

Study on some nymphalid butterflies from China - 2

(Lepidoptera, Nymphalidae)

by

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Abstract: Four new subspecies of nymphalid butterflies from China are described and illustrated in this paper, they are: *Mesoacidalia clara kanga* LANG **subspec. nov.** from W. Sichuan and E. Tibet, *Fabriciana niobe kunlunensis* LANG **subspec. nov.** from S. Xinjiang, *Euphydryas maturna pseudomaterna* LANG **subspec. nov.** from NE. China and *Neptis ananta lancangensis* LANG **subspec. nov.** from NW. Yunnan. *Neptis thisbe obscurior* OBERTHÜR, 1906 from W. China is raised to species status and *N. tshetverikovi* KURENTZOV, 1936, described from Far East Russia, is considered to be a subspecies of *N. obscurior* OBERTHÜR: *N. obscurior tshetverikovi* KURENTZOV **stat. nov.**

Abbreviations: FW - forewing; HW - hindwing; LFW - length of forewing; IZCAS - the Institute of Zoology, Chinese Academy of Sciences, Beijing, China; LSY - the Private Collection of LANG SONG-YUN, Chengdu, China.

Mesoacidalia clara kanga LANG **subspec. nov.** (colour plate 6: 1, 2)

Holotype ♂, LFW: 26.5 mm, Sichuan: Kangding, Muge Cuo Lake, 29.VII.2009, coll. LANG YI (LSY). Paratypes: 1 ♀, LFW: 25 mm, Tibet: Basu, Bimalaigu, 4050-4250 m, 14.VIII.1973, coll. HUANG FU-SHENG (IZCAS); 1 ♂, Sichuan: Batang, 4600 m, 20.VIII.1982, coll. WANG SHUYONG (IZCAS).

Mesoacidalia clara (BLANCHARD, 1844) is a local alpine species which is only restricted to the southern and eastern parts of Qinghai-Tibet Plateau. Until now, five subspecies have been known, they are *M. c. clara* (BLANCH.), *M. c. manis* (FRUHSTORFER, 1903), *M. c. clarina* (STAUDINGER, 1901) (colour plate 6: 3, 4), *M. c. menba* LANG, 2009 and *M. c. tongtianensis* LANG, 2009. Among them, *M. c. clarina* (STGR.) was recorded from E. Qinghai, W. Gansu, W. Sichuan and E. Tibet. The first author (LANG, 2009) pointed out that the geographic population from W. Sichuan and E. Tibet is somewhat different from typical *M. c. clarina* (STGR.) from E. Qinghai and W. Gansu. After a survey accomplished by the first author and Mr. LANG YI in W. Sichuan in the summer of 2009, his former viewpoint is confirmed by additional material. So the population from this region, viz. Hengduan Mts., is described here as a new subspecies. A distribution map (fig. 1) of all subspecies is shown.

Diagnosis: The new subspecies can be easily distinguished from all previously known subspecies of *M. clara* (BLANCH.) by the following combination of characters:

1. It is medium in size as in *M. c. clara* (BLANCH.), *M. c. clarina* (STGR.) and *M. c. menba* LANG, whereas *M. c. manis* (FRUHST.) and *M. c. tongtianensis* LANG are obviously small.
2. Ground colour of the dorsal surface is orange in ♂, it is much more brilliant and vivid than that of *M. c. clarina* (STGR.).
3. Ground colour of the dorsal surface in ♀ is slightly lighter than that of ♂, whereas in *M. c. clara* (BLANCH.) it is decorated by dark bronzy greenish or grey scales, and in *M. c. menba* LANG and

M. c. clarina (STGR.) it is almost the same as in ♂.

4. FW apex of ♂ is round, whereas in *M. c. clara* (BLANCH.) it is somewhat acute.
5. Postdiscal spots of dorsal HW are complete from spaces 2 to 6, whereas in *M. c. menba* LANG they are extremely weak and incomplete.

