSTORFER, 1913)
 Distribution: China (Taiwan).
 subspec. *eitschbergeri* YOSHINO, 1997
 Distribution: China (Zhejiang, Fujian, Jiangxi, Guangdong, Guangxi, Sichuan, and Guizhou).
9. *Chitoria leei* Lang **spec. nov.**
 Distribution: China (W. Hubei).

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Colour plate 7/ Farbtafel 7

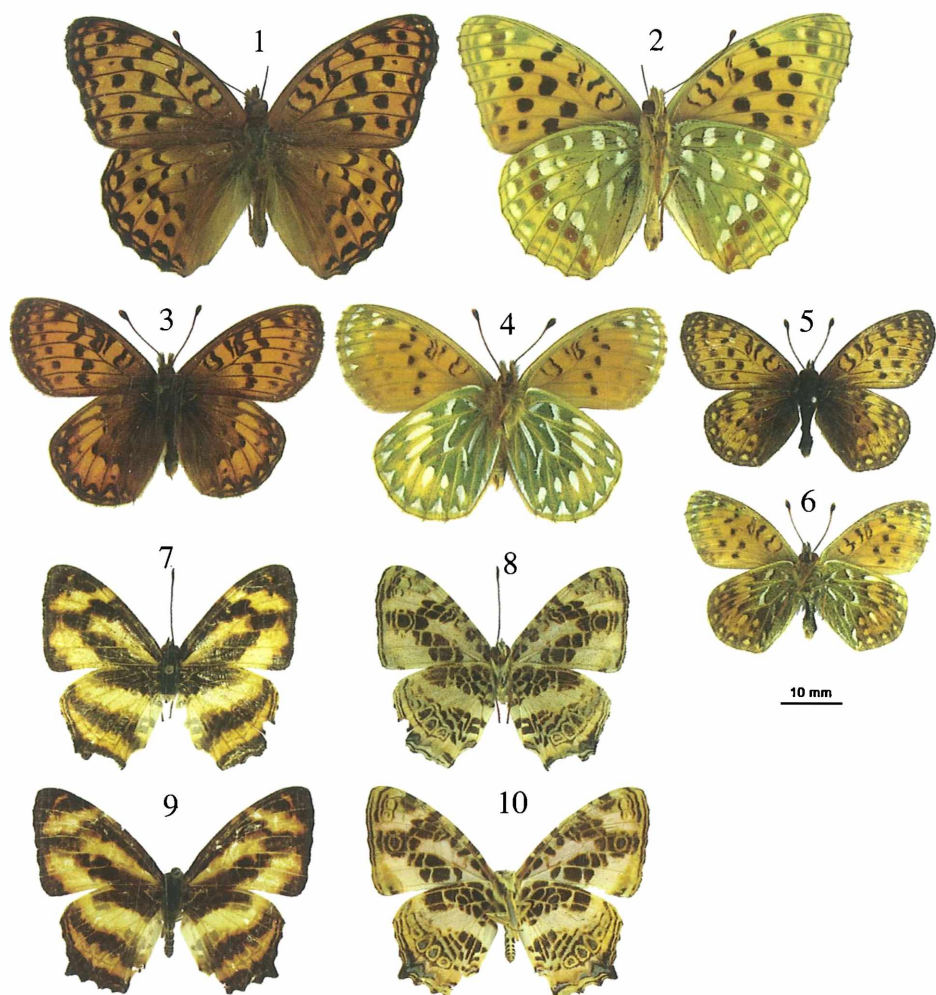


Fig. 1, 2: *Fabriciana adippe milina* LANG **subspec. nov.**, holotype ♂, Milin, Tibet, dorsal, ventral.
 Fig. 3, 4: *Mesoacidalia clara menba* LANG **subspec. nov.**, holotype ♂, Milin, Tibet, dorsal, ventral.
 Fig. 5, 6: *Mesoacidalia clara tongtianensis* LANG **subspec. nov.**, holotype ♂, Qumalai, Qinghai, dorsal, ventral.
 Fig. 7: *Symbrenthia silana* DE NICÉVILLE, 1885, ♂, Mt. Bawangling, Hainan, dorsal, ventral.
 Fig. 9, 10: *Symbrenthia silana* DE NICÉVILLE, 1885, ♂, Motuo, Tibet, dorsal, ventral.

Colour plate 8/ Farbtafel 8



Fig. 1, 2: *Chitoria chrysolora chrysolora* (FRUHSTORFER, 1908), ♂, Mt. Horisha, Taiwan, dorsal, ventral.
 Fig. 3, 4: *Chitoria ulupi ulupi* (DOHERTY, 1889), ♂, Xishuangbanna, Yunnan, dorsal, ventral.
 Fig. 5, 6: *Chitoria ulupi subcaerulea* (LEECH, 1891), ♂, Mt. Qingchengshan, Sichuan, dorsal, ventral.
 Fig. 7, 8: *Chitoria leei* Lang **spec. nov.**, holotype ♂, Mt. Shennongjia, Hubei, dorsal, ventral.

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