

Monograph



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A subjective checklist of the Recent, free-living, non-marine Ostracoda (Crustacea)

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Abstract

We present a subjective list of the Recent, free-living, non-marine ostracods species and genera of the world, with their distribution in the large zoogeographical regions, as well as a list of genera in their present hierarchical taxonomic position. Based on the recognised synonymies, there are at present about 2090 species in c. 209 genera. About half of all species occur in one family, the Cyprididae, which is especially common in the southern Hemisphere. We give three new names for extant homonyms (*Cypretta bradyi* nom. nov., *Cypria kliei* nom. nov. and *Physocypria dadayi* nom. nov.), propose one new combination and one new synonymy and elevate the rank of the tribe Mytilocypridini to that of subfamily (with the same diagnosis).

Keywords: Ostracoda, distribution, biodiversity, taxonomy, nomenclature

Introduction

Non-marine, aquatic biodiversity is declining rapidly, faster than terrestrial or marine diversity (Dudgeon *et al.* 2006). In addition, non-marine aquatic habitats hold a much higher diversity than terrestrial and marine ones of comparable sizes: freshwater comprises only 0.01% of all water on the planet and occupies only 0.8% of the Earth's surface, yet it holds about 12% of all known animal species, including 40% of all fish species and 1/4 of all vertebrates. This incongruence between diversity and occupied surface is known as the *paradox of freshwater* (Lévèque *et al.* 2005).

In order to establish more precise species numbers of the various freshwater groups, the Royal Belgian Institute of natural Sciences and the Belgian Biodiversity Platform (Brussels) conducted the "Freshwater Animal Diversity Assessment", an initiative that involved c. 150 taxonomic experts, covering all freshwater animal groups (Balian *et al.* 2008; http://FADA.biodiversity.be). The Ostracoda (small, bivalved crustaceans, which abound in all aquatic, marine and freshwater, and even in (semi-) terrestrial environments) were analysed by Martens *et al.* (2008). They found that there are at present c. 2000 species in c. 200 genera; the family Cyprididae in the superfamily Cypridoidea is the most diverse group and comprises more than 50% of all extant non-marine ostracod species.

The present checklist is an updated and expanded version of the one used by Martens *et al.* (2008). It enumerates names of classic species and genera described up to 2008 (with some selected species described later also being included), providing synonyms as well as broad distribution of species over the main zoogeographical regions. The present list includes only the free-living non-marine ostracod species, the parasitic/symbiotic Entocytheridae are not listed here. Readers are referred to the monograph by Hart & Hart (1974), to which little has been added in later years.

Recently, there is a pronounced interest in so-called cryptic species in several (mostly aquatic) groups (see review in Bickford *et al.* 2007). Such species can only be identified with molecular methods, and are generally not morphologically recognisable. Bode *et al.* (2010) analysed almost 450 specimens from c. 135 European populations of the temporary pool ostracod species, *Eucypris virens* (Jurine, 1820), and found close to 40 cryptic