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Two new species sibling to *Ghoria albocinerea* Moore from South China
(Lepidoptera, Arctiidae: Lithosiinae)

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Abstract. Two new species sibling to *Ghoria albocinerea* Moore are described from South China: *G. sinotibetica* sp. nov. (Sichuan) and *G. nanlingica* sp. nov. (Guangdong, Nanling Mts.).

Ghoria albocinerea Moore, 1878 was described from the South-Eastern Himalaya (Darjeeling vicinities, West Bengal, India). It has a single synonym that was described from the same locality, *Ghoria sericeipennis* Moore, 1878, synonymized by Hampson (1900). Later, the species was cited from Nepal (Kishida, 1994), Thailand (Cerny & Pinratana, 2009), and China: Yunnan, Sichuan, Guangxi, Shaanxi, Hunan, Hubei (Fang, 2000). After dissection of the male genitalia from two provinces of China: Sichuan and Guangdong, it was found that they are presented by two different species sibling to the nominotypical *G. albocinerea* Moore from Himalayas. Descriptions of these new species, and characterization of the male genitalia of *G. albocinerea* Moore are given below.

Ghoria albocinerea Moore (Fig. 1)

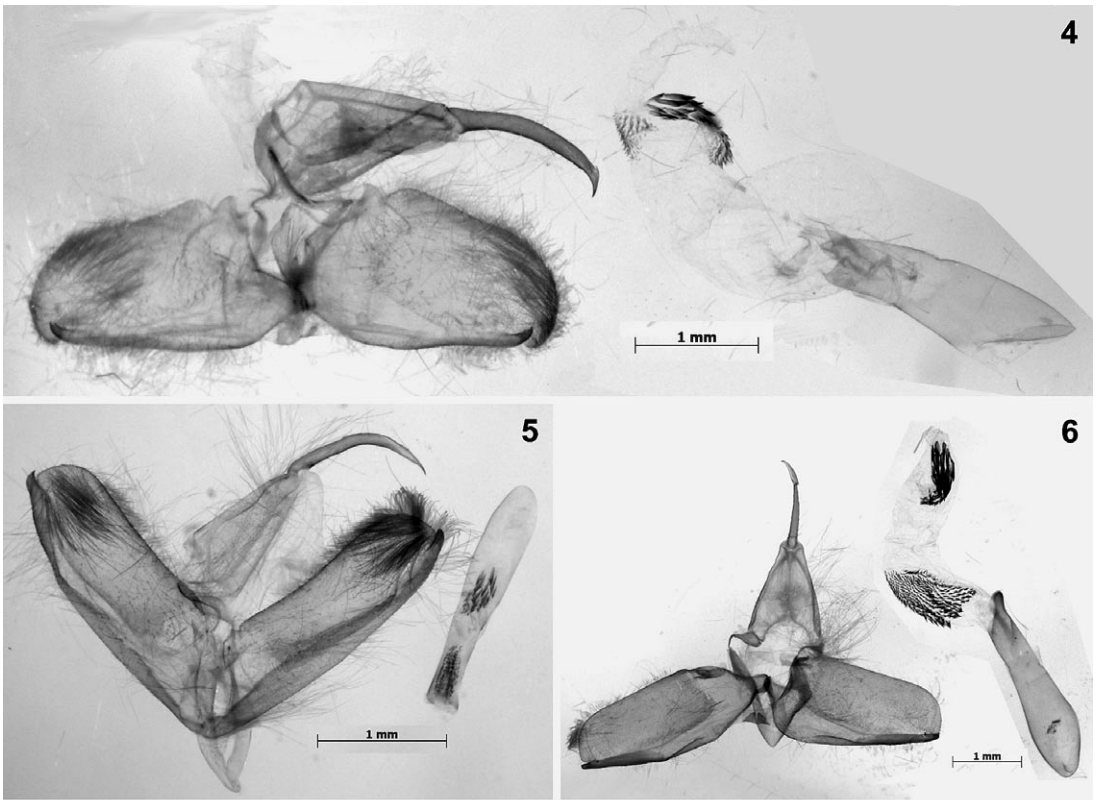
Ghoria albocinerea Moore, 1878, *Proc. zool. Soc. Lond.* **1878**: 13, pl. 1, fig. 10. Type locality: "Darjiling" [West Bengal. India]; Hampson, 1894, *Moths of India* **2**: 70 (Sikhim); Kishida, 1994, *Moths of Nepal* **3**: 68 (Jiri).
Ghoria sericeipennis Moore, 1878, *Proc. zool. Soc. Lond.* **1878**: 13. Type locality: "Darjining" [West Bengal. India]; Hampson, 1894, *Moths of India* **2**: 69-70 (Sikhim).
Agylla albocinerea, Hampson, 1900, *Cat. Lep. Phalaenae Br. Mus.* **2**: 209-210.

Material. NEPAL: 1 ♂, E. Nepal, Janakpur, Dolakha, Jiri, 2,350 m, 31. V -2. VI. 1993, T. Haruta leg.; 1 ♀, E. Nepal, Janakpur, Dolakha, Deolari, 2,800 m, 25. v -7. vi. 1994, M. S. Limbu leg.

Distribution. Nepal (Kishida, 1994); South-East India: West Bengal, Sikkim.

