

Chapter 16

Forest and Wildlife

Points to be studied

- 16.1 Forests
- 16.2 Advantages of forests
- 16.3 Causes of Deforestation
- 16.4 Disadvantages of deforestation
- 16.5 Measures to conservation Forests
- 16.6 National Parks and Sanctuaries
- 16.7 Some of the major wildlife found in Rajasthan
- 16.8 State animal, bird, tree and flower of Rajasthan

During rainy season we visit gardens, fields, etc. with our family or friends. Lush green surroundings make us happy there. This greenery and beautiful environment is only because of trees and wildlife.

Write down the names of plants and animals in your surrounding in Table 16.1:

Table 16.1: Names of plants and animals found around us

S.N.	Name of plants	Name of animals
1		
2		
3		
4		
5		
6		
7		
8		

Have you ever seen or heard about a nearby area where trees and wildlife are found in over abundance. This green environment is due to trees and wildlife. You know this terrain by which name?

These terrains are called forests or jungles. Let us know about forests.

16.1 Forest

Plants and animals are important components of the environment. A large land area with abundance of trees and wild animals is called a Forest.



Fig. 16.1 Forest

How are these forests important for us? What are the advantages we get from them? Let us know.

16.2 Advantages of forests

1. Wood obtained from forests is used for various domestic, commercial and industrial purposes. We obtain drugs in the form of herbs and many important commercial products like rubber, wax, bamboo, grass, catechu, resins etc. from the forest.

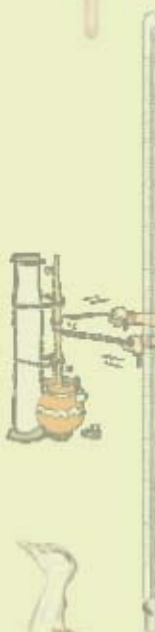


2. Forests reduce air pollution and other types of pollution.
3. Forests are the best habitat for wildlife.
4. They enhance the natural beauty.
5. They help in the maintenance of humidity of air.
6. They enhance the fertility of the land.
7. They help to increase ground water level and level of water in the soil.
8. They prevent soil and land erosion.
9. Forests provide oxygen in the form of air that keeps our environment clean.
10. They help in bringing rainfall.

Let us get a detailed knowledge about some of the above given important benefits provided by forests.

- **Maintain humidity of air-** Climate is controlled by the forests. Forests reduce the temperature. Forest is the excellent natural source of pleasantness. There are several small pores called stomata found in leaves of plants. The water leaves the stomata in the form of water vapour which enhances the moisture content of the air known as humidity. Due to high density of trees in forests there is more humidity and we feel pleasant. Due to this, the temperature of the forests is lower as compared to other places.
- **Improve the fertility of land -** Worn out leaves, twigs, etc. fall down from trees which are decomposed by micro-organisms present in the soil as a result of which a layer of organic material is formed on the top soil, known as **Humus**. Humus increases the fertility of the soil and causes the rain water to seep slowly into the soil so that there is enough moisture in the land and the quantity of water the trees receive is adequate.
- **Improve ground water level -** Forests reduce the strong water currents as a result of which water trickles down in the earth thus raising the ground water level.
- **Prevent soil and land erosion -** All of you have gained knowledge about the benefits we receive from forests. There is a field with plants and another field without plants, from which field soil will wash or flow over more during rains or a storm?

There is a change in the pattern of land by various events that occur in nature. The removal of top soil by rain and wind (washed or blown to another location) is called **Soil erosion**. The forests play an important role in preventing soil erosion. Roots of plant binds the soil particles as a result of which fertile soil is not washed or blown away by storm, flood etc.



16.3 Causes of Deforestation

- (1) Fast growing population, urbanization and industrialization need additional land for housing, shelter, agriculture and factories. To fulfill this demand there is an indiscriminate cutting of forests. This is called deforestation.
- (2) Trees in the forests are being cut down for the construction, of dams & roads, mining, river valley projects etc.
- (3) Indiscriminate cutting of trees in forests to fulfill industrial, commercial and domestic needs is the main cause of deforestation.

