

Acleris sagarmathae sp. n., a new species (Lepidoptera: Tortricidae) from Nepal

P. Trematerra

Department of Agricultural, Environmental and Food Sciences, University of Molise, Campobasso, Italy

Abstract

A new species (Lepidoptera: Tortricidae), *Acleris sagarmathae* sp. n., from Nepal is described. The new species was collected in Lobuche, a locality of Sagarmatha National Park. *A. sagarmathae* is closest to *A. formosae* Razowski, 1964, but differs from the other species of the genus *Acleris* in forewing markings and structures of the male genitalia. Adults and genitalia of *Lambertiodes harmonia* (Meyrick) and *Archips termias termias* (Meyrick) are also illustrated.

Introduction

From 20 October to 12 November 2008, a scientific expedition from the Molise region (Italy) called *Himalaya 2008* visited the Everest region in Nepal. Among the participants were two students, Alfredo Brunetti and Alenuccio Palladino, who collected insects (Figures 1 and 2). Among the entomological material found were two tortricid moths: *Lambertiodes harmonia* (Meyrick, 1908) (collected 26 October, at Tengboche, 3867 m, in Sagarmatha National Park), which is widely

distributed in that region (Figures 3 and 4), and an unknown species of *Acleris* Hübner, 1825 (Razowski, 1964, 1987). In a previous expedition, conducted in 2002 in the Solu-Khunbu region, at Phakding, Andrea Sciarretta (University of Molise, Italy) found a male of *Archips termias termias* (Meyrick, 1918) (Figures 8-10) on 19 September 2002 (Clarke Gates, 1958; Diakonoff, 1976; Razowski, 1977).

In the present paper, the adults and genitalia of the two known species are reported and the new species, *Acleris sagarmathae* sp. n., is described. *A. sagarmathae* is closest to *Acleris formosae* Razowski, 1964, which has a type locality of Arizan, Taiwan (Formosa), at 2286 m (Razowski, 1964). Adults and slides are deposited in the P. Trematerra collection, Campobasso (Italy).

Acleris sagarmathae sp. n.

MATERIAL EXAMINED. 1 male, holotypus, labelled as follows: 30/10/2008, Lobuche, 4930 m, Nepal-Sagarmatha National Park, Leg. A. Palladino, A. Brunetti.

ADULT (Figure 5). Wing span 12.5 mm. Labial palpi yellowish-brown. Head brownish. Thorax and anterior portions of tegulae brownish; posterior portions of thorax and tegulae delicately tinged with pale brownish. Forewing elongate, nearly uniform in width throughout; costa bent at base, rounded, slightly concave beyond 1/3, delicately arched outward in posterior third; apex pointed; termen oblique. Ground color grayish brown-ferruginous, ochreous on basal and posterior portions. A large, whitish area along dorsum. Dark brownish-black stripes along the costa; one from base to end of curvature, second in medio-anterior portion; various smaller black spots before apex. In basal and posterior areas of wing small brownish or brown spots and

Correspondence: Pasquale Trematerra, Dipartimento di Agricoltura, Ambiente e Alimenti, Università degli Studi del Molise, via de Sanctis, 86100 Campobasso, Italy.
E-mail: trema@unimol.it

Key words: *Acleris sagarmathae*, Lepidoptera Tortricidae, new species, Nepal.

Acknowledgements: the author would like to express his thanks to Jozef Razowski (Poland), Alfredo Brunetti, Stefano Marino, Alenuccio Palladino and Andrea Sciarretta (Italy) for comments and providing the study material.

Received for publication: 19 April 2013.

Revision received: 1 August 2013.

Accepted for publication: 8 August 2013.

©Copyright P. Trematerra, 2013

Licensee PAGEPress, Italy

Journal of Entomological and Acarological Research 2013; 45:e16

doi:10.4081/jea.2013.e16

This article is distributed under the terms of the Creative Commons Attribution Noncommercial License (by-nc 3.0) which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited.



Figure 1. Locality of Tengboche, 3867 m, in Sagarmatha National Park, Nepal.

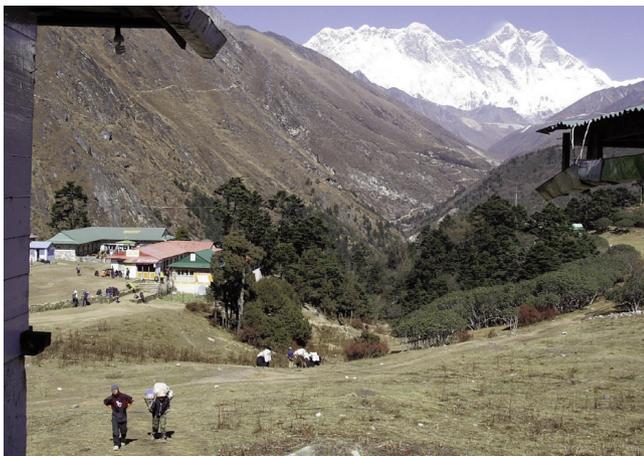


Figure 2. Locality of Lobuche, 4930 m, Sagarmatha National Park, Nepal.



Figure 5. *Acleris sagarmathae* sp. n., adult.



Figure 3. *Lambertiodes harmonia* (Meyrick). Adult.



Figure 6. *Acleris sagarmathae* sp. n., male genitalia.



Figure 4. *Lambertiodes harmonia* (Meyrick). Female genitalia.

