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An assessment on species richness of Ichthyofauna in the Thalangama lake

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The study was conducted over a period of four years to estimate the species richness of a suburban lake at Thalangama, in close proximity to Colombo. Weekly excursions were made to the study site. Fishes were caught using hand nets. The sampling locations were randomly selected. To randomly select the sampling locations, 1: 50000 grid map of the lake area was used. Numbers were given to the grids and using a random number table, sampling grids were chosen. The sampling sites were selected that correspond to the grid number in the map. Sampling sites included the periphery of the lake, vegetated areas, open water and deep central areas of the lake. Records were also taken from catches of fishermen and visual observations, especially in the case of large-sized fish species. All fish species encountered were identified, recorded and released back. Twenty-seven species of freshwater fishes were encountered in this study, which consisted of five freshwater fish orders (Cypriniformes, Siluriformes, Cyprinodontiformes, Perciformes, and Channiformes) and 12 freshwater families (Channidae, Belontiidae, Anabantidae, Gobiidaea, Cichlidae, Poeciliidae, Aplocheilidae, Heteropneustidae, Siluridae, Bagridae, Cyprinidae, Cobitidae). Five introduced species were recorded in this study. Among the 22 indigenous fish species, six were endemic. One endemic genus was also recorded in this research, *Malpulutta*. No significant variation in species richness or species composition of fish was observed over the four years. The species richness of the four consecutive years 2001, 2002, 2003 and 2004 were 27, 27, 26 and 26 respectively. Nevertheless, the relative abundance of two species, *Horadandia autukorali* and *Aplocheilus dayi* reached extreme high levels in October-December period in each year. The lake is subjected to pollution due to garbage dumping, eutrophication followed by soil erosion and inputs of agro-chemicals. Destruction of surrounding vegetation, invasion by introduced fauna and flora aggravated this situation. As a perfect habitat complex for suburban and urban wildlife, especially freshwater fish, the Thalangama Lake and its environment should be subjected to conservation and management strategies. In the process of conservation, the restoration and reclamation of vegetation of the lake vicinity, protection of the nearby marshes, and prevention of further pollution and removal of invasive species should be implemented.

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