16.4 Disadvantages of Deforestation

The major side effects of over-exploitation of forest resources are as follows-

1. Environmental imbalance.
2. Decrease in precipitation.
3. Increase in soil erosion.
4. Increase in atmospheric temperature.
5. Lowering of ground water level.
6. A decrease in biodiversity due to decrease in the number and species of wildlife.
7. A decrease in forest productivity.
8. An increase in floods, drought and natural disasters and also an increase in desertification.

At present there is a continuous decline in the number of plants, hence their protection is necessary. How and in what way can we protect them? Let us think about it. What effort will you make to save the forests? Discuss in groups on this subject, list down the suggestions given by students.


We are well aware of the importance of forests. Decrease in forest area and its destruction due to continuous exploitation and eradication is a matter of concern. Forests are important contributors in maintaining the ecological balance. Therefore, at present, there is a dire need of replantation and conservation of forest.

16.5 Measures for the Conservation of Forests

To conserve forests we should strive to make the following efforts-

- (1) Plantation.
- (2) Adequate safety of forest from fire.
- (3) Prevention of diseases in trees.
- (4) Plantation by an awareness program.
- (5) Strong action to be taken against individuals for illegal deforestation.




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- (6) Ensure our participation in protection and conservation of forest and environment.
 - (7) Abidance of the rules constituted by legal institutes, government and courts.
 - (8) Celebrating wildlife and forest conservation weeks enthusiastically.

Wildlife

You might have visited farms, mountains and other natural places. Make a list of animals and plants you might have seen there.

Table 16.2 List of animals and plants



S.N.	Location	Name of animals	Name of plants
1			
2			
3			
4			
5			
6			
7			
8			
9			

All the living species that are found in their natural habitat (flora and fauna) are called wildlife.

16.6 National Parks and Sanctuaries

Wildlife is found in all the ecosystems of the world. Wildlife stays away from human habitat.

National parks and sanctuaries were established for conservation, promotion and management of wildlife. Some of the major national parks and sanctuaries of Rajasthan are as follows -

1. **Ranthambore National Park** - This Park spreads over an area of several square kilometers around Ranthambore, the historic fort near Sawai Madhopur. Tigers project was undertaken to stop the depletion in the numbers of tigers. Here tiger, wolves, leopards, nilgays, deer, wild boars, sambhars, etc. Are found in abundance. It is an aspiring project of Government of India for the conservation of tigers.



2. **Keoladeo National Park** - It is located in Bharatpur. Particularly, migratory birds come here in specific seasons and many Indian species of birds are also found here.
3. **Sanctuaries of Rajasthan** - Some major wildlife sanctuaries of Rajasthan are- Ramgarh Vishdhari Wildlife Sanctuary, Bundi, Nahargarh Wildlife Sanctuary, Jaipur, Sita Mata Wildlife Sanctuary, Pratapgarh, Tal Chhaper Wildlife Sanctuary, Churu.
4. **Sita Mata Sanctuary** - It covers several square kilometers area in Pratapgarh district. Teak trees are found here in abundance. Nilgai, Sambar, Chital, Wild cats, foxes, etc. are also found.
5. **Mount Abu Sanctuary** - It covers several square kilometers of dense vegetation rich area in Sirohi district. It is a protected forest area for the conservation of leopard, nilgai, chinkara, wild boar etc.

16.1 Some Major Wild Animals Found in Rajasthan

Tiger - Usually tiger is ten feet in length and three and a half feet in height. Its body is golden yellow, with long black strips from top to bottom with bulging eyes. Tiger's sense of smell is highly developed.



Fig 16.2 Tiger

Leopard: Its body is buff or light brown in color which has certain whiteness. The breast is white. Rounded black spots cover the entire body.

