

## Habitat preferences of swimming and non-swimming Ostracods (Crustacea) from Gaziantep region, Turkey

Derya AKDEMİR, Okan KÜLKÖYLÜOĞLU, Necmettin SARI & Mehmet YAVUZATMACA

In order to understand habitat preferences of swimming and non-swimming ostracods, 70 samplings from nine different water bodies (rheocrene spring, limnocrene spring, shallow zones of lakes and dams, ponds, troughs, streams, creeks, fountains) were randomly done between 19–29 July, 2010 in Gaziantep region (Turkey).

Total of 29 species (*Candona neglecta*, *C. sanociensis*, *Candonopsis scourfieldi*, *Cypria ophthalmica*, *Cypridopsis vidua*, *Darwinula stevensoni*, *Herpetocypris brevicaudata*, *H. chevreuxi*, *H. helenae*, *H. intermedia*, *H. reptans*, *Heterocypris incongruens*, *Ilyocypris bradyi*, *I. inermis*, *I. monstifica*, *I. decipiens*, *Limnocythere inopinata*, *Physocypris kraepelini*, *Potamocypris villosa*, *P. variegata*, *P. unicaudata*, *P. arcuata*, *P. similis*, *Prionocypris zenkeri*, *Pseudocandona albicans*, *P. hartwigi*, *Psychrodromus olivaceus*, *P. fontinalis*, *Zonocypris* sp.) were found, of which 26 were new reports for the region.

Comparison of habitat preferences (or occurrences) of species with and without (or reduced) swimming setae on second antenna showed differences. Occurrence (presence or absence) of species with setae was not significant ( $p > 0.05$ ) in lentic (standing) and lotic (flowing) aquatic habitats. However, species without swimming setae appears to prefer lotic habitats more than lentic ( $p < 0.05$ ). Species with no/reduced/short swimming setae are mostly bottom-dependent. Therefore, their occurrence in lotic habitats may enhance their dispersion ability, increasing their survival chance in wider range of habitats.

In addition to this, the occurrence (presence or absence) of species comparison between lentic and lotic aquatic habitats shows that, only *Candona neglecta* among the species that found at least 2 times was absent in lentic aquatic habitats ( $p < 0.05$ ) while others were present in both habitats ( $p > 0.05$ ). In this case, some other factors such as cosmopolitan characteristics have effects on the distribution of species.

Accordingly, results suggest that species with swimming setae may have ability of free movement, but a successful widespread distribution can be depending on species tolerance levels as well. Higher levels of tolerances provide broader species distribution due to the advantages that cosmopolitans have over non-cosmopolitans in variety of habitats.

Non-swimming species (except two) were generally placed on the left axis of CCA diagram while swimming species were located on the right side of the axis. First axis of CCA was able to explain 73 % of the relationship between species and environmental variables, when water ( $p = 0.004$ ) and air temperatures ( $p = 0.042$ ) were the most influential variables on species.

---

Authors addresses:

Derya Akdemir

Marmara University, Department of Biology, Kadiköy 34722, Istanbul, Turkey  
deryaak@marmara.edu.tr

OKAN KÜLKÖYLÜOĞLU, NECMETTİN SARI & MEHMET YAVUZATMACA

Abant İzzet Baysal University, Department of Biology, Gököy 14280 Bolu, Turkey