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Non-marine ostracod species distribution in Florida, Jamaica and Dominican Republic

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Ostracods are an extremely important group of bioindicators for paleolimnology because of their excellent preservability and sensitivity for a variety of ecological factors. Paleoenvironmental reconstructions based on biological proxies such as ostracods rely on understanding of relationships between the species and the environment. This knowledge is, however, almost missing for most ostracod species.

Ostracod species distribution and related ecological conditions are poorly known for wide parts of the Neotropics. We studied ostracod species assemblages from 39 water bodies in Florida, Jamaica, and Dominican Republic in order to determine their distribution and to infer ecological preferences especially with respect to conductivity and ion composition. Samples were taken in November/December 2013 and were obtained from different habitats including lakes, rivers, estuaries, swamps, roadside ditches and a spring. Salinity of the water bodies ranged from 0 to 24.9 PSU, pH values ranged from 7.2 to 8.9, and water temperatures covered 12.3°C to 35.1°C.

In total, 44 species were identified of which 14 taxa occur at more than three sites. *Cypridopsis okeechobei* and *Physocypria globula* are the most frequent species. *C. okeechobei* is the most widespread species occurring in all countries whereas *P. globula* is restricted to Florida. Similarity in species is higher between Jamaica and Dominican Republic (β -diversity: 0.44) than between Florida and Jamaica and Dominican Republic (β -diversities: 0.66, 0.67), respectively.

Conductivity and habitat type have been identified as major controls on the species distribution. This study was funded by Austrian Science Fund (FWF project P26554).