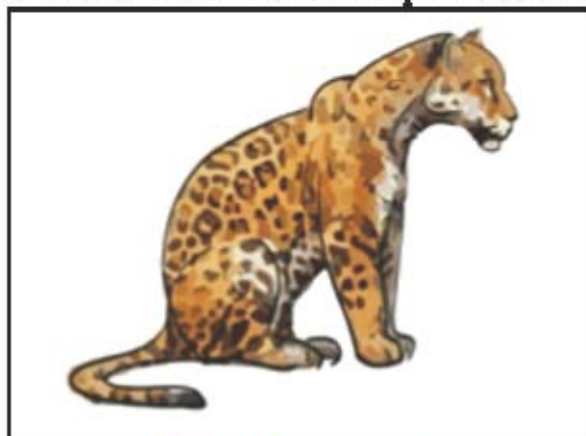


Fig 16.3 Leopard

Hyena - Also known as lakkadbagha in common language. It appears like a dog. Abundant hair is present on its back, neck and tail. Its color is gray or ashy which have vertical and horizontal black strips. Hyena's sense of smell is very intense, due to which it can find out hidden remains of animals. It is very timid animal. Its voice is horrible and graceless. Hyena in animals, and vultures in birds get their food from decaying dead organisms. This is an automated system in forests to keep the natural habitats clean.



Fig 16.4 Hyena



Fig 16.5 Wolf

Wolf - The wolf is here! The Wolf is here! Is a proverb. Its color is like ash. It has light brown colored hair mixed with black hair. It is renowned for its cleverness. It is adept in treachery and thievery. It deceives its prey, makes it run and hunts it in packs. It has immense power to run, It chases its prey so that the prey gets exhausted and then it kills the prey.

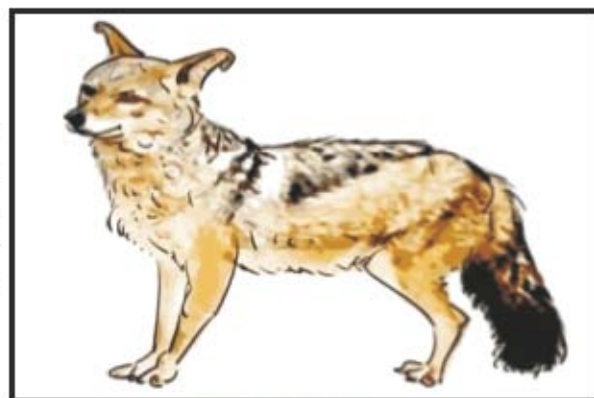


Fig 16.6 Fox

Fox - The story "Grapes are sour" is prevalent for the fox. It is considered one of the most cunning among animals of the wild life. Fox is a small, very agile and clever animal.

Jackal: Hua.....Huavoice of jackal at night is heard and recognized by villagers. Jackal is also known as siyar.



Fig 16.7 Jackal

Wild boar: It is bigger and quite different in appearance than pigs found in cities, but has totally different attitude. It is very strongly built to hit the target with high speed directly.

Deer and Antelope - Deer species mainly found in Rajasthan are Chinkara, Blackbuck Antelope, Black Buck and Nilgai. The two main species found in Rajasthan are Sambhar and Chital.

