

# Marine Megafauna

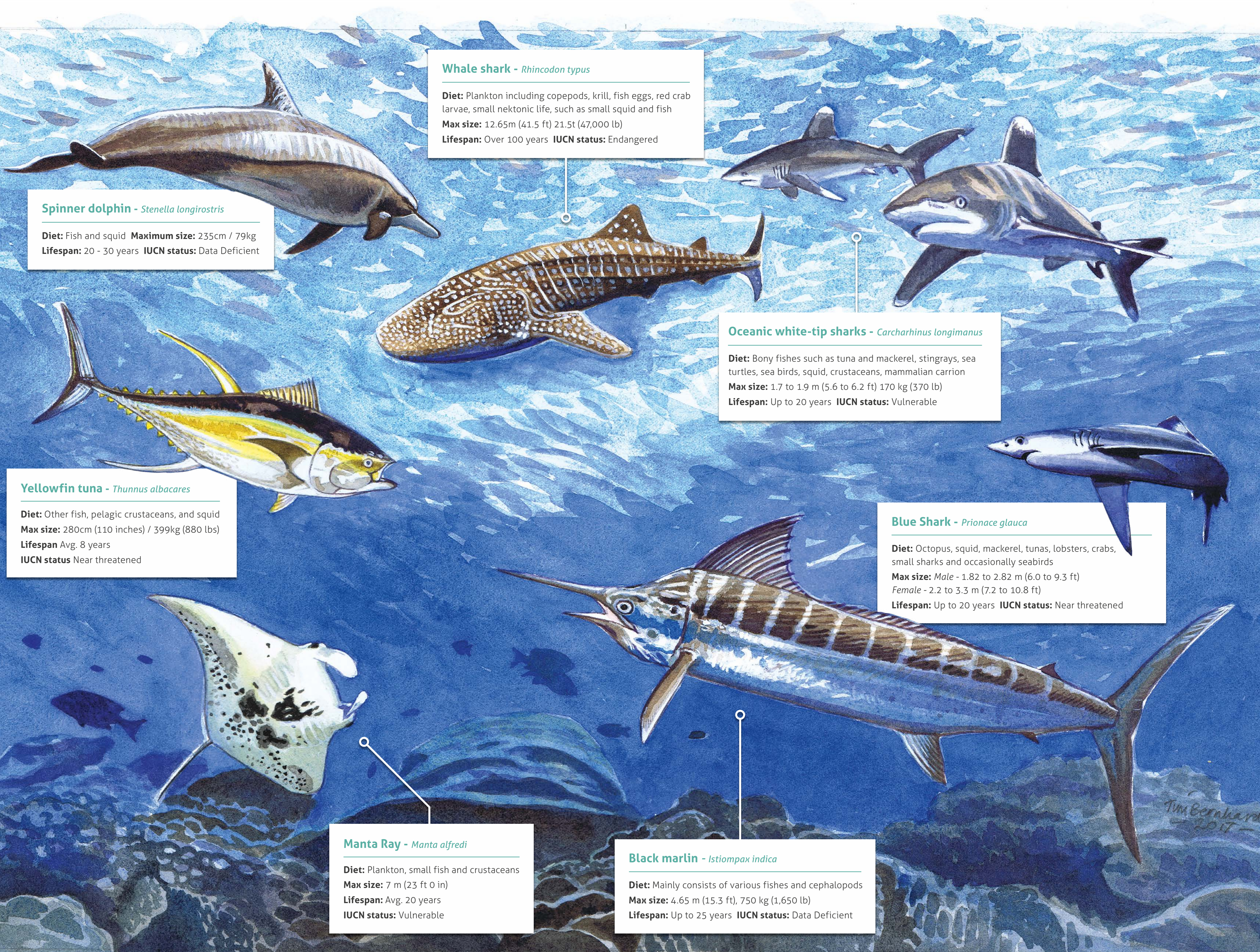
The deep waters surrounding the reefs and islands of the British Indian Ocean Territory are part of the pelagic zone. This is the largest habitat on earth, with a volume of 330 million cubic miles, a vast liquid space, without boundaries.

At the base of the food-chain are organisms too small to even see: microscopic plants or phytoplankton. These in turn feed a host of tiny animals, the zooplankton. Zooplankton help to support some of the largest creatures in the oceans, including the filter feeding **whale sharks** and **manta rays**. These graceful creatures open their gaping mouths to ingest seawater. Then, using specially adapted gills they sieve the water for zooplankton. Where zooplankton form dense swarms, manta rays use a behaviour known as 'barrel-rolling', making repeated vertical loops in one location, sometimes for many minutes, to capture as much food as possible. Whale sharks, the world's largest living fish, have been recorded in BIOTs waters, diving to depths of around 2000m and travelling around 30km in a day.

Other pelagic predators, such as **yellowfin tuna** and **marlin**, hunt in an entirely different way, using their speed and endurance to cover large distances in search of other fish or squid. The fastest animal in the ocean is the **black marlin**, which has been clocked at 130km/hr. These incredible animals are able to power these bursts of speed because they can regulate their own body temperature. Unlike other fish they keep their bodies warmer than the surrounding water greatly increasing their muscular power.

Sharks are also found patrolling the pelagic zone – like the marlin and tuna they have a fast metabolism and need to swim constantly to maintain a sufficient flow of oxygen over their gills. **Oceanic white-tip** and **blue sharks** grow to almost 4m (12 ft) in length. These animals are opportunistic feeders, taking barracuda, tuna, swordfish, squid, dolphins, and seabirds.

All these species have one factor in common - they have all suffered very high mortality from fishing. Populations are declining world-wide and at least some of these species, including whale sharks and manta rays, reproduce slowly, making it very difficult for their populations to recover. Whilst in the 640,000km² of the BIOT Marine Protected Area however, where all commercial fishing is banned, all these species are safe from fishing.



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