

## Kinds of Adaptations in Aquatic Organisms

Karson Lopez\*

Department of Aquaculture and Fisheries, Kentucky State University, USA.

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### Introduction

There are many kinds of organisms living in the oceans and sea like fish, shellfish, mammals etc., each of them exhibit some adaptations so as to suit the environment where they are surviving. The organisms living in the marine habitats has to drink a lot of water as it continuously loses water and pumps out the excess salt that it takes from the seawater. There will be different kinds of kidneys or gills adapted for the surroundings. But in the case of shark, the water does not flow out of its body as it has urea and other constituents as that of salt in the sea.

The marine organisms must be able to take the dissolved oxygen from water and this is taken by the simple diffusion through skin in worms and other organisms use gills and lungs for this purpose. All the organisms use oxygen and release carbon dioxide into water which is turn used by the plants. The temperature also is a great factor in marine life, where some organisms have blubber to protect themselves from the cold currents and other have anti-freezing chemicals in them. Some slow moving organisms use their ability to escape from the predators.

The weeds or plants are attached to the rocks, their leaves have special adaptations which protect them from tearing and drying. Animals like whales use unique sounds to communicate and navigate others. Crab's larvae also use the sounds to find a place to metamorphose in to adults. The organisms have different colours and patterns on the body so as to avoid the predators. Some organisms have sting on the posterior part of the body which as a defence tool while escaping from predator. Some fish like shark and ray can sense the weak electric fields produced by the fish by a special sensing system. Eel has the ability to produce electric shock.

By breaking down salt into chlorine and sodium ions, ocean plants have adapted to the salinity. Some plants accumulate salt and then expel it through their respiratory system. Many plants that thrive near the beach may have succulent

leaves that store water in the leaves. The plants use water to dilute the salinity of the water. Another strategy to adapt to the conditions in a saltwater biome is to reduce the leaf surface area. Marsh grass extracts the salt, and white salt crystals can be seen on its leaves.

Living beings have maintained an interior environment that roughly resembles the ionic composition of the primordial seas since life originated several billion years ago in the oceans. The ionic conditions in which life began are likely to be unique in their suitability for its perpetuation. The interactions of nucleic acids with each other and with proteins, the folding and performance of proteins such as enzymes, the functioning of intracellular machines such as ribosomes, and the maintenance of cellular compartments, all of these chemical phenomena are critically dependent on the ionic milieu in which the reactions take place, according to laboratory studies.

### Conflict of Interest

We have no conflict of interests to disclose and the manuscript has been read and approved by all named authors. The Authors are very thankful and honored to publish this article in the respective Journal and are also very great full to the reviewers for their positive response to this article publication.

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### \*Correspondence to

Karson Lopez,  
Department of Aquaculture and Fisheries,  
Kentucky State University,  
USA  
Email karson.L@gmail.com