

## Review of species of the Old World genus *Doryctophasmus* Enderlein, 1912 (Hymenoptera: Braconidae: Doryctinae)

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### Abstract

The Old World doryctine wasp genus *Doryctophasmus* Enderlein, 1912 is reviewed. Two new species, *D. beninus* sp. nov. and *D. madagascarus* sp. nov., are described and illustrated from the Afrotropical region. The illustrated redescriptions of *D. ferrugineiceps* Enderlein, 1912, *D. ferrugineus* (Granger, 1949) and *D. rubrotestaceus* (Granger, 1949) are provided. Lectotypes of *Doryctes ferrugineus* Granger 1949 and *D. rubrotestaceus* Granger 1949 are designated. A key for determination of six known species of *Doryctophasmus* is given.

**Key words:** Ichneumonoidea, *Doryctophasmus*, parasitoids, new species, redescriptions, key, Old World

### Introduction

The small doryctine genus *Doryctophasmus* Enderlein, 1912, type species *D. ferrugineiceps* Enderlein, 1912, was described by Enderlein (1912) from Papua New Guinea. Three additional species of this genus were already described from Afrotropical region: *D. africanus* Brues, 1926 from South Africa (Brues, 1926); *D. ferrugineus* (Granger, 1949) and *D. rubrotestaceus* (Granger, 1949), as the members of *Doryctes* Haliday, 1836, from Madagascar (Granger, 1949). *Doryctophasmus ferrugineiceps* has been later recorded for Vietnam (Belokobylskij, 1993) and Australia (Belokobylskij *et al.*, 2004).

According to results of a recent molecular phylogenetic study (Zaldívar-Riverón *et al.*, 2008), the genus *Doryctophasmus* (on the basis of sequenced *D. ferrugineiceps*) belongs in a clade with the genera *Euscelinus* Westwood, 1882, *Hemidoryctes* Belokobylskij, 1992 and an undescribed new genus which type species is currently belonging to the genus *Dendrosoter* Wesmael, 1838; these genera are a sister group to several *Dendrosoter* taxa. A study of the venom glands and apparatus in Doryctinae (Quicke *et al.*, 1992) shows the presence of peculiar horn-shaped expanded insertions of the venom ducts on reservoir in *Doryctophasmus*. Because this structure was also found in several other unrelated taxa (*Polystenus* Foerster, 1862, *Halycaea* Cameron, 1903, *Schlettereriella* Szepligeti, 1904 etc.), evolutionary and phylogenetic meanings of this structure is not clear.

To date, there is no information about the biology and hosts of *Doryctophasmus* species. Given the host range of related taxa and on the basis of the adult size of species of this genus, it is possible to suggest that *Doryctophasmus* species are idiobiont parasitoids of the larvae of the family Cerambycidae and analogous xylophagous beetle groups inhabiting similar ecological niches.

This paper includes revision of all available types of *Doryctophasmus* species, descriptions of two new Afrotropical species and illustrated re-descriptions of the type specimens of *D. ferrugineiceps*, *D. ferrugineus* and *D. rubrotestaceus* (type material for *D. africanus* is lost). New records and a comprehensive key for the determination of all known species of this genus are also presented.