

## **Chapter - II**

### **The Forests**

#### **Composition and condition of the crop:**

##### **24. General:**

The presence of large chunks of tropical evergreen forests makes this Division very important. Though the locality factors are conducive for the luxuriant growth of evergreen vegetation in the division, the mismanagement of such rich forests in the past, by the erstwhile owners, had caused irreversible damage to these forests. The distribution of natural forests in North Wayanad Division is shown in Fig.4.

##### **25. Forest types:**

The natural forests of this tract fall under three broad types (Fig. 5) as shown below vide “Revised classification of forest types of India” by Champion and Seth.

- |    |  |   |        |
|----|--|---|--------|
| 1. | The West Coast Tropical Evergreen Forest | - | IA/C4  |
| 2. | West Coast Semi Evergreen Forest         | - | 2A/C2  |
| 3. | Southern Tropical Moist Deciduous Forest | - | 3B/CIC |

Out of a total forest area of 20626.487 ha, the net extent of private forests vested with Government is 6499.12 ha. The erstwhile owners were managing their forests with the sole objective of gaining maximum economic returns. Due to the indiscriminate removal of valuable trees coupled with poor protection from fire, grazing and such other biotic interventions, the site is severely degraded.

##### **25a. West Coast Tropical Evergreen Forest [1A-C4]:**

This type of forest is the climax of tropical rain forests and is found usually at elevations of 250 m to 1,200 m above MSL. These forest types are found in Hill dale RF and Thirunelly RF in Begur range and Chandanathodu RF in Peria range. Luxuriant growth of evergreen trees of different sizes and shapes arranged in storey is a peculiarity of this type. The under growth consists of canes, *Strobilanthes* species and ferns. Grass is absent.

Evergreen vegetation as a whole can be recognised into four distinctive layers. The evergreen species is briefly mixed with deciduous species without

affecting the evergreen nature of the forest e.g. *Terminalia bellirica*. The canopy is dense and closed. Co-associations i.e. gregariousness of dominants are not present in this type of forests. The tropical evergreen vegetation in the plains and moderate slopes show this type of growth conditions characterised by tall cylindrical boles with closed canopy and stratification. As one proceeds into the interior, slight variations in the typical characteristics could be noticed and finally towards ridges and hilltops, the growth changes drastically. The stem becomes less and less clean and the canopy more and more open until on the hilltop and peaks where the tree growth altogether becomes absent. Towards the ridges and hilltops, the canopy shows no line of demarcation from the foliage of trees or shrubs and result in an irregular mass of foliage from the treetops down to the level of terrestrial herbaceous plants. The herbaceous vegetation grows profusely where the tropical evergreen canopy is moderately open and is almost completely absent in ridges and hilltops and in sheet rocks. The rocky outcrops are surrounded by grass and are covered with masses of broken ferns and lichens.

The common terrestrial ferns found in the area are of the genera *Allophylus*. Epiphytic vegetation of the tropical evergreen forests is abundant. Orchids with thin water storing roots are common but not so frequent as the ferns, which range from the hydrophilous to small xerophilous. The bulk of epiphytic vegetation is of mosses and lichens, which indirectly serve as a water- retaining substratum for larger forms. Climbers are abundant along the banks of watercourses and are less abundant where canopy is closed. The common species of climbers are *Enteda scandens*, *Gnetum scantons*, *Calamus* sp., *Acacia intsia*, *Caesalpinia* sp., *Calycopteris floribunda*, *Celastrus paniculata* and *Butea parviflora*. Canebrakes of varying density are found in flat and very well drained areas.

#### **Ecology of the Forest type:**

The common concept is that the Tropical evergreen Forest represents a climax stage without any retrogression or progressive change or in other words is fairly stable. The view of single climatic climax for any given type of climate, the mono-climax theory, (Clement) has been challenged by the later authors who feel that it is not enough to consider climate alone as a limiting factor thereby excluding

possibilities of progressive changes. The alternate theory is a poly climax theory, which accepts same general view of succession considering that each pronounced variation in site conditions within a given type of climate will tend to have its own recognisable climax, typically as edaphic climax pre and post climax developing on a particular soil type. Of late much preference is given to the poly climax view, leading to a dynamic rather than a static equilibrium, with possible cyclic alterations of varying complexity. The well-known ecologist Watson summarises that the tropical evergreen forests should be considered as continuum in which the parts are in unstable equilibrium. So much so it could be seen that a forest type maintaining itself as a whole as a single complex unit but is continually changing at any given spot.