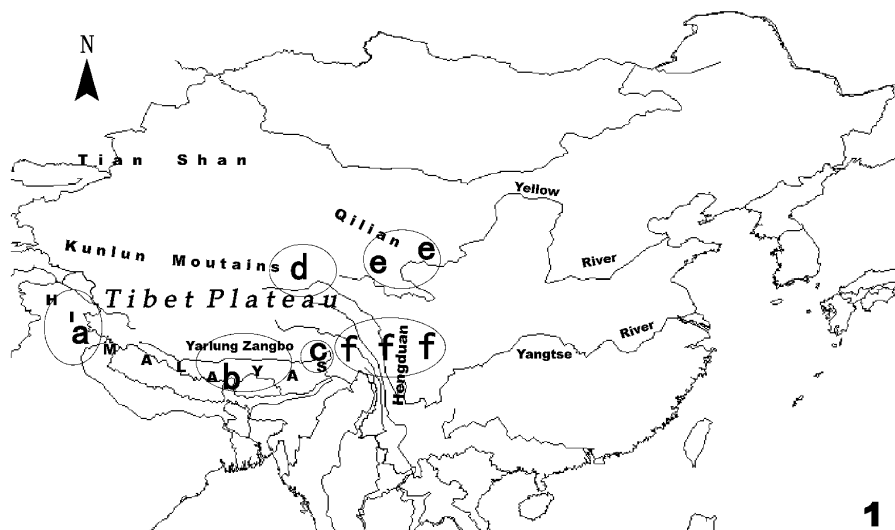


Fig. 1. Distribution map of *Mesoacidalia clara* (BLANCHARD, 1844): a = *Mesoacidalia c. clara* (BLANCHARD, 1844); b = *M. c. manis* (FRUHSTORFER, 1903); c = *M. c. menba* LANG, 2009; d = *M. c. tongtianensis* LANG, 2009; e = *M. c. clarina* (STAUDINGER, 1901); f = *M. c. kanga* LANG **subspec. nov.**

Etymology: The new subspecific name *kanga* is named after its home, the Kang area, which equals the eastern part of the Tibetan region.

Biology: Flight-period of *M. clara* (BLANCH.) is from late July to early September.

***Fabriciana niobe kunlunensis* LANG **subspec. nov.** (colour plate 6: 5)**

Holotype ♂, LFW: 27 mm, Xinjiang Uygur Autonomous Region: Kunlun Mts., 3300 m, 14.VII.1984, coll. Station of Forest Protection, Xinjiang Bureau of Forestry. Paratypes: 1 ♂ (LFW: 25 mm), 1 ♀ (LFW: 29 mm), same data as holotype (all in IZCAS).

Fabriciana niobe (LINNAEUS, 1758) is widely distributed from W. Europe eastwards to Central Asia. In China, it has been only known from Xinjiang and is replaced by *F. jainadeva* (MOORE, 1864) from W. Tibet and by *F. xipe* (GRUM-GRSHIMAILO, 1891) from other localities (HUANG, 2000; TUZOV, 2000). Until now, two geographic subspecies of *F. niobe* (L.) have been known from Xinjiang, they are *F. n. changaica* (REUSS, 1922) from Altai Mts. in N. Xinjiang and *F. n. orientalis* (ALPHERAKY, 1881) from Tianshan Mts. A different subspecies from the northern slope of western Kunlun Mts. in S. Xinjiang is described here as new.

Diagnosis: The new subspecies can be easily distinguished from others in the genus *Fabriciana* REUSS, 1920 from Xinjiang and nearby regions by the following combination of characters:

1. The σ brand of dorsal FW is absent as in *F. n. orientalis* (ALPH.), whereas in *F. n. changaica* (REUSS) the brands on veins 1, 2 and 3 are present but much slender, in *F. adippe* (ROTTEMBURG, 1775) the brands on veins 2 and 3 are developed and in *F. x. xipe* (GR.-GR.) from Qinghai the brand is prominent on vein 2.
2. Ground colours of dorsal wings and ventral FW are more yellowish and obviously lighter than that of *F. n. orientalis* (ALPH.) whose colours are more reddish.
3. Basal half of HW on both sides are greyish scaled and duller than that of *F. n. orientalis* (ALPH.).

