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## Revision of the genus *Coletinia* (*Zygentoma*: Nicoletiidae) in the Iberian Peninsula, with descriptions of nine new species

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## Abstract

The discovery of several members of the genus *Coletinia* Wygodzinsky, 1980, from subterranean habitats (endogean and troglobiont), prompted the review of this genus in the Iberian Peninsula. Most of the samples came from caves of the Mediterranean basin of Spain, from Cádiz to the Tarragona province. As a result of this revision, nine new species have been established: *C. herculea* n. sp., an endogean from Cádiz; *C. vergitana* n. sp. from the Gádor calcareous mountains in Almería; *C. calaforrai* n. sp. from the gypsum karst in Almería; *C. intermedia* n. sp. from caves in Murcia and Alicante; *C. diania* n. sp., found in the north of the province of Alicante; *C. longitibia* n. sp. and *C. tessella* n. sp., both troglobites from Valencia; *C. redetecta* n. sp. from Castellón caves and finally *C. hernandoi* n. sp., an endogean from Tarragona. Moreover, *Coletinia maggii* (Grassi, 1887) is reported for the first time in the Iberian Peninsula, and new data are presented regarding *C. mendesi*, *C. tinauti* and *C. capolongoi* that widen their geographic distribution and enhance the information about their anatomic characteristics and biology. These results increase the number of known species of this genus to 14 in the region and to 21 in the world. The new species are described and compared with the most closely related previously known species of the genus. Characters with the most taxonomic relevance are discussed using optical and scanning microscope studies. A key for the identification of the Iberian *Coletinia* species and a distribution map including all of them are also provided.

**Key words:** Coletiniinae, Thysanura, Spain, taxonomy, identification key, endogean fauna, troglobitic fauna

## Resumen

El hallazgo de numerosas muestras del género *Coletinia* Wygodzinsky, 1980, integrado por especies subterráneas (endogreas y troglobias), permite la revisión de dicho género en la Península Ibérica. La mayoría de estas muestras proceden de cuevas situadas en provincias mediterráneas, desde Cádiz a Tarragona. Como resultado de esta revisión, se describen nueve nuevas especies: *C. herculea* n. sp., endogea de Cádiz; *C. vergitana* n. sp. procedente de la sierra de Gádor en Almería; *C. calaforrai* n. sp. del karst en yesos de Almería; *C. intermedia* n. sp., de cuevas de Murcia y Alicante; *C. diania* n. sp., encontrada en el norte de la provincia de Alicante; *C. longitibia* n. sp. y *C. tessella* n. sp., ambas troglobias de Valencia; *C. redetecta* n. sp., de cuevas de Castellón, y finalmente *C. hernandoi* n. sp., endogea de Tarragona. Además, *C. maggii* (Grassi, 1887) se cita por primera vez en la Península Ibérica, y también se aportan nuevos datos sobre *C. mendesi*, *C. tinauti* y *C. capolongoi* que amplían su distribución geográfica y la información disponible sobre sus caracteres anatómicos y biología. Estos resultados incrementan el número de especies conocidas de este género hasta 14 en el área ibérica y hasta 21 a nivel mundial. Las nuevas especies se describen y comparan con las previamente conocidas y más estrechamente relacionadas del género. Se discuten los caracteres con mayor interés taxonómico, utilizando estudios tanto de microscopía óptica como de microscopio electrónico de barrido. Se proporciona también una clave para la identificación de las *Coletinia* ibéricas y un mapa de distribución de las mismas.

## Introduction

The genus *Coletinia* Wygodzinsky, 1980 belongs to the family Nicoletiidae (order Zygentoma = Thysanura s. str.) and includes species from subterranean environments collected in the Southwest Palaearctic region; one species has also been described from Brazil (Mendes & Ferreira, 2002). Prior to this study, 12 species belonging to this genus were known, 4 of which were endemic to the Iberian Peninsula (continental Portugal and Spain): *C. mendesi* Wygodzinsky, 1980, *C. capolongoi* Wygodzinsky, 1980, *C. asymetrica* Mendes *et al.* 1985 and *C. tinauti* Molero *et al.*, 1997. Additional data about the previous knowledge of these 12 species are presented in Table 1.

Difficulties in canvassing the habitats (endogean medium and caves) where these insects occur have resulted in a scarcity of knowledge about this genus. Fortunately, samples recently provided by Spanish biospeleologic teams have increased the number of specimens of Nicoletiidae available for taxonomic and biologic research on these poorly known thysanurans. As a result of the study of these specimens, nine new species and new faunistic data are presented in this work.