As a whole, whatever effect plant populations may have in climax composition, there is no absolute climax for any area, and the prevailing climax for any area is a function of the sum total of all the factors of the ecosystem i.e. climate, soil, other site factors, biotic influence, presence of different species and their characteristics, dispersal and regeneration. Thus all climaxes should be at the same time physiognomic, edaphic, biotic as well as climatic and further more distinction between the climatic climax, sub and pre-climax, edaphic climax etc, have no logical basis. The climax hence should accordingly be viewed as an average of most probable population.

In view of the above facts the tropical evergreen forests of Wayanad Division has to be viewed as the most probable population that could exist under given ecological factors like climate, soil, site factors, availability of species and their characteristics. Since the tropical evergreen forests of Wayanad Division covers a comparatively smaller area, the climate prevailing in the area could be treated as one and the same as the variation of climate over a small area is comparatively negligible.

Taking into account the characteristics of species it could be seen that most of the species occupying the 1<sup>st</sup> storey are of evergreen character. But 60% of the composition has been occupied by deciduous species like *Terminalia bellirica*. Eminent foresters like Champion and Richard's stated that the presence of the top

storey trees of deciduous character would not affect the evergreen nature of the forest as a whole or warrant recognition of the type to a lower order.

As far as the 2<sup>nd</sup> storey of the vegetation is concerned, the species are predominantly evergreen. However 4.06% of the composition is of the deciduous type.

The occurrence of deciduous species in the order of 4.06% is negligible to warrant classifying the vegetation as a whole as semi-evergreen. But the occurrence of deciduous species in the lower canopy (4.06%) lends to think and conclude that the existence of deciduous species in the community under given climatic and edaphic conditions is quite normal. The percentage of occurrence of deciduous species in the community may increase in due course due to biotic interference

The deciduous species in the lower canopy may be occurring due to site factors or due to biotic interference. Of which the biotic interference bears much direct effect than the edaphic. The existing communities of vegetation of these areas have been subjected to indiscriminate felling by their owners. If this plant community is protected from biotic interference and are subjected to cultural operations such as artificially inducing natural regeneration of evergreen species and its non-disturbance will help the nature itself to play its role. Given adequate opportunity the ecology itself, as a rule of succession will eliminate the deciduous species from the community in the battle for the survival of the fittest.

#### **Floristic Composition:**

The density of species is very high unlike in the moist deciduous type of forest. A few species of the top canopy may remain deciduous over a short period. The species wise details of west coast tropical evergreen forests are shown below.

**Table No. 7 Species of west coast tropical evergreen forests in North Wayanad**

Sl. No.	Botanical name	Local name	Family
<b>1. Trees of top storey</b>			
1.	<i>Artocarpus hirsute</i>	Anjily, Aini	<i>Moraceae</i>
2.	<i>Bombax ceiba</i>	Elavu	<i>Bombacaceae</i>
3.	<i>Calophyllum elatum</i>	Punnapai	<i>Celastraceae</i>
4.	<i>Cullenia excelsa</i>	Vediplavu	<i>Bombacaceae</i>
5.	<i>Elaeocarpus tuberculatus</i>	Bhadraksham	<i>Elaeocarpaceae</i>
6.	<i>Garcinia morella</i>	Chigiri	<i>Clusiaceae</i>
7.	<i>Hopea parviflora</i>	Kambakam	<i>Dipterocarpaceae</i>
8.	<i>Mesua ferrea</i>	Nanku	<i>Clusiaceae</i>
9.	<i>Palaquium ellipticum</i>	Paali	<i>Sapotaceae</i>

