Notes on Chinese Lepidoptera (Lasiocampidae, Endromididae, Bombycidae) with description of a new species

Vadim V. Zolotuhin

Abstract: Euthrix brachma sp. n. is described from S. China (W. Sichuan, Qionglai Shan, 2300 m; holotype ♂ in coll. ZMFK, Bonn, Germany). The ♂ lectotype of Odonestis hampsoni Leech, 1899 is designated (in BMNH, London). Cosmotriche kunmingensis Hou, 1984, is considered as a subspecies of C. inexperta (Leech, 1899), stat. nov. It is pointed out that the taxa Cosmotriche monbeigi Gæde, 1932 and C. likiangica Daniel, 1953 should not be considered as separate species because both represent only the subspecies of C. lunigera (Esper, 1784) and C. monotona (Daniel, 1953), respectively. The new status of Metanastria gemella terminalia (Tsai & Hou, 1980) as subspecies is established. The following new synonymies are established: Paradoxopla sinuata orientalis Lajonquière, 1976 syn. nov. of P. sinuata sinuata Moore, 1879; Cyclophragma tephra Hou, 1985, and C. glauca Hou, 1987, both syn. nov. of Kunugia tamsi (Lajonquière, 1973); Cyclophragma yongdensis [sic!] Tsai & Hou, 1983, syn. nov. of Kunugia lemeepauli (Lemée & Tams, 1950), comb. nov.; Trichiura sanwenensis Hou & Wang, 1992, syn. (comb.) nov. of Baobera khasiana (Moore, 1879); Gastropacha yunxianensis Hou & Wang, 1992, syn. nov. of Gastropacha pardale sinensis Tams, 1935, all Lasiocampidae; Minina fenzeli Mell, 1938, Endromididae. Oberthuëria formosibia Matsumura, 1927 (Bombycidae) is for the first time reported from Continental China.

Anmerkungen zu einigen chinesischen Lepidopteren (Lasiocampidae, Endromididae, Bombycidae)


Lasiocampidae

1. Euthrix brachma spec. nov. (Figs. 1, 9)


2 ♂♂, Siao-Lou, Chasseurs indigènes du P Déjean, 1903 (BMNH).

1 ♂, Chasseurs indigènes de Ta-tsien-lou, Récolte de 1910 (BMNH).

Male. Wingspan of holotype 27 mm, forewing length 15 mm. Wings and body reddish brown. Forewings with dark grey transversal lines: medially smooth, externally dentate, space between postmedial and external lines dark grey; discal spot prominent, semilunar, yellowish. Hindwings unicolorous, greyish brown.

Male genitalia (Fig. 9). Tegumen and vinculum band-shaped, socii pillow-shaped, prominent. Valvae bilobed, upper lobe stiletto-shaped, curved dorsally, lower lobe cone-shaped, inner surface of valva densely covered with hairs. Processes of vinculum flattened, caudal edge leaf-shaped, dentate. Aedeagus long, stiletto-shaped, well-sclerotized. Distal border of sternite 8 rounded.

Comments: Euthrix brachma sp. n. differs from all other Euthrix spp. by the structure of the genitalia. None of the other species described so far has the dorsal part of the upper lobe of the vinculum leaf-shaped and dentate. This is the smallest species of Euthrix with dark coloration and the transversal lines of the forewings not being filled with white.

Female, preimaginal instars and biology unknown.
Remarks. Two different species were confused in type series of *Cosmotriche hampsoni* Leech (2 ♂ syntypes, BMNH, locus typicus: Pu-tsu-fong). One of them is *Cosmeptera hampsoni* Leech sensu de Lajonquiére (1978); this specimen is designated here as the lectotype of *Odonestis hampsoni* (Leech, 1899), genitalia slide BMNH No. Lasiocampidae 516. The second one is an *Euthrix*-species and is included here in type-series of *Euthrix brachma* sp. n. as a paratype.

2. *Cosmotriche inexperta kunmingensis* Hou, 1984 (stat. nov.)


The description of this taxon is given in Chinese with the following English summary: “This species is similar to *Cosmotriche inexperta* (Leech), but differs from the latter by the following characters: Primaries light greyish in ♂, median and mostmedian lines blackish at middle, strongly curved, the interspace light greyish, distinct; genitalia very different as shown in figs.”

