

Effect of Tidal Zones on Some Aspects of Fish Biodiversity in East Hammar Marsh, Basrah, Iraq

Fadia K.H. Raadi

Department of Fisheries and Marine Resources, College of Agriculture, University of Basrah, Basrah Iraq, fodfod97@yahoo.com

Amjed K. Resen

Department of Fisheries and Marine Resources, College of Agriculture, University of Basrah, Basrah Iraq

Salah M. Najim

Department of Fisheries and Marine Resources, College of Agriculture, University of Basrah, Basrah Iraq

Abstract

The current study describes the movements of nine fish species in the tidal and intertidal areas of East Hammar Marsh during different seasons of the year. The study was conducted at three stations in East Hammar tidal marsh; Al-Sallal station LLW (subtidal zone), Al-Mansory station MHW (intertidal zone) and Al-Burka station HHW (tidal zone). The results indicated that Al-Sallal station was characterized by dominating species of (*O. aureus*, *O. niloticus*, *P. latipinna*, *C. auratus*, *P. abu*, *T. ilisha*, *T. whiteheadi*), Al-Mansory station by (*O. aureus*, *O. niloticus*, *P. latipinna*, *C. auratus*, *P. abu*, *T. whiteheadi*), and Al-Burka station by (*O. aureus*, *O. niloticus*, *P. latipinna*, *C. zillii*, *C. auratus*, *P. abu*, *T. whiteheadi*). The native species *S. triostegus* prevailed in both subtidal during winter and intertidal zones during all other seasons. In contrast, *P. abu* showed a migration into the subtidal zone in all seasons with returning in autumn into the subtidal and tidal zones. In all seasons, the marine species *T. ilisha* was migrated densely from the subtidal zone into the tidal zone, unlike *B. fuscus* which dominates the subtidal zone. However, the marine species *T. whiteheadi* dominated the intertidal zone at all the seasons except winter when it migrates into the subtidal and tidal zones. The exotic species *C. zillii* populated the tidal zone zone all over the year, while *C. auratus* migrates into the tidal zone at spring and summer but in autumn and winter it migrates into the intertidal zone. On the other hand, *O. aureus* dominated the subtidal zone during winter and summer, and the tidal zone at summer and autumn, while *O. niloticus* migrates into the intertidal zone in winter and spring but at summer it migrates into the tidal zone then at autumn it returns back to the subtidal zone. It was concluded that most fish species in this marsh have seasonal migrations into the intertidal from tidal and subtidal zones and vice versa. The zonation patterns were significantly affected by several factors including evading predators, food availability, salinity, spawning site and avoiding seasonal fluctuations of temperature.

Keywords: *East Hammar Marsh, fish assemblage, biodiversity, zonation, tidal zones.*