

Recurrent response patterns of a zooplankton community to whole-lake fish manipulation

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SUMMARY

1. In a series of whole-lake manipulations conducted from 1984 to 1991, planktivorous fishes were alternately removed and restocked in a small mesotrophic lake, resulting in dramatic changes in the zooplankton community.
2. Response patterns in the zooplankton community, which include species and size structure, and within-year community variability, were examined. Variation in the zooplankton community in unmanipulated years was much lower than that in manipulated years, regardless of direction of the manipulation (i.e. decreasing or increasing planktivory).
3. The succession of zooplankton species abundance was repeated in the second removal of planktivorous fishes. The community shifted from small-bodied cladocerans, copepods and rotifers, through an intermediate state with high abundance of *Holopedium*, to an assemblage dominated by large-bodied daphnids.