

Macrozoobenthos assemblages in shallow lakes in China

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Abstract – Comparative ecological study of zoobenthos was conducted in five lakes representing different retrogressive-succession phases. These lakes are situated along the medium reaches of the River Yangtze. Field investigations were carried out seasonally from July 1993 to April 1994. A total of 114 taxa (including 30 oligochaetes, 51 insects, 22 mollusks and 11 other zoobenthos) were recorded, the number of taxa in the lakes Biandantang, Qiaodun, South Qingling, Dahuangjia and North Qingling being 83, 66, 45, 40 and 14 and the annual mean density (ind. m⁻²) 250, 484, 340, 1024 and 653 respectively. Significant differences in the number of taxa and in the annual average total density and biodiversity were ascertained between macrophytic lakes and algal lakes. Zoobenthic diversities based on K-dominance curves and Shannon-Wiener index followed the order of Biandantang > Qiaodun > South Qingling > Dahuangjia > North Qingling. Our research suggested that the macrophytes are an important “framework” for the maintenance of zoobenthos in shallow lakes, but over-flourished macrophytes could disadvantage zoobenthic survival in the bottom. Therefore, we are of the opinion that moderate fishery exploitation is useful for increasing the biodiversity of zoobenthos in shallow lakes.

Key words: shallow lakes, macrophytes, algae, macrozoobenthos, species richness, biodiversity, abundance.