Sl. No.	Botanical name	Local name	Family
10.	<i>Persea macarantha</i>	Kulamaavu, Ooravu	Lauraceae
11.	<i>Polyalthia fragrans</i>	Nedunaar	Anonaceae
12.	<i>Terminalia bellirica</i>	Thanni	Combretaceae
13.	<i>Vateria indica</i>	Vellapine	Dipterocarpaceae
<b>2. Trees of middle storey</b>			
1.	<i>Acrocarpus fraxinifolius</i>	Narivenga	Caesalpinioideae
2.	<i>Bischofia javanica</i>	Mlachathayan	Euphorbiaceae
3.	<i>Canarium strictum</i>	Thellipayin	Burseraceae
4.	<i>Elaeocarpus serratus</i>	Kara	Elaeocarpaceae
5.	<i>Knema attenuata</i>	Chorappayin	Myristicaceae
6.	<i>Macaranga peltata</i>	Vatta	Euphorbiaceae
7.	<i>Myristica dactyloides</i>	Adakapayin	Myristicaceae
8.	<i>Nephelium longana</i>	Chempunna	Sapindaceae
9.	<i>Sterculia guttata</i>	Peenari	Sterculiaceae
10.	<i>Toona ciliata</i>	Mathagiri vembu	Meliaceae
<b>3. Trees of lower storey</b>			
1.	<i>Actinadaphne bourdillonii</i>	Malavirinja	Lauraceae
2.	<i>Antidesma menasu</i>	Putharaval	Euphorbiaceae
3.	<i>Aporosa lindleyana</i>	Vetti	Euphorbiaceae
4.	<i>Bambusa arundinaceae</i>	Mula	Poaceae
5.	<i>Cinnamomum malabattrum</i>	Vayana	Lauraceae
6.	<i>Ixora arborea</i>	Soochimulla	Rubiaceae
7.	<i>Laea indica</i>	Maniperandi	Laeaceae
8.	<i>Olea dioica</i>	Edana	Oleaceae
<b>4. Epiphytes</b>			
1.	<i>Aeschynanthus perrottetti</i>	---	Gesneriaceae
2.	<i>Medinilla beddomei</i>	---	Melastomataceae
3.	<i>Sirhookera latifolia</i>	---	Orchidaceae
<b>5. Undergrowth and Climbers</b>			
<b>a. Woody climbers and Stragglers</b>			
1.	<i>Acacia intia</i>	Incha	Mimosaceae
2.	<i>Calycopteris floribunda</i>	Pullani	Combretaceae
3.	<i>Celastrus paniculata</i>	---	Ulmaceae
4.	<i>Butea parviflora</i>	---	Papilionaceae
5.	<i>Gnetum scantons</i>	Karuthoda	Gnetaceae
6.	<i>Entada scandens</i>	Kakkumvalli	Mimosaceae
<b>b. Herbaceous climbers</b>			
1.	<i>Myxopyrum serratulum</i>	Chathuramulla	Oleaceae
2.	<i>Smilax macrophylla</i>	---	Smilacaceae
<b>c. Shrubs</b>			
1.	<i>Calamus sp.</i>	Chooral	Palmae
2.	<i>Costus speciosus</i>	Channakoova	Zingiberaceae
3.	<i>Mallotus philippenensis</i>	Manjana, Shemkolli	Euphorbiaceae
4.	<i>Psychotria sp.</i>	---	Rubiacea
5.	<i>Strobilantheus sp.</i>	Kurinji	Acanthaceae
<b>d. Herbs</b>			
1.	<i>Elephantopus scaber</i>	Aanachuvadi	Asteraceae
2.	<i>Molineria trichocarpa</i>	Nilappana	Amarylhidaceae

## 25b. West Coast Semi Evergreen forest [2A/C2]:

This forest type is an intermediate between the tropical evergreen and moist deciduous forms. This is mainly because of the change in environment or human interference or both. The West coast semi evergreen forests accordingly form a close high forest but usually inferior to that of tropical evergreen. This type includes both evergreen and deciduous trees. The bark tends to be thick and rough. The density of the canopy of this type is less than that of evergreen. The climbers and under growths are seen in abundance. This type occurs mostly on the hill slopes and in plains. This type is found in Kambamala RF and Thrissilery RF in Begur range and Peria RF in Peria range.

