

## *Lithostege stadiiei* sp.n. from North Iran (Geometridae: Larentiinae)

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**Abstract.** *Lithostege stadiiei* sp. n. is described from North Iran and compared with *Lithostege buxtoni* Prout, 1920. A list of Iranian *Lithostege* species is provided.

**Zusammenfassung.** *Lithostege stadiiei* sp. n. aus dem Nordiran wird beschrieben und mit *Lithostege buxtoni* Prout, 1920 verglichen. Die bisher aus dem Iran bekannten *Lithostege*-Arten werden aufgelistet.

### Introduction

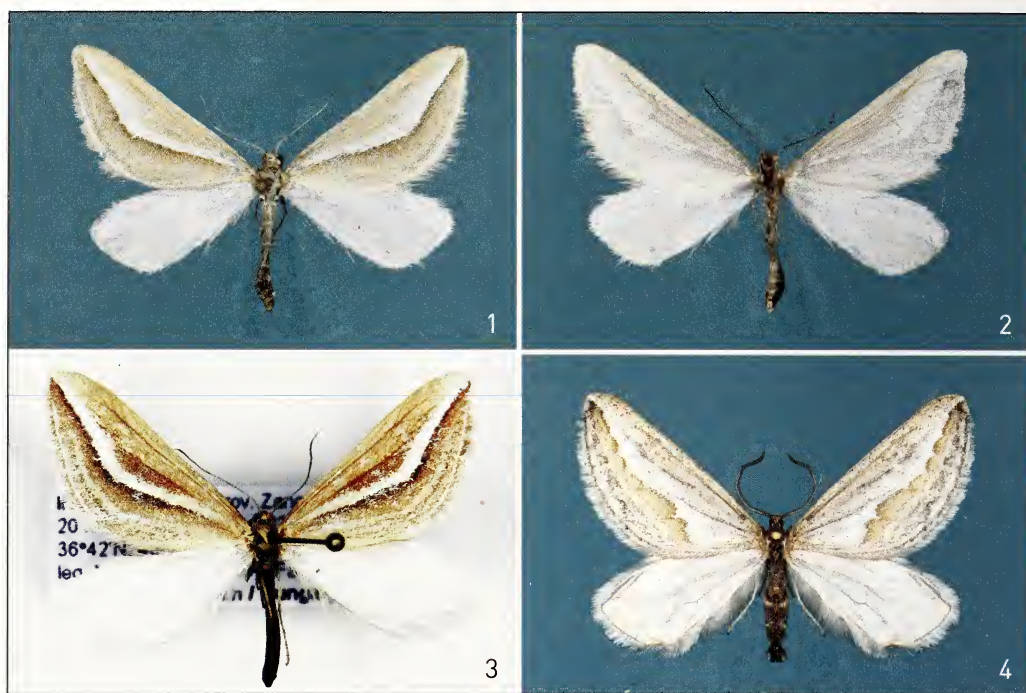
Members of the genus *Lithostege* Hübner, 1825 are distributed throughout the Holarctic region. They prefer steppe-like to arid habitats and are especially species rich in the Middle East from Turkey to western Central Asia. Adults often fly in early spring, sometimes even in the winter months. The species included in the genus are probably not monophyletic, and the genus still awaits a thorough revision considering the whole Holarctic fauna and including DNA analysis. Our knowledge of the Asian species is still incomplete and new species have been described in the last two decades, even from Europe (*L. clarae* Gastón & Redondo, 2004, from Spain) or were recorded as new for Europe (Hausmann & Seguna 2005). Twelve species have been recorded from Iran so far: *L. amoenata* Christoph, 1885, *L. dissocyma* Prout, 1938 (recently reported by Lehmann et al. 2009), *L. coassata* (Hübner, 1817), *L. griseata* (Denis & Schiffermüller, 1775), *L. palaestinensis* Amsel, 1935, *L. fissurata* Mabille, 1888, *L. notata* Bang-Haas, 1906, *L. luminosata* Christoph, 1885, *L. flavicornata* (Zeller, 1847), *L. odessaria* Boisduval, 1848, *L. witzmanni* Standfuss, 1892 and *L. buxtoni* Prout, 1920 (according to literature and material in the Hayk Mirzayans Insect Museum (HMIM) of the Iranian Research Institute of Plant Protection in Tehran (IRIPP, formerly PPDRI) examined by Hossein Rajaei and the author). A new, characteristic species of *Lithostege* found by two of the numerous Hungarian lepidopterological expeditions to Iran will be described below.

