

On distribution of *Nannoarctia* species in China (Lepidoptera, Arctiidae)

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Abstract All available material of the genus *Nannoarctia* Kôda from China is considered. All but one formerly known specimens appeared to belong to *N. obliquifascia* Hmps., although earlier they had been identified as two species. The second species, *N. tripartita* Wlk. is still known by a single specimen from Yunnan only.

Taxonomy of the genus *Nannoarctia* Kôda, 1988 is very complicated due to individual variability of the wing pattern and male genitalia. This problem was strongly complicated by different and not conspecific type designation of *N. tripartita* (Walker, 1855) by Butler (1881) and Hampson (1894, 1901). Dubatolov & Kishida (2010) following Cerny & Pinratana (2009) chose the latter as the lectotype because it corresponds to var. α by Walker (1855). Moreover, neither image of the *N. tripartita* variation α sensu Walker (1855) nor a comprehensive explanation of the specific problem in this group were published. So, in spite of presence of two distinct species in the South-East Asian fauna, many authors could not separate them from each other. The same concern *Nannoarctia* species from China. After Cerny & Pinratana (2009) and Dubatolov & Kishida (2010) reviews, it became necessary to reattribute all known *Nannoarctia* material from China into correct species.

Nannoarctia tripartita Walker (Fig. 1)

Aloa tripartita Walker, 1855 (main variation [α]), *List Specimens lepid. Insects Colln. Br. Mus.* **3**: 706 (East Indies) [Burma (Myanmar)].

Material. YUNNAN: 1, Xishuangbanna, 2200 m, 26.IX 1957.

Distribution. Burma (Myanmar); Thailand (Cerny & Pinratana, 2009); Laos; in China known from Yunnan only.

This is the first correct record of the species from China. The species has nearly transversal (not oblique) light band or the spot row on the forewings that begin on the costa between bifurcations R_{2+5} / M_1 and R_2 / R_{3+4} .

Nannoarctia obliquifascia (Hampson) (Figs 2–20)

Aloa tripartita Walker, 1855 (var. β , γ , δ), *List Specimens lepid. Insects Colln. Br. Mus.* **3**: 706-707; Butler, 1881, *Ill. Typ. Lep. Het. Br. Mus.* **5**: 35, pl. 86, fig. 4. Type label of the figured specimen, probably, is not correct; such coloured moths occur in “East Indies”, Burma (=Myanmar).

Rajendra tripartita: Butler, 1881, *Ill. Typ. Spec. Lep. Het. Coll. Brit. Mus.* **5**: 35 (North India [false!]).