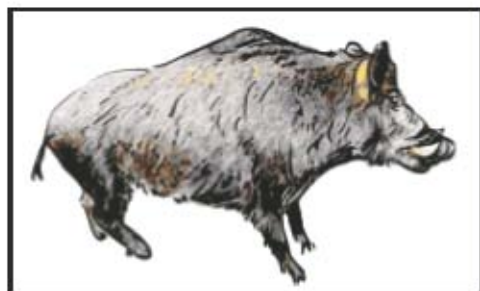


Fig 16.8 Wild Boar

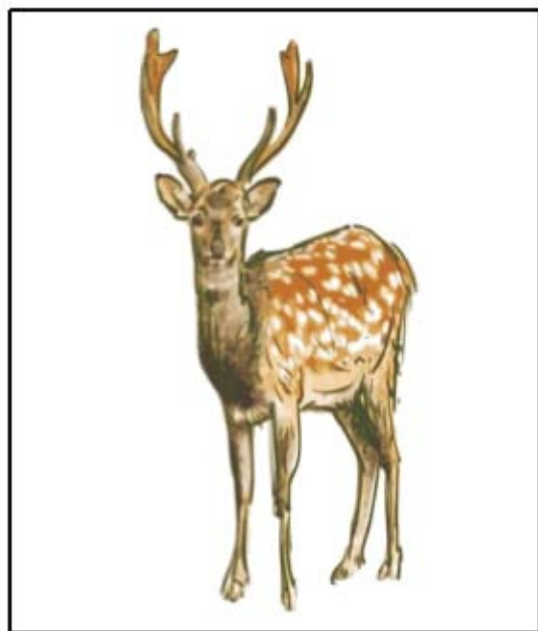


Fig 16.9 Chinkara



Fig 16.10 deer



Black buck - It is very beautiful and picturesque wild animal found in Tal Chhapar wild Life sanctuary in Churu district.

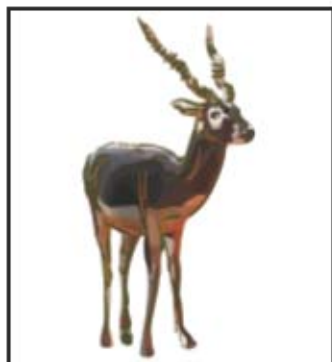


Fig 16.11 Black Buck

Blue bull (Nilgai) - The Nilgai is also known as 'Rojda or Rojh'. It is heavy as a horse, strong, gray to blue in color. It explores grounds and fields along with forests and destroys the crop in the fields completely.



Fig 16.12 Nilgai

Chital - It is a beautiful and alluring wild animal. It is spotted deer. It is an embodiment of playfulness, innocence and beauty.



Fig 16.13 Chital

Sambhar - Sambhar is a huge wild animal of deer species, also known as Barahsinga by many people.



Fig 16.14 Sambhar

Indian Hare - Beautiful and simple natured animal that has the capacity to run fast. Due to hunting and deforestation its number is decreasing continuously.



Fig 16.15 Indian Hare

Porcupine - Porcupine is also known as Shaveli in villages. It has long spines of black and white color all over its body. It uses them as a weapon against its enemies.



Fig 16.16 Porcupine



Some Species of Birds (The World of Birds) -

It is an amazing coincidence that the international bird, White Stork (Siberian Crane), the national bird, Peacock and the state bird, the Great Indian Bustard reside in Rajasthan. Besides these, cuckoo, sparrow, Indian roller, Indian crane etc are also found here.