Contrary to this description the genitalia of *kunmingensis* appear to be very similar to those of *inexperta* Leech, 1899: vinculum with lateral tooth, valvae undivided, distal processes of vinculum with two large caudal jagged branches and a significant medio-distal thorn; aedoeagus bilobed, upper lobe longer (see also the illustrations given by de Lajonquière 1974). In de Lajonquière’s (1974) figure the upper lobe of the aedeagus is shown to intersect with the lower one. This appears to be why Hou (1984) considered the genitalic characters to be “very different”. A serial analysis of *C. inexperta* shows that the form of the distal process of the vinculum varies according to localities. The type material of *C. kunmingensis* represents the southernmost locality of the group known so far, separated from the main range of *C. inexperta*. It differs by the form of the distal process of the vinculum. It is therefore proposed to assign only subspecific status to this taxon.

Hou (1987) has also raised some subspecies of *Cosmotriche* to species rank, i.e. *C. lunigera monbeigi* (Gaede, 1932) and *C. monotona likiangica* (Daniel, 1953). These changes appear to be not well substantiated and should not be accepted.
Fig. 1: *Euthrix brachma* sp. nov., ♂, holotype (ZFMK). Fig. 2: *Kunugia lemeepauli* (LEMÉE & TAMS), ♂, holotype (MNHN). Fig. 3: *Mirina christophi STAUDINGER*, ♂, Amur (ZFMK). Fig. 4: *Mirina fenzeli MELL*, ♂, holotype (ZFMK). Fig. 5: *Oberthueria caeca OBERTHÜR*, ♂, Ussuri (ZFMK). Fig. 6: *Oberthueria formosibia MATSUMURA*, ♂, China, Kuatun (ZFMK). Fig. 7: *Oberthueria falcigera BUTLER*, ♂, Japan, Tokyo (ZFMK). Fig. 8: *Paradoxopla sinuata orientalis DE LAJONQUIÈRE*, ♂, holotype (ZFMK).
3. *Paradoxopla sinuata sinuata* (Moore, 1879) (Fig. 8)

*Gastropacha sinuata* Moore, 1879, Descr. new Indian lepid. insects colln. late Mr. Atkinson 1: 76. Locus typicus: India, Darjeeling.


A re-examination of the type series of *Paradoxopla sinuata orientalis* de Lajonquière, 1976 (coll. ZFMK, see Fig. 8) has demonstrated the lack of significant phenotypic or male genitalic differences to the nominate taxon *C. sinuata sinuata*. This allows to establish here the synonymy as given above.

Only two subspecies of *P. sinuata* are known at present, the nominate subspecies ranging from north-eastern Pakistan, northern India and Nepal to southern China, and *P. sinuata taiwana* (Wileman, 1915) from Taiwan.

---

Fig. 9: Male genitalia of *Euthrix brachma* sp. nov.: general view ventral, aedeagus and 8th sternite.
Fig. 10: Shape of male 8th sternite of Cosmotriche inexperta inexperta Leech (A–E) and C. inexperta kunmingensis Hou (F). A–B = Kuatun, Fukien; C = Chekiang, Ost-Tien-mu-shan; D = Chekiang, Wenchou; E = Chekiang, West-Tien-mu-shan; F = Yunnan, Kunming.

4. Metanastria gemella de Lajonquière, 1979


The illustration of the male genitalia and of the imagos given by Hou (1987) clearly demonstrate the conspecificity of M. terminalia Tsai & Hou, 1980 with M. gemella de Lajonquière, 1979 of which two male paratypes are deposited in coll. ZFMK. However, the small differences in coloration
and wing pattern ("submarginal spot series blackish, distinct and larger") and in the shape of the wings ("♂ primaries longer and narrower; costal margin 1/3 near apex protrusively curved") allow to consider this taxon as a subspecies of _M.gemella_ LAJ. with the establishing of a new subordination:

_Metanastria gemella terminalia_ (TSAI & HOU, 1979), _stat. nov._

5. _Kunugia tamsi_ (DE LAJONQUIÈRE, 1973)


_Cyclophragma tephra_ HOU, 1985, _syn. nov._, Wuyi Sc. J. 5: 59–61, figs. 1, 2, 7 Locus typicus: China, Fujian, Chiongan.


