

NA GARJUNASA GAR-SRISAILAM TIGER RESERVE, ANDHRA PRADESH

INTRODUCTION:

The earliest authentic report of the Nallamalais is contained in the report by Captain Russel in 1852 wherein he described these Forests as the most uninviting tract inhabited by Chenchus, and subjected to virulent annual fires. Farista, the great muslim traveller of the 17th century wrote that the Forests of Cuddapah and Kurnool teemed with Elephants and a wide variety of Wild game. The H.E.H. Nizam of erstwhile Hyderabad State developed a Shikargah (Hunting preserve) around Mannanur Plateau in Mahaboobnagar district. Sri M. Gopalakrishnan in Kurnool Manual recorded that the forests around Srisailam Temple had been permanently closed for shooting. As described by that famous ornithologist, Dr. Salim Ali during his visit in 1942 to these areas, the entire track was full of Wildlife.

With the dawn of Independence like in all other Wildlife areas of the country, uncontrolled poaching reduced the population of Wildlife to a miserable state during the sixties. With the awareness to preserve Wildlife and adoption of Wildlife (Protection) Act, 1972 by Andhra Pradesh State, the pendulum started to swing back slowly. In the meantime two monumental multipurpose projects on river Krishna created two man-made lakes at Srisailam and Nagarjunasagar. The Nallamalai hill ranges flanking river Krishna were subjected to a severe axe blow during this period. Thus this beautiful habitat along river Krishna attracted the attention of the state forest department as a priority area for the protection and improvement. Thus, in 1978, both the flanks of river Krishna were declared as part of Nagarjunasagar-Srisailam Wildlife Sanctuary. The 1979 All India Tiger Census revealed 40 Tigers in this sanctuary. This encouraged the State Government to request the Government of India

to include this sanctuary in the Project Tiger Scheme. After careful study the Government of India included this sanctuary in the list of Tiger Reserve in the country during February 1983.

LOCATION, EXTENT, TOPOGRAPHY:

This Tiger Reserve extends over 3568 sq.kms spreading in five revenue districts, viz., Nalgonda, Guntur, Prakasam, Kurnool and Mahaboobnagar. This reserve is situated at 130 kms. South of Hyderabad city (AP) between 15° 53' North and 16°43' North Latitudes and in between 78°30' East and 79° 28' East longitudes. The boundaries of this reserve start at a distance of 130 kms from Hyderabad the capital of Andhra Pradesh can be approached only by Road. The nearest rail heads are 1) Hyderabad (SCR) at 130 kms. in north, 2) Macherla (SCR) 13 kms in the north-east and Markapur (SCR) 85 kms in the South of this Tiger Reserve. At Srisaillam Headquarters of the Project a helipad is available only for chartered flights.

The mighty river Krishna flows through the centre of this reserve cutting a deep gorge of 700 to 900 feet depth. Amrabad plateau on the north and Pechervu, Guttalachenu plateaus on the south of river Krishna from the main core of this reserve with rich flora and fauna. The average elevation of this reserve is 1500 feet from A M S L with the highest altitude being Durgamkonda, 2992 ft. above AMSL in Prakasam district, right flank. The elevation drops from the South, South-west to North and North-East. The lowest altitude being the river Krishna course (250 feet A M S L) on the eastern side. The Tiger Reserve is entirely carved out of Reserved Forests only, with some large enclosures in it.

CLIMATE:

Extreme climatic conditions are experienced in the reserve with a high temperature of 43°C in Summer and a low temperature of 8°C during nights in winter on higher elevations. In interior places like Pecheruvu, Nekkanti, Farhabad, Vatvallapalli etc., variation in temperature is less due to higher elevation. In general, the climate in the Tiger Reserve can be described as hot and dry climate. Three seasons are distinguishable.

1. Hottest Summer - March to mid June.
2. Rainy season - Mid June to Mid November
3. Mild winter - Mid November to February end.

Majority of the rainfall is due to south-west monsoons. The average annual rainfall is below 1000 mm. even with wind is generally heavy. After North-east monsoons, heavy dew falls in the Nallamalais. The first three months in a year are generally clear and fine in this Tiger Reserve.

