Persian Gulf fish species biogeography, based on habitat similarity

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The present study was conducted during 2011 – 2015, with the aim of obtaining new information about the Persian Gulf (and the Strait of Hormuz) ichthyo fauna zoogeography and biogeography, habitat overlapping and fish species similarity of the Iranian waters of the Persian Gulf (and the Hormuz Strait) and Indo-Pacific region seas. The final list of approved fish of the Persian Gulf contains 907 species, of which 93 species are of cartilaginous families; and 814 species are of bony fishes. 294 species (32.4 %) belong to benthic habitats and 613 species (67.6 %) belong to pelagic habitats. The fish in the coral reefs and rocky habitats (with 14.3 %) and reef associated fishes in the range of pelagic fishes (with 47.8 %) show the highest numbers and percentage of habitat diversity. Fish habitats with sea grass and algae (.9 %) and pelagic - Oceanic (3.3 %), show the lowest number and percentage of habitat diversity. 13 species as well as endemic species are unique to the area. Based on the presence of certain species of fish fauna of the Persian Gulf in the Red Sea and the Bay of Bengal (East Arabian Sea), habitat similarities of the fish fauna of the Persian Gulf is closer (about 50%) in comparison with other similar seas in the Indian Ocean area. The Mediterranean (East area) and the Hawaiian Islands have the lowest overlap and similarity (about 10%) of habitat and species.

Key words: *Indo-Pacific Ocean, Endemism, Habitat diversity, Biogeography, Persian Gulf, Ichthyo fauna.*