No real differences were found either in the external characters nor in male genitalia of _Cyclophragma tephra_ HOU (1985: figs.1, 2, 7; HOU 1987: figs. 63, 67, pl. 22, figs. 8, 9) and _Ch. tamsi_ LAJ. (♂ holotype in BMNH examined), and therefore the synonymy as above is established.

Comment. The name “_glauca_” was used by HOU (1987: 95) to describe the illustration of the male genitalia of _Cyclophragma tephra_.

6. _Kunugia fulgens jianchuanensis_ (TSAI & HOU, 1976)

_Lebeda fulgens_ MOORE, 1879, in HEWITSON & MOORE, Descr. new Indian lepid. insects colln. late Mr. ATKINSON 1: 81. Locus typicus: N. India, Darjiling.


This taxon was reduced to subspecific rank by KISHIDA (1993: 142): "_Cyclophragma jianchuanensis_ TSAI & HOU is considered to be the same species with _fulgens_. But in _jianchuanensis_ the ground colour of the forewing is pale ochrous, so I treat it as a distinct subspecies.”

The genitalia of both taxa were examined in topotypic specimens of _fulgens_ from Darjeeling and of _jianchuanensis_ from Sichuan (prep. Y. L. 550, China, Setchouen, Batang, 28. vii. 1975, Muséum national d’Histoire naturelle = MNHN, Paris). In fact, these taxa really differ only by external characters, so the synonymy proposed by Y. KISHIDA is accepted here.
(Figs. 2, 11)


*Cyclophragma yongtensis* auctorum – misspelling.

This little-known taxon from southern Vietnam has been overlooked by most authors. A re-examination of the holotype ♂ has shown that it is conspecific with *Cyclophragma yongdensis* Tsai & Hou, 1983. In the male genitalia of this species (Fig. 11), the distal processes of the vinculum have no teeth, the valvae are short and their upper lobe is conical, the lower one covered by thick setae. Aedeagus with tubular base and beak-shaped tip, vesica with a few short cornuti. Tegumen and vinculum narrowed in a characteristic manner; saccus long and strong.

8. *Baodera khasiana* (Moore, 1879)


It can be gathered by comparing the original illustrations of the genitalia that this taxon cannot be placed in *Trichiura*, but has to be transferred to *Baodera Zolotuhin, 1992* (Zolotuhin 1992). No differences to *Baodera khasiana* (Moore, 1879), the type-species of *Baodera*, have been found in the short English summary of the original description nor in the illustrations of the genitalia structures. All characters pointed out by Hou & Wang as the unique ones for *Trichiura sanwenensis* in the original description are typical for specimens of *khasiana* (examined: 64 ♂♂, 1 ♀ from northern and north-eastern India [Sikkim, Assam], Bhutan, north-eastern Burma and Nepal), thus the synonymy is established.


Fig. 11: Male genitalia (general view ventral) and aedeagi of *Cyclophragma yongdensis* Tsai & Hou (A; from the original description) and *Kunugia lemeepauli* (Lemeé & Tams) (B; topotype).

A large series of specimens of both sexes originating from Pakistan, India, Nepal, Thailand, Vietnam and southern China (Kwangtung, Fukien) was examined. A comparison with the illustrations of the imago and the male genitalia of *yunxianensis* proves the conspecificity of these taxa. No differences were found in the male genitalia despite the statement of the authors of *yunxianensis* that the genitalia are “very different as shown in Figs.”, “Highly chitinized, aedeagus double stuck, tarsal clasper with 7–8 teeth at the apical edge”. The “double stucked aedeagus” shown in the original illustration by bilobed (“double stucked”) juxta and aedeagus proper presents a generic character of *Gastropacha*. None of the characters mentioned is sufficient to assign species status to *yunxianensis*. 
Endromididae

10. *Mirina fenzeli* MELL, 1938 (Figs. 4, 12)


*M. longnanensis* was compared to *M. christophi* (STAUDINGER, 1882) by the authors, but no mention was made of *M. fenzeli* MELL, 1938 described from the same area. The analysis of the type material of the latter (preserved in colls. ZFMK and ZMHU) allows to establish the new synonymy given above and to redescribe this little-known species.

