

## Food resource partitioning among the accidentally introduced *Pterygoplichthys multiradiatus* (Sucker mouth cat fish) and co-occurring fish species in Polgahawewa reservoir at Ragama, Sri Lanka

M.U.I. Wijethunga and U.P.K. Epa\*

Department of Zoology, University of Kelaniya, Kelaniya 11600, Sri Lanka

Introduction of exotic species has been considered as one of the major threats to the biological diversity of Sri Lanka. Number of fish species has intentionally and accidentally introduced in to fresh water eco systems of the country while several exotic species have adversely affected the indigenous fish fauna resulting in decrease in their abundance.

*Pterygoplichthys multiradiatus*, the sucker mouth catfish is one of the accidentally introduced exotic fish species and occurs mainly as localized populations around Colombo, Gampaha, Kandy and Kaluthara due to release from the tanks and ponds of hobbyists and aquarium fish breeders to natural water bodies in these areas. The present study was carried out with a view to investigating the food resource partitioning of *P. multiradiatus* with the coexisting fish species in a lentic water body, Polagawewa Lake in the western province, Sri Lanka.

Fish species present in the lake were sampled using a cast net (mesh size: 1.3cm) from June to September 2007. Food and feeding habits of fish were investigated examining stomach/gut contents of sampled fish. A diurnal survey was also carried out to investigate diurnal feeding patterns of co-occurring fish species. The stomach contents or first third of the gut of the fish were volumetrically analysed. Relative abundance of different food categories of different fish species and the food items consumed by different size classes of *P. multiradiatus* were evaluated. Total length, standard length, head length, diameter of eye, body height, body width, gape height, gape width, gut length and body weight of each sampled fish were also recorded.

Two exotic fish species (*Oreochromis mossambicus* and *P. multiradiatus*) and seven indigenous fish species (*Puntius dorsalis*, *P. filamentosus*, *Rasbora daniconius*, *Epiplatys suratensis*, *E. moaculatus*, *Mystus gulio*, *Amblypharyngodon melattinus*) were caught during the sampling period. According to Schoener's index (S), high dietary overlap ( $S = 86.87\%$ ) was observed between the two exotic species, *P. multiradiatus* and *O. mossambicus*. *P. multiradiatus* had a moderate food niche overlap with all other seven indigenous fish species ( $33\% < S < 66\%$ ).

Blue green algae, green algae, detritus, diatoms, macrophytes and insect parts were the most common food items found in the gut contents of all the fish species. According to the volumetric proportions, the abundance of food items