Etymology: The new subspecies is discovered from the northern slope of Kunlun Mts. in S. Xinjiang. Its name *kunlunensis* is named after the Kunlun Mts. which is a very long and huge mountain range extending 2500 kilometers from the easternmost of Pamir eastwards to the northernmost of Sichuan.

Euphydryas maturna pseudomaterna LANG **subspec. nov.** (colour plate 6: 6)

Holotype σ , LFW: 21 mm, Heilongjiang: Jiamusi, Liangzihe, 21.VII.2002, coll. LUO ZHIWEN (IZCAS).

Euphydryas maturna (LINNAEUS, 1758) is widely distributed in the temperate Eurasia from C. Europe eastwards to Asia part of Russia. Except the nominate subspecies from Europe, another subspecies *E. m. staudingeri* (WNUKOWSKY, 1929) has been known from the Asian part of Russia (from Ural eastwards to eastern Transbaikalia), Kazakhstan and Mongolia. HUANG et al. (2000) recorded this species from NW. Xinjiang. WANG (1999) recorded it [misidentified as *E. iduna* (DALMAN, 1816) in his work] from the extreme northeast of Inner Mongolia (the western slope of northern Greater Khingan Range). Both the two above mentioned Chinese records of *E. maturna* (L.) belong to *E. m. staudingeri* (WNUKOWSKY). A quite different subspecies from the southern Lesser Khingan Range in Heilongjiang Province, NE. China is obtained and described here as new with the illustration of its σ genitalia (Fig. 2).



Fig. 2. σ genitalia of *Euphydryas maturna pseudomaterna* LANG **subspec. nov.** from Jiamusi, Heilongjiang.

Diagnosis: The new subspecies is distributed to the southeast of *E. m. staudingeri* (WNUKOWSKY), but it is more similar in external features to the nominate subspecies from Europe than to *E. m. staudingeri* (WNUKOWSKY). It can be very easily distinguished from *E. m. staudingeri* (WNUKOWSKY) by the following character: On dorsal surface, marginal lines, discal lines and several small marks on basal half are yellowish as in the nominate subspecies, whereas in the *E. m. staudingeri* (WNUKOWSKY) they are pure white.

Etymology: The new subspecific name *pseudomaturna* means that it is similar to *maturna*.

Neptis ananta lancangensis LANG **subspec. nov.** (colour plate 6: 7)

Neptis ananta lucida, ELIOT 1969, Bull. Brit. Mus. (N. H.) Ent., Suppl. 15: 99. (nec LEE, 1962)

Holotype ♂, LFW: 33 mm, Yunnan: Longyun County, Mt. Zhibenshan, 24.VI.1981, coll. LIAO SUBO (IZCAS).

ELIOT (1969) designated *Neptis lucida* LEE, 1962 as a subspecies of *N. ananta* MOORE, 1858 and provisionally placed the specimens from the Upper Mekong Valley in NW. Yunnan under the name *lucida* LEE. Later HUANG & WU (2003) synonymized *N. lucida* LEE as a junior synonym of *N. namba* TYTLER, 1915 which is another species of the *ananta*-complex. Therefor, six subspecies of *N. ananta* MOORE have been known until now, they are *N. a. ananta* MOORE (from NW. India), *N. a. ochracea* EVANS, 1924 (from SE. Tibet, Nepal, Sikkim, NE. India, Bhutan and N. Myanmar), *N. a. learmondi* TYTLER, 1940 (from N. Vietnam, Laos, Shan State of Myanmar and N. Thailand), *N. a. chinensis* LEECH, 1892 (from Sichuan and N. Guangxi), *N. a. minus* YOSHINO, 1997 (from Fujian, Jiangxi and Zhejiang) and *N. a. yanagisawai* SUGIYAMA, 1992 (from Hainan Island). The population of *N. ananta* MOORE from the Upper Mekong Valley in NW. Yunnan is discovered again this time and described here as a new subspecies.