THE RESOURCE

GEOLOGY, ROCK AND SOIL:

Majority portion of the area is covered by the oldest Geological formations known as the Archeans, which are unfossiliferous rocks formed about 2000 million years ago. These rocks mainly consist of granites, Gneisses, Pegmatitis and crystalline schists forming the basement. Lying unconformably on the Archaean are the Cuddapah system of rocks consisting of shales, slates, lime stone, dolomite, quartzites, sand stone and conglomerates. Outcrops of Barytes and Manganese are occur in Prakasam district parts of the reserve. Srisailam quartzites occupy most of the plateau portions with pale bluish, grey, brown and purplish colours. There are almost horizontal beds with a remarkable flat topped appearance,

ending abruptly in sharp edges. Ippalapalli areas in Mahaboobnagar district were once famous for diamonds.

The soils vary from red earth to black cottong soils. Soil is 90 cms deep in 23% of the area, of medium depth, (30 cms to 90 cms) and shallow or very shallow in the rest of the 77% of the area. Soil content is poor and is often absent in most of the forest area except in the valleys where red or clayey loams occur. Humus is negligible.

DRAINAGE:

River Krishna forms the main drainage source of the catchment in the Tiger Reserve, running in east and north east directions with many curves and bends. Other important drainage systems are of Dindi river, Nallavagu, Kaklet vagu, Palmalkolvagu and Yemulapaya vagu which run from west to East and South-East direction to join river Krishna. Munimadugulaeru, south of river Krishna in Kurnool district is an important drainage system running from east to west into the plains. On this stream only the much discussed Varadarajaswamy Gudi project (a medium irrigation Project) is contemplated. Other important streams like Bhemunikolanu vagu, Nekkanti vagu, Palanka vagu, Chennavaram vagu, Jarrivagu and Chandravanka river flow from south the north and north-east to join river Krishna.

In Nallamalais, underground drainage is more rapid than the surface drainage. Rain water percolates rapidly into the soil and is carried down through the sub-soil rocks and eventually into the main system of drainage. Hence the streams in Nallamalais are dry for the most part of the year. However, a number of perennial water holes (Springs) are located in most of the valleys of the Nallamalais (list enclosed).

FLORA:

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The forests in this Tiger Reserve are mainly Southern tropical dry mixed deciduous forests (5 A/C3 type of champion and seth's classification) other types being dry deciduous scrub, dry savannah forest, dry euphorbia scrub, *Boswellia serrata* type, *Hardwickia binata* type and *Anogeissus latifolia* type and southern tropical thorn forests.

The main type of forests normally consists of 3-4 storeys of which the important species are, *Terminalia tomentosa*, *Pterocarpus marsupium*, *Tectona Grandis*, *Terminalia bellerica*, *Terminalia chebula*, *Lannea grandis*, *Albizzia lebbek*, *Albizzia odoratissima*, *Embllica officinalis*, *Chloroxylon swietenia*, *Hardwickia binata*, *Bridelia retusa*, *Adina cardifolia*, *Melia azadirach*, *Ailanthus excelsa*, *Nassia latifolia*, *Bucharania lonzan*, *Diaspyros melanoxylon*, *Aegle marmelos*, *Feronia elephantum*, *Dalbergia latifolia*, *Dalbergia paniculata*, *Bombax malabaricum*, *Cochlospermum Gosypium*, *Ficus species*, *Sterculia urens*, *Givotia rottleriformis*, *Gyrocarpus jacquini*, *Sapindus emarginatus*, *Mitragyna parviflora*, *Strychnos nux-vomica*, *Helecteris isora*, *Grewia tiliaefolia*, *Gadenia spp*, *Ixora parviflora*, *Premna tomentosa*, *Mundelia suberosa*, *Zizyphus juzuba*, *Zizyphus xylopyrus*, *Zizyphus oenoplea*, *Phoenix acaulis*, *Phoenix sylvestris*, *Acacia*, *Abrus precatorius*, *Pterolobium indicum etc.*

Among the grasses, *Heteropogon Contortus*, *Sehima nervosum*, *Cymbopogon martini*, *Cymbopogon coloratus*, *Aristida setacea* and *Andropogon pumilis* are normally found.

FAUNA:

In this Reserve, tiger is dominant species associated with lesser carnivores like panther, sloth bear

etc. Except barking deer and Bara singha, almost all other species of deer are present in the reserve. The antelopes are represented by black buck Nilgai and Chowsingha, gazelles are represented by chinkara. The list of species of Mammals, birds and reptiles available in the reserve is enclosed. Their number is steadily increasing with the improved protection in the Tiger Reserve. The tourism is discouraged only to create conditions congenial to the growth of wild animals, particularly prey populations.

