



5100 m above sea level: *Agabus joachimschmidti* sp. n. and notes on other high altitude diving beetles from Tibet and Bhutan (Coleoptera, Dytiscidae)

MICHEL BRANCUCCI^{1,2} & LARS HENDRICH³

¹Natural History Museum, Entomology, Augustinergasse 2, CH-4001 Basel, Switzerland. E-mail: michel.branuccci@bs.ch

²Institut für Natur-, Landschafts- und Umweltschutz (NLU), Biogeographie, St. Johannstrasse 10, CH-4056 Basel, Switzerland

³Zoologische Staatssammlung, Münchhausenstraße 21, D-81247 München, Germany. E-mail: hendrich1@aol.com

Abstract

Agabus joachimschmidti sp. n. is described from a temporary brook at 5100 m a.s.l. in south central Tibet, which is a worldwide altitude record for Dytiscidae. It belongs to the *Agabus confinis*-group and is related to *A. tibetanus* Zaitzev, 1908 from which it can be separated by its smaller size, different habitus and form of the median lobe. Important species characters of the new species are illustrated (median lobe of aedeagus, parameres, habitus). Altogether six species of the *A. confinis*-group are now reported from China. Further localities for the recently described *Agabus suoduogangi* Stastný & Nilsson, 2003 (Yünnan) and *Ilybiosoma yeti* Brancucci & Hendrich, 2006 (Tibet) are recorded. *Agabus longissimus* Régimbart, 1899 is recorded for the first time in Bhutan. Notes on the distribution and life habitats of all the species are given.

Key words: Coleoptera, Dytiscidae, high altitude, *Agabus*, *Ilybiosoma*, Bhutan, Tibet, Himalaya

Introduction

As mentioned in Brancucci & Hendrich (2006), the predaceous water beetle fauna of Tibet is very depauperate but includes a few, very remarkable and rarely collected high-altitude endemics, such as the two species of the genus *Laccoporus* Balfour-Browne, 1939, *Colymbetes minimus* Zaitzev, 1908, and the recently described *Ilybiosoma yeti* Brancucci & Hendrich, 2006. Here we report the discovery of a species of the Holarctic genus *Agabus* Leach, subgenus *Acatodes* Thomson, and also give some additional records for other high mountain and rarely collected dytiscids occurring in Bhutan and Tibet. In the eastern Palaearctic, the subgenus *Acatodes* is dominated by the speciose but poorly differentiated *A. confinis*- and *A. japonicus*-groups (Nilsson 1990, Stastný & Nilsson 2003). The members of the latter are in current need of a comprehensive revision whereas the Palaearctic species of the *confinis*-group were revised by Nilsson (1990) who later recorded four species from China (Nilsson 1995). In an additional paper, Stastný & Nilsson (2003) described *Agabus suoduogangi* Stastný & Nilsson, 2003 from northern Yünnan, China. Altogether six species of the *A. confinis*-group are now reported from China.

Material and methods

The material examined in this study is deposited in the Natural History Museum of Basel, Switzerland (NMB), in the Natural History Museum of Vienna, Austria (NMW), in the Zoological Institute, St. Petersburg, Russia (ZISP), and in the private collection of Lars Hendrich, Berlin, Germany (CLH), property of NMW. All