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## A checklist of Branchiopoda (Anostraca and Cladocera) of Chilean continental waters

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### Abstract

The aim of the present study is to represent an annotated checklist of the Branchiopoda (Crustacea) reported from Chilean inland waters. Only Anostraca and Cladocera are found in Chile, while there are no reports on Notostraca and "Conchostraca". Our checklist contains 85 valid taxa, among which nine anostracans and 76 cladocerans. Such "low" biodiversity of the branchiopods in Chile is in reality an artifact of insufficient sampling. Our work indicates that more faunistic, taxonomic and biogeographical studies of Chilean branchiopods are necessary, especially in areas with subtropical climate, Atacama desert, Southern Patagonia, and central Chilean ephemeral pools.

**Key words:** Crustacea, Branchiopoda, Anostraca, Cladocera, Neotropics, Chile

### Introduction

Branchiopod crustaceans of continental waters of Chile attracted attention of zoologists for a long time, since the pioneer work of Hercule Nicolet (1848), who described five cladoceran taxa among which only *Daphnia spinifera* Nicolet, 1848 is regarded as a valid species now (within the genus *Scapholeberis* Schödler, 1858), while others are *species inquirenda*. Several species of the Cladocera were described from Chile at the end of the 19th and 20th century by well-known European investigators (Richard 1891, 1897; Ekman 1900; Vávra 1900). Then interest for the cladoceran studies was lost, and new valuable taxonomic papers appeared already in the second half of the 20th century (Löffler 1961; Araya & Zúñiga 1985; Ruiz & Bahamonde 1989). Despite the long history of study, the Cladocerans of Chilean inland waters are still relatively poorly studied as compared, for example, with Argentina, where many taxonomic problems are resolved, first of all, due to effort of Paggi (1994, 1995, 1996, 1999) and recent attention of the geneticists (Adamowicz *et al.* 2002, 2009). Also Bolivian Andean region is an important polygon for molecular phylogenetic studies (Aguilera *et al.* 2007; Mergeay *et al.* 2008), but no attention is paid to Chile.

No recent "Conchostraca" and Notostraca are known from Chile. In contrast to the Cladocera, the first papers for the Anostraca from Chile appeared at the end of the 20th century (Vanhaecke *et al.* 1987; Soto 1990). Since that time, two species of the family Artemiidae Grochowski, 1896 were reported: *Artemia franciscana* Kellogg, 1906 (Gajardo *et al.* 1992, 1995, 2004) and *A. persimilis* Piccinelli & Prosdocimi, 1968 (Campos *et al.* 1996; Gajardo *et al.* 1998, 2000; De los Ríos & Zúñiga 2000; De los Ríos 2005). Several species of the the genus *Branchinecta* Verrill, 1869 from family Branchinectidae Daday, 1910 were also found (De los Ríos 2005, 2008; De los Ríos & Rivera 2007; De los Ríos *et al.* 2008a,b; Cohen 2008; Rogers *et al.* 2008; Hegna & Lazo-Wasem 2010; Burrioni *et al.* 2011).

Few papers on taxonomy of the anostracans (Gajardo *et al.* 1992, 1995, 2000; Rogers *et al.* 2008) and cladocerans (Araya & Zúñiga 1985; Ruiz & Bahamonde 1989; Villalobos 1994, 2006; Berrios & Sielfield 2000; Kotov *et al.* 2010, 2002) of Chile appeared during last decades. At the same time, many ecological articles were