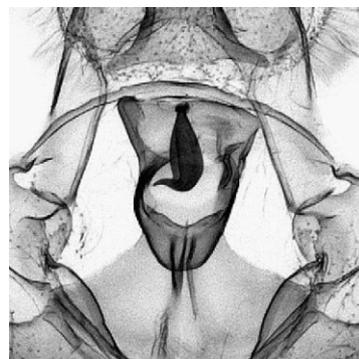


Figure 7. *Acleris sagarmathae* sp. n., male genitalia. Aedeagus.



Figure 8. *Archips termias* (Meyrick). Adult.

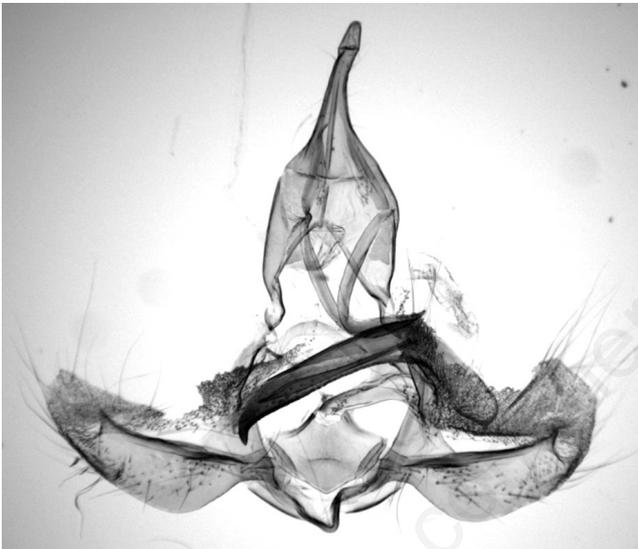


Figure 9. *Archips termias* (Meyrick), male genitalia

groups of erect scales. Costal patch ill-defined, brownish. Dorsal margin brown-black. Cilia concolorous with ground color of wing. Hind wing grayish, more light-brown apically, spotted with grayish brown. Cilia grayish.

MALE GENITALIA (Figures 6 and 7). Tegumen rather slender with rounded apical lobes; socii well developed, very long and hairy, erect, rather broad basally. Tuba analis well developed, subconical. Transtilla slender. Valva slender; saccus strong and sinuate with postmedian incision rather short, slightly oblique; spined termination large, longer than brachiola. Brachiola elongate-subtriangular, extending upward. Costa rather straight. Aedeagus short and broad, vesica with a single large cornutus, with curved apex.

FEMALE GENITALIA. Unknown.

DISTRIBUTION. Known only from Lobuche, 4930 m, Sagarmatha National Park, Nepal.

BIOLOGY. The specimen was taken at light in late October. The

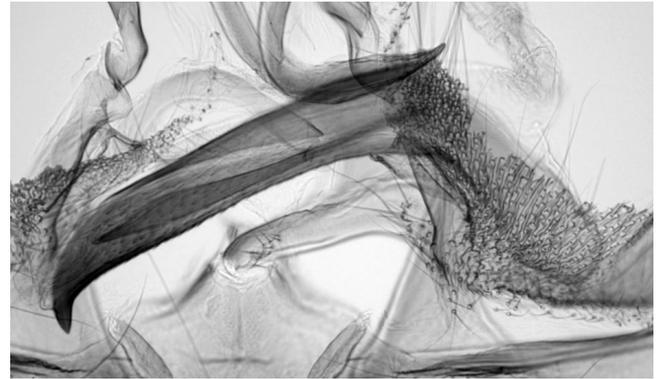


Figure 10. *Archips termias* (Meyrick), male genitalia. Aedeagus.

majority of *Acleris* species have two generations annually. Sagarmatha National Park is located northeast of Kathmandu in the Khumbu region of Nepal. The park includes the highest peak in the world, Mt. Sagarmatha (Everest), and several other well-known peaks. The mountains of Sagarmatha National Park are geologically young and broken up by deep gorges and glacial valleys. Vegetation includes pine and hemlock forests at lower altitudes, fir, juniper, birch and rhododendron woods at middle altitudes, and scrub, alpine plant communities, bare rock and snow at the highest altitudes.

HOST. Unknown.

DIAGNOSIS. *Acleris sagarmathae* belongs to the same group as *A. formosae* Razowski, 1964 (from Arizan, Taiwan), *A. bengalica* Razowski, 1964 (from Bengal, India), and *A. porphyrocentra* (Meyrick, 1937), from Yunnan province, Likiang, China. It is superficially very similar to the first species (Razowski, 1964). The differences between the new species and *A. formosae* are in the shape of valvae; the longer and hairy socii; the thinner transtilla; and the shorter, broader aedeagus, with a single large cornutus with a curved tip (Razowski, 1964).

ETYMOLOGY. The new species is named after Sagarmatha National Park (Nepal), the area from which the type series comes.

References

- CLARKE GATES J.F., 1958 - Catalogue of the type specimens of Microlepidoptera in the British Museum (Natural History) described by Edward Meyrick. Vol. III. - Jarrold and Sons Ltd, Norwich: 1-600.
- DIAKONOFF A., 1976 - Tortricoidea from Nepal, 2. - Zool. Verh. Leiden: 1-145.
- RAZOWSKI J., 1964 - Discussion of some groups of Tortricini (Tortricidae, Lepidoptera) with descriptions of new genera and species. - Acta Zool. Cracov. 9: 357-416.
- RAZOWSKI J., 1977 - Monograph of the genus Archips Hübner (Lepidoptera Tortricidae). - Acta Zool. Cracov. XXII: 55-205.
- RAZOWSKI J., 1987 - The Genera of Tortricidae (Lepidoptera). Part I: Palaearctic Chlidanotinae and Tortricinae. - Acta Zool. Cracov. 30: 141-355.