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The Metazooplankton Dynamics in a Regulated River System With Estuary Dam During 7 years (1994–2000) (Nakdong River, Korea)

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This river system inherently differs from lakes and reservoirs in terms of hydrology, so that metazooplankton dynamics seemed to be largely affected by hydrological parameters. Inter-annual variability of zooplankton abundance was high, annual mean ranging from 1160 ind./l (1996) to 3330 ind./l (1997). Spatial and temporal variation were shown in zooplankton community structure (ANOVA, $p < 0.05$). Total zooplankton abundance and the number of species increased significantly with distance downstream along the river. Across all stations (five main channels and three tributaries), high zooplankton abundance was observed in spring (ranges from 550 to 4500 ind./l) and fall (950–3200 ind./l). In spring and summer, the dramatic changes of phytoplankton biomass and the shift of the plankton community structure were repeatedly observed in the lower part of the river. Our findings indicate that the relative importance of microzooplankton biomass to both the total plankton and heterotrophic consumer plankton biomass is greater than that of macrozooplankton, suggesting that the microzooplankton is a more important carbon link.

Keywords: Metazooplankton, the Nakdong River, estuary dam, microzooplankton, phytoplankton biomass