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## Re-description and first host and biology records of *Entedon magnificus* (Girault & Dodd) (Hymenoptera, Eulophidae), a natural enemy of *Gonipterus* weevils (Coleoptera, Curculionidae), a pest of *Eucalyptus* trees

ALEX GUMOVSKY<sup>1,2,6</sup>, DAVE DE LITTLE<sup>3</sup>, SERGIO ROTHMANN<sup>4</sup>,  
LORENA JAQUES<sup>4</sup> & SANDRA ELIZABETH IDE MAYORGA<sup>5</sup>

<sup>1</sup>Schmalhausen Institute of Zoology, 15 Bogdan Khmelnytsky St., 01601 Kiev-30, Ukraine

<sup>2</sup>School of Animal, Plant and Environmental Sciences, University of the Witwatersrand, Johannesburg, South Africa

<sup>3</sup>Entomological and Forest Heath Consultancy, Lower Sandy Bay, TAS 7005, Australia

<sup>4</sup>Servicio Agrícola y Ganadero, Departamento Laboratorios y Estación Cuarentenaria Agrícola, Chile

<sup>5</sup>Servicio Agrícola y Ganadero, División protección Agrícola y Forestal, Paseo Bulnes 140, Santiago, Chile

<sup>6</sup>Corresponding author. E-mail: entedon@gmail.com

### Abstract

*Entedon magnificus* (Girault & Dodd) (Hymenoptera: Eulophidae, Entedoninae) is recorded as a gregarious larval endoparasitoid of *Gonipterus* weevils (Coleoptera: Curculionidae), significant pests of *Eucalyptus* trees. *Entedon magnificus* is re-described and illustrated based on females and males from Australia and Tasmania.

**Key words:** Australia, Tasmania, Chile, Entedoninae, larval endoparasitoid, gregarious endoparasitoid

### Introduction

The genus *Eucalyptus* (Myrtaceae) is native to Australia and Tasmania, with various tree species being cultivated worldwide for the timber, pulp and paper industry due to their high growth rates and wide environmental tolerances. Globally, the area under *Eucalyptus* plantations exceeds 21 million hectares, with Brazil, India, China and South Africa being among the most important growers (Rejmánek & Richardson 2011; Midgley 2013). *Eucalyptus globulus* Labill is the main species planted in Chile, comprising more than 540,000 ha (INFOR 2014). Several pests of *Eucalyptus* trees have been unintentionally introduced to Chile in recent years, including *Gonipterus platensis* Marelli (Coleoptera: Curculionidae), which is considered to be one of the most serious pests of *E. globulus* worldwide. *Gonipterus platensis* is native to Tasmania (Australia), and was first detected in Chile in 1998 (Beeche *et al.* 1999).

The Plant Protection Division of SAG (a division of the Ministry of Agriculture) together with the “Consortio de Protección Fitosanitaria Forestal” (CPF S.A.) commenced a biological control program against *G. platensis* over a decade ago with the introduction of the egg parasitoid *Anaphes nitens* (Girault) (Hymenoptera: Mymaridae) in 1998, and subsequently *A. tasmaniae* Huber & Prinsloo in 2009 and 2011. However, to date none of these parasitoids have been successful in controlling pest populations of *G. platensis*. In 2011, the Plant Protection Division of SAG together with CPF S.A. initiated a new survey in Tasmania for other species of parasitoids that can supplement the activity of the established egg parasitoids of *G. platensis* in Chile.

Parasitoids recently reared from *Gonipterus platensis* larvae, collected in Tasmania, as well as specimens found in museum collections of the Natural History Museum (London, U.K.) and the Plant Protection Research Institute (Pretoria, South Africa), were identified as *Entedon magnificus* (Girault & Dodd). Australian members of the genus *Entedon* (Hymenoptera: Eulophidae, Entedoninae) are badly in need of revision, with most species described by A.A. Girault in the early 20<sup>th</sup> century (Girault 1913–1929). Bouček (1988) listed 11 species of *Entedon* for the Australasian region after examination of the remnants of the Girault types. Bouček also compared