



XXVIII CONGRESSO NAZIONALE
ITALIANO DI ENTOMOLOGIA
SIENA | 16-20 GIUGNO 2025

BOOK OF ABSTRACTS

ENTI ORGANIZZATORI



UNIVERSITÀ
DI SIENA
1240

DIPARTIMENTO DI
**SCIENZE
DELLA VITA**
— DSV



Società
Entomologica
Italiana



Accademia
Nazionale
Italiana di
Entomologia



SESSION III

III - BIODIVERSITY, SYSTEMATICS AND PHYLOGENY

POSTER

First molecular studies on Embioptera in Italy (Embioptera)

Paolo Fontana^{1,2}, Marco A. Bologna^{3,4}, Alessandra Ricci^{3,4}

¹Edmund Mach Foundation; ²World Biodiversity Association; ³University of Roma Tre; ⁴NBFC

The Embioptera, commonly known as webspinners, are insects with gregarious habits, which live inside tubular tunnels that they build with the silk secreted by their front tarsi. They are widespread in tropical areas and hot climate regions. There are approximately 250 known species in the world while another 750 have already been discovered and identified but have yet to be described. They are among the least studied in Europe and in the Mediterranean basin and in recent decades they have been studied almost exclusively in Italy where several new species have been described in recent years. Italy is the country with the greatest complexity both in terms of genera and number of species, counting 3 genera and 13 of the 18 species known for Europe: *Embia brutia* Cianferoni & Ceccolini, 2024, *Embia cynthiae* Fontana, 2002, *Embia girolamii* Fontana, 2001, *Embia ilvana* Fontana & Forbicioni, 2024, *Embia minapalumboi* Fontana, 2024, *Embia nuragica* Stefani, 1953, *Embia pandateriensis* Cianferoni & Ceccolini, 2024, *Embia ramburi* Rimsky-Korsakow, 1905, *Embia specolensis* Cianferoni & Ceccolini, 2024, *Embia tyrrhenica* Stefani, 1953, *Cleomia guareschii* Stefani, 1953, *Haploembia solieri* Rambur, 1842 e *Haploembia tarsalis* (Ross, 1940). Other new species are being studied and published but up to now the studies had not yet addressed the aspects related to molecular biology. Here, the preliminary results of the first molecular investigations on these insects are presented, based on the DNA barcoding fragment Cytochrome oxidase I (COI). The identity of some Italian endemic species is confirmed, as well as the presence of two species of the genus *Haploembia* Verhoeff, 1904, namely an amphigonic species, *H. solieri* (Rambur, 1842) and the parthenogenetic species *H. tarsalis* (Ross, 1940). Moreover, it was recovered the presence of new genetic lineages, close but distinct to *H. solieri* and *H. tarsalis*, whose taxonomic identification needs further investigation.

KEYWORDS: DNA Barcoding, COI, Molecular Taxonomy