

Observation on reef fishes in the coastal waters off some Iranian Islands in the Persian Gulf

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Abstract. A number of reef fish species are reported following visual assessment in the shallow water off the coasts of ten Iranian Islands in the Persian Gulf between 1994 and 1996. Of the major groups of taxa encountered, *Pomacanthus maculosus* (Pomacanthidae) and *Acanthurus sohal* (Acanthuridae) were the most widely distributed species. However, the most abundant species belonged to Lutjanidae, followed by Scaridae. The fishes of artificial structures were dominated mostly by *Abudefduf saxatilis*. Multidimensional scaling (MDS) applied to the species matrix revealed three groups of stations (islands): two groups of islands which lay close to each other and one group of islands which were relatively far apart. The feeding habits of reef fishes are described.

Kurzfassung. Zwischen 1994 und 1996 wurden in der Flachwasserzone von 10 Inseln im iranischen Teil des Persischen Golfes die Fische der Korallenriffe optisch erfasst. Unter den wichtigsten Gruppen sind *Pomacanthus maculosus* (Pomacanthidae) und *Acanthurus sohal* (Pomacanthidae) die am weitesten verbreiteten Arten. Die häufigsten Arten jedoch gehörten zur Familie der Lutjanidae, gefolgt von den Scaridae. Künstliche Bodenstrukturen wurden meist von *Abudefduf saxatilis* dominiert. Eine für die Artenmatrix durchgeführte multidimensionale Skalierung (MDS) zeigt, dass im Persischen Golf drei Gruppen von Stationen (Inseln) existieren: zwei Gruppen von Inseln, die relativ nahe beieinander liegen, und eine Gruppe von Inseln, die voneinander relativ weiter entfernt sind. Beobachtungen zur Nahrungssuche von Riff-Fischen werden mitgeteilt.

Key words. Lutjanidae, Scaridae, Persian Gulf (Arabian Gulf), Iran, Middle East.

Introduction

Ecological work on the fish communities associated with coral reefs has expanded rapidly since the 1960s. It is widely recognized that these fish communities are highly diverse systems (EMERY 1978). Many fish coexist and utilize the available resources, especially food and living spaces, within reef habitats. Although several checklists exist for the Persian Gulf ichthyofauna (BELGVAD 1944, KURONUMA & ABE 1972, BASSON et al. 1977, RANDALL et al. 1978, RELYEA 1981, DOWNING 1985, SMITH et al. 1987), there is no information on the reef fish species in the northern part of the Gulf. This is partly due to the fact that the reef fishes were not considered to be an economically viable resource and that underwater sampling is relatively difficult. They live in an environment that has had a long, stable geological history (HELFRICH & TOWNSLEY 1965). The remote Iranian offshore islands support the prolific coral coverage in the northern part of the Gulf.

Under the auspices of Iranian Fisheries Research and Training Organization (IFRTO), an investigation into the ecology of marine molluscs around several Iranian Islands in the