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Some notes on the systematics of the genus *Lithosarctia* Daniel, 1954

(Lepidoptera, Arctiidae)

by

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Summary: Based on the male genitalia structure, *Lithosarctia y-albulum goergneri* De Freina & Witt, 1994 is elevated to specific status; the male genitalia of *L. hoenei* Daniel, 1954, the type species of the genus, are figured and described; a new species, *L. kozlovi* spec. nov. is described from NE Sichuan (China).

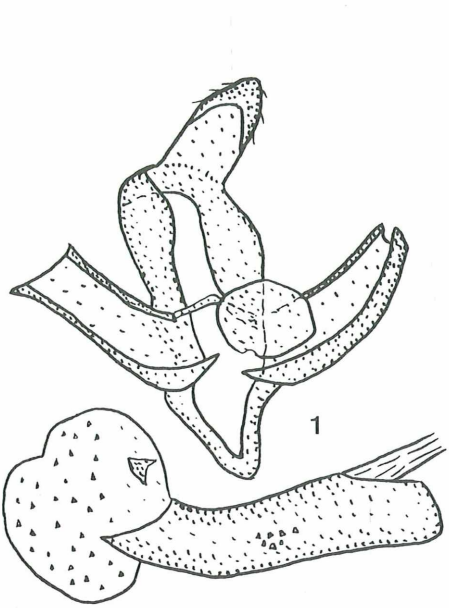
Note 1. Daniel (1954) described the genus *Lithosarctia*, within the subfamily Lithosiinae, including the single species *L. hoenei* Dan. from North Yunnan, Likiang (China). Later, Dubatolov (1987) isolated *Micrarctia y-albulum* (Oberthür, 1886) into the distinct genus *Ocnogynodes* Dubatolov, 1987. De Freina & Witt (1994) synonymized these genera and described two new taxa, *L. y-albulum goergneri* De Freina & Witt, 1994 from Gansu and *L. thomasi* De Freina & Witt, 1994 from Nepal. Unfortunately, the authors didn't compare the male genitalia of their *L. y-albulum goergneri* De Freina & Witt with those of the nominative one, figured in Dubatolov (1987) and here (fig. 1), in which the valva is slightly broadened to the apex and forms two sharp angles, a costal and a ventral one. The valva of *L. y-albulum goergneri* De Freina & Witt is slightly narrowing to a roundish apex (fig. 2). So, I consider the latter to be a separate species, *L. goergneri* De Freina & Witt, 1994, **stat. nov.**

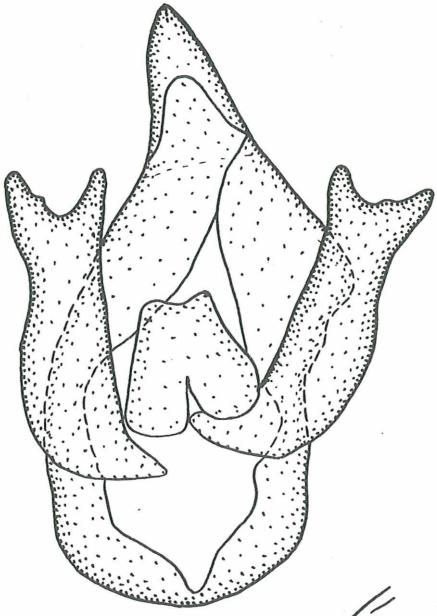
Note 2. In the same paper (De Freina & Witt, 1994), the authors designated the lectotype of *L. hoenei* Daniel, but without investigation of the genitalia structure. By courtesy of Dr. V. S. Murzin (Moscow, Russia), I received a male specimen of the latter species and describe its genitalia structure herewith.

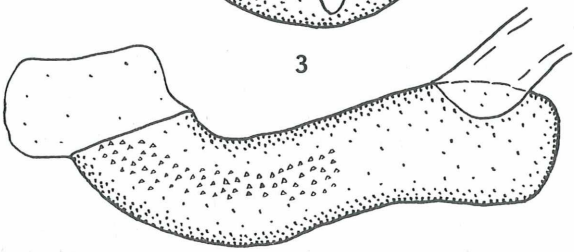
Lithosarctia hoenei Daniel, 1954 (col. pl. VII, fig. 1)
Bonn. zool. Beitr. **5**: 138, t. 3, fig. 77.

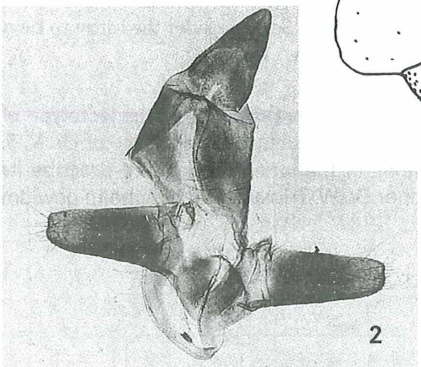
Material
1 ♂, China, North Yunnan, Yulongsueshan, 3500 m, 16.VI.1996 (S. V. Murzin leg.).

Male genitalia (fig. 3). General pattern is similar to other species of the genus: uncus broad, narrowed and rounded at apex, dorsally with a slight longitudinal crevice in the middle, covered with hairs. Valvae are characteristic for the species, with a deep hollow on the top, apex apparently forked, both endings being distinctly rounded. At the costal processus base there is a slight but noticeable inflation.









