

Difference between Marine Biology Versus Biological Oceanography

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Marine Biology is the study of marine life, right from micro planktons to plants and animals in the oceans and saltwater circumstances. In reality, marine biology is closely related to oceanography and to have a full perception of marine biology; it is dominant to have some comprehension of oceanography. Marine Biology's varies is quite broad; specializations can be based on a single species, family, behaviour, or ecosystem. For example, marine biologists may choose to study a single species of fish or all fish varieties that are native to a climate or region [1]. Like oceanography, marine biology is also interdisciplinary where cellular biology, chemistry, ecology, geology, meteorology, botany, genetics, molecular biology, physical and biological oceanography, and zoology intersect.

Oceanography and Marine Biology have lots of overlap of course, but the difference is pretty clear. To better understand what each emphasizes, we need to understand the work of oceanographers and marine biologists [2].

Biological Oceanography is the study of the ocean through the lens of marine life, its distribution, abundance, environmental interaction, and predation. Biological Oceanographers look into the processes that lead to the unique behavioral and reproductive patterns of marine organisms. They will also study the ocean's chemical makeup and ecology to better understand relationships in the oceans. Any sudden shift in the chemical profile of the ocean has a profound effect on its inhabitants.

Chemical Oceanography studies ocean chemistry. It is a field that is very much in the exploratory phase [3]. Chemical oceanography can be further divided into marine chemistry (studies the concerned

with chemical constituents of seawater) and marine geochemistry (studies geological processes, the chemistry of ocean floor, and the role of microbes in the formation or alteration of the ocean's geology. Ocean chemistry provides a window into the origin and evolution of marine life, chemical mass balance, ocean sediments, and climate. Chemical oceanographers' majorly look into ocean acidification and its effect on ecology and the influence of changing geology and biological activity in the ocean. They also collaborate with biological and physical oceanographers to study human-induced marine pollution and to protect and preserve the marine ecosystem.

Physical Oceanography look into the interaction of the ocean with the atmospheric factors including temperature, salinity, density, wind speed, tides, eddies, and gyres [4]. They also seek answers to coastal erosion, ocean circulation, and fluid motion. Physical mechanisms responsible for sea ice and polar ice sheet distribution are also the focus area of the physical oceanographers.

Geological Oceanography referred to as geophysical oceanography, Geological Oceanography is the study of the ocean floor and many interesting formations under the water-mountains, volcanoes canyons, and valleys. For example, the Mid-Ocean Ridge, the longest continuous mountain chain on the planet is a hot research topic among geological oceanographers.

References

1. Halanych KM, Westerholm DG (2021) Considerations for scientists getting involved in oil spill research. *Oceanography* 34: 112-123.
2. Kappel E (2021) Oceanography happenings. *Oceanography* 34: 5.
3. Boxall S (2021) A new way of learning. *Oceanography* 34: 274-275.
4. Farrell JW (2021) Career profiles-Options and insights. *Oceanography* 34: 276-277.

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