HISTORICAL AND CULTURAL RESOURCE:

The forests around Srisailam and Nagarjunasagar have a sound cultural background. The history dates back to 2nd century A.D. during which period these areas were ruled by Andhra and Sriparvateeyas (Satavahana kings). Ikshwaku kings succeeded them in the 3rd century with their capital at Vijayapuri (the present Nagarjunasagar areas). Acharya Nagarjuna, the famous Buddhist scholar-savant lived during 2nd century A.D. at Nagarjunasagar where Buddhist culture flourished. The remains of the past glory are now preserved in the Island museum in Nagarjunasagar reservoir. In the early part of the 5th century, Adishankara, the great Hindu saint-philosopher and propounder of 'Adivaita' principle visited Srisailam and did penance at Hatakeswaram. These parts were ruled by the Kakateeya kings during the 12th century. Krishna Devaraya, the famous Vijayanagar king and Chatrapati Shivaji, the famous Maratha Warrior visited Srisailam temple and built the Gopurams and Mantapams.

Srisailam is the abods of Lord Mallikarjuna, one of the 12 Jyothirlingams in the country and his consort Bhramaramba. One of the eighteen shakthi peethams in our country. There are many other places of religious importance at Umamaheswaram, Chaleswaram, Nagaluty, Sikhareswaram etc.

The two man-made lakes, Nagarjunasagar and Srisaillam reservoirs and the dams lie within this Tiger Reserve.

A special mention is to be made here regarding the native tribes of Nallamalais, the 'Chenchus'. The total population of this tribe is only a few thousands. They used to be very wild in their nature, highly suspicious and very indolent, Now the situation has changed and many a Chenchus children are getting educated in tribal schools. Chenchus live in small groups of huts called gudems. They eat Jowar, Bajra, Wild fruits, roots, bamboo seed and some time depend solely on country liquor made of mohwa flower. Occassionally they hunt squirrels, monitor lizard and birds. They enjoy certain rights in these reserve forests to hunt and enjoy collection of M.F.P. This Project is trying to improve their lot by enrolling them in 72% of jobs created in the Project. An attempt is made to educate them. A strong controversy is shaping whether this tribe is to be preserved in their age old barter system approach as a specimen study of vanishing ethnic group or to orient them to modern style of living.

DECIMATING FACTORS:

Annual fires is a regular feature in the reserve. Cattle grazing which is allowed free losses a serious threat to the development of wild herbivores. Other disturbing factors include collection of minor forest produce and vehicular traffic along the highways, which is considerable. Efforts are being made to control these biotic interferences. Core areas are freed from these evils by persuasion and coersion. Non-availability of adequate water during pinch period in plateau portions is another influencing factor which limits the distribution of the wild animals.

ACCOMMODATION FOR VISITORS:

The best time to visit the sanctuary is from October to March. Tourist accommodation is available at Mannanur, Egalpenta, Srisailam Dornal and Bairluty in Forest Rest Houses and at Nagarjunasagar, Ethipothala falls and Srisailam in P.W.D. and Tourism Department Guest houses. Boarding facility is available at Srisailam Project and Nagarjunasagar in the P.W.D. Guest houses. Yet this Project is not geared for a full fledged tourist activity and this aspect is given last priority.

OBJECTIVES OF THE PRESENT MANAGEMENT PLAN:

1. Increasing the herbivore population into two fold.
2. Improving the habitat by creating more waterholes and fodder development.
3. Protection against Fire, Cattle grazing, poaching and smuggling.
4. Welfare measures for the Chenchus.
5. Increased facilities for tourists like visitors' centres, watch-towers, Accommodation.
6. Meeting the basic demands of local people for fuel, fodder and small timber.

OBJECTIVES OF THE TIGER RESERVE:

1. To protect Tiger and its prey animals with their habitat.
2. To protect the river Krishna catchment and to save the life span of the two reservoirs.
3. To save the ecology of these parts of Nallamalais.
4. To bring awareness among the local people about wildlife conservation and Nature preservation through Nature interpretation centres.
5. To improve the living conditions of native tribals.
6. To promote wildlife tourism.
7. To improve eco-development consciousness in villages surrounding Tiger Reserve by Pasture development and creating village wood lands.

