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A new species of the genus *Lithostege* (Geometridae: Larentiinae) from China

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Lithostege Hübner [1825] 1816, is a widely distributed and species-rich genus, reported from nearly all continents except Australia, but with the main focus of distribution in the Palaearctic region (African species are only known from the Palaearctic northern areas). Parsons *et al.* (1999) listed 49 species and 8 subspecies. The updated list of Geometridae of the World (Scoble & Hausmann 2007) mentioned 50 species worldwide, 39 of them with Palaearctic origin. In a recent paper (Lehmann 2011) and a review of *Lithostege* from the Middle East (Rajaei *et al.* 2011), two new species from Iran and one from Pakistan have been added. In addition, one species has been synonymized and a subspecies was upgraded to species rank, which did not change the total number of 53 known species.

Xue & Zhu (1999) recorded five species for the fauna of China: *Lithostege narynensis* Prout, 1938 (Xinjiang); *L. mesoleucata* Püngeler, 1899 (Shaanxi, Inner Mongolia); *L. verbosaria* Xue, 1994 (Gansu); *L. coassata mongolica* Vojnits, 1978 (Inner Mongolia); *L. usgentaria ignorata* Staudinger, 1901 (Xinjiang). All these species are from the northern, northwestern and northeastern parts of the country. The new species described here is the first and only species of *Lithostege* known from Sichuan.

Jaan Viidalepp (Tartu, Estonia) was the first who suspected that this species might be new to science when he studied the Geometridae material at the Lepidoptera collection of ZFMK in 1994. He also proposed the specific name, but did not describe it due to debatable generic association. The authors of the present paper later were able to confirm this assumption in the course of their own studies on the genus *Lithostege* (Xue & Zhu 1999; Rajaei *et al.* 2011). The genus *Lithostege* is a member of the tribe Chesiadini Pierce, 1914 (Chesiadini Stephens, 1850 is unavailable name (Viidalepp 2011)). Species of this genus generally show the following characters (Rajaei *et al.* 2011): the forewing is elongated, the venation has two areoles; the hindwing is narrow, oval, and reduced in size, with a short anal vein in males (longer in females); the femur of foreleg is strongly thickened; the tibia of foreleg is extremely short, with a massive, distal, forked projection (consisting of a longer internal and shorter external tooth; see fig. 7) and a very small epiphysis; the middle tibia has one, the hind tibia has two pairs of spurs; a harpe is usually present (a process arising from the basal centre of valve) in male genitalia (not in all species); the membranous diverticulum to the corpus bursae is usually present (not in all species).

Specimens used in this study are deposited in the following collections (acronyms after Evenhuis & Samuelson 2007): BMNH—The Natural History Museum, London, United Kingdom; IZCAS—Institute of Zoology, Chinese Academy of Sciences, Beijing, China; IZBE—Institute of Agronomy and Environmental Studies, Estonian University of Life Sciences (Institute of Zoology and Botany) Tartu, Estonia; ZFMK—Zoological Research museum Alexander Koenig, Bonn, Germany. Genitalia have been dissected following the standard procedure published by Robinson (1976). Permanent genitalia slides were photographed by a digital stereo-microscope (ZEISS-SteREO: Discovery.V20).

Lithostege stueningi Rajaei & Xue, sp. nov.

Figs. 1–7

Material examined. Holotype, ♂, CHINA: Sichuan, Ta-Tsien-Lou, 1899, Chasseurs indigènes; coll. ZFMK. Paratypes, 3 ♂: same data as holotype, leg & genitalia prep. 1810/ 2012 H. Rajaei; 1 ♂: Chasseurs indigènes, de Tá-Tsién-Loû. R.P. Déjean, 1901; coll. ZFMK. 1 ♂ 1 ♀: same data as holotype, gen. prep. ♂ 5257, ♀ 7695, in IZBE. 1 ♂ 1 ♀: same data as holotype, female genitalia prep. Geom-01934/2012, coll. IZCAS. 10 ♂ 5 ♀: Ta-tsien-Lou, 1899, Chasseurs indigènes, Ex. Oberthür Coll. Brit. Mus. 1927-3, gen. prep. ♀ BMNH-24032, Han Hongxiang fec.; 2 ♂: Thibet, Chasseurs de Tâ-tsien-