Adaptations In Animals

Adaptation, by definition, is any change in the structure or functioning of an organism that makes it better suited to its environment. Adaptation, in essence, is a boon that every organism in nature is gifted with. It is because of their ability to adapt to change, that living beings can survive in diverse kinds of environment. Animals and plants have adapted themselves to their habitat and have therefore been able to survive. Adaptation is the ability of a living being to adapt to its environment by changing its function or behavior. Here is an overview of some of the interesting animal adaptations observed in nature.

Adaptations in Animals

One of the very well-known examples of animal adaptations is that of the ships of the desert, the camels. To protect itself from the blowing sand of the desert, a camel has two rows of long and thick eyelashes. Its nostrils can be closed to prevent the blowing sand from getting in. Its hooves with broad and leathery pads create a snowshoe effect and prevent a camel from sinking in the sand. Its hump that stores fat helps a camel sustain for long spans without food and water. Some desert mammals like mule deer adapt to the harsh climatic conditions by remaining active only during the first few hours of dawn and dusk.

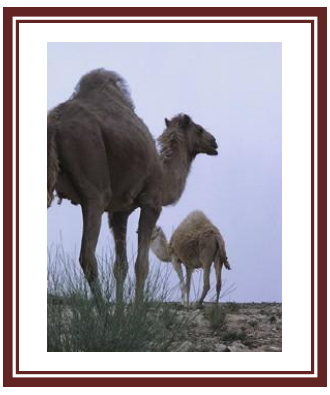
Polar bears, which inhabit the polar regions of the planet, have adapted to the aquatic environment. They have a thick layer of fat and dense layers of fur to protect them from the cold. A similar adaptation is found in a musk ox. It also has two layers of fur. The air trapped between the layers helps it thrive in the cold climates. The front paws of polar bears propel through water and their nostrils can be closed when swimming underwater. This adaptation gives them the ability to travel for long distances underwater. The layer of blubber on their bodies serves as an effective insulation and helps them maintain a normal body temperature.

Giraffes exhibit some interesting adaptations that help them survive in the savannas. Their fringed tails help keep flies and insects away. Their long legs and long neck provide them with the height to reach tall trees. The long tongue helps a giraffe strip off leaves while its tough lips protect it from thorns.

Many animals exhibit the feature of camouflaging, which helps them hide from predators and also helps them catch their prey. Giraffes have a camouflaged coat that helps them hide themselves from their enemies. The white coat of polar bears helps them camouflage with the white snow. A common snake-neck turtle is covered in camouflaging algae. A mackerel tabby blends with its environment. Certain fish possess the abilities to change their skin color by changing their diet.

A unique animal adaptation observed in certain fish is that of counter shading. Pelagic fish are often light colored at the bottom and dark towards the top. Due to this coloration, the birds flying atop cannot see the fish easily due to their dark color while the fish swimming below them do not easily see their light colored bodies. The shape of the bodies of fish is another adaptation that helps them swim swiftly in water.

A commonly seen animal adaptation is that animals have adapted to eating foods that other animals do not. The animals living in the same habitat compete for food. But the adaptation of eating a less commonly eaten food lessens this competition and strikes a balance in nature. An interesting form of animal adaptation is hibernation that is a state of inactivity characterized by low metabolic rate. Migration is another form of adaptation typically seen in birds, which, in some months of a year, migrate to regions with climatic conditions conducive to their survival.



Adaptation, a change in the living organisms that helps them live successfully in the environment is also their savior.

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Adaptation

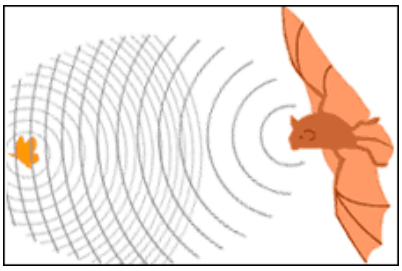
An adaptation is a feature that is common in a population because it provides some improved function. Adaptations are well fitted to their function and are produced by natural selection.

Adaptations can take many forms: a behavior that allows better evasion of predators, a protein that functions better at body temperature, or an anatomical feature that allows the organism to access a valuable new resource — all of these might be adaptations. Many of the things that impress us most in nature are thought to be adaptations.

Mimicry of leaves by insects is an adaptation for evading predators. This example is a katydid from Costa Rica.

The creosote bush is a desert-dwelling plant that produces toxins that prevent other plants from growing nearby, thus reducing competition for nutrients and water.

Echolocation in bats is an adaptation for catching insects.



So what's not an adaptation? The answer: a lot of things. One example is vestigial structures. A vestigial structure is a feature that was an adaptation for the organism's ancestor, but that evolved to be non-functional because the organism's environment changed.

Fish species that live in completely dark caves have vestigial, non-functional eyes. When their sighted ancestors ended up living in caves, there was no longer any natural selection that maintained the function of the fishes' eyes. So, fish with better sight no longer out-competed fish with worse sight. Today, these fish still have eyes — but they are not functional and are not an adaptation; they are just the by-products of the fishes' evolutionary history.

In fact, biologists have a lot to say about what is and is not an adaptation.