Chapter 3
Profile of National Parks and Sanctuaries of Karnataka

Bannerghatta National Park

Abstract

The Bannerghatta National Park is hailed as one of the most famous and prominent of all national parks in India. This park is a host to many species of birds and animals and it pulls down the attraction of children and adults in the same way with the wide range of varied wildlife.

Bannerghatta Biological Park is carved out from Bannerghatta National Park in the year 2002. It is positioned 22 km south of Bangalore, Karnataka, India. The drive to the park takes nearly one and a half hours from Bangalore. This hilly place is the home for one of the richest natural, zoological reserves. The 25,000 acre (104.27 km²)
zoological park composes a key tourist attraction of Bangalore. With this Bannerghatta National Park was extended 267 Sq mtr by inclusion of Bilakal State Forest, Manjunatha State Forest and Ramadevarabetta State Forest wild G.O. No. FEE 302, FWL 2011 (ii) dated 27.12.2011. this inclusion was necessary because of the abundance of wild animal of adjoin original Bannerghatta National Park.

The Bannerghatta Biological Park (BBP) now under the control of Zoo Authority of Karnataka has reserved lions and tigers rescued over the years from circuses. The region is of key attention to the visitors and more than 10 lakh tourists.

History

It is spread across a sprawling area of over 104.27 sq. Km established in 1974. Bannerghatta National Park is an element of the Nilgiris-Eastern Ghats Reserve (NEGR) considered as the largest elephant reserve in the country, the NEGR is the residence to over 2500 Asiatic elephants and also elephants migrating from one place to other are passed via the Banerghatta Park.

Climate

The weather is moderate in the range of 15 – 22degree Celsius all over the year. Best season: September to Jan.

Flora

This National Park is a treasure house of mysterious species of wildlife and also consists of great variety of flora. The flora of this place is very rich and beautiful with huge green trees providing shadow and protection all through the year. The forest nature of the park is mostly moist deciduous teak forests. Tree species in the park include, Schleicheria oleosa, chujjullu, sandal, T. arjuna. Grewia tilaefolia, Santalum album, Terminalia tomentosa, tamarind, neem, Shorea talura, Vitex altissima, jalari, Emblica officinalis, Anogeissus latifolia, Wrightia tinctoria, Randia sp. Zizphus sp. and Albizia sp. Bamboos are common in the park, the governing species being Dendrocalamus strictus. A small portion of the park has plantations of Eucalyptus, Bauhinia purpurea, Samanea saman and Peltphorum pterocarpum.68

Fauna

Leopard, Chital, Porcupine Sambar, Bison, Sloth Bear, Barking Deer, Wild Dog, Elephant, Jackal, Mouse Deer, Wild Boar, Porcupine ,Striped Hyena, Bonnet Macaque, etc. The park is a unique replacement area for tigers and lions rescued from circuses in India. They can be seen in securely fenced areas within the 25,000 acres of the Park.

Birds include Eagles, Grey Jungle Fowl, Collared Scop's owl, grey heron, white ibis, Minivets, Partridges, Quails, Common Grey Hornbill, Flycatchers, Spotted Owlet, Wood Peckers, Ibis, Storks, Flower-Peckers, Peafowl, Thrushes, Cuckoos, Parakeets, Orioles, Wagtails, Drongos cormorants, Sunbirds, little green heron, paradise flycatcher, Brown Fish owl, Eurasian Eagle owl White bellied Drong, Mottled Wood Owl, and Tickell's Blue Flycatcher etc.

Reptiles found here are Tortoise, cobra, Land monitor lizard, viper, crocodiles, krait, rat snake, python etc. are the type of animals live in the water holes/blank area of the BBP.

**Interesting things to do:**

**Lion and Tiger Safari:**

Safari is a tour to view and study the animals in their natural habitat. In the safari the animals are left free in a larger enclosure. The visitors are taken in closed vehicles inside the enclosure and are allowed to view the animals very close to them. The visitors can see the animals in their natural surroundings unlike what they would see in zoo wherein the animals are caged while the visitors are free outside. The safari provides the tourists with an opportunity to have close look at wildlife as
they drive through the winding roads in the larger enclosures caged in their vehicles while the animals wander freely in the enclosures.

The visitors will have the excitement of wilderness and wildlife with the feeling of being in the midst of the forest and wild animals. This is the main theme of the safaris formed in the Bannerghatta Biological Park in the midst of the Natural forests – i.e. Ragihalli Reserve Forest, 4 km away from the zoo connected by asphalted road. The route to the safari surpasses through the pictures hillock Mattubunde giving an opportunity to the visitors to have the exciting and breathe holding panoramic view of the landscape of the broken chain of hillocks and valleys with lush green forests. The park is one of the initiatives in creating and maintaining the safari of the wild animals to see, study and enjoy the majestic predators and other animals.

