



First description of the soft part anatomy of *Ilyocypris ramirezi* Cusminsky & Whatley (Crustacea, Ostracoda) from Argentina, South America

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Abstract

The anatomy of the soft parts of *Ilyocypris ramirezi* Cusminsky & Whatley, 1996 is described and illustrated for the first time, based on findings of this species from water bodies in the shallow areas of the Llanquanelo basin, south-west of Mendoza Province, Argentina. This species is common in Quaternary and extant environments of the Pampa and Patagonian regions. Its distribution is now extending in Argentina to the Central-West area, locally named “Cuyo region”. *Ilyocypris ramirezi* is a good environmental indicator and constitutes a useful tool in paleolimnological studies.

Key words: soft parts anatomy, ecology, Llanquanelo basin, *Ilyocypris* key

Introduction

The family Ilyocypridae Kaufmann, 1900 belongs to the superfamily Cypridoidea Baird, 1845. According to the most recent view, the subfamily Ilyocyprinae Kaufmann, 1900 is the only one in this family. The subfamily Pelocyprinae has been transferred to the family Cyprididae (Karanovic 2012; Martens & Savatnalinton 2011). The subfamily Ilyocyprinae has only two extant genera: *Ilyocypris* Brady & Norman, 1889 and *Indiacypris* Hartmann, 1964.

Ilyocypris is a widespread freshwater genus including between 25 (Karanovic 2012) and 37 (Martens & Savatnalinton 2011) living species; however, no author has yet included *Ilyocypris ramirezi* in the species list.

The specific identification of the living *Ilyocypris* relies mainly on the appendages (length of the swimming setae on the antenna, A2; division of the penultimate segment of the second thoracic limb, T2; and the number of setae on the penultimate segment of the third thoracic limb, T3). According to Mazzini *et al.* (2014) the morphology of soft parts is considered to be more conservative than that of valves and can be used to derive phylogenetic and taxonomic relationships. For several non-marine species, intraspecific variability in valve size, shape, ornamentation (e.g. reticulation and nodding) depends on genetic factors, reproductive modes (Rossi *et al.* 2007), environmental conditions or a combination of these and several other factors. Such morphological plasticity may hamper taxonomic identification and lead to the questionable erection of new species and genera. In addition, the “classical” morphological approach to species identification is further complicated because of the presence of cryptic diversity, where species cannot be differentiated by morphological but only by genetic characters (Mazzini *et al.* 2014).

Brady & Norman (1889) designated *Ilyocypris gibba* (Ramdohr, 1808) as the type species. It was collected from a water-body near the entrance to the botanical garden at Neumarkt, Halle (Germany). Many species of this genus can be found in small and shallow permanent water bodies as well as in larger ones such as lakes. Some species are also recorded from springs and brooks and can tolerate a slightly higher salinity. Most of the species have a wide distribution; according to Karanovic (2012), the genus has been recorded from all continents, except Antarctica and South America. However, there are several records of the genus since 1893 in Argentina. Wierzejski