

## Evaluation of Zooplankton Community and Saprobi Index of Carps Culture Ponds: Case Study on East of Golestan Province-Gonbade Kavous City

**Authors :** Mehrdad Kamali-Sanzighi, Maziar Kamali-Sanzighi

**Abstract :** The aim of this research was to study zooplankton community density, diversity and Saprobi index in carp ponds at Golestan province, Gonbade Kavous city, Iran. Zooplankton sampling was done monthly in each pond during one carp culture time. Our analysis showed 27 genus from 4 groups (Protozoa 12, Rotatoria 8, Copepoda 4 and Cladocera 3). The highest and lowest frequency of zooplankton groups were belongs to Rotatoria, Copepoda, Cladocera and Protozoa with 46, 28, 23 and 3 percent, respectively. No significant differences between saprobi index of six carp ponds ( $P>0.05$ ) were observed. Saprobi index indicated Class  $\beta$ mesosaprob for six analysis ponds. There was a general tendency to decrease and significantly in the saprobi index with the value range of 1.52-1.70 from the beginning to end of the culture season ( $P<0.05$ ). Also, gradual improvement of water quality observed toward the end of culture period and these reasons are partly a result of natural and management processed such as seasons changes (climate), water exchange (replacement of water) and pause of introduce of fertilizer materials to the ponds. According to the ability of saprobi index in monitoring of water quality condition and health of different water resources, focus to similar kind of effective research is necessary in future time.

**Keywords :** zooplankton, saprobi pollution index, water quality, fish pond, east of Golestan Province

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