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Description of a new species of *Anthrenus* Geoffroy 1762, with a key to species from Nepal

JIŘÍ HÁVA[1] & MARCIN KADEJ[2,3]

[1]*Department of Forest Protection and Entomology, Faculty of Forestry and Wood Sciences, Czech University of Life Sciences, Kamýcká 1176, CZ-165 21, Prague 6 - Suchdol, Czech Republic*
[2]*Department of Invertebrate Biology, Evolution and Conservation, Institute of Environmental Biology, Faculty of Biological Science, University of Wrocław, Przybyszewskiego 63/77, 51-148 Wrocław, Poland*
[3]*Corresponding author. E-mail: marcin.kadej@uni.wroc.pl or marcin.kadej@gmail.com*

Abstract

The genus *Anthrenus*, is in the subfamily Megatominae. It is relatively speciose within family Dermestidae and currently contains ca. 250 valid taxa which have been grouped within 10 subgenera. Most of the species are found in the Palearctic ecozone. *Anthrenus* (*Helocerus*) *cechovskyi* Háva & Kadej, **sp. nov.** is described from Nepal. The habitus, antenna, genitalia are illustrated and compared with related species. A key to the known species from the Nepal is presented. Only seven species of Dermestidae have been recorded from Nepal so far. Newly described species is the first species of subgenus *Helocerus* which have been found in Nepal. Further study of Dermestidae of Nepal and adjacent countries is required.

Key words: Coleoptera, Dermestidae, *Anthrenus,* taxonomy, new species, key to species, Nepal

Introduction

Nepal (officially the Federal Democratic Republic of Nepal), a country located in Southcentral Asia, is still a challenge for taxonomists and naturalists. A large number of new species have been described from this region within the last few years, reported and documented in some monographs (Háva 2003, 2006b, 2009; Hartmann & Weipert 2012) and recent taxonomic papers (Háva 2001, 2006, 2008; Kadej & Háva 2012). The new species of *Anthrenus* Geoffroy, 1762 described herein was collected from Rasuwa District (the smallest district by area), located in the central part of Nepal. *Anthrenus* is one of the most speciose of the 62 known genera with Dermestidae, currently including approximately 250 species worldwide arranged in 10 subgenera: *Anthrenodes* Chobaut, *Anthrenops* Reitter, *Anthrenus* s. str., *Helocerus* Mulsant and Rey, *Florilinus* Mulsant and Rey, *Nathrenus* Casey, *Peacockia* Menier and Villemant, *Ranthenus* Mroczkowski, *Setapeacockia* Háva, and *Solskinus* Mroczkowski (Kadej 2011; Kadej & Háva 2012). In general, these subgenera can be separated on the basis of number of antennomeres in antenna and antennal club, as well as the morphology of the scales and eyes. Based on the presence of 5-segmented antenna in males (6-segmented in females), triangular scales and oval eyes, we place this new species in the subgenus *Helocerus*, the 3rd smallest subgenus with only 3 species known prior to this study. At present, only six species of *Anthrenus* are known from Nepal (Kadej & Háva 2012), with this new species bringing the total to seven.

Materials and methods

Specimens were dissected and morphological structures were boiled for 3–10 minutes in 10% KOH, and placed in distilled water for about 1 hour to clean and soften the cuticle. All structures were placed on glycerin mounts. Structures were examined with a Nikon Eclipse E 600® (Tokyo, Japan) phase contrast microscope and a Nikon SMZ–800® (Tokyo, Japan) binocular microscope. Photographs were taken with a Canon 500D® (Taiwan) under a Nikon Eclipse 80i® (Tokyo,

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- Antenna with 8–11 antennomeres 2
2. Antenna with 8 antennomeres 3
- Antenna with 10–11 antennomeres 5
3. Antennal club shorter than half of antenna 4
- Antennal club almost as long as half antenna or longer ..... *A. nepalensis*
4. Antennal club with 2 antennomeres, female antennomere VIII at least 2.5x longer than antennomere VII; male antennomere VIII at least 5x longer than antennomere VII ..... *A. museorum*
- Antennal club with 3 antennomeres, female antennomere VIII at least 1.3–1.6x longer than antennomere VII; male antennomere VIII at least 2.8–3.0x longer than antennomere VII ..... *A. hartmanni*
5. Antenna with 10 antennomeres ..... *A. maculifer*
- Antenna with 11 antennomeres 6
6. Eye with median margin entire, scales short and stout, 1.5–2.0x as long as wide ..... *A. flavipes flavipes*
- Eye with median margin not entire (oval), scales elongated, very narrow (seta–like), 3.0–6.0x as long as wide .... *A. verbasci*

Conclusions

Although *Anthrenus* is one of the most speciose genera within the family Dermestidae, with nearly 250 valid taxa, it remains poorly represented in Nepal. Only seven species assigned to five different subgenera (*Anthrenodes*, *Anthrenus* s. str., *Florilinus*, *Helocerus*, *Nathrenus*) have been recorded thus far. The new species added to the Nepalese fauna in this study is the first species from the subgenus *Helocerus* to be found in Nepal. Three others species (*A. flavipes flavipes, A. museorum* and *A. verbasci*) have wide-world distribution and are classified as cosmopolitan. Given renewed interest in biodiversity studies in Nepal, it is not unreasonable to suggest that the total number of species of *Anthrenus* from Nepal will continue to increase as new species are discovered and described in the near future.

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