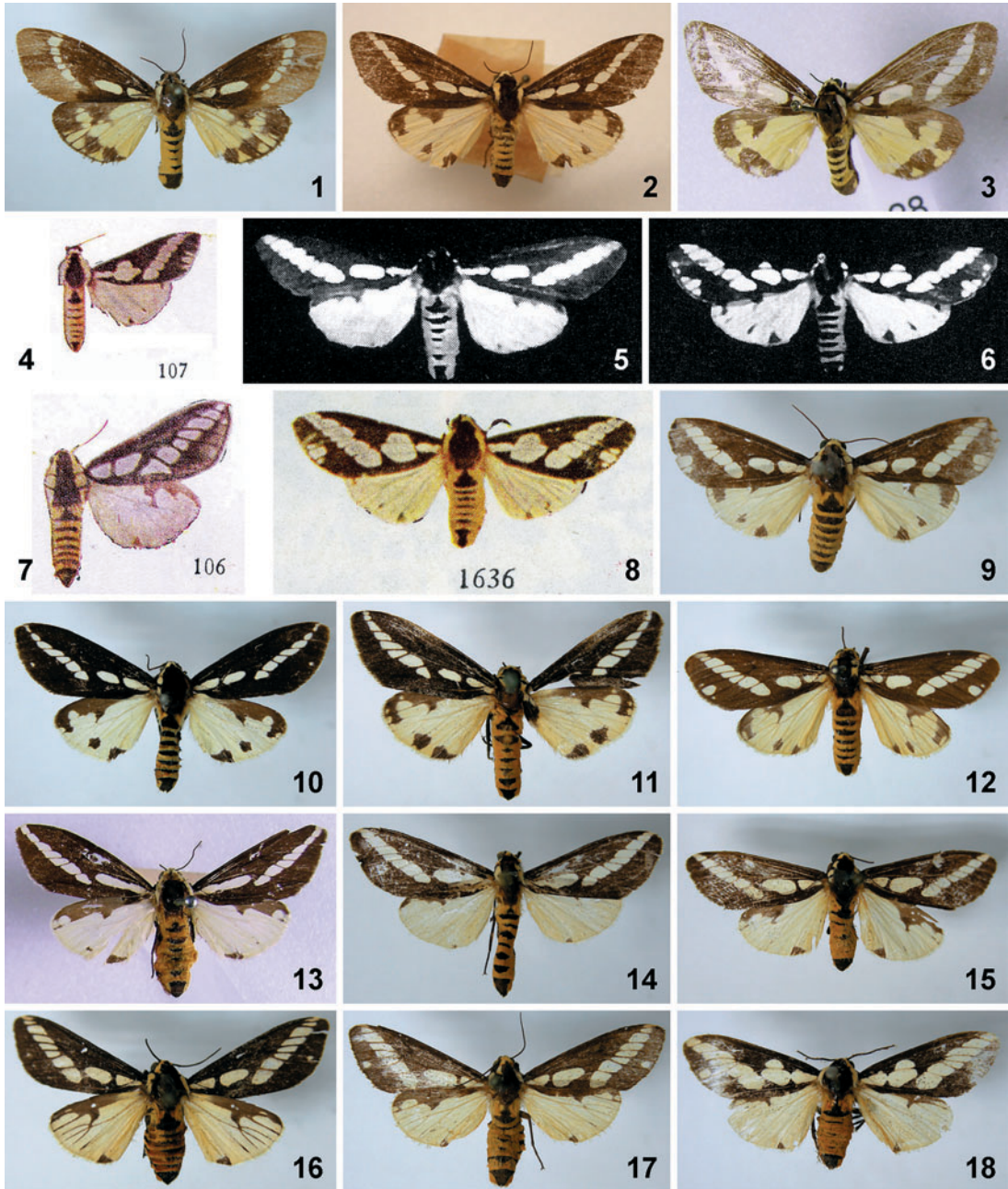
Pericallia obliquifascia Hampson, 1894, *Moths India* **2**: 24; type locality: “Burma, Rangoon” (from the lectotype); Hampson, 1901, *Catalogue Lep. Phal. Colln Br. Mus.* **3**: 358-359, pl. XLVII, fig. 12; Rothschild, 1910, *Novit. Zool.* **17**: 170 (part.) (... , Hainan) (Fig. 3); Fang, 1982, *Iconographia Heterocerorum Sinicorum* **2**: 222, fig. 1636 (Yunnan) (Fig. 8); Fang, 1985, *Economic Insect fauna of China* **33**: 71, pl. VII, fig. 106 (Yunnan) (Fig. 7).

Pericallia tripartita: Fang, 1985, *Economic Insect fauna of China* **33**: 71, pl. VII, fig. 107 (Hainan) (Fig. 4).

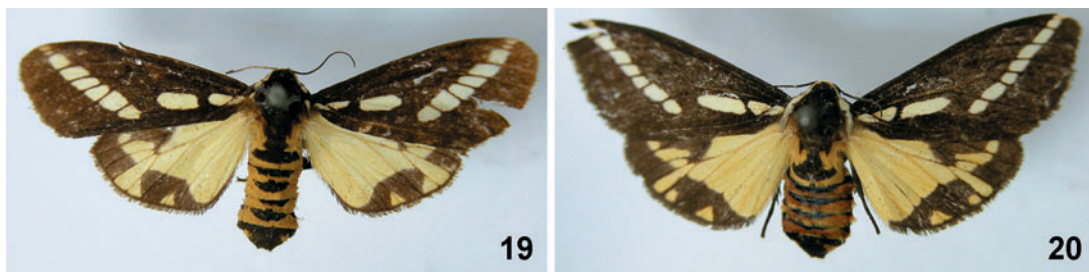
Cretonotus obliquifascia nigrescens Mell, 1935, *Mitt. Dt. ent. Ges.* **6**: 38; type locality: “Nordkwangtung (Tsatmukngao südlich Linping)” (Fig. 2).