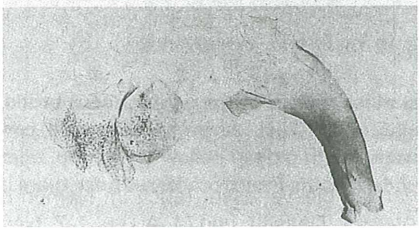


Fig. 1: Male genitalia of *Lithosarctia y-albulum* (Obth.); China, Sichuan, "Vassykou", Potanin leg.
Fig. 2: Male genitalia of *Lithosarctia goergneri* De Freina & Witt; China, Gansu, Xiahe, from: De Freina & Witt (1994: 539, Abb. 3).
Fig. 3: Male genitalia of *Lithosarctia hoenei* Dan.; China, N Yunnan, Yulongsueshan.

Note 3. In the Zoological Institute (St.-Petersburg, Russia) there is an unidentified female specimen of this genus, similar to *L. y-albulum* (Obth.). Formerly I postponed describing it as a new species, but taking into account the elucidated differences between the known species of the *L. y-albulum* (Obth.) group it looks worth to do this.

Lithosarctia ***kozlovi*** **spec. nov.**
(colour plate VII, figs 2, 6)

Material
Holotype ♀: China, Sichuan, river Yalong Jiang left side, 80 km NW from Garzê, stand "Chikok", 4000 m, 23.IV.1901 (P. K. Kozlov leg.).

Description
Forewing length 9 mm. Head with sparse sticking out light-brown hairs. Eyes small, concave, oval-shaped, naked. Palpi short, porrect, covered with white scales, at apex externally with a small patch of light-brown scales. Patagia and teguli at middle with dense dark-brown scales and sparse sticking out hairs, laterally with whitish scales. Thorax with light-brown scales at middle and white scales on sides. Lateral sides and underside of thorax covered with whitish scales. Legs as well covered with white scales but femora and tibia externally and tarsi entirely – with brown scales. Fore tibia rather short, four times longer than their diameter, apically with one large tooth; middle tibia have one and hind tibia two pairs of spores. On hind tibia the spores are closely set so that apices of proximal pair spores reach bases of distal part spores. Abdomen black above and beneath, its sides and apex set with whitish scales.
Forewing light brown with a pattern consisting of whitish longitudinal stripes: a short and narrow stroke in basal one-third of costal margin; a subapical stroke slightly slanting from costal margin; a white stripe between veins 1 and 2, and a y-formed spot with a curved tail and a fork directed towards external margin. Hind wing grayish-white, with a wide light-brown basal suffusion extending up to discal vein and an outer margin of the same colour interrupted along veins 3, 4, and 5.

The new species in general looks like *L. goergneri* De Freina & Witt, 1994 (col. pl. VII, fig. 3) due to the whitish, not rosy hindwing ground colour. Nevertheless, I conclude to describe it bearing in mind several reasons. First, its type locality is in NW Sichuan, on the southern spurs of the Bayan Har Shan Mts., far away from the *L. goergneri* De Freina & Witt type locality in SW Gansu, Xiahe in Xiqing Shan, being the northern spurs of the Min Shan Mts.; these mountains belong to different mountain systems. Second, there are some differences between these moths in wing pattern, namely, the subapical whitish stripe is only slightly slanting to the costal margin, approximately 20°, while in *L. goergneri* De Freina & Witt it forms a greater angle with the costal margin, approximately 50° Third, these species are of very different size (col. pl. VII, fig. 6), the new one is very small, its forewing length being 9 mm (the wing expanse is 19 mm); the forewing length of *L. goergneri* De Freina & Witt males is 11–12 mm, so the wing expanse must be 24–25 mm. Noteworthy is that the size of different sexes in this genus seems to be similar, like in *L. y-albulum* (Obth.) (col. pl. VII, figs 4, 5) being the only species with both sexes known. Therefore, males of the new species are expected to be noticeably smaller than those of *L. goergneri* De Freina & Witt.

Acknowledgements

The author is greatly indebted to Dr. V. S. Murzin and S. V. Murzin (Moscow, Russia) for providing the specimens for this work, to J. De Freina (München, Germany) and U. Eitschberger (Marktleuthen, Germany) for the constant help with literature on Arctiinae, to Dr. O. E. Kosterin for correcting the language.

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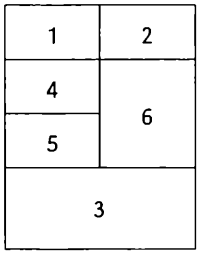
Explanation of colour plate VII (p. 237):

Fig. 1: *Lithosarctia hoenei* Dan., ♂; China, N Yunnan, Yulongsueshan.
Fig. 2: *Lithosarctia kozlovi* spec. nov., holotype ♀.
Fig. 3: *Lithosarctia goergneri* De Freina & Witt, ♂♂; China, Gansu, Xiahe, from: De Freina & Witt (1994: Plate XVIIIb, Abb. 1).
Fig. 4: *Lithosarctia y-albulum* (Obth.), ♂; China, Sichuan, "Vassykou", Potanin leg.
Fig. 5: *Lithosarctia y-albulum* (Obth.), ♀; China, Sichuan, "Tatsienlu", Potanin leg.
Fig. 6. *Lithosarctia kozlovi* spec. nov. and *Lithosarctia y-albulum* (Obth.), ♀♀; in the same scale.



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DUBATOLOV, V. V.: Some notes on the systematics of the genus *Lithosarctia* (Lepidoptera, Arctiidae). - Atalanta **33** (1/2): 173-176.

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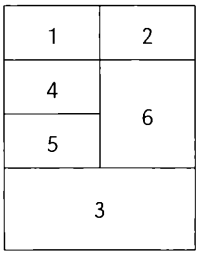

Colour plate VII