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Nepomorpha, Gerromorpha and Leptopodomorpha (Hemiptera: Heteroptera) of the Tuscan Archipelago (Italy)

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Abstract

This paper provides the first checklists for Nepomorpha (12 spp.), Gerromorpha (10 spp.) and Leptopodomorpha (5 spp.) of the Tuscan Archipelago; summarizing and updating the knowledge for this area. The presence of the family Microneectidae is recorded for the first time in the Archipelago, as well as six species: Nepomorpha — *Microneecta scholtzi* (Fieber, 1860), *Sigara selecta* (Fieber, 1848), *S. stagnalis* (Leach, 1817), *S. lateralis* (Leach, 1817); Gerromorpha — *Gerris asper* (Fieber, 1860); Leptopodomorpha — *Saldula palustris* (Douglas, 1874); increasing the numbers of aquatic Heteroptera *sensu lato* from 21 to 27 species. The three infraorders are present in only four of the seven major islands of the Tuscan Archipelago (Capraia, Elba, Montecristo and Giglio). The Isle of Elba has been scarcely investigated until now: ten species are newly recorded for this island (doubling the number to 20 spp.), whilst another species has been first recorded for Giglio Island. The most remarkable finding is *Gerris asper* (Fieber, 1860) on Elba, a species inhabiting marshy areas that is very rare to Italy. *Notonecta glauca* Linnaeus, 1758 is excluded from the fauna of the Tuscan Archipelago.

Key words: Heteroptera, Gerromorpha, Nepomorpha, Leptopodomorpha, island, checklist, Italy

Introduction

Nepomorpha, Gerromorpha and Leptopodomorpha (Hemiptera, Heteroptera) represent a significant component of the freshwater communities. Most of these species inhabit aquatic biotopes, while only a small proportion are not water dependent, e.g. some members of the family Leptopodidae (Polhemus & Polhemus 2008).

The Tuscan Archipelago consists of a chain of islands to the west of mainland Tuscany (Italy), between the Ligurian Sea and the Tyrrhenian Sea. It consists of seven major islands: Gorgona, Capraia, Elba, Pianosa, Montecristo, Giglio and Giannutri, and several minor islands: Palmaiola, Cerboli, Formiche di Grosseto, etc.

Most of islands of the Tuscan Archipelago are included, partly or entirely, in the Tuscan Archipelago National Park, formerly "Parco Nazionale dell'Arcipelago Toscano" (established in 1999), while Montecristo Island has been a State nature reserve since 1971. Furthermore, there are several European protected areas: "Sites of Community Importance" (SCI – Italian SIC) as defined by the Habitats Directive (Council Directive 92/43/EEC) and "Special Protection Areas" (SPA – Italian ZPS) as defined by the Birds Directive (Council Directive 2009/147/EC). Finally, some of these European protected areas have been extended by the Tuscany Region through the "Sites of Regional Importance" (SIR).

Despite the importance of these freshwater island environments and the presence of several protected areas, no comprehensive works are currently available on these groups of Heteroptera. Only a few contributions and some scattered data exist for some islands of the Archipelago.

The first paper regarding the Tuscan Archipelago and these groups is the general work by Razzauti (1917) relating to Capraia Island. Then Mancini (1935, 1952) conducted research on Heteroptera, respectively on the islands of Capraia and Giglio, also publishing, in part, the results of the expeditions of Giacomo Doria at the start of the 20th century. Tamanini (1947) described the brachypterous morph of *Velia major* Puton, 1879 [syn. of *V. rivulorum* (Fabricius, 1794)], based on specimens from Capraia Island collected by Mancini (1935). Filippi (1957) and Faraci and Rizzotti Vlach (1992) included some records from the Tuscan Archipelago in their contributions on