MANAGEMENT:

Till recently the areas of this reserve were allotted to support pulp wood requirements of two Major Paper Industries in the State namely, Sree Rayalaseema Paper Mills Limited and Siripur Paper Mills. In addition, these forests also have to cater to the requirements of five thickly populated districts in which these areas are located. To strike a viamedia between the needs of Wildlife and requirements of the people around the areas, Management practices are being regulated in a slow but steady manner since 1983, with a view to avoid friction with local people.

Out of 3568 sq.kms. of the Tiger Reserve, about 1200 sq.kms area is declared as core area of the reserve. In core area all the forestry operations and sale of forest produce is dispensed with from 1983 onwards. The biotic influences except continuance of 23 CHENCHU GUDAMS with a population of (1751) are eliminated. The resident tribals (CHENCHUS) of these areas are still very primitive and cannot identify themselves with the outside human civilisation. They are continuing to live on barter system. In fact they are not quite different from wildlife of the area. Translocation of these villages outside sanctuary limits is almost impossible. As such, for the management of core areas, chenchus are treated as an integral part of this eco-system. They are allowed to enjoy rights for collection of M F P and to rear their cattle. In fact arrangements are made to provide supply of food materials to these chenchus in the core area and efforts are also made to educate them keeping them in the core area itself.

WATER AND FODDER SOURCES:

In core area except fire protection and improvement of water holes no other works are taken-up. But

to counter-act the unprecedented drought in the state, cut grass is being supplied to the drought affected areas from the Tiger Reserve.

The grazing is permitted in the Buffer zone on free permit system. It is insisted to vaccinate the cattle before they enter the reserve. Steps are also being taken to improve the quality of the cattle with the help of Vateriaary Department.

The main effect of this intensive grazing on the buffer zone is the total depredation grazing grounds. To counter this some fodder enclosures are formed in the Buffer zone near to the water holes. The extent of these grass lands vary from 5 hecets to 20 hecets. The area will be fenced by chain link fence of 1.2 mtr. height where wild animals can jump but cattle can not enter.

This reserve can be broadly divided into pleateau portion and valley portion. On the plateau, water holes get dry by March of every year. This is because the rock strata on the hills do not allow any storage of subsoil water. The entire water drains into the valleys. Most of the tribal villages are located near the perennial springs. This is causing difficulty in expanding the distribution of wild animals. To counter this (16) breached tanks are repaired and water troughs are being constructed which will be filled up with transported water. Frequency of sighting of herbivores on the plateau is improving in summer months also.

FIRE CONTROL

Being essentially a savannah type of forests, with deciduous trees the fire has become a menace for

the wild animals in summer. Grass is cut on either side of the roads to a width of 10 mtrs. and with the help of wireless net work, the fire control operations are regulated. Fire lines are maintained and in summer months strict patrolling is taken up by the special staff to control the fire. The root causes of fire are collection of Mahwa Flower and Tendu leaves.

COMMUNICATIONS:

In this Sanctuary, the accessibility of the areas is poor. Roads are in a bad condition, because of the bad terrain in the hills. A net work of wireless stations are erected to establish communications. At present 11 fixed stations and 11 walkie Talkies are used in this reserve. Important forest roads are being repaired and maintained.

PROTECTION:

There are 2 ex-convict settlements one on either side of river Krishna. They are professional smugglers and poachers. Controlling them is a perilous task for the staff. Three (3) Jeeps and 4 Motor cycles are provided for patrolling the areas.

WEED CONTROL:

In the artificial plots weeds like lantanum etc. may deprive the management the opportunity to develop fodder areas. Fortunately such areas are restricted only to the buffer zone. In core area the infestation of weeds is comparatively less. The weeds are being removed from these plots regularly.

KILLS BY CARNIVORES:

The main prey for the tiger remain to be cattle in buffer zone. As such, heavy compensation is being paid to the owners of the cattle. It is expected that

with the improvement in the habitat and natural prey in the core area the tigers may shift their habit of preying on cattle to preying on wild animals. Vide G.O.Ms.No.323 F & R D (For.III) Dept. dt.3.8.1985 rates of compensation and basis of compensation are clearly defined.

TOURISM:

No effort is made to improve the Tourism in Tiger Reserve with an intention to give rest to the habitat for a period of 5 years. It is hoped to improve tourism after the completion of 7th Plan. In the meantime the nature trails and trekking paths are slowly developed. Also school children are encouraged to go to forests and participate in census operation to create interest in them for conservation of nature.