**Floristic Composition:** The species wise details of west coast semi evergreen forests are shown below:

**Table No. 8 Species of west coast tropical semi evergreen forests in the Division**

Sl. No.	Botanical name	Local name	Family
<b>1. Trees of top storey</b>			
1.	<i>Artocarpus integrifolia</i>	Plavu	Moraceae
2.	<i>Dalbergia latifolia</i>	Veetti	Fabaceae
3.	<i>Lagerstroemia latifolia</i>	Venthekku	Lythraceae
4.	<i>Machilus macarantha</i>	Kulamavu	Lauraceae
5.	<i>Mangifera indica</i>	Maavu	Anacardiaceae
6.	<i>Pterocarpus marsupium</i>	Venga	Moraceae
7.	<i>Sterculia guttata</i>	Peenari	Sterculiaceae
<b>2. Trees of middle storey</b>			
1.	<i>Bischofia javanica</i>	Mlachathayan	Euphorbiaceae
2.	<i>Lannea coromandelica</i>	Kalash	Anacardiaceae
3.	<i>Macaranga peltata</i>	Vatta	Euphorbiaceae
4.	<i>Knema attenuata</i>	Chorappayin	Myristicaceae
5.	<i>Olea dioica</i>	Edana	Oleaceae
<b>3. Trees of lower storey</b>			
1.	<i>Aporosa lindleyana</i>	Vetti	Euphorbiaceae
2.	<i>Cinnamomum malabaricum</i>	Vayana	Lauraceae
3.	<i>Ficus hispida</i>	Parakam	Moraceae
4.	<i>Laea indica</i>	Maniperandi	Laeaceae
<b>4. Epiphytes</b>			
1.	<i>Aeschynanthus perrottetti</i>		Gesneriaceae
2.	<i>Medinilla beddomei</i>		Melastomataceae
3.	<i>Sirhookera latifolia</i>		Orchidaceae
<b>5. Undergrowths and Climbers</b>			
<b>a. Woody climbers and Stragglers</b>			
1.	<i>Entada scandens</i>	Kakkumvalli	Mimosaceae
2.	<i>Bauhinia phenicea</i>	Vallimandaram	Caesalpiniaceae

Sl. No.	Botanical name	Local name	Family
<b>b. Herbaceous climbers</b>			
1.	<i>Merremia tridentate</i>	Prasarini	Convolvulaceae
2.	<i>Myxopyrum serratum</i>	Chathuramulla	Oleaceae
<b>c. Shrubs</b>			
1.	<i>Antidesma diandrum</i>		
2.	<i>Calamus sp.</i>	Chooral	Palmae
3.	<i>Clerodendron serratum</i>	Cheruthekku	Verbinaceae
4.	<i>Costus speciosus</i>	Channakoova	Zingiberaceae
<b>d. Herbs</b>			
1.	<i>Glycosmis pentaphylla</i>	Paanal	Meliaceae
2.	<i>Spilanthes calva</i>	Kuppa manjal	Asteraceae

### 25c. Southern tropical moist deciduous forest [3B/CIC]:

This type of forests consists of valuable species mostly deciduous with height of 30-40 m. The trees of upper canopy are usually light demanders. Fluting is common. Bamboo undergrowth and climbers are abundant. These forests are subjected to annual fires resulting in the destruction of regeneration, seeds and soil, flora and fauna. Deciduous Forests obviously have more combustible materials on ground during summer. Combined with this, collection of NTFP and grazing by tribes contribute to fire, annually. These types of forests occur in Wayanad Plateau at elevation between 700 and 1100 m above MSL in Begur and Peria ranges.

**Floristic Composition:** The species wise details of southern tropical moist deciduous forests are shown below:

**Table No. 9 Species of southern tropical moist deciduous forests in the Division**

Sl. No.	Botanical name	Local name	Family
<b>1. Trees of top storey</b>			
1.	<i>Dalbergia latifolia</i>	Veetti	Papilionacea
2.	<i>Grevia tiliaefolia</i>	Chadachi	Tiliaceae
3.	<i>Lagerstroemia lanceolata</i>	Venteak	Lythraceae
4.	<i>Pterocarpus marsupium</i>	Venga	Fabaceae
5.	<i>Schleichera oleosa</i>	Poovam	Sapindaceae
6.	<i>Stereospermum colais</i>	Poopathiri	Bignonaceae
7.	<i>Tectona grandis</i>	Teak	Verbenaceae
8.	<i>Terminalia tomentosa</i>	Karimaruthu	Combretaceae
9.	<i>Terminalia bellerica</i>	Thanni	Combretaceae
10.	<i>Tetrameles nudiflora</i>	Cheeni	Datisceae
<b>2. Trees of middle storey</b>			
1.	<i>Adina cordifolia</i>	Manjakadambu	Rubiaceae
2.	<i>Anogeissus latifolia</i>	Mazhukanjiram	Combretaceae

