Diel and tidal changes in intertidal fish fauna composition from mangrove creeks of Qeshm Island, Persian Gulf, Iran

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Abstract

Information on the mangrove-associated fish fauna from the northernmost edge of mangrove distribution in the Indian Ocean is virtually non-existent. We studied temporal changes in fish community structure from 4 Iranian intertidal mangrove creeks by setting block nets at high water (December 2011-Januaray 2012) at Qeshm Island by considering tide and time of day: spring tide day, spring tide night, neap tide day, neap tide night. First results from our winter sampling (wet season) found a total of 20 fish species from 17 families. *Liza subviridis, Leiognathus daurus, Gerres poieti* and *Scatophagus argus* were the most abundant species. The fish assemblage was dominated by small-sized fish. The number of species and diversity H´ was highest at spring tide-night and lowest at neap tide-day. Diversity H´ ranged between 1.1 at neap tide-day and 1.9 at spring tide-night. Evenness J´ was lowest at spring tide night (0.7) due to entering more rare species which increased dominant species in quantitative proportion. An overlap in species composition (80% similarity) was found for spring tide day and also neap tide assemblages were different from the spring tide ones.
Preliminary result indicate that diel and tidal changes in fish community structure in an arid environment along the Persian Gulf show the similar pattern like Brazilian and Colombian mangroves which are located in a tropical rainy environment.

Keywords
fish migration, community structure, mangrove creeks, Strait of Hormuz