INTERPRETATION CENTRE:

In this Tiger Reserve two environmental education centres (interpretation Centre) are being developed. In this centre provision is made to exhibit the multi-facets of the mother nature, which will be associated with a exhibition hall to screen films on wildlife and environment subjects. A Library is also attached to the interpretation centre.

RELOCATING OF CORE VILLAGES:

During 1985-86 Pechervu, village with 580 population is being relocated outside the Tiger Reserve limits. It is proposed to take up three core villages during 1986-87 for relocation. The list of pentas (Tribal habitation) is enclosed.

IRRIGATION PROJECTS:

In the reserve two irrigation projects are being taken-up to take water of river Krishna for cultivation in drought areas. They are major threat to the habitat and wildlife of the area.

POPULATION ESTIMATES:

So far only tiger and panther census could be conducted with reasonable correctness, 65 Tigers 57 Panthers are recorded in the census. Methods of Census for other species are still under trial.

STAFF:

The Project is managed by a Field Director of Conservator Cadre assisted by 2 Asst. Directors (Asst. Conservator of Forests) and 7 Range Officers, 24 Foresters, 74 Forest Guards and 56 watchers. The complete administrative control of core area is with the Project. The Buffer zone only Wildlife Management is entrusted with the Project. The habitat control is with the regular Forest Division. This is to facilitate continuation of Forest working in Buffer zone.

In general, the Wildlife Management in the reserve resulted in improved habitat conditions, improved herdsizes, and reduction in Biotic interferences.

FINANCIAL OUTLAY:

The Project is funded by Government of India and shared by the State Government on 50:50 basis. During 7th Plan, 35 lakhs per annum are allotted to this reserve from February 1983 to March 1985. Rs.39 Lakhs were utilised for developing infrastructure facilities and habitat improvements.

FUTURE PLAN:

The main thrust would be on the improvement of water sources, communication, control of fires in the forest and providing residential accommodation to the staff in the interior forest. The facilities for

tourism are not provided in this plan with a view to give complete rest to the habitat and wildlife and to develop them to an appreciable degree.

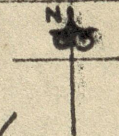
The total outlay agreed by Government of India is Rs.35 Lakhs (Rupees thirty five lakhs only) per annum. But this amount would not be sufficient if more stress is to be laid on items like (1) Re-allocation of villages, (2) Interpretation and Research, (3) Welfare Measures to the people 10 Kms. around the TIGER RESERVE.

CROCODILE CONSERVATION:

With the Nagarjunasagar and Srisaillam reservoir waterspreads and the Krishna river cutting across the Project Tiger area, a considerable quantum of aquatic habitat is available for the endangered mugger crocodile Crocodylus palustris. In the state of Andhra Pradesh, the aquatic habitat of Project Tiger area holds the largest population of reintroduced mugger crocodile. On the eastern boundary of the project tiger at Ethipothala falls, the first ever reintroduction of captive reared crocodilians was taken up in the year 1977. This location is also the first in the country where the reintroduced mugger crocodile have started breeding in the wild from the year 1981. So far over 180 mugger crocodile have been reintroduced within the project tiger area/and ^{in the Krishna river} with the planned construction of a captive crocodile breeding and rearing centre at Nagarjunasagar, it is hoped to reintroduce several hundred more crocodile into the waterspreads of the Project Tiger area in future.

NAGARJUNA SAGAR - SRISAILAM TIGER RESERVE (A.P.)

SCALE: 1:50,000



REFERENCE:
- - - - - TIGER RESERVE
——— MAIN ROADS
——— STREAMS
○ PROJECT TIGER HQ.
DRAWN BY: B. YAKA PRASAD, FRP.