Sl. No.	Botanical name	Local name	Family
3.	<i>Butea monosperma</i>	Plasu	Fabaceae
4.	<i>Dillenia pentagyna</i>	Vazhapunna	Dilleniaceae
5.	<i>Lannea coromandelica</i>	Kalasu	Anacardiaceae
6.	<i>Mitragyna parviflora</i>	Neerkadambu	Rubiaceae
7.	<i>Spondias pinnata</i>	Ambazham	Anacardiaceae
8.	<i>Sterculia guttata</i>	Peenari	Sterculiaceae
9.	<i>Sterculia urens</i>	Thondi	Sterculiaceae
10.	<i>Terminalia paniculata</i>	Pillamaruthu	Combretaceae
11.	<i>Trema orientalis</i>	Aamapetti	Ulmaceae
12.	<i>Xylia xylocarpa</i>	Irul	Mimosaceae
<b>3. Trees of lower storey</b>			
1.	<i>Aporosa lindleyana</i>	Vetti	Euphorbiaceae
2.	<i>Bambusa arundinaceae</i>	Mula	Poaceae
3.	<i>Careya arborea</i>	Pezhu	Lecythidaceae
4.	<i>Cycas circinalis</i>	Eentha	Cycadaceae
5.	<i>Ficus hispida</i>	Erumanaakku	Moraceae
6.	<i>Xeromphis spinosa</i>	Malamkaara	Rubiaceae
<b>4. Epiphytes</b>			
1.	<i>Cymbidium aloifolium</i>		Orchidaceae
2.	<i>Pholidota pallida</i>	Panna	Orchidaceae
<b>5. Undergrowths and Climbers</b>			
<b>a. Woody climbers and Stragglers</b>			
1.	<i>Acacia intsia</i>	Incha	Mimosaceae
2.	<i>Calycopteris floribunda</i>	Pullani	Combretaceae
3.	<i>Celastrus paniculata</i>	---	Vitaceae
4.	<i>Butea parviflora</i>	---	Papilionaceae
<b>b. Herbaceous climbers</b>			
1.	<i>Caesalpinia bonduc</i>	---	Caesalpinaceae
2.	<i>Hemidesmus indicus</i>	Naruneendi	Asclepiadaceae
3.	<i>Naravelia zeylanica</i>	Karuppakodi	Ranunculaceae
4.	<i>Passiflora foetida</i>	Poochapazham	Passifloraceae
<b>c. Shrubs</b>			
1.	<i>Abutilon persicum</i>	Thutti	Malvaceae
2.	<i>Eupatorium odoratum</i>	Communist pacha	
3.	<i>Helecteris isora</i>	Idampiri valampiri	Sterculiaceae
4.	<i>Hibiscus aculeatus</i>	Uppanachakam	Malvaceae
5.	<i>Lantana camera</i>	Poochedi	Verbenaceae
<b>d. Herbs</b>			
1.	<i>Glycosmis pentaphylla</i>	Paanal	Meliaceae
2.	<i>Desmodium triquetrum</i>	Adakkapaanal	Papilionaceae
	<i>Cida cordifolia</i>	Kurumthotti	Malvaceae



## 26. Plantations:

From 1943 onwards plantations were raised in the erstwhile Wayanad division. Part of such plantations come under this division due to the bifurcation. Plantations of different species were also raised in the division after 1990. The details of the plantations in this Division are given below and also in **Annexure -V**.

**Table No. 10 Types of Plantations of North Wayanad Division**

Plantation	Extent (ha)		Remarks
	Plantation	Natural forest	
a. Original planting			
Teak (Pure)	495.440		
Teak with Softwood	1001.027		
Softwood (Pure)	78.307		
Eucalyptus	392.743		
Cashew	12.140		
Mixed	584.980		
Belt	123.097		
Heterogeneous Mixed Seeding	194.000		
Medicinal	34.180		
Acacia	143.260		
Bamboo	111.000		
Cane*	0.000	20.000	
Reed*	0.000	36.000	
Plantations in open patches and degraded lands	109.640		
Total	3279.814	56.000	
b. Under planting			
Pepper	30.000		Under planted in 1979 Thirunelly teak and softwood plantation

### **Regeneration activities under World Bank Scheme (From 1998 onwards)**

Pulpwood	353.16	
ANR*	279.00	Raised in natural forests
RDF*	215.07	-- Do --
RRB*	115.60	-- Do --
<b>Total</b>	<b>353.16</b>	
<b>Grand total</b>	<b>3632.974</b>	

\*Area treated within natural forests, not reckoned as plantations.

The total area of the plantations in North Wayanad division is 3632.974 ha which includes 194.00 ha of heterogeneous mixed seeding.

### **Injuries to which the crop is liable:**

#### **27. General:**

The forests are liable to injuries by various kind, the main being the human population. The other natural factors like wind; fire, weeds, climbers, diseases and pests and animals also pose threats of different types.