Forewings elongate, greyish white, with vague cream-grey, lunulated transversal lines and external zones. Discal vein with large velvet-black rounded spot; a small spot of the same colour between the bases of R5 and M1. Hindwings with grey discal spot and vague cream-grey transversal lunulated lines. Venation as illustrated (Fig. 12). Body covered throughout by grey hairy scales. Foretibia with long elongated epiphysis. Wingspan of the holotype 44 mm, forewing length 23 mm.


Distribution: China, Gansu (Wen country) and Shaanxi (Tapaishan).

Biology. Unknown. All specimens were taken between 20th June and July.

Comments. The male specimen illustrated here (Fig. 4) is the holotype (coll. ZFMK). From 13 ♂♂ and 1 ♀ mentioned in the original description, there are 9 ♂♂ paratypes in coll. ZFMK and 3 ♂♂ paratypes in coll. ZHMB. One male specimen (not labeled as a paratype) from the same locality is kept in BMNH. The institution of present deposition of one ♂ and the ♀ paratypes is unknown.

MELL (1938) noted that “Unkus und Valvae des ♂ [sind] so von der von *christophi* verschieden, daß sie die Aufstellung eines besonderen Genus rechtfertigen würden.” Despite the peculiarities of the male genitalia mentioned above I prefer to include this species into *Mirina* due to the overall similarity.
Fig. 12: *Mirina* spp. A–C: *M. longnanensis* CHEN & WANG: imago, male genitalia in ventral view, uncus in lateral view and venation (taken from CHEN & WANG 1993); D–E: *M. fenzeli* Mell, paratype, male, genitalia ventral, general view without left valva and aedeagus; F–G: *M. christophi* STGR., male, uncus and tegumen (F) and aedeagus (G).
Bombycidae

11. Oberthueria formosibia Matsumura, 1927 (Figs. 6, 13, 14)


This species is recorded here for the first time from Continental China. Thus far it was only known from Taiwan (Chang 1989, Kishida 1992), but had been illustrated as Oberthueria caeca by Chu & Wang (1983, pl. 129, fig. 2944).

Material studied: China, Kuatun, 2300 m, 27°40' N., 117°40' E., 17 v.-1. vi. 1938, leg. Klapperich (8 ♂♂ in ZFMK).

China, West Tien-mu-shan, 8. vi. and 28. vi. 1932, H. Hoene (2 ♂♂ in ZFMK).

This species is closely related to O. caeca Oberthür, 1880 (Fig. 5), but differs by the presence of 3-4 clear teeth on the hindwings, the denticulate edge of the forewing and the wing pattern being more obvious. In the male genitalia (Fig. 14) the right valva has as stronger and longer harpe with longer spines; teguminal lobes rounded, aedeagus tubular with plate-shaped cornutus.

This is the largest species of Oberthueria and appears to be isolated in the mountains parallel to the southern coastal line and on Taiwan. I have not seen any intermediate specimens between O. caeca and O. formosibia and therefore consider the latter to represent a separate species, which differs from the closely allied O. caeca mainly by the shape of the wings. The distribution of O. caeca in China is not yet well documented, but it is a common species in the Russian Far East and in North Korea (Kongosan). In China it is known from Manchuria (Erzen-dianzy, 45°40' N., 127°10' E. and from Lidahetse), Shensi (Mien-shan), Gansu (Tapaishan: Tsinling) and northern Szechuan (Min Shan, Juzhaigou vic., 12-16 July 1994, leg. C. della Bruna). The third species is O. falcigera (Butler 1878) from Japan. All the species of Oberthueria known thus far are illustrated (Figs. 5-7).
Fig. 13: Oberthueria formosibia Mats., holotype (from the original description).

Fig. 14: Oberthueria spp., male genitalia ventral and aedeagi. A: O. formosibia Mats.; B: O. caeca Obth.
References


Received: 27. v. 1995