LIST OF FAUNA FOUND IN NAGARJUNASARAI SRISAILAM TIGER RESERVE ANDHRA PRADESH

MAMMALS:

- A. CHIROPTERA:
1. Fulvous Fruit bat (*Rousettus Leschenaulti*)
 2. Indian Flying Fox (*Pteropus giganteus*)
 3. Indian pipistrelle (*Pipistrellus coromandra*)
 4. Common yellow bat (*Scotophilus heathi*)

B. INSECTIVORA:

1. Grey mist Shrew (*Sorex murinus*)
2. Indian Tree shrew (*Anathene alliebi*)

C. RODENTIA

1. Three striped palm squirrel (*Flemingia palmorum*)
2. Five striped palm squirrel (*F Pennanti*)
3. Indian Giant squirrel (*Ratufa indica*)
4. Indian Gerbil (*Tateia indica*)
5. Indian mole rat (*Bandicota bengalensis*)
6. Bandicoot rat (*B. indica*)
7. Indian Field mouse (*Mus hoodugae*)
8. Indian Poromina (*Hystrix indica*)
(both red and white varieties)

D. LAGOMORPHA

1. Black naped hare (*Lepus nigricollis, nigricollis*)

E. PHOLIDOTA:

1. Indian scaly ant-eater (*Manis crassicaudata*)
(Pangolin)

F. PRIMATES :

1. Common Lemur (*Presbytis entellus*)
2. Bonnet macaque (*Macaca radiata*)
3. Rhomus macaque (*Macaca mulatta*)

G. CARNIVORA:

1. Indian Tiger (*Panthera tigris tigris*)
2. Panther or Leopard (*Panthera pardus*)
3. Jungle cat (*Felis chaus*)
4. Leopard cat (*Felis bengalensis*)
5. Small Indian Civet (*Viverricula indica*)
6. Common Palm Civet (*Paradoxurus hermaphroditus*)
(Toddy cat)
7. Common mongoose (*Herpestes edwardsi*)
8. Smooth Indian otter (*Lutra perspicillata*)
9. Ratel or Honey badger (*Mellivora capensis*)
10. Sloth bear (*Melursus ursinus*)
11. Striped hyena (*Hyaena hyaena*)
12. Indian wild dog or Dhole (*Cuon alpinus*)
13. Indian Fox (*Vulpes bengalensis*)
14. Jackal (*Canis aureus*)
15. Wolf (*Canis lupus*)

H. ARTIODACTYLA:

1. Chital or spotted deer (*Axis axis*)
2. Sambar (*Cervus unicolor*)
3. Barking deer (*Muntiacus muntjak*)
4. Mouse deer (*Tragulus naivus*)
5. Wild boar (*Sus cristatus*)
6. Chinkara (*Gazella gazella*)
7. Chousinga (*Tetraco^{ru} quadricornis*)
8. Black buck (*Antelope cervicapra*)
9. Nilgai (*Boselaphus tragocamelus*)

(Most common species are mentioned)

- A. GALLIFORMES:
1. Indian Peafowl (*Pavo cristatus*)
 2. Grey jungle fowl (*Gallus somerattii*)
 3. Red spur fowl (*Galliperdix spadicea*)
 4. Jungle bush quail (*Perdicula asiatica*)
 5. Grey quail (*Coturnix coturnix*)
 6. Grey partridge (*Francolinus pondicerianus*)
 7. Painted partridge (*F. pictus*)
 8. Painted spur fowl (*Galliperdix lunilata*)

- B. GRUIFORMES:
1. Indian moorhen (*Gallinula chloropus*)
 2. White breasted waterhen (*Amasornis^{cu} phoenicurus*)

- C. COCCYFORMES:
1. Indian Pond heron (*Ardeola grayii*)
 2. Cattle egret (*Bubulcus ibis*)
 3. Little egret (*Egrettaⁿ gazetta*)
 4. Large egret ()
 5. Grey heron (*Ardea cinerea*)
 6. White necked stork (*Ciconia episcopus*)
 7. Black ibis (*Pseudibis papillosa*)

- D. PODICIPEDIFORMES:
1. Little grebe or Dabchick (*Podiceps ruficollis*)

- E. ANSERIFORMES:
1. Cotton teal (*Nettion coromandelianus*)
 2. Common teal (*Anas creces*)
 3. Lesser whistling teal (*Pendrocygna javanica*)
 4. Pintail (*Anas acuta*)
 5. Spot bill duck (*Anas poecilorhyncha*)
 6. Shoveller (*Anas clypeata*)
 7. Combduck (*Sarkidiornis melanotos*)