Description. Forewing length 15.5 mm. "♂. Head pale yellow; palpi, frons, and antennæ brown; thorax brown, the tegulæ and base of patagia pale yellow; abdomen grey-brown, the anal tuft yellowish. Fore wing silky white, the inner area, costal edge, and cilia brown. Hind wing pale brown, the cilia white. Underside of forewing brown. Underside of forewing brown; hind wing pale, the costal half suffused with brown. ♀. Hind wing white. Ab. 1. *sericeipennis*. Head fuscous; hind wing

Figs 1-3. *Ghoria* moths. 1: *G. albocinerea* Moore, Nepal, Janakpur, Dolakha, Deolari. 2: *G. sinotibetica* sp. nov., holotype, China, Sichuan, Ludin, Moxi. 3: *G. nanlingica* sp. nov., holotype, China, Guangdong, Shaoguan, Nanling.



Figs 4-6. *Ghoria* male genitalia. 4: *G. albocinerea* Moore, Nepal, Janakpur, Dolakha, Deolari. 5: *G. sinotibetica* sp. nov., holotype, China, Sichuan, Ludin, Moxi. 6: *G. nanlingica* sp. nov., holotype, China, Guangdong, Shaoguan, Nanling.

white, with the apical area brown in male, wholly white in female." (Hampson, 1900). This description is wholly comprehensive, but it is necessary to add that costal margin is brown at basal 1/4. The most diagnostic character is a brown coloration of hindwings, often with a lightening in basal area.

Male genitalia (Fig. 4). Uncus long, narrow, curved downwards, slightly but at apex significantly. Valves broad at base, gradually constricted to apex; cucullus rounded at apex. Apical process of sacculus short, shorter than apex of cucullus, slightly curved upwards. Aedeagus short, stout, constricted to apex, without spines. Vesica long, elongate, with two plates of spines at apex, the larger one consists of strong spines and band-like in shape, the smaller one triangular, shorter than 1/2 of the first plate and consists of small spines.

Ghoria sinotibetica Dubatolov, Kishida & Wang, **sp. nov.** (Fig. 2)

Material. Holotype: ♂, China, Sichuan, Ludin, Moxi, 2700 m, 18-19. vii. 2009, Y. Kishida leg. Preserved in a collection of South China Agricultural University, Guangdong. Paratypes: 1 ♀, same data as in the holotype; 1 ♀, same locality as in the holotype, 24. vii. 2009, Y. Kishida & Wang M. leg. ; 1 ♀, China, Sichuan, Baoxing, 1800m, 25. vii. 2009, Wang M. leg.

Distribution. South-West China. Apart from Sichuan, specimens from neighbouring provinces of Yunnan, Guangxi, Shaanxi, as well as from Thailand may probably be attributed to this species.

Description. Forewing length 16.5 mm. Male forewing pattern as typical in *G. albocinerea* Moore.

Forewing costal margin brown at basal 1/3. Hindwings light brown, with a lightening in cubital area beyond discal cell apex.

Male genitalia (Fig. 5). Uncus long, narrow, straight at basal half, then strongly curved downwards but straight at apex. Valves long, with nearly parallel sides. Apical process of sacculus strong, slightly longer than apex of cucullus. Aedeagus narrow, with two plates of spines, one at base consisting of small spines, the other consisting of stronger spines, it is located at vesica apex.

Ghoria nanlingica Dubatolov, Kishida & Wang, **sp. nov.** (Fig. 3)

Material. Holotype: ♂, China, Guangdong, Shaoguan, Nanling, 900-1,400 m, 16-20. v. 2009, Y. Kishida, Wang M. [leg.]. Preserved in South China Agricultural University, Guangdong. Paratypes: 4 ♂ 2 ♀, same data as in the holotype.

Distribution. South-East China. Apart from Guangdong, specimens from neighbouring provinces of Hunan and Hubei probably belong to this species as well.

Description. Forewing length 17 mm. Male forewing pattern as typical in *G. albocinerea* Moore. Forewings, in addition to dark brown dorsal margination extending over wing basal half, has narrow brown dash along radial vein at basal half of the discal cell. Hindwings greyish white, with a darker grey suffusion at apex, along costa, and in tornal angle.

Male genitalia (Fig. 6). Uncus long, narrower than in *G. albocinerea* Moore, slightly curved downwards. Valves oval, most broad at 1/4 from base, then gradually constricted to apex; cucullus rounded at apex. Apical process of sacculus slightly longer than apex of cucullus. Aedeagus moderate in length and width, constricted to apex; at ventral apical part with a short rounded protrusion. Vesica long, elongate at base with a large plate of small spines, at apex -with a band-like plate of strong spines.

Discussion

Although of a very similar wing pattern, the three species of the *Ghoria albocinerea* species group are well marked by small details of the wing pattern and significantly by the male genitalia structure. According to the wing pattern, the most outstanding is *G. nanlingica* **sp. nov.**, with a dark brown stroke on the radial vein; as no such stroke is present in the two other species. These two species can be distinguished by the length of the brown costal edge at basal 1/3 in *G. sinotibetica* **sp. nov.** and at basal 1/4 in *G. albocinerea* Moore. The male genitalia structure is most significant in species determination in the *Ghoria albocinerea* species group. *G. albocinerea* Moore has the most short and broad valves, a very short apical process of the sacculus, shorter than the valve apex, as well as the widest uncus, strongly curved downwards at apex. The vesica of this species also differs from that of other species by two plates of signi situated at its apical part; in the other species the plate of smaller spines is located at the vesica base. The two Chinese species differ by the size of the vesica plates (in *G. nanlingica* **sp. nov.** plates are noticeably larger) and shape of valves: long with parallel sides in *G. sinotibetica* **sp. nov.** and shorter and constricted to apex in *G. nanlingica* **sp. nov.**

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