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Asphondylia gochnatiae, a new species of gall midge (Diptera, Cecidomyiidae) associated with *Gochnatia polymorpha* (Less.) Cabrera (Asteraceae)

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Abstract

Asphondylia gochnatiae Maia, a new species of Cecidomyiidae (Diptera) that induces leaf galls on *Gochnatia polymorpha* (Less.) Cabrera (Asteraceae) is described and illustrated (larva, pupa, male, female and gall) based on material from Minas Gerais, Brazil. Data on the gall biology is also provided.

Key words: *Asphondylia*, Asteraceae, Cerrado, galling insect, *Gochnatia*

Introduction

The diversity of galling insects is argued to be especially higher in ecosystems, where sclerophyllous shrubs prevail, such as the Brazilian Cerrado (Price *et al*. 1998). Here we report a new species of *Asphondylia* (Diptera: Cecidomyiidae) inducing galls on *Gochnatia polymorpha* (Less.) Cabrera, a common tree from South America. *Gochnatia polymorpha* is a 6 to 8m high tree occurring in sandy and nutrient-deficient soils of Brazilian Cerrado (Lorenzi 2002). It is a semideciduous pioneer tree occurring in Brazil, Uruguay, Paraguay and Argentina (Freire *et al*. 2002). Trees are employed in restoration ecology while its wood can be used for civil construction and furniture (Lorenzi 2002). Leaves are eaten by Brown Howler monkeys (Miranda & Passos 2004) and flowers are galled by *Tomoplagia trivittata* Lutz & Lima (Tephritidae; F. A. O. Silveira, pers. obs). Previous gall sampling through the range of *G. polymorpha* in South America (Fernandes *et al*. 1988; Fernandes *et al*. 1997; Gonçalves-Alvim & Fernandes 2001; Julião *et al*. 2002, Fernandes *et al*. 2002ab; Maia & Fernandes 2004; Fernandes & Negreiros 2006) did not to record it as a host of galling insects.

Material and methods

Specimens were collected in the locality of Luz (19°47’51’’S, 45°41’14’’W) in the state of Minas Gerais, SE Brazil. Trees were located in remnants of Cerrado vegetation in oxisols. The climate is characterized by dry winters and rainy summers with an average annual rainfall of 1,200 mm and mean temperature of 21–22°C (Domingos 2005). The area is under large impact from human activities: cattle raising has resulted in the invasion of African grasses and selective logging has decreased canopy. For this reason, *G. polymorpha* individuals in the study area were small, reaching up to 1.5m high.

Samples of galled leaves were collected in October 2005 and immediately taken to the laboratory. Larvae were obtained by dissection of galls under a stereoscopic microscope. Pupal exuviae and adults were obtained

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