

Marine biology: Habitats and its Distribution factors

Masud Larseh*

Department of Anatomy and Histology, Agricultural University, Sylhet, Bangladesh

Opinion Article

Received: 30-Nov-2022, Manuscript No. JZS-22- 99003; **Editor assigned:** 02-Dec-2022, Pre QC No. JZS-22-99003 (PQ); **Reviewed:** 16-Dec-2022, QC No. JZS-22- 99003; **Revised:** 23- Dec-2022, Manuscript No.JZS-22- 99003 (R); **Published:** 30-Dec-2022, DOI: 10.4172/2321-6190.10.8.003

***For Correspondence:**

Masud Larseh, Department of Anatomy and Histology, Agricultural University, Sylhet, Bangladesh
E-mail: mas.larseh259@gmail.com

ABOUT THE STUDY

Marine biology is the scientific study of the biology of marine life, organisms in the sea. Given that in biology many phyla, families and genera have some species that live in the sea and others that live on land, marine biology classifies species based on the environment rather than on taxonomy. A large proportion of all life on Earth lives in the ocean. The exact size of this large proportion is unknown, since many ocean species are still to be discovered. The ocean is a complex three-dimensional world covering approximately 71% of the Earth's surface. The habitats studied in marine biology include everything from the tiny layers of surface water in which organisms and abiotic items may be trapped in surface tension between the ocean and atmosphere, to the depths of the oceanic trenches, sometimes 10,000 meters or more beneath the surface of the ocean.

Specific habitats include estuaries, coral reefs, kelp forests, seagrass meadows, the surrounds of seamounts and thermal vents, tidepools, muddy, sandy and rocky bottoms, and the open ocean (pelagic) zone, where solid objects are rare and the surface of the water is the only visible boundary. The organisms studied range from microscopic phytoplankton and zooplankton to huge cetaceans (whales) 25-32 meters (82-105 feet) in length. Marine ecology is the study of how marine organisms interact with each other and the environment.

Marine life is a vast resource, providing food, medicine, and raw materials, in addition to helping to support recreation and tourism all over the world. At a fundamental level, marine life helps determine the very nature of our planet. Marine organisms contribute significantly to the oxygen cycle, and are involved in the regulation of the Earth's climate. Shorelines are in part shaped and protected by marine life, and some marine organisms even help create new land.

Marine biology can be contrasted with biological oceanography. Marine life is a field of study both in marine biology and in biological oceanography. Biological oceanography is the study of how organisms affect and are affected by the physics, chemistry, and geology of the oceanographic system. Biological oceanography mostly focuses on the microorganisms within the ocean; looking at how they are affected by their environment and how that affects larger marine creatures and their ecosystem.[6] Biological oceanography is similar to marine biology, but it studies ocean

life from a different perspective. Biological oceanography takes a bottom up approach in terms of the food web, while marine biology studies the ocean from a top down perspective. Biological oceanography mainly focuses on the ecosystem of the ocean with an emphasis on plankton: their diversity (morphology, nutritional sources, motility, and metabolism); their productivity and how that plays a role in the global carbon cycle; and their distribution (predation and life cycle).[6][7][8] Biological oceanography also investigates the role of microbes in food webs, and how humans impact the ecosystems in the oceans.

Marine habitats can be divided into coastal and open ocean habitats. Coastal habitats are found in the area that extends from the shoreline to the edge of the continental shelf. Most marine life is found in coastal habitats, even though the shelf area occupies only seven percent of the total ocean area. Open ocean habitats are found in the deep ocean beyond the edge of the continental shelf. Alternatively, marine habitats can be divided into pelagic and demersal habitats. Pelagic habitats are found near the surface or in the open water column, away from the bottom of the ocean and affected by ocean currents, while demersal habitats are near or on the bottom. Marine habitats can be modified by their inhabitants. Some marine organisms, like corals, kelp and sea grasses, are ecosystem engineers which reshape the marine environment to the point where they create further habitat for other organisms.