**Herbivore Safari**

It is an enclosed space over an area of 121.41km forest area with rubble wall, moat and solar fencing around it. It has perennial water sources and salt beat to the herbivores and also a arrangement of road for the visitors to go round in the mini coaches for viewing the wild animals. The animals translocated and maintained in the forest for the safari are barking deer, cheetal, bison, nilgai, sambar, black buck, wild boar, pangolin, and porcupine. There are crocodiles inside the ponds to view during safari. Varieties of birds and peafowl are naturally found in the safari. Big herbivores are feeded during pinch period by green fodder and cattle feed. This safari is attracting more tourists, especially children.

Herbivore Safari is nestled in natural forest area of 117 Ha. Animals exhibited are spotted deer, hog deer Sambar, Black buck, India Gaur, barking deer, wild boar, Neelgai etc.
A bear safari is started with large number of bears which is rehabilitated which are rescued from kalakars from Karnataka who perform the bear dance. The bear safari is planned for 30 bears with separate cages for housing and feeding with a plan to let out the bears to the open view within the enclosures for viewing of the visitors. The forest area is planned to plant additionally varieties of fruits yielding trees to create natural habitat for bears.. This NGO is also looking after all bears of BBP for which BBP is paying the maintenance cost and these bears are left to the safari area for exhibition to the visiting tourist. Due to positive accommodation in holding houses, the NGO has built one holding house with 20 cubicles to house the incoming bears. In an average there are 105 bears including 25 bears of BBP, UK and from awful circus.

The famous Safari has Carnivore Section and Herbivore section. In the Safari rides, visitors are taken around a mini bus through the enclosed and protected area of the animals to roam around freely. The Herbivores section comprises of few animals like bears, deers, and a few monkeys etc. White Tigers, Bengal Tigers make up for the Tiger Safari, Lions Safari and Bear Safari in the carnivores' section. Though the entire national park stretches across 104.27 sq km, only a small portion in the north has been engraved out for tourism. The Karnataka government vide notification Dated27.11.2011 enlarged the national park

**Trekking**

Uddigbande (3.5 km) a natural rock formation called Hajjamana Kallu (3 km) and Mirza Hill (1.5 km) are for the Trekking enthusiasts. There is also Jumbo ride for the visitors beyond the parking slots organized by the Forest Department. The area is spread of Dry deciduous forests and thorny scrub, with patches of moist deciduous forests along the streams.
Suvarnamukhi Stream and Temple

At an average coverage area of 104 sq km, including ten reserve forests of Anekal Range of the Bangalore Forest Division, the scenic hills are covered with many ancient temples. A stream named Suvarnamukhi flows through the park, originates in the Suvarnamukhi hills. These hills spread out to a huge rock, about a kilometre long. The Champaka Dharna Swamy temple dedicated to Lord Vishnu and his consorts Sridevi and Bhoodevi is built in the Dravidian style of the Hoysala age, lies at the foot of the rock. There is also a Narasimha temple about two km away from the Suvarnamukhi pond. The waters of this pond are believed to have curative powers.

Pearl Valley

Situated around 25 km from the park is the beautiful pearl valley. A popular picnic spot, the area is surrounded by thick vegetation which harbours some wild animals. 280 steps cut into the rock lead to the bottom of the valley where an ancient Shiva temple is seen.

Butterfly Park

The butterfly park is a circular enclosure stretching over an area of 10,000 sq ft, covered by a polycarbonate roof. There are approximately 20 species of butterflies at the conservatory, which has an adjusted environment that suits the butterflies. The setting is entire tropical, with humid climate and an artificial waterfall. The flora of the conservatory includes those plants and shrubs that attract butterflies. As tourists move forward from the conservatory, tourists will come across the second and third dome which takes to the museum. The museum has numerous dioramas and show evidence.69

Best time to visit

The best time to visit Bannerghatta National Park is between September and January when one can spot lions and tigers while on a safari.

Timing

The Bannerghatta National Park is open to the public from 9:30 am to 5:30 pm and the timings for safari are 11:00 am to 4:00 pm, The Park is closed on Tuesday.

How to get there

By Air: Bangalore airport is the most nearest point from the park.
By Rail: Bangalore railway station is the closest point from the park.
By Road: The park is located an hour’s drive away from the city of Bangalore. There are regular buses that connect the various areas of Bangalore to Bannerghatta National Park.

Accommodation

The Jungle lodges and resorts an undertaking of govt of Karnataka, run a Nature Camp sort of establishment which is with furnished twin bed tents and furnished ethnic huts on stilts. Both are attached with modern toilet facilities and lit by hurricane lamps. Furnished rooms at the Maharaja’s Bungalow with electricity are also provided to tourists. Delicious Indian cuisine, Vegetarian and non-vegetarian food are available.
Anshi National Park

Anshi National Park is located in Uttara Kannada district, in the Indian state of Karnataka, bordering the state of Goa. The park is a habitat of Bengal tigers, Black panthers and Indian elephants, amongst other distinctive fauna.

Anshi Dandeli Tiger reserve

It is remarkable that Anshi National Park and Dandeli Wildlife Sanctuary were together granted the status of Project Tiger tiger reserve, being declared as 'Anshi Dandeli Tiger Reserve' in January, 2007. The 340 km² (130 sq mi) Anshi park adjoins the Dandeli Wildlife Sanctuary, and together with six adjacent protected areas in the states of Goa and Maharashtra, forms an almost uninterrupted protected forest area of over 2,200 km² (850 sq mi). The scenery of the park consists of deep valleys, steep hill slopes, and thick evergreen and semi-evergreen forests.