- F. FALCONIFORMES:
1. White backed vulture (*Gyps bengalensis*)
 2. White scavenger vulture (*Neophron pernopterus*)
 3. Blackwinged kite (*Elanus caeruleus*)
 4. Pariah kite (*Milvus migrans*)
 5. Pale Harrier (*Circus maerouanus*)
 6. White eyed buzzard (*Buteo teesa*)
 7. Crested Hawk eagle (*Spizaetus cirrhatius*)
 8. Crested serpent eagle (*Spilornis^{ee} chyla*)
 9. Tawny eagle (*Aquila rapax*)
 10. Short - toed eagle (*Circus gallicus*)
 11. Kestrel (*Falco tinnunculus*)
 12. Shikra (*Accipiter badius*)

- G. CHARADRIIFORMES:
1. Bronzewinged jacana (*Metopidius indica*)
 2. Red wattled Lapwing (*Vanellus indicus*)
 3. Yellow wattled Lapwing (*V. malabaricus*)
 4. Little ringed plover (*Charadrius dubius*)
 5. Avocet (*Recurvirostra avosetta*)
 6. Black winged stilt (*Himantopus himantopus*)
 7. Curlew (*Numenius arquata*)
 8. Common sandpiper (*Tringa hypoleucos*)
 9. Indian courser (*Cursorius coromandelicus*)
 10. River tern (*Sterna aurantia*)

PHALACROCORACIFORMES:

1. Common sandgrouse (*Pterocoles eximius*)
2. Blue rock pigeon (*Columba livia*)
3. Common green pigeon (*Treron phoenicoptera*)
4. Emerald dove (*Chalcophaps indica*)
5. Spotted dove (*Streptopelia chinensis*)
6. Red turtle dove (*S. traquairiana*)
7. Ring dove (*S. decussata*)
8. Little brown dove (*S. Senegalensis*)

I. PSITTACIFORMES:

1. Large Indian Parakeet (*Psittacula eupteria*)
2. Rose ringed parakeet (*P. krameri*)
3. Blossom headed parakeet (*P. cyanocephala*)

J. CUCULIFORMES:

1. Common Hawk cuckoo (*Cuculus varius*)
(Brain fever bird)
2. Pied crested cuckoo (*clamator jacobinus*)
3. Koel (*Eudynamys scolopacea*)
4. Crow-pheasant (*Centropus sinensis*)

STRIGIFORMES:

1. Great horned owl (*Bubo bubo*)
2. Barn owl (*Tyto alba*)
3. Brown fish owl (*Bubo Zeylonensis*)
4. Spotted owl (*Athene brama*)

CAPrimULGIFORMES:

1. Common Indian Nightjar (*Cephaloprogne asiaticus*)

APODIFORMES:

1. Palm swift (*Cypsiurus parvus*)
2. Alpine swift (*Apus melba*)
3. Common swallow (*Hirundo rustica*)
4. Wiretailed swallow (*H. smithii*)

CORACIIFORMES:

1. Indian roller (*Coracias benghalensis*)
2. Hoopoe (*Upupa epops*)
3. Small green bee-eater (*Merops orientalis*)
4. Blue tailed bee-eater (*M. philippinus*)
5. Pied king fisher (^{Ceryle} ~~alcyon~~ *alcyon radiata*)
6. Small blue king fisher (*Alcedo atthis*)
7. White breasted king fisher (*Halcyon smythenensis*)
8. Stock billed king fisher (*Pelargopsis capensis*)
9. Common grey horn bill (*Tockus birostris*)

PICTIFORMES:

1. Green barbet (*Megalaima zeylanica*)
2. Crimson breasted barbet (*M. haema cephalis*)
3. Golden backed woodpecker (*Dinopium benghalense*)
4. Yellow-pied wood pecker (*Picoides nairattensis*)
5. Pygmy wood pecker (*P. nalis*)
6. Indian pitta (*Pitta brachyura*)

PASSERIFORMES:

1. Ashy crowned finch lark (*Eremophila grisea*)
2. Crested lark (*Calcearis malebarica*)
3. Skylark (*Alauda gulgula*)
4. Blackheaded - yellow bulbul (*Pycnonotus melanicterus*)
5. Golden fronted chloropsis or green bulbul (*Chloropsis aurea*)
6. Red vented bulbul (*Pycnonotus cafer*)