Diagnosis: According to ELIOT (1969), the new subspecies is intermediate between *N. a. chinensis* LEECH and *N. a. ananta* MOORE on the dorsal surface, but closely resemble the latter on the ventral surface and in possessing fuscous cilia. Additionally, it can be distinguished from all previously known taxa of the *ananta*-complex from Yunnan and nearby regions by the following combination of characters:

1. Cilia are fuscous and very obscurely chequered, whereas in *N. namba* TYTLER from Yunnan they are clearly chequered with white.
2. Markings on dorsal surface are more yellowish than that of *N. a. chinensis* LEECH, and are not orange red as in *N. namba* TYTLER.
3. Ventral surface ground colour is intermediate between that of *N. a. chinensis* LEECH and *N. a. ochracea* EVANS, whereas in *N. a. chinensis* LEECH it is obviously light in colour and in *N. a. ochracea* EVANS it is more reddish brown.
4. It is slightly small in size compared with *N. a. chinensis* LEECH and *N. a. ochracea* EVANS.

Etymology: The new subspecies is discovered from Lancang Valley in NW. Yunnan. Its name *lancangensis* is named after the Lancang River (the upper water of Mekong).

Neptis obscurior OBERTHÜR, 1906 **stat. nov.**

Neptis thisbe obscurior OBERTHÜR, 1906, Ét. Lép. Comp. 2: 9, pl. 9: 1. TL: Siaolu [Lianglu, Tianquan, Sichuan].

According to ELIOT (1969), three subspecies of *N. thisbe* MÉNÉTRIÈS, 1859 have been known: *N. t. thisbe* MÉN. from Far East Russia, *N. t. obscurior* OBERTHÜR, 1906 from Sichuan and *N. t. dilutior* OBTH., 1906 from NW. Yunnan. *N. t. dilutior* OBTH. is only considered as a light form of *N. t. obscurior* OBTH. by BOZANO (2008), but here we still consider it as a bona subspecies which can be only obtained from NW. Yunnan and adjacent SW. Sichuan.

N. tshetverikovi KURENTZOV, 1936, described from Far East Russia, was considered as a bona species by its original author and some recent authors (DUBATOLOV, 1997; BOZANO, 2008), it is also recorded from NE. China and Korea. TUZOV et al. (2000) wrongly transferred *N. thisbe* MÉN. and some other relative species to the genus *Aldania* MOORE, 1869 and ranked the taxon *tshetverikovi* KURENTZOV as a subspecies of *A. deliquata* (STICHEL, 1909). The debate upon the name *deliquata* STICH. was discussed by BOZANO (2008: 54) in detail. We also follow the opinion of BOZANO (2008) and consider the taxon *deliquata* STICH. as a junior subjective synonym of *N. thisbe* MÉN.

Neptis tshetverikovi KURENTZOV can be reliably recognised from *N. thisbe* MÉN. only by some characters of external features and the ♂ valva. The diagnostic characters of *N. tshetverikovi* KURENTZOV are also found in the specimens of typical form of *N. t. obscurior* OBTH. from W. China. Actually, in W. China, typical form of *N. t. obscurior* OBTH. is sympatric with a *thisbe*-like form of *N. t. obscurior* OBTH. which correspondingly has a *thisbe*-like ♂ valva. Therefore, typical form of *N. t. obscurior* OBTH. should be conspecific with *N. tshetverikovi* KURENTZOV, but not be a subspecies of *N. thisbe* MÉN. At the same time, the *thisbe*-like form of *N. t. obscurior* OBTH. is true *N. thisbe* MÉN. Considering priority of the Nomenclature, *N. obscurior* OBTH. **stat. nov.** should be the valid name of this species, and *N. tshetverikovi* KURENTZOV should run as a subspecies of *N. obscurior* OBTH. **stat. nov.**: *N. obscurior tshetverikovi* KURENTZOV **stat. nov.**

Neptis obscurior obscurior OBERTHÜR, 1906 **stat. nov.** (colour plate 6: 8)

Material: 1 ♂, Sichuan: Mt. Omei, 19.VI.1979; 1 ♂, Shaanxi: Foping, Lingfengya, 1750-2150 m, 28.VI.1999; 2 ♂♂, Hubei: Xingshan, Longmenhe, 730-1300 m, 16-22.VI.1993 (all in IZCAS).

