SECTION D

401/D

A study on finfish and shellfish species in the NARA mangrove reserve, Kadolkele, Negombo, Sri Lanka

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This study was conducted to understand Finfish and Shellfish diversity to enhance the knowledge on biodiversity of NARA mangrove reserve, Kadolkele 10 ha in extent is located on the right bank of the northern part of Negombo Estuary ($7^0$11' N, $79^0$50' E). The ecological value of mangroves is the least concern of people in the surrounding area and this mangrove patch is frequently under threat due to high land demand and its high economic value. It is essential to understand biodiversity and other relevant ecological features in order to determine strategies to conserve this mangrove forest. In total, 29 mangrove species, including 18 considered as true mangroves present in this reserve. There were no any detail taxonomic studies to understand faunal composition of this reserve. Diversity of fauna in mangrove forests of Sri Lanka is so immense but is a relatively poorly dealt subject. The main objective of the present research was to explore the species diversity of finfish and shellfish species in mangrove reserve and provide information for formulate guidelines for the conservation and management of Kadolkele mangrove reserve. Data was collected from random sampling in surrounding water bodies from February to December 2007. Monthly sampling was carried out using cast nets and monofilament gill nets. Collected finfish and shellfish species were identified using available keys and descriptions. Results of the study indicated that there was a high diversity of finfish species which consisted of 35 species belongs to 27 families. The fish include freshwater forms, brackish water forms, fresh-brackish water migratory forms and marine- brackish migratory species. Shellfish species represented by 4 shrimp species (i.e. *Penaeus indicus, Penaeus merguiensis, Penaeus monodon, Metapenaeus dobsoni*), fresh water prawn (*Macrobrachium rosenbergii)* and crab species (*Scylla serrata)*. Families with the highest abundance of finfish were Cichlidae, Belontidae and Anabantidae. *Oreochromis mossambicus, Trichogaster pectoralis* and *Anabas testudineus* species dominated in families of Cichlidae, Belontidae and Anabantidae respectively. Knowledge of the species composition of finfish and shellfish of this mangrove reserve is an important prerequisite, not only to understand all the aspects of structure and function of this reserve, but also to formulate guidelines for their conservation and management.

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