

Plants, animals and climate zones

Introduction

The planet can be divided up into four major climate zones: temperate, desert, polar and tropical. Each climate has different temperatures and amounts of precipitation. Generally the further away from the equator the colder the temperatures are. Temperate climates are mild, deserts dry and hot, polar cold and dry and tropical wet and hot. Plants and animals that live in different climates are adapted to suit them, which means that they have special features to help them survive.

Which plants and animals live in temperate areas?

Temperate climates support a wide range of plants and animals. Deciduous trees, such as the oak and the beech, are the most common types of tree found in the temperate zones. The leaves of trees make food for the tree by using sunshine, in a process called photosynthesis. Deciduous trees are trees that lose their leaves in winter because there is much less sunshine than in summer, and so the leaves are no use. Most of the temperate zone, including Britain, was covered with forests before people cleared a lot of them to make space for farms. Animals that live in deciduous forests include deer, squirrels and hedgehogs.



Fig. 1: A deer

What about in deserts?



Fig. 2: Cactus

There are fewer plants and animals in the desert than in temperate places, but there are still some. The plants that do survive have special adaptations. For example, the cactus has a tough outer skin to resist the heat and is able to store large amounts of water on the rare occasions when rain falls. Animals such as insects, camels, lizards, snakes, and cougars that live in deserts also have special adaptations. For instance the



Fig. 3: Camel

sidewinder snake has a distinctive side-winding movement to ensure that not all of its body is touching the burning sand at any one time. A camel can store great amounts of water to sustain it for long periods without drinking. The camel also has the capacity to foam at the mouth when it overheats, just like we sweat. The foam spreads over parts of the animal's body and then evaporates in the sun, so reducing its temperature.

Are there more plants and animals in the Polar Regions?



Fig. 4: A Caribou

Although for different reasons, the Polar Regions are also difficult to survive in, meaning there are not that many plants and animals. In Antarctica one animal that does survive is the emperor penguin, which keeps its eggs warm by holding them between its feet and covering them with a flap of fur. In the Arctic the summer brings a brief flourishing of small shrubs and plants, and in comparison to the Antarctic, wildlife is plentiful. Caribou take advantage of the plants that grow in the brief spring and summer. Animals such as polar bears and the beautiful arctic fox also seem to thrive in the conditions, while migrating birds pay visits in summer to feed on the plant life.

So what about in tropical regions?

Unlike the deserts and the poles the plentiful rainfall and sunshine make the tropical climates an ideal habitat for many plants and animals. Tropical areas have the richest biodiversity of all the climates, which means that there are more different types of plants and animals than anywhere else in the world. The tropics are naturally covered in thick, lush jungle or rain forest where these plants and animals live. Animals like monkeys, jaguars and multi-coloured birds live in these jungles. There are even a large number of plants that have yet to be properly named and studied.



Fig. 5: A jaguar

Summary

The harsh conditions in deserts and polar areas make it difficult for plants and animals to survive. As such the only things that do live there are highly adapted to the climate e.g. the cactus and the camel. In contrast to these regions the temperate area is milder and therefore easier to thrive in, meaning that there is a greater range of wildlife. However the most bio-diverse climate is the tropical one because of the high levels of sunshine and rainfall. All the climates contain fascinating and beautiful flora and fauna. We are extremely lucky to live in such a wondrous world and need to do our best to keep it this way.

References and sources

Text

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Images

Fig. 1: A deer

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Fig. 2: Cactus

<http://cdevroe.com/photos/arizona-cactus/>

Fig. 3: Camel

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Fig. 4: A Caribou

<http://www.treehugger.com/files/2009/04/canada-caribou-herds-dying-off-threatened.php>

Fig. 5: A jaguar

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