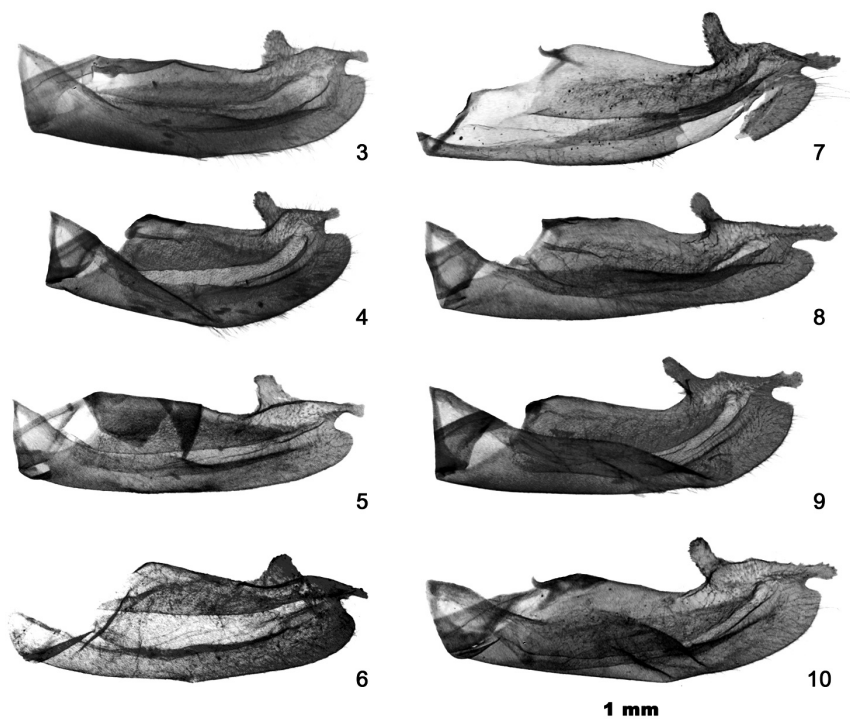
Diagnosis: Usually, it can be carefully distinguished from *N. thisbe* MÉN. and *N. o. tshetverikovi* KURENTZOV **stat. nov.** by the following combination of external characters:

1. Ventral HW discal spot in space 5 is inwardly narrower, whereas in *N. thisbe* MÉN. it is equal width.
2. Ventral HW discal spot in space 6 is smaller and much more narrower than that of *N. thisbe* MÉN.
3. Ventral HW pale lavender subbasal spot in space 5 stands well clear of the inner edge of the discal band, whereas in *N. thisbe* MÉN. it is more or less swallowed up in the discal band.
4. It is larger in size and more brilliant in colour than *N. o. tshetverikovi* KURENTZOV **stat. nov.**

♂ valva (figs. 3, 4): In most cases, it can be distinguished from *N. thisbe* MÉN. by the following combination of characters:

1. It is shorter than *N. thisbe* MÉN. in length.
2. Its distal process is thinner and not longer than its apex, whereas in *N. thisbe* MÉN, it is wider and longer than its apex.
3. Its dorsal process is remarkably wider than its distal process, whereas in *N. thisbe* MÉN, it is almost as wide as its distal process.

Range: China (Sichuan, S. Shaanxi, Hubei).



