



## Cladocera (Crustacea: Branchiopoda) of the south-east of the Korean Peninsula, with twenty new records for Korea\*

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### Abstract

We studied the cladocerans from 15 different freshwater bodies in south-east of the Korean Peninsula. Twenty species are first records for Korea, viz. 1. *Sida ortiva* Korovchinsky, 1979; 2. *Pseudosida cf. szalayi* (Daday, 1898); 3. *Scapholeberis kingi* Sars, 1888; 4. *Simocephalus congener* (Koch, 1841); 5. *Moinodaphnia macleayi* (King, 1853); 6. *Ilyocryptus cuneatus* Štifter, 1988; 7. *Ilyocryptus cf. raridentatus* Smirnov, 1989; 8. *Ilyocryptus spinifer* Herrick, 1882; 9. *Macrothrix pennigera* Shen, Sung & Chen, 1961; 10. *Macrothrix triserialis* Brady, 1886; 11. *Bosmina (Sinobosmina) fatalis* Burckhardt, 1924; 12. *Chydorus irinae* Smirnov & Sheveleva, 2010; 13. *Disparalona ikarus* Kotov & Sinev, 2011; 14. *Ephemeroporus cf. barroisi* (Richard, 1894); 15. *Camptocercus uncinatus* Smirnov, 1971; 16. *Camptocercus vietnamensis* Than, 1980; 17. *Kurzia (Rostrokurzia) longirostris* (Daday, 1898); 18. *Leydigia (Neoleydia) acanthocercoides* (Fischer, 1854); 19. *Monospilus daedalus* Kotov & Sinev, 2011; 20. *Nedorhynchotalona chiangi* Kotov & Sinev, 2011. Most of them are illustrated and briefly redescribed from newly collected material. We also provide illustrations of four taxa previously recorded from Korea: *Sida crystallina* (O.F. Müller, 1776); *Macrothrix rosea* (Jurine, 1820); *Bosmina (Bosmina) longirostris* (O. F. Müller, 1776) and *Disparalona cf. hamata* (Birge, 1879). Among the newly recorded taxa, there are six Far East endemics; five tropicopolitan species for which the Amur basin is the northernmost margin of their distribution; four tropicopolitan species for which Korea is presumed to be the northern most area of their distribution; two Palaearctic taxa for which Korea could be the southern most area of their distribution; two cosmopolitan species which need to be revised; and one species widely distributed in Eastern Asia. Despite significantly increasing the number of known species of cladocerans in Korea, we recognize that further research is needed to complete the picture, and the cosmopolitan taxa need further revision.

**Key words:** New records, taxonomy, cladocerans, freshwater, biodiversity, South Korea

### Introduction

During the last two decades, significant progress was achieved in the study of some genera of Ctenopoda (Korovchinsky 2004), Anomopoda (Smirnov 1992, 1996, 1998; Kotov & Štifter 2006; Van Damme & Dumont 2008; Kotov 2009; Sinev 2009; Van Damme et al. 2011) and Haplopoda (Korovchinsky 2009) based on “traditional” morphological analysis. Phylogeographic studies based on molecular methods (Adamowicz et al. 2009; Xu S. et al. 2009; Xu L. et al. 2011) also contributed to our understanding of the taxonomy, but unfortunately they were (and are) conducted only for few, mostly planktonic, genera. Some attempts to combine morphological and molecular approaches were made, but such publications are still rare (Belyaeva & Taylor 2009; Kotov et al. 2006, 2009).

Improvements in the taxonomy of cladoceran groups need to be accompanied by studies of regional faunas conducted according to current standards, as done by Alonso (1996) for the Iberian Peninsula. Unfortunately, such investigations are mainly limited to the Holarctic, even though spectacular progress has been made in tropical countries like Mexico (Elías-Gutiérrez et al. 2008), Brazil (Elmoor-Loureiro 2000) and Thailand (Maiphae et al.