### *Lithostege stadiiei* sp. n.

**Figs 1–3, 5**

**Material.** Holotype, ♂: “Iran, Prov. Zangan | 20 km NE of Zangan, 2220 m | 36°42'N; 48°45'E, 25.X. 2000 | leg. B. Benedek & Gy. Fábán | col. György Fábán / Hungary”, “Holotype ♂ | *Lithostege stadiiei* Lehmann”, “L: Lehmann Gen. Prep. Nr. | 10/2008”, in coll. L. Lehmann, will be deposited in ZMHB (Berlin). – Paratypes: 1♂, same data as holotype, coll. L. Lehmann, Eisenhüttenstadt; 3♂, same data as holotype, ♂, same data, but 26.x.2000, all coll. N. Pöhl, Bad Ischl, Austria; 1♂, Iran, Mts. Sendan | Prov. Zanjan 2200 m | Zanjan-Gilvan pass | 2009.x.09–11. | Leg. Hács-Sum | coll. SMNK (Karlsruhe).

**Description.** (Figs 1–3). Wingspan 29 mm, forewing length 15 mm. Head beige-grey. Antenna dark grey, setose. Thorax grey. Forewing sand-coloured with characteristic



**Figs 1–4.** Adults of *Lithostege* spp. **1.** Holotype of *L. stadiiei* sp. n., ♂, upper side. **2.** Same as Fig. 1, but underside. **3.** Paratype of *L. stadiiei* sp. n., ♂, upper side. **4.** *L. buxtoni* Prout, 1920, ♂, Iran, Prov. Bushehr, Tange Fayab, 680 m, 5.i.2008, leg. Lehmann.



**Figs 5–6.** Male genitalia of *Lithostege* spp. **5.** *L. stadiiei* sp. n. (slide no. 10/2008 L. Lehmann). **6.** *L. buxtoni* Prout, 1920 (slide 544 R. Zahiri) (scale bars: 1 mm).

narrow whitish band, running from basal area to wing tip, broadest above discocellular vein, bordered below by a darker brownish line which bends towards apex at the end of the cell, terminal line whitish, fringes brown at base. Forewing below the longitudinal band towards inner margin darker, suffused with grey scales. Hindwing white. Forewing underside (Fig. 2) paler, pattern reminiscent of that of the upperside but much more diffuse, slightly darker towards costa. Hindwing underside whitish.

**Male genitalia** (Fig. 5). Uncus short, stout, tapered. Valva short, broad, tapering, not rounded as in most other *Lithostege*. Costa sclerotised, without separate process. Valva membranous. Basal projection of valve (harpe) long, stout, reaching nearly length of costa. Saccus strongly developed, long, broad at base.

Aedeagus relatively long, nearly straight, not curved, slightly constricted, without cornutus.

**Female**. Unknown.

**Diagnosis**. Due to its characteristic coloring and pattern, the species can not be confused with any other. The systematic position of the new species in *Lithostege* and its closest relatives remain unclear. Judging from wing pattern and male genitalia, *Lithostege buxtoni* Prout, 1920 distributed in South Iran (Lehmann et al. 2009) seems to be related. The new species differs by the tapering valva and the length and shape of the saccus.

**Distribution**. Altogether seven specimens were collected at the southern slopes of the northwestern Elburs (Alborz) mountain chain in North Iran, Province of Zanjan (Kuh-e Sendan Dag Mts.). The area is characterized by rather hot and dry mountain slopes. Unfortunately, the first received specimen, agreeing with the holotype, was lost during a car theft in Prague.

**Life history**. Unknown. The type series was collected beginning to late October, an unusual flight time for *Lithostege* species.

**Derivatio nominis**. The new species is dedicated to Dirk Stadie, renowned expert of the life history of West Palaearctic Macrolepidoptera and companion on collecting trips to South Iran, Jordan and Oman.

## Acknowledgements

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