By the end of this chapter, you will be competent to...

- describe the marvellous characters of a few animals.
- provide information
- appreciate the value of the marvels in the environment.
### 7.1 Marvels in the world of animals

#### 7.1.1 Animals that exhibit mysterious characters

Any animal shows its own inherent wonders. Animals are distributed all over the world. They live in a wide range of environments such as air, water and land.

Every animal is specialized because of their unique characters. The body colour, body size, body shape, methods of feeding, methods of reproduction, methods of building their habitats, methods of protecting from predators and the methods of communication are some specialized characters of animals. Now, we will consider about few animals which show wonderful characteristics.

**Chemical weapon of the animal world**

**poison - arrow frog**

According to the information recorded so far, the **poison arrow frog** is the most poisonous amphibian species living in the world. They are very common in the rain forests of South America. Amazon forest is their homeland.

The length of the body is about 5 cm. It shows camouflage. The skin has yellow, black and green colours and some species possess blue colour as well. These colours are spread on the body as stripes. Poison glands are found distributed all over the body.

Red Indians have collected this poison and made poisoned arrows which were used in hunting and in their tribal fights. When an animal comes in front of this frog, it keeps on jumping up with its hind legs and its fore legs raised up warning danger. Then it injects poison which affects the nervous system of its enemy making the enemy, disabled and die in front of him.
Giant fish in the Mekong river
Mekong cat fish

It is the largest fish found in fresh water bodies. Length of its body is about 3 metres and weighs around 150 - 200 kg. Even though, this fish is not violent, it is a powerful fish. It has teeth in its mouth for about two years and then fall off. The streamlined shape of its body helps it to swim in the fast flowing water.

South Eastern Asian region is their homeland. They live in freshwater bodies found in the regions around Mekong plateau. Countries such as Thailand and Cambodia have banned the fishing of this fish species. Due to overfishing and deterioration of the quality of water in which they live has made it an endangered species to be extinct. International Union for Conservation of Nature-IUCN annually publishes a book which includes the latest information about the endangered species. It is the Red Data book. The name of Meekong cat fish is also included in this Red Data Book.

The data available does not confirm the number of these fish today. However there is evidence to show that there is a sharp drop of the number of this fish over the past few years.

Fish that looks like a horse
Sea horse

Have you seen a fish with a head looks like horse? Ventral fins are used only very little for swimming. They are just shaken during swimming. Even though it is a bony fish it does not have corals on its body. Body length varies over a range of 2.5 cm to 30 cm. They live in the sea.

More than 32 species of sea horses are found distributed in the oceans world wide. They are very common in the stretch of the Pacific ocean extending from North America to South America. This fish who swims with its head up is known as sea - horse. They prefer to live in regions where the water is warm. They live in shady aquatic environments which are specially covered with aquatic plants, coral reef and mangroves.

Long snout like structure is important in feeding. Sea horse feeds on small fish, small shrimps and phytoplanktons, thus sea horse is an omnivorus fish.
Sea horse has a pouch like structure in its body. Other special feature is that it is the male that protect the eggs. During reproduction the female deposits about 200 ova inside the pouch situated on the abdomen of the male. These ova get fertilized within the pouch. The fully developed young sea horses that get released from the eggs left in the pouch of the male seahorse enter the ocean water.

**Architect of the Bird world**

**Weaver Bird**

In the world of birds, weaver bird creates a much better mosaic nest than all the other birds. The size, shape and the material used for building varies with the species of the weaver bird. Weaver bird has its origin in Africa, Asia and Australia. Male bird is colourful.

Weaver bird uses fine fibres of leaves, grass and thin sticks to build nests. The entrance to the nest is either from the bottom or from a side. Weaver bird is a social bird. Eventhough they build their separate nests, they are built close to each other so as to form a colony. Each nest has two parts. The part with which it is attached to a branch of a tree is the upper part. It takes the shape of a globe or flask and is used for laying eggs. The lower part is used as a tunnel to enter the nest. After the young ones come out of the eggs the parent birds make holes in the globe part of the nest and feed the young ones with small insects through these holes.

Small pieces of clay is seen inside nests and it is assumed that they have used clay to prevent any loss of balance in the nest during wind.

