

## **Diversity of ichthyofauna in an abandoned and an active paddy field in Boralugoda GN Division in Kaduwela municipal council area**

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Paddy fields are manmade wetlands which provide habitats for a large number of freshwater fish species. Owing to uncontrolled reclamation and usage of pesticides, most of freshwater fishes are wiped out them. Therefore, this study attempted to determine the diversity of the ichthyofauna in an active and an abandoned paddy field.

The studied paddy fields are located in Boralugoda GN division (489/A) in Kaduwela municipal council area. The paddy fields are located within the catchment area of Kelani River. During the study fish species at six selected sites, three from active area and three from abandoned area were collected from the hand net by using random sampling method and their species diversity and species richness were determined. Physico-chemical parameters in water such as pH, temperature, visibility and flow rate were also measured. In addition, anthropogenic activities and the distribution of peripheral and submerged vegetation were recorded. Data were collected once a week from January to June 2009. According to the results, a total of 19 species were detected from the abandoned paddy field sites while 16 species were detected from the active sites. In abandoned and active paddy fields, 6 and 4 endemics were found respectively. The mean abundance of the species in cultivating sites were significantly lower than the abandoned sites ( $P < 0.05$ ). *Puntius vittatus*, *Rasbora daniconius*, *Lepidocephalichthys thermalis*, *Aplocheilus parvus* and *Aplocheilus dayi* were the dominant species in both areas. *Oreochromis mossambicus*, an exotic species was also found in both areas and *Rasbora wilpita*, *Heteropneustes fossilis*, *Channa orientalis* and *Channa gachua* were the least abundant species which varies in between 0 – 0.02 in both areas. *Esomus thermoicos*, *Puntius titteya* and *Puntius bimaculatus* were only recorded in abandoned sites. Shannon Weiner index of diversity was higher in abandoned area (0.07) compared to active fields (0.04) ( $P < 0.05$ ). There were no significant differences in flora and physico-chemical parameters in two sites. It is concluded that diversity of ichthyofauna in paddy fields are significantly higher in abandon areas that active areas. Further studies are necessary to determine the impact of nitrates, phosphates, and the pesticides on ichthyofauna in the studied sites.