

Abstract

Zooplankton pool-inhabiting organisms form metacommunities and metapopulations. Locations are connected through dispersion which is an essential part of colonization-extinction dynamic. Locations vary with the environmental conditions, the specifics of the community and the biotic interactions taking place there. Differences in these parameters may occur between spatially separated pools or in one pool throughout time. These changes are caused by seasonal dynamics, disturbances, long-term development of environmental conditions or biotic factors such as predation, competition and parasite influence. On a long-term scale the locations are classified into rather stable and ephemeral. In pool environment the ephemeral locations may unexpectedly be the driving force of metacommunity and metapopulation processes according to the “inverse mainland-island” theory. Global climate change has an essential influence on zooplankton dynamic in smaller water-bodies. Hydrology of pools and through it also life dynamics of plankton organisms is directly influenced by temperature changes and precipitation. Regional metacommunity and metapopulation dynamics are changing in dependency on regional course of climate change and the specifics of these water-bodies and the communities living there.