

Observations on the Eastern Red Sea Elasmobranchs: Data on Their Distribution and Ecology

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Abstract : Nowadays, elasmobranch populations are disappearing at a dangerous rate, mainly due to overexploitation, extensive fisheries, as well as climate change. The decline of these species can trigger a cascade effect, which may eventually lead to detrimental impacts on local ecosystems. The Elasmobranch in the Red Sea is facing one of the highest risks of extinction, mainly due to unregulated fisheries activities. Thus, it is of paramount importance to assess their current distribution and unveil their environmental preferences in order to improve conservation measures. Important data have been collected throughout the whole red Sea during the Red Sea Decade Expedition (RSDE) to achieve this goal. Elasmobranch sightings were gathered through the use of submarines, remotely operated underwater vehicles (ROV), scuba diving operations, and helicopter surveys. Over a period of 5 months, we collected 891 sightings, 52 with submarines, 138 with the ROV, 67 with the scuba diving teams, and 634 from helicopters. In total, we observed 657 and 234 individuals from the superorder Batoidea and Selachimorpha, respectively. The most common shark encountered was *Iago omanensis*, a deep-water shark of the order Carcharhiniformes. To each sighting, data on temperature, salinity density, and dissolved oxygen were integrated to reveal favorable conditions for each species. Additionally, an extensive literature review on elasmobranch research in the Eastern Red Sea has been carried out in order to obtain more data on local populations and to be able to highlight patterns of their distribution.

Keywords : distribution, elasmobranchs, habitat, rays, red sea, sharks

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