



Intra- and interspecific analysis of first instar larval morphology in the genus *Berberomeloe* Bologna 1989 (Coleoptera: Meloidae)

CHIARA SETTANNI^{1,4}, ANDREA DI GIULIO², MARIA GRAZIA FINOIA³ & MARCO A. BOLOGNA²

¹Departamento de Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales CSIC. Calle José Gutiérrez Abascal 2, 28006 Madrid, Spain; tel: +34-914111328 ext 1124; fax: +34-915645078. E-mail: chiarasettanni@gmail.com

²Dipartimento di Biologia, Università degli Studi Roma Tre, Viale Marconi 446, 00146 Roma, Italy; tel: +39-0657336323/27; fax: +39-0657336321. E-mail: digiulio@uniroma3.it, bologna@uniroma3.it

³Istituto Superiore per la Protezione e la Ricerca Ambientale. Via di Casalotti 300, 00166 Roma, Italy; tel: 39-0661570544; fax: +39-0661561906. E-mail: mafinoia@tin.it

⁴Corresponding author

Abstract

The first instar larva of *Berberomeloe insignis* (Charpentier, 1818) is described and figured for the first time and compared to that of *B. majalis* (Linnaeus, 1758). Diagnostic larval characters of the genus and of both species are identified. Morphometric data from different populations are analyzed statistically. Results support species differentiation and characters definition. Additionally, analyses also suggest that whereas *B. majalis* is structured in the Iberian Peninsula, there is a lack of differentiation between Iberian and North African populations.

Key words: blister beetles, West Mediterranean, populations relationships, morphometry

Resumen

El primer estadio larvario de *Berberomeloe insignis* (Charpentier, 1818) se describe y se ilustra por primera vez en comparación con el de *B. majalis* (Linnaeus, 1758). Se proponen caracteres diagnósticos para el género y caracteres discriminatorios para ambas especies. Se llevan a cabo análisis estadísticos de datos morfométricos de diferentes poblaciones. Los resultados apoyan la diferenciación específica y la definición de los caracteres morfológicos de ambos taxones. Además, los análisis sugieren que *B. majalis* está estructurada dentro de la Península Ibérica mientras que no hay diferenciación entre poblaciones ibéricas y del Norte de África.

Introduction

The blister beetle genus *Berberomeloe* (tribe Lyttini, subfamily Meloinae) when described by Bologna (1989) included only a single species, the West Mediterranean *B. majalis* (Linnaeus, 1758). A second species [*B. insignis* (Charpentier, 1818)] was considered a junior synonym. *Berberomeloe majalis* had been originally placed in the genus *Meloe* Linnaeus, 1758 (tribe Meloini). When first instar larval morphology indicated affinity to the tribe Lyttini (Cros 1940; MacSwain 1956) the species was transferred to *Trichomeloe* Reitter, 1911 a generic assignment that could not be supported by its distinctive adult and larval traits (Bologna 1989; Bologna and Pinto 2001; Bologna and Di Giulio 2008).

Recently, García-París (1998) resurrected *B. insignis* based on differences in adult morphology, and treated it as a rare endemic of the southeastern Iberian Peninsula. Sexual behaviour and its syntopic distribution with *B. majalis* support species status (García-París *et al.* 1999; Settanni unpublished).