7. Red whiskered bulbul
8. Bay backed shrike (*Lanius vittatus*)
9. Rufous backed shrike (*L. schach*)
10. Common wood shrike (*Troglodytes paniceus*)
11. Black drongo (*Merops ^{luc} adami*)
12. White bellied drongo (*D. caeruleus*)
13. Racket tailed drongo (*D. paradisi*)
14. Golden oriole (*Oriolus oriolus*)
15. Blackheaded ~~swift~~ oriole (*O. xanthornis*)
16. Brahminy myna (*Sturnus pagodanus*)
17. Common myna (*Acridotheres tristis*)
pied myna (*sturnus contra*)
18. Jungle crow (*corvus macrorhynchos*)
19. Tree pie (*Dendrocitta vagabunda*)
20. Large cuckoo shrike (*coracina novae-hollandiae*)
21. Scarlet minivet (*Pericrocotus flammeus*)
22. Iora (*Aegintha tiphia*)
23. Spotted babbler (*Pellonismus ruficeps*)
24. Common babbler (*Turdoides catantus*)
25. Slatyheaded scimitar babbler (*Penthorinus schisticeps*)
26. Tickell's blue flycatcher (*Muscicapa tickellae*)
27. Verditer blue flycatcher (*M. thelassina*)
28. Paradise flycatcher (*Terpsiphona paradisi*)
29. White spotted fan tailed flycatcher (*rhipidura albicollis*)
30. Ashy wren warbler (*Prinia sociata*)
31. Tailor bird (*Orthotomus sutorius*)
32. Magpie robin (*Copsychus ^{Seylan} ~~malabaricus~~*)
33. Indian robin (*Saxicoloides fulicata*)
34. Shama (*copsychus malabaricus*)
35. Yellow wagtail (*Motacilla citreola*)
36. Pied wagtail (*M. madagascariensis*)
37. Tickell's flower pecker (*Dicaeum erythrorhynchos*)
38. Purple sun bird (*Nectarinia asiatica*)
39. Purple rumped sun bird (*N. zeylonica*)
40. White eye (*Zosterops palpebrosa*)
41. Weaver bird (*Ploceus philippinus*)
42. White throated munia (*Lonchura malabarica*)
43. Red munia (*Estrilda amandava*)
44. Blue rock thrush (*Monticola solitarius*)
45. Collared bushchat (*Saxicola torquata*)

REPTILES

1. Deccan Saw back terrapin (*Kachuga tentoria*)
2. Indian Pond terrapin (*Coccyda (melanochelys) trifuga*)
3. Mud or Flapshelled turtle (*Lissemys punctata granosa*)
4. Indian starred tortoise (*Testudo (geocheilone) elegans*)
5. Mugger or Marsh crocodile (^{*Crocodylus*} ~~*avocatus*~~ *palustris*)
6. Bark gecko (*Hemidactylus leschenaultii*)
7. Southern house gecko (*Hemidactylus frenatus*)
8. Termite hill gecko (*H. triedrus*)
9. Banded rock gecko (*cyrtodactylus dekkanensis*)
10. Common garden lizard (*calotes versicolor*)
11. Forest calotes (*calotes roulei*)
12. Fan throated lizard (*Sitana ponticeriana*)
13. Indian chameleon (*Chamaeleon zeylanicus*)
14. Common skink (*Mabuys carinata*)
15. Snake skink (*Riopa punctata*)
16. Land monitor (*Varanus bengalensis*)
17. Common blind snake (*Typhlops braminis*)
18. Indian rock python (~~*Python*~~ *molurus*)
19. Spectacled Cobra (*Naja naja*)
20. Russel's viper (*Vipera russelii*)
21. Saw scaled viper (*Echis carinatus*)
22. Common Krait (*Bungarus caeruleus*)
23. Common rat snake (*ptyas mucosus*)
24. Tree snake (*Dendrelaphis tristis*)
25. Common wolf snake (*Lycodon aulicus*)
26. Checkered keel back (*Xenochrophis piscator*)
27. Green keelback (*Macropisthodon plumbicolor*)
28. Cat Snake (*Baiga trigonata*)
29. Russel's earthboa (*Bryx conicus*)
30. Vine snake (*Ahaetulla nasutus*)

Amphibia

1. Dwarf toad
2. Common toad
3. Narrow mouthed frog
4. Skittering frog
5. Common frog
6. Spotted tree frog.

Fishes (Major Varieties)

1. Aila coila
2. Arvis jella
3. Catla catla
4. Labeo bata
5. Labeo calbasu
6. Labeo fimbriatus
7. Garhana mrigala
8. Mystus singhala
9. Garra gotyla
10. Wallago attu