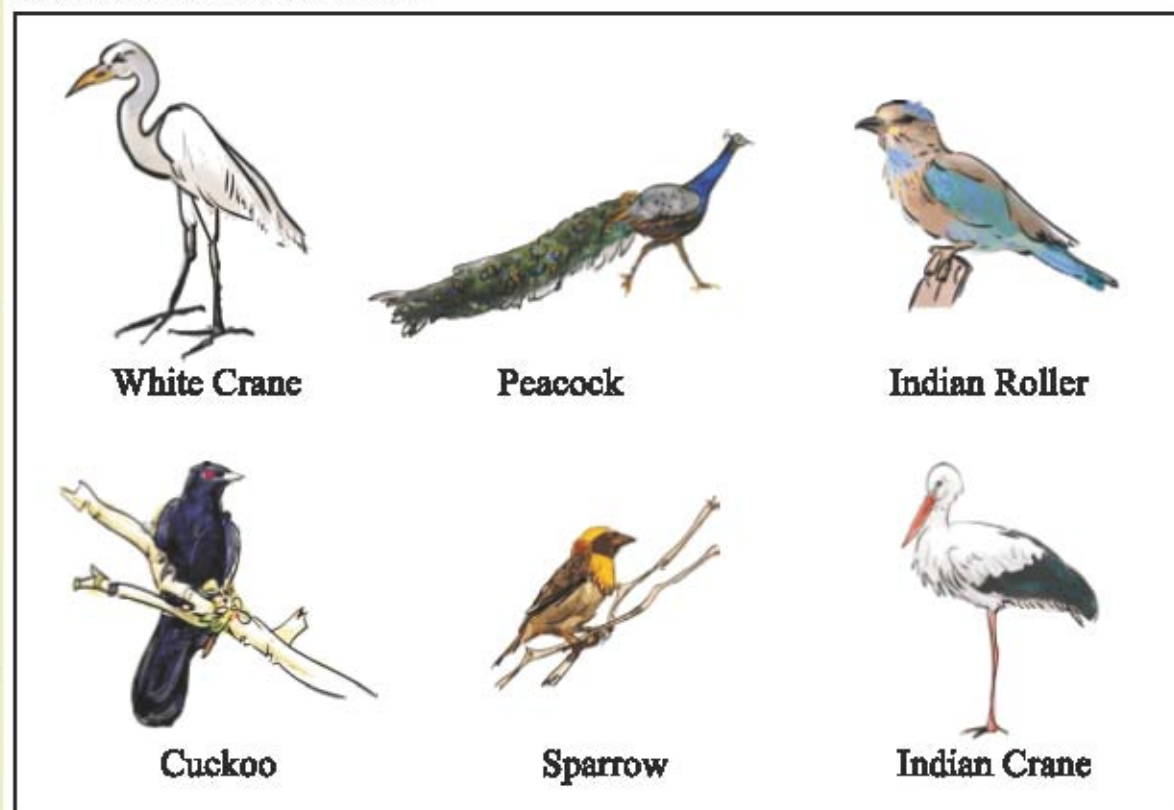


Fig 16.17 The World of Bird

Lets learn about state bird, animal, tree, flower of Rajasthan.

1. State bird - Great Indian Bustard



Fig 16.18 State bird - Great Indian Bustard

2. State animal - Chinkara and Camel

The Government of Rajasthan declared Camel as a state animal in 2014. Now along with Chinkara, Camel is also our state animal. Chinkara is a state animal in wildlife category. Camel gets a status of state animal in the category of livestock.

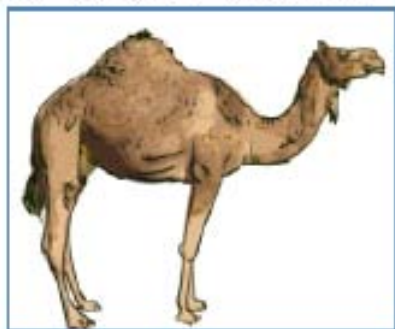


Fig 16.19 Camel

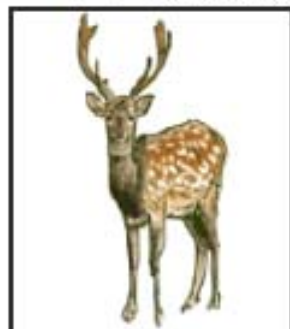


Fig 16.20 Chinkara



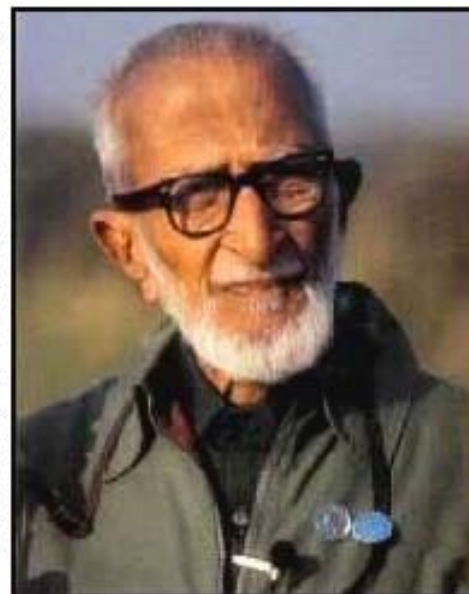
**Fig 16.21 State tree
Prosopis Cineraria
(Khejri)**



