

***Horismenus* species (Hymenoptera: Eulophidae) in a bruchid beetle parasitoid guild, including the description of a new species**

CHRISTER HANSSON*, ALEXANDRE AEBI** & BETTY BENREY**

*Lund University, Department of COB, Zoology, Helgonavägen 3, SE-223 62 Lund, Sweden. Christer.Hansson@cob.lu.se

**Université de Neuchâtel, Institut de Zoologie, LEAE, 11 rue Emile-Argand, case postale 2, CH-2007 Neuchâtel, Suisse. alexandre.aebi@unine.ch, betty.benrey@unine.ch

Author for correspondence: Dr. C. Hansson.

Abstract

Four species of *Horismenus* (Hymenoptera: Eulophidae) associated with *Acanthoscelides* spp. (Coleoptera: Bruchidae), three of which are also associated with *Phaseolus* spp., are treated. One of the species, *H. butcheri*, is described as new and the remaining three species are redescribed. All four species are diagnosed in a key. A lectotype is designated for *Holcopelte productus* Ashmead.

Key words: *Horismenus*, Eulophidae, *Acanthoscelides*, Bruchidae, species description, revision, *Phaseolus*

Introduction

This taxonomic work was triggered by an ongoing project studying the effects of plant variability on host-parasitoid interactions and consequences for the genetic population structure of these organisms. Female parasitoids are known to rely on volatile chemical cues emanating from the plant on which their host feeds to localise their hosts (Turlings & Wäckers 2004). While the parasitoid's host-location behaviour and performance can clearly be enhanced by the use of these chemical cues, the impact of plant features such as allelochemistry, nutritional quality or morphology can also alter the parasitoid reproductive success (Barbosa and Benrey 1998; Turlings and Benrey 1998; Karban and Huc 1999). The potential impact of plants on the parasitoids reproductive success raises the question whether plant quality could influence the genetic population structure of the parasitoid populations. A previous study has shown that the performance (parasitism rate, development time and sex ratio) and host-location behaviour of a parasitoid attacking bruchid beetles that feed on the seeds of the genus *Phaseolus* are greatly affected by the plant species and variety on which the bruchid host feeds (Benrey *et al.* 1998).