**Fire:** Annual fire is common during the dry period, mostly in the deciduous forests, fringes of semi evergreen areas and open grassy areas. Fire is the main cause for the degradation of the forests and it destroys the natural regeneration. Apart from this, fires impoverish the soil through the burning of humus and reducing the nutrient status of the soil. Fire encourages soil erosion and reduces the water holding capacity of the soil. Destruction of soil flora and fauna affects the process of decomposition of organic matter and the maintenance of soil fertility.

**Wind:** Normally wind damage to the forest of this division is not a serious problem though occasionally some trees are top broken or uprooted. But during dry months it enhances the chances of faster spread of forest fire.

**Land Slips:** Landslip occurs at time in steep slopes during the monsoon. The damage is very much localised.

**Climbers and Phyto parasites:** Climbers are quite common in young plantations. Loranthus causes considerable damage in teak plantations reducing the yield as well as death of heavily infected plants.

**Grass and Weeds:** Weeds like Eupatorium and Lantana have a tendency to invade open areas of the forest. They are the most persistent bottlenecks in the growth and establishment of plantations. They have invaded plantations and have reached dangerous proportions, demanding repeated cutting and removal for the first 3 to 4 years of raising the plantations, thereby increasing the cost of plantation. They suppress and compete with the forest seedlings for the available moisture during the dry season. They also increase the fire risk.

**Insects:** The class Insecta constitutes the largest of all group in the Animal Kingdom; about three quarters of all known species of living animals are Insects. The most important characteristic of the forest insect is its food. The food of insects ranges between the extremes of a famishing diet like dry cellulose and the rich

nourishment of warm human blood, and includes such unlikely matter as strychnine and opium.

*Hyblaea puera* (Teak defoliator) and *Eutectona machearalis* (Teak skeletoniser) are the two important pests of teak. The damage varies in intensity from year to year and even in the same year from season to season.

**Fungus:** *Cylindrocladium quinquesepaticum*, *Cilicola parvum* are the most common fungus. They cause seedling blight, leaf spot, shoot blight, stem canker in species of Eucalyptus species.

**Animals:** There are a variety of animals big and small, inhabiting these forests. Wild Elephants trample saplings and peel off the bark of tree; Sambar and spotted deer browse leaves and young shoots of trees. Apart from browsing, they also injure the bark by rubbing their antlers against them. Squirrels and mouse deer destroy the seeds of valuable species of *Mesua* and *Dysoxylum*. Burrowl of rodents damage the roots.

**Man:** Man is the most powerful destructive agent responsible for degradation and destruction of forests. All Illicit fellings, encroachment, forest fire, grazing of cattle, poaching of wild animals etc are some of the actions leading to loss of Biodiversity and forest wealth. Though legal provisions exist, it is to be admitted that effective implementation is far from satisfactory.

## **28. Wildlife:**

The forest tracts of North Wayanad Division are rich in wildlife. The Wayanad Wildlife Sanctuary, is also located adjoining to this Division. These tracts are found to be having innumerable elephant trails. Similarly Tigers are sighted in these tracts. Gaur, Wild Boar, Sambar, other deer species, Fox etc are also sighted in these areas

At times wild elephants are seen moving in human inhabited areas adjoining forests. There had been cases of crop damage and even loss of human life. As such man-animal conflicts are escalating in these areas. Attempts were made in the past to construct power fences and elephant proof trenches in most problematic areas to prevent wildlife straying into human habitation.

**Common animals found in these forest tracts are:** Indian Elephant (*Elephas maximus*), Indian Bison (*Bos gaurus*), Sambhar (*Crevus unicolor*), Indian Wild Boar (*Sus scrofa*), Common Langur (*Presbytis entellus*), Nilgiri Langur (*Presbytis johani*), Lion-tailed Macaque (*Macaca silenus*), Tiger (*Panthera tigris*), Panther, Leopard (*Panthera pardus*), Jungle Cat (*Felis chaus*), Common mongoose (*Herpestes edwardsi*), Jackal (*Canis aureus*), Indian Fox (*Vulpus bengalensis*), Flying squirrel (*Petaurista, petaurista*), Malabar squirrel (*Ratufa indica*), Indian Porcupine (*Hystrix indica*), Barking Deer ( *Muntacus muntjak*), Spotted Deer (*Axis axis*).

**29. Offences:**

The details of offences recorded from the division since 1991 are given in **Annexure -VI.**