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Ecological Succession of Freshwater Ostracoda (Crustacea) in A Newly Developed Rheocrene Spring (Bolu, Turkey)

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Abstract: Six species of ostracod (*Candona neglecta*, *Heterocypris incongruens*, *Ilyocypris bradyi*, *Darwinula stevensoni*, *Pseudocandona compressa*, and *Psychrodromus olivaceus*) were collected from a newly developed spring between October 2001 and October 2004. The first 5 species have cosmopolitan distribution in the Holarctic region. The ratio of non-cosmopolitan to cosmopolitan species (called 'pseudorichness') was 0.2, suggesting dominance of cosmopolitan species. Among the species, *C. neglecta* displayed the highest tolerance to 6 different environmental variables, although its estimated optimum values varied. Except for redox potential and salinity, optimum values for *H. incongruens* were the highest. High tolerance and optimum values seemed to provide more advantages for cosmopolitan species to increase their survival in a variety of habitats. Considering that this spring is newly developed, the ostracod species' composition may be demonstrating the first stages of ecological succession, in which the first invader animals can be cosmopolitan species due to their wide-ranging tolerance.

Key Words: Ostracoda, succession, spring water, ecology, cosmopolitan, pseudorichness

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