- Fig. 3: ♂ valva of *Neptis obscurior obscurior* OBERTHÜR, 1906 **stat. nov.** from Mt. Omei, Sichuan.
 Fig. 4: ♂ valva of *Neptis obscurior obscurior* OBERTHÜR, 1906 **stat. nov.** from Xingshan, Hubei.
 Fig. 5: ♂ valva of *Neptis obscurior tshetverikovi* KURENTZOV, 1936 **stat. nov.** from Maoershan, Heilongjiang.
 Fig. 6: ♂ valva of *Neptis obscurior tshetverikovi* KURENTZOV, 1936 **stat. nov.** from Gaolingzi, Liaoning.
 Fig. 7: ♂ valva of *Neptis thisbe dilutior* OBERTHÜR, 1906 **stat. nov.** from Lanping, NW. Yunnan.
 Fig. 8: ♂ valva of *Neptis thisbe thisbe* MÉNÉTRIÈS, 1859 from Xingshan, Hubei.
 Fig. 9: ♂ valva of *Neptis thisbe thisbe* MÉNÉTRIÈS, 1859 from Yichun, Heilongjiang.
 Fig. 10: ♂ valva of *Neptis thisbe thisbe* MÉNÉTRIÈS, 1859, from Yablonya, Heilongjiang.

Neptis obscurior tshetverikovi* KURENTZOV, 1936 **stat. nov.*

Neptis tshetverikovi KURENTZOV, 1936, Lambillionea **36**: 185. TL: ... Sichote-Alin ... [Ussuri]
 Material: 2 ♂♂, Heilongjiang: Maoershan, 4.VII.1928; 1 ♂, Jilin: Mt. Changbaishan, 18.VII.1982;
 Jilin: 2 ♀♀, Linjiang, 9-10.VII.1955; 1 ♂, Liaoning: Gaolingzi, 29.VI.1949 (all in IZCAS).

♂ valva (figs. 5, 6): it is the same as that of *N. o. obscurior* OBERTHÜR, 1906 **stat. nov.**

Range: China (Heilongjiang, Jilin, Liaoning, E. Inner Mongolia, Hebei, Beijing); Korea, Far East Russia (Ussuri, Amur, Transbaikal).

Neptis thisbe thisbe MÉNÉTRIÈS, 1859

Material: 6 ♂♂, Heilongjiang: Yichun, 7.VII.1956; 1 ♂, Heilongjiang: Yablonya, 1.VII.1940; 1 ♂, Heilongjiang: Hengdaohezi, 2.VII.1939; 1 ♂, Jilin: Weishaho, VII.1939; 2 ♀♀, Jilin: Linjiang, 10.VII.1955; 2 ♂♂, Liaoning: Gaolingzi, 4.VII.1934, 24.VI.1940; 1 ♀, Hubei: Mt. Shennongjia, 500-600 m, 2.VI.1981; 1 ♂, 1 ♀, Hubei: Mt. Shennongjia, Songluo, 900-1600 m, 15-18.VI.1981; 1 ♂, Hubei: Xingshan, Longmenhe, 1300 m, 23.VI.1993; 1 ♂, Fujian: Chongan, Xingcun Village, 740-1170 m, 20.V.1960; 2 ♀♀, Sichuan: Mt. Qingcheng Shan, 700-1600 m, 15-25.VI.1963 (all in IZCAS).

♂ valva (figs. 8, 9, 10).

Notes: According to ELIOT (1969), specimens from W. China differ from typical *N. thisbe* MÉN. only in being rather larger and more richly coloured.

Range: China (Heilongjiang, Jilin, Liaoning, Hubei, Zhejiang, Fujian, Sichuan); Korea, Far East Russia.

Neptis thisbe dilutior OBERTHÜR, 1906

Material: 1 ♂, Sichuan: Xiangcheng, 3000 m, 21.VI.1982; 2 ♂♂, Yunnan: Lan-ping, 2900-2950 m, 13.VI.1979 (all in IZCAS).

♂ valva (fig. 7).

Range: China (SW. Sichuan, NW. Yunnan).

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