**Blood sucking bat**

**Vampire bat**

Their first homeland is America. Their habitat extends in America, Mexico to Brazil, Chile and Argentina. They live as colonies. Their nose take the shape of a cone. They have temperature receptors on the nose to feel the warmth or cold. These receptors help them to identify the blood vessels of the prey.

Vampire bat being a mammal, has a pair of small external ears and a small tail membrane. The incisors in front of the mouth are modified for cutting (biting). The teeth behind are small.
They go in search of food in the night or at dusk. They use low sound frequencies to search food. The food of the vampire bat is the blood of mammals and sometimes they take human blood as well. Some species feed on birds blood. The structure that receives sound in their brain is modified to hear the breathing sound of the prey. There is a structure in the brain that is sensitive to infra-red rays. With that the vampire bat identifies the place where it should bite its prey. It pumps its saliva into the prey and let the substances found in the saliva flow through the blood of the prey. Vampire bat acts as a vector too. It contributes in spreading rabies. But their saliva is used for medicines.

**Do you know?**

The digestive system of the vampire bat is adapted to take liquid food and there is an anticoagulant named draculin present in their saliva.

**Pet of the animal world**

**Giant Panda**

Their homeland is China. They live in the bamboo forests. Around its eyes, ears and body black patches can be identified. It looks a pet and every one likes it. Young pandas have their body covered with black and white wool. Male pandas are bigger than the females. The shape of the body is similar to a bear. Black and white body colour is thought to be a devise or a camouflage to make them live more safely in the background of snow and rocks where they live. The wool around its body helps panda to stay warm in its habitat. There is an extra thumb - like projection on the side of each front paw. (In eating young bamboo shoots) This projection allows the panda to grasp bundles of shoots and to manipulate them. Their principal diet is the young shoots of bamboo.

Usually the adult pandas live in separate regions. They communicate by different methods such as by making sound, spreading odours, scratch the tree trunks and pump urine. They do not have a permanant habitat.

The female panda looks after the young ones all by herself. Behaviour of panda is affected by the food they take. Panda gets very little energy since their main food is bamboo shoot. Their digestive system is not adapted to digest cellulose. Panda maintain a less active life since they get only very little energy from their diet.

Their survival is affected by the feeding habit, loss of habitat and the reduction in birthrate. Veryoften Giant Panda is used as a symbol in China.
Flatworm that regenerates
Planaria

They live in fresh water or brackish water. Some species are terrestrial (live on land). The body size varies from 3 mm to 12 mm. It is a free living flat worm. The body is bilaterally symmetrical. If this animal is cut lengthwise or breadthwise or along its axis, each part develops its lost part and new animals are formed. This is called regeneration. There are two eye spots at the anterior end which are sensitive to light. There are simple organ systems in their body. The mouth is ventral in position. Planaria is a hermaphrodite because both male and female reproductive systems are present in the same animal.

An Amphibian that is endemic to Sri Lanka.
Bufo kotagamaii

When naming plants and animals according to the international nomenclature, names of renowned persons or scientists can be used. Accordingly an amphibian endemic to Sri Lanka has been named as “Bufo kotagamaii” after the famous Sri lankan zoologist professor Sarath Kotagama.

The nature of the external surface of the body is orangish with a pale colour on the ventral. Side brown patches can be seen here and there. Skin is dry and has warts. There are three pale coloured stripes between the eyes. Adult male animal has a body length varying from 33 mm to 40 mm and the adult female has its body length varying from 55 mm to 63 mm limbs. They do not have a membrane in between its fingers. But the feet of the hind limbs have a membrane in between the toes which is used for swimming.

They are found mostly in the night, and they are common in the wet zone, central hills and in the Western and Southern, regions. They prefer to stay close to flowing water in streams, ponds and rivers. They live among decaying leaves, among stones and in sand banks. These animals live in abundance in Sinharaja forest which is a tropical rain forest.

Assignment - 1
Sri Lanka is a country rich in biodiversity. There are a number of animals with marvalous features in Sri Lanka. Collect information of animals with wonderful features in your area and prepare a booklet.

Excercises.
List the special characters of the following animals
7. Weaver bird