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FIRST RECORD IN TUNISIA OF *CLOSTEROCERUS CHAMAELEON*
(GIRAULT) PARASITOID OF THE EUCALYPTUS GALL WASP
OPHELMIMUS MASKELLI (ASHMEAD)
(*Hymenoptera Eulophidae*)

SUMMARY

Closterocerus chamaeleon (Girault) (Hymenoptera Eulophidae), parasitoid of the Eucalyptus gall wasp *Ophelimus maskelli* (Ashmead) (Hymenoptera Eulophidae) has been recorded for the first time in Tunisia in July 2007. This record suggests that 14 months after its release in Sicily, in May 2006, it has spread over Sicily Channel.

RIASSUNTO

Ritrovamento in Tunisia di Closterocerus chamaeleon (Girault) (Hymenoptera Eulophidae), parassitoide dell'eulofide galligeno dell'eucalipto *Ophelimus maskelli* (Ashmead) (Hymenoptera Eulophidae). Viene segnalata per la prima volta la presenza di *Closterocerus chamaeleon* (Girault) (Hymenoptera Eulophidae), parassitoide dell'eulofide galligeno dell'eucalipto *Ophelimus maskelli* (Ashmead) (Hymenoptera Eulophidae). Il parassitoide era stato introdotto in Sicilia nel maggio 2006, diffondendosi rapidamente in tutta l'isola nei successivi 18 mesi. Il suo ritrovamento in Tunisia indica che 14 mesi dopo il rilascio nell'isola *C. chamaeleon* aveva già superato il Canale di Sicilia, raggiungendo le coste del Nord Africa.

INTRODUCTION

The Eucalyptus gall wasps *Leptocybe invasa* Fisher et LaSalle and *Ophelimus maskelli* (Ashmead) (Eulophidae) were recorded in the last ten years in several European countries; both of them were found in different regions of Italy (ARZONE & ALMA, 2000; VIGGIANI & NICOTINA, 2001; BELLA & LO

VERDE, 2002; BAGNOLI & ROVERSI, 2004), in Spain (SÁNCHEZ, 2003), Portugal (BRANCO *et al.*, 2006, 2009), France (EPP0, 2006) and Greece (KAVALIERATOS *et al.*, 2006; PROTASOV *et al.*, 2007b). *O. maskelli* has recently spread also in several countries of the Mediterranean Basin, in Israel (MENDEL *et al.*, 2004, 2005), Turkey (DOGANLAR, 2005; DOGANLAR & MENDEL, 2007), Algeria (CALECA, 2010) and Tunisia (DHAHRI *et al.*, in press).

It causes serious damage to *Eucalyptus camaldulensis*, both on adult trees, that show large amount of leaves desiccated, and on young plantations, whose growth rate may be severely reduced as a consequence of its infestations; moreover, some problems to people health were observed during mass emergence of adults (BAGNOLI & ROVERSI, 2004; LAUDONIA, 2005; MENDEL *et al.*, 2005; PROTASOV *et al.*, 2007b).

In 2005 a biological control program has been launched in Israel, where the eulophid *Closterocerus chamaeleon* was introduced (MENDEL *et al.*, 2007; PROTASOV *et al.*, 2007a). In 2006 *C. chamaeleon* was introduced also Italy (Campania, Sicily, Calabria, Sardinia), showing a rapid spread rate (LAUDONIA *et al.*, 2006, 2007; RIZZO *et al.*, 2006, 2007; DE MARZO, 2007; CALECA *et al.*, 2009). In Sicily it spread all over the region (CALECA *et al.*, 2009).

PRESENCE OF *C. CHAMAELEON* IN TUNISIA

In July 2007 some dead insects and a sample of leaves of *Eucalyptus camaldulensis* Dehnh., collected in the beginning of April from roadsides plantation in Ariana (Tunisia), were sent to Palermo University to confirm the identification of *O. maskelli*. From the leaves put in a rearing chamber both *O. maskelli* and *C. chamaeleon* emerged. The parasitism rate, calculated as the number of *C. chamaeleon* compared with the total number of both *O. maskelli* and *C. chamaeleon* emerged, was low (5%), indicating that the insect reached Tunisian coast from Sicily probably during the spring of the same year, about one year after its release in central Sicily. The minimum distance between Tunisia and Sicily is ca. 82 km (Pantelleria Island) and 150 km (west coast of Sicily). In Sicily, about 18 months after its release, the parasitoid has been found all over the region, more than 170 km far from the release sites (CALECA *et al.*, 2009). The presence of *C. chamaeleon* in north Tunisia confirms the high spread capacity of this parasitoid, demonstrated also by its record in Spain (BORRAJO *et al.*, 2008), Portugal (BRANCO *et al.*, 2009), Algeria (CALECA, 2010); it was also found in Turkey, about 1300 km far from Israel, where it was released in 2005 (DOGANLAR & MENDEL, 2007; MENDEL *et al.*, 2007; PROTASOV *et al.*, 2007a).

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