



The Norwegian species of *Copidosoma* Ratzeburg (Hymenoptera: Chalcidoidea: Encyrtidae)

GEORGE JAPOSHVILI¹, LARS OVE HANSEN² & EMILIO GUERRIERI^{3,4,5}

¹Entomology and Biocontrol Research Centre, Agricultural University of Georgia, Tbilisi-0159, GEORGIA

²Natural History Museum, University of Oslo, PO Box 1172 Blindern, NO-0318 Oslo, NORWAY

³Institute for Plant Protection, National Research Council of Italy 80055, Portici (NA) ITALY

⁴The Natural History Museum, SW7 5BD London, UK

⁵Corresponding author. E-mail: guerrieri@ipp.cnr.it

Abstract

The species of *Copidosoma* Ratzeburg (Hymenoptera: Encyrtidae) are reviewed for Norway. Sixteen species are recognized, of which one, *Copidosoma longicaudata* **sp. nov.**, is newly described, illustrated and compared with closely related species. Seven species represent new distribution records for Norway—*C. aithya* (Walker), *C. genale* (Thomson), *C. herbaceum* Mercet, *C. primulum* (Mercet), *C. radnense* Erdős, *C. thebe* (Walker) and *C. truncatellum* (Dalman). An illustrated dichotomous key for the identification of both sexes of Norwegian *Copidosoma* is presented.

Key words: *Copidosoma longicaudata*, new distribution records, dichotomous key

Introduction

Copidosoma Ratzeburg is one of the most diverse genera of Encyrtidae, including 191 species worldwide (Noyes 2012). Many of the species have potential as biocontrol agents of Lepidoptera pests (Guerrieri & Noyes 2005, 2006). Guerrieri and Noyes (2005) revised the Palaearctic species and 64 species are reported from Europe, (Noyes 2012). Only eight species have been reported previously from Norway, *C. agrotis* (Fonscolombe, 1833), *C. anceus* (Walker, 1837), *C. boucheanum* Ratzeburg, 1844, *C. cervius* (Walker, 1846), *C. chalconotum* (Dalman, 1820), *C. filicorne* (Dalman, 1820), *C. flagellare* (Dalman, 1820), and *C. tibiale* Hoffer, 1970 (Hansen *et al.* 2012). Diagnosis, hosts and taxonomic status of these species can be found in Guerrieri & Noyes (2005). This study reports additional species of *Copidosoma* from Norway, including one newly described species.

Material and methods

This study is based on dry-mounted and ethanol-preserved specimens deposited in The Natural History Museum of Oslo. Slide preparation of material followed Noyes (1982). Description and terminology follow Guerrieri and Noyes (2005). Abbreviations used in the text are as follows: F1, F2, etc., first, second funicle segment, etc.; FV, minimum frontovertex width; HW, maximum head width; OCL (occipital-ocellar line), shortest distance between posterior ocellus and occipital margin; OD, maximum diameter of posterior ocellus; OL, ovipositor length; OOL (ocular-ocellar line), shortest distance between posterior ocellus and adjacent eye margin; POL (posterior ocellar distance), shortest distance between posterior ocelli.

Geographical positions are given using latitude and longitude and the World Geodetic System 84 (WGS84), whereas division of Norwegian counties follows Økland (1981).