



**Monographic revision of the endemic *Helix mazzullii* De Cristofori & Jan, 1832 complex from Sicily and re-introduction of the genus *Ercetella* Monterosato, 1894 (Pulmonata, Stylommatophora, Helicidae)**

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**Abstract**

*Helix mazzullii* De Cristofori & Jan, 1832 *s.l.* (Pulmonata, Stylommatophora, Helicidae) is an endemic, rupicolous, saxi-cavous taxon of northwestern Sicily. Its populations are vulnerable and it is of great ecological significance. However, its taxonomy, phylogeny and biogeography are still uncertain. The present paper reports on a comprehensive analysis of morphological diagnostic characters (shell and genitalia) joined by the molecular study of two mitochondrial (16S rRNA and 12S rRNA) and one nuclear (ITS-2) partial gene sequences, investigated by individual segment analyses or combining the three gene fragments with a concatenate analysis. Our results corroborated the hypothesis that this species is rather a group (i.e., the *mazzullii* group) including three different taxa (*mazzullii*, *cephaloeditana* and *insolida*) recognized as species. Moreover, molecular dating of lineages suggests that this complex might have occurred long before the Messinian salinity crisis. Finally, peculiar morphological and ecological features along with molecular data strongly support the proposal to re-introduce the genus *Ercetella* Monterosato, 1894 for the *H. mazzullii* complex. Synonyms and bibliographic references are reported in the systematic part; collection records are listed in Appendix 1.

**Key words:** Land snails, *mazzullii* group, *Ercetella*, Helicidae, Sicilian endemism, molecular taxonomy, molecular phylogeny, biodiversity, biogeography, Mio-pliocene events