

7th – Weather Climate and Adaptation II



Migratory birds: Some birds are living in the polar region. These birds have not adapted to the harsh climate. Therefore during severe winter these birds migrate to warmer areas. These birds are called migratory birds.

Meteorological: The weather reports changes are prepared daily by an agency of the government. This agency is called meteorological. It collects data on temperature, humidity, rainfall and wind etc.

Why weather changes so frequently? All the changes in the weather are caused by the sun. The sun is huge sphere of hot gases at a very high temperature. The distance of the sun from us is very large. Even then the energy sent out by the sun is so huge that it is the source of all heat and light on the earth. So, the sun is the primary source of energy that causes changes in the weather.

The Tropical Rainforest: The tropical region lies near both the sides of equator line on the earth. These regions are hot but get plenty of rainfall. Therefore, this region is humid. Even in coldest month, the temperature is generally higher than about 15°C. During hot summers, the temperature may cross 40°C. Days and nights are almost equal in length throughout year. In India, tropical rainforests are found in Western Ghats and Assam. Other countries of the world like South, East, Asia, Central America, Malaysia, Indonesia, Brazil, Republic of Congo, Kenya, Uganda, Nigeria and Central Africa also have tropical rainforest. The major type of animals living in the rainforest are monkeys, apes, gorillas, tigers, elephants, leopards, lizards, snakes, birds and insects. Since, there are large numbers of animals found in these regions. So, the animals are adapted in such a way that they eat different kinds of food and live in different kinds of places to overcome competition for food and shelter respectively.

Adaptations in Red-eyed Frog: The red-eyed frog lives on trees in tropical rainforest. They have sticky pads on their feet that help them to climb trees. It does not live in water and has a green back and a creamy underside. It has big and bulging bright-red eyes and it is a nocturnal. It sleeps during the day and becomes active during night and feeds on the insects present on the tree. The bulging eye of frog protects it from its predator. The sudden opening of big and bright-red eyes frightens predator for a while and in the meantime the frog gets time to jump to a safe place. The green colour of the frog helps it to hide within the green leaves of the tree and helps it to protect from predators.

Adaptations in Monkey: The monkeys living in tropical rainforests have long tails for grasping branches. Their hands and feet are adapted in such a way that they can easily hold the branches of trees. The eyesight of monkeys is very good which helps them in leaping between the branches to escape from their predators. Monkeys eat fruits, seeds, leaves, root and insects as their food which is present in abundance in tropical rainforest.

Adaptations in Lion-Tailed Macaque: It is also called as beard ape and lives in the rainforest of Western Ghats in India. It has silver-white mane which surrounds the head from the cheeks down to its chin which is the specific characteristic of this animal. It is called lion-tailed because its tail is like that of lion having bunch or tuft of hair at the end. They spend most of their time feeding in the upper canopy of trees (i.e. arboreal animal). It mainly feeds on fruits, seeds, young leaves, stems, flowers and buds. They also can eat insects present under the bark of the tree. Since, it is able to get sufficient food on trees. It rarely comes down on the

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ground and spends a major part of its life on the tree. It is good climber with its hand and feet adapted to hold the branches of trees firmly.

Adaptation in Toucan: Toucan is a bird, which is found in tropical rainforest and which possesses a long strong and large beak. This bird is adapted for tropical rainforest in several ways. It is colourful bird which possesses a strange beak. It lives most of e in the holes of big trees.

The long and large beak helps Toucan to reach the fruits attached to the ends of even thin branches of tree that are weak enough to support its weight. It is an adaptation of this bird to get the unreachable fruits. It's large beak also help in temporary storage of fruits which is collected by Toucan. These possess feet that are adapted for grasping the branches of trees firmly. Toucan can change the colour of its feather, so as to get mixed up with the surrounding and are not easily noticed by predators and remain safe.

Adaptations in Lion and Tiger: These are also called as big cats and are carnivores which eat only flesh of other animals. These have following Adaptations to survive in tropical rainforest:

- They have thick skin and skin colour helps them to **camouflage** (ability of the animal to match their surrounding, e.g. chameleon, butterfly). The yellow brown colour of lion and black stripes of tiger helps them to hide in the forest by blending with the surroundings. It helps these carnivores to catch their prey.
- They have strong sense of smell which helps them to locate their prey.
- They also develop sensitive hearing capacity to find its prey.
- They have eyes in front of their head which enable them to have a correct idea of the location of their prey. They also have good eyesight.
- Their strong legs help them to run fast and long, sharp and strong claws in front of their legs help them to catch and tear their prey.

Adaptations in Elephant

Elephant is a well-known animal of Indian tropical rainforest. These are plant eaters and are adapted in many remarkable ways to survive in tropical rainforest. These adaptations can be discussed as follows:

- The elephant has a long trunk which is used as nose and has a strong sense of smell. It also helps elephant to pick up the food. The long trunk is also used for breathing. It can reach up to the branches of trees and help it to eat tree leaves. It is used for sucking water from lakes or rivers (drinking).
- The elephant possesses tusks (long pointed teeth) that are used in tearing the bark of trees which the elephant loves to eat as food. It also helps elephant to fight their enemies and protecting themselves.
- The elephant has large ears that help it to hear even very soft sounds and can sense the danger. It also helps the elephant to keep it cool in the hot and humid climate of the tropical forest.
- The feet of elephant are large and round which help it to provide good stability and also prevent it from sinking into soft ground due to its heavy weight.