**Fig 16.22 State Flower
Tecomella undulate
(Rokida)**

Salim Ali

Salim Ali was born on 12th November, 1896 in Bombay (Now Mumbai). He was an Indian ornithologist and naturalist. Salim Ali is known as the "Birdman of India". Salim Ali was the first Indian to conduct systematic bird surveys across India and has written several books on birds that have helped popularize ornithology in India. He spent 65 years surveying birds hence was called as 'Parindo ka Chalta Phirta Vishvakosh'. Among the books written by him on birds 'The Book of Indian birds', 'Handbook of the Birds of India and Pakistan' and 'The Fall of a Sparrow' gained enormous popularity. Owing to his great contribution towards Natural Science and birds he was awarded Padma Vibhushan and many such awards by Government of India.



What have you learnt

- A large area of land covered by trees and inhabited by wild animals, is called forest.
- We get wood, drugs, gum and oxygen from forest.
- For forest conservation there should be dense plantation and proper care of plants.
- State bird is the great Indian bustard and state animal is camel and chinkara.
- State tree is Khejri (*Prosopis cineraria*) and state flower is Rohida (*Tecomella undulata*).
- Prominent national parks of Rajasthan are
 - ☐ Ranthambore National Park
 - ☐ Keoladeo National Park

□□□

Exercises

Choose the most appropriate option

1. What are the advantages of forests to us -

(a) Improves ground water level	(b) Control environmental temperature
(c) Improve fertility of land	(d) all the above ()
2. Disadvantage of deforestation is -

(a) Increase in soil erosion	(b) decrease in soil erosion
(c) Increase in number of wildlife	(d) increase in rain ()
3. State flower and tree of Rajasthan -

(a) Roheda and Khejri	(b) Jaal and Roheda
(c) Roheda and Neem	(d) Lotus and Banyan ()
4. State bird of Rajasthan is -

(a) Pigeon	(b) peacock
(c) Great Indian bustard	(d) parrot ()

Match columns 1 and 2

- | | |
|-------------------------------|------------------------------|
| (a) Ranthambore National Park | (i) Pratapgarh district |
| (b) Keoladeo National park | (ii) Sirohi district |
| (c) Sitamata Sanctuary | (iii) Bharatpur district |
| (d) Mount Abu Sanctuary | (vi) Sawai Madhopur district |

Fill in the blanks

- (i) Large area of land covered by trees, inhabited by wildlife is called.....
- (ii) Forests prevent..... erosion.
- (iii) A Forest is a habitat for.....
- (iv) For wildlife conservation, National parks and..... were established.

Short answer type questions

1. Write down the causes of deforestation.
2. Write down the disadvantages of deforestation.
3. Write down the advantages we receive from forests.
4. Write down the names of some major wild life species of Rajasthan.

Long answer type questions -

1. Write down the suggestions for forest conservation.
2. Write about Keoladeo and Ranthambore National Parks.
3. Draw a figure of a wild animal of your choice.
4. What would be the impact if forests were nonexistent? Explain in detail.

Activity

1. Find out some specific medicinal plants of local forest area by surveying and interviewing the local Ayurvedic practitioner (Vaidhya, Hakim, Guni) and document their effects and scientifically test the local traditional knowledge. By contacting Central Drug Laboratory Discover the science behind local traditional knowledge.
2. Study the impact of local pesticides or pest control methods such as neem leaves, havan of benzoin (Guggal), akada (Calotropis) etc. on mosquitoes or other insects on the basis of community dialogue and survey and compare them with modern insecticides.
3. Prepare a tabular chart to exhibit wildlife sanctuaries located in Rajasthan, their districts and the names of wild animals which fall under conservation.

