

Exploring the diversity of Chondrichthyes from Andaman waters, India

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Andaman & Nicobar Islands of India are surrounded by a variety of coastal habitats such as mangroves, seagrass beds and fringing reef ecosystems, supporting diverse flora and fauna, and providing a wide ranges of socio-economic services. Compared to the other parts of Indian EEZ, the coastal waters of these Island largely remains unexplored. Studies on chondrichthyans are scarce and limited data is available. Present study is an attempt to give a detailed account on diversity and richness of cartilaginous fishes (Sharks, Skates, Rays & Chimaeras). This study is based on the surveys conducted for two years (2014-2016) at various fish landing centers (single day/multi-day commercial fishing vessels), fish market and deep-sea oceanographic exploratory surveys (FORV SagarSampada) around Andaman Islands. The present findings revealed a total of 16 species of chondrichthyans in exploratory surveys which includes chimaeras (2), sharks (10), rays (2), skates (2) and more than 30 species in commercial fishery as targeted and also as bycatch. Surveys provided an insight to unexplored diversity, with several new reports to region including *Proscyllium magnificum*, *Neoharriotta pinnata*, *Hexanchus gri-*

seus, *Hepttranchias perlo*, *Cephaloscyllium silasi* and *Echinorhinus brucus*. Findings also revealed two new records of ray are in press from the region, namely *Rhinoptera jayakari* and *Gymnura zonura*. Several unidentified specimens are also collected, belonging to Chimaeridae, Triakidae, Rajidae, which will further increase the diversity of region. An updated checklist was prepared from the region which consists of 80 chondrichthyans species recorded covering 10 orders and 30 families with Chimaeras (2), sharks (49), Skates (1), Rays (21), Sawfishes (3) and Guitar fishes (4). Diversity of chondrichthyans shows Carcharhiniformes as most diverse with 6 families followed by Myliobatiformes with 4 families and *Carcharhinus* were the most diverse genus. Bathymetrically, depth range 600-800m and spatially, latitude 12-13°N were the most diverse in comparison to other locations. An estimated 245 tonnes of chondrichthyans were recorded during 2014-15 in Andaman fishery and 158 tonnes during 2015-16. Outcomes from present study indicates rich diversity and unexplored areas in Indian EEZ, which require to study in detail to understand the status of chondrichthyans.

Keywords: Chondrichthyes, species composition, diversity, Andaman Islands, Indian EEZ.