

Phytoplankton Community and Saprobic Pollution Index of Warm Water Fishes Ponds at East of Golestan Province: Case Study: Gonbade Kavous City

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Abstract : The aim of this investigation is to study the phytoplankton and saprobic index at warm water fish ponds in the East of Golestan province, Gonbade Kavous city. Phytoplankton and ciliate sampling were done monthly during one season of culture. Finally, 39 genera from 7 classes of phytoplankton and 4 genera from the ciliate group were identified. Although, among different classes, Chlorophyceae, Cyanophyceae, Bacillariophyceae, Charophyceae, Chrysophyceae, Dinophyceae, and Euglenophyceae had the highest and lowest frequency percent of phytoplankton community with 23, 21, 20, 14, 11, 6 and 5 percent respectively. The results show that there are no significant differences between the saprobic index of different ponds ($P > 0.05$). But there are significant differences between the saprobic index value of different months and seasons during season culture ($P < 0.05$). Also, in current research, the saprobic index indicated the β -mesosaprob water quality level. There was a general trends of decrease in the saprobic index value from the beginning to the end of the culture season. Parameters such as biomass increase of grower fishes, an increase of introduced chemical fertilizer and manure sedimentation, uneaten fish feed, fish fecal, and no regular exchangeable water resources are some of these changes' reasons.

Keywords : fish pond, Golestan Province, saprobi index, phytoplankton, water quality

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