Alphaea obliquifascia: Daniel, 1943, *Mitt. münch. ent. Ges.* **33** (3): 741 (Kwangtung sept., Lienping).

Nannoarctia tripartita: Fang, 2000, *Fauna Sinica (Insecta)* **19**: 350, pl. XV, fig. 4 (Sichuan (Yanyuan), Hainan);



Figs 1–18. *Nannoarctia* moths from China. 1 *N. tripartita* Wlk., , Yunnan, Xishuangbanna; 2–18. *N. obliquifascia* Hmps.: 2. *N. o. nigrescens* Mell, , syntype; 3. , Hainan, Youboi; 4. , “*Pericallia tripartita*” sensu Fang, 1985; 5. , *N. obliquifascia* sensu Fang, 2000; 6. , “*N. tripartita*” sensu Fang, 2000; 7. , *N. obliquifascia* sensu Fang, 1985; 8. , *Pericallia obliquifascia* sensu Fang, 1982; 9. , Hainan, Xinglong; 10. , Guangxi, Fangcheng; 11. , Guangxi, Ningming; 12. , Hainan, Wanning; 13. , Yunnan, Teng-yueh Ting (now – Tengchong); 14. , Yunnan, Yunxian; 15. , Yunnan, Jindun; 16–18. , Yunnan, Xishuangbanna.



Figs 19–20. *Nannoarctia* moths from China, . 19. Yunnan, Xishuangbanna; 20. Yangbi.

Dubatolov, Haynes, Kishida, 2007, *Tinea* **20**: 67.

Nannoarctia obliquifascia: Fang, 2000, *Fauna Sinica* **19**: 349-350 (Yunnan, Hainan, Guangxi (Ningming));

Dubatolov, Haynes, Kishida, 2007, *Tinea* **20**: 67.

Material. YUNNAN: 1 ♂, Teng-yueh Ting [Tengchong] (BMNH); 1 ♀, Tsindun (in Russian), 1170 m, 27-28.IV 1956, Zaguljaev (IZBC); 3 ♂, 1 ♀, Xishuangbanna, 380-850 m, 21.VIII 1958, 13.VII 1964, 6.IX 1993, 14.IX 1993 (IZBC); 1 ♂, Yunxian, 950 m, 18.VII 1980 (IZBC), 1 ♀, 31.VII 1980 (IZBC); GUANGXI: 1 ♀, Ningming, 125 m, 25.V 1984 (IZBC); GUANGDONG: 1 ♀ (*nigrescens* syntype), no label [Nordkwangtung (Tsatmukngao south from Linping)] (ZFMK); HAINAN: 1 ♀, 12.VI 1963 (IZBC); 2 ♂, Wanning, 22.VII 1963 (IZBC); 1 ♀, Youboi (BMNH).

Distribution. Burma (Myanmar), Thailand, Vietnam, Malakka (Malay Peninsula), South China: Southern Sichuan, Yunnan, Guangxi, Guangdong, Hainan. A distributional map of the *Nannoarctia* species was published by Dubatolov & Kishida (2010).

The first record of the species from China belongs to Rothschild (1910) who published information of the species from southernmost China, Hainan is. Soon later, Mell (1935) described a new subspecies from Guangdong; unfortunately the figure of the subspecies was not published. The original description was too poor, and it was impossible to understand real taxonomic position of this taxon. Based on Mell's material, Daniel (1943) also cited the species from Guangdong.

Fang (1982) recorded the species from Yunnan without exact locality, but with a colour figure of a moth (Fig. 8). It truly corresponds to *N. obliquefascia* Hmps. in modern sense. Later, she cited one more *Nannoarctia* species from China (Fang, 1985, 2000): *N. tripartita* Wik., but all figures of these moths (Figs 4-7) show in fact specimens of *N. obliquifascia* Hmps. Unfortunately, it is impossible to understand what characters she considered as differentiating between them.

Taking into account individual variability of *Nannoarctia obliquifascia* Hmps. (including *N. tripartita* sensu Fang, 1985, 2000), it is possible to meet in China all types of the variable forewing pattern (Figs 9-20): with or without light spots along the forewing outer margin, with or without the white spot in the forewing cell, with separate or fused spots of the light oblique fascia, with a narrower or wider light oblique fascia.

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