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Rajendran, S (2007), Karnataka gets its fourth Project Tiger sanctuary, retrieved 6-3-2007
History

The forest in the area was declared the Dandeli Wildlife Sanctuary on May 10, 1956. The state proposed carving out a section of the sanctuary to form the Anshi national park, and the proposal was implemented on 2 September 1987.\(^{71}\) The initial proposal covered 250 square kilometres but when the final notification of the park area was issued in 2002, it was extended by another 90 square kilometres.

Geography

Located in the Western Ghats range from l4°54’ to l5°07’ N latitude and 74°16’ to 74°30’ E longitude. Anshi’s elevation varies from 27–927 m (89–3,041 ft) above MSL. In spite of high rainfall in this area, water holes go dry very early in the summer because the soil is laterite, with very minimal water-holding capacity. \(^{72}\)

Park management

The management of National parks and sanctuaries in the state is the responsibility of the Principal Chief Conservator of Forests (Wild life). Anshi National Park and the adjoining Dandeli wildlife sanctuary together form the Dandeli Wildlife Division of the Karnataka Forest Department, headed by a Deputy Conservator of Forests.

Flora

The park is in the eco-regions of North Western Ghats mountain rain forests and North Western Ghats moist deciduous forests, both of

\(^{71}\)Wildlife Institute of India Protected Areas in Karnataka state, (June 2000), URL accessed 02 April 2007

\(^{72}\) "About the park", National Parks - Anshi National Park (Karnataka State Wildlife Board), 2011, retrieved 8-3-2012
which are deemed endangered by the World Wide Fund for Nature (WWF). The forests have high biodiversity.

Some common trees and plants here include: Knema attenuata, Garcinia morella, Calophyllum (wightianum), Hopea wightiana, Teak, Malabar tamarind, 'bintangur', Tetrameles nudiflora, Ainimaram, blackboardtree, flacourtia (Montana), Machilus (macrantha), Carallia (brachiata), mulberry (lakoocha), truecinnamon, Bamboo, Bauhinia, Silver Oak, Eucalyptus, Lantana, and Jamba.

Fauna

Animals like elephants, Black Panther and tigers live in the park but are rarely seen. Other large mammals here are Sloth bear, Indian bison, Bonnet Macaque, Indian wild boar, Gray slender loris, Northern plains gray langur, several deer including: mouse deer (Chevrotain), Barking deer (Muntjac), Spotted deer (chital or axis deer). Sambar deer and Jungle Cat, Small Indian Civet, Malabar Civet, Flying Squirrel, Porcupine, Leopard Cat, Wild Dog, Jackal, Indian Gray Mongoose, Indian giant squirrel and pangolin also make their home in the forests here.

This place is also home to interesting birds like the Malabar Grey Hornbill, Malabar Pied Hornbill, Ceylon Frogmouth, Indian Grey Hornbill, Great Hornbill, and Asian Fairy Bluebird. Around 200 species of birds are recorded in the park. These include the distinctive Adjutant Stork, Crested Serpent Eagle, Sri Lanka Frogmouth, Black-crested Bulbul, Blue-headed Pitta, Brahminy Kite, Broad-billed Roller, Ashy Woodswallow, Malabar


74 "Flora and Fauna", National Parks - Anshi National Park (Karnataka State Wildlife Board), 2011, retrieved 8-3-2012
Pied Hornbill, Golden-backed Woodpecker, Great Hornbill, and Yellow-footed Green Pigeon.

**Best time to visit**

The best months to visit are October to May. The park is open from 6.00 am to 6.00 pm. The nature camp at Kulgi has accommodations available in tents, deluxe tents, and a dormitory.  

**How to get there**

Nearest Airport: Dharwad, Belgaum
Nearest Railhead: Karwar, Londa, Dharwad

**Kudremukh National Park**

Kuduremukha is a mountain range in Chikkamagaluru district, in Karnataka, India. It is also the name of a small hill station town situated near the mountain, about 48 kilometers from Karkala and about 20 kilometers from Kalasa. The name *Kuduremukha* (as it is known by the natives) literally means 'horse-face' (in the local language Kannada) and refers to a particular picturesque view of a side of the mountain that resembles the same. It was also referred to as 'Samseparvata', historically since it was approached from Samse village.

The town of Kudremukh is primarily an iron ore mining town where the government runs Public Sector Kudremukh Iron Ore Company Ltd. (KIOCL) which was operated till the last decade. It is renowned for its scenic beauty. Owing to the dense forests, sighting wildlife can be challenging, though the area is rich in wildlife. However the drive through the forest ranges can be enthralling and exciting. Three important rivers,

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75 "Accommodation‖, National Parks - Anshi National Park (Karnataka State Wildlife Board), 2011, retrieved 8-3-2012 The Dandeli town is nearest town which can be reached easily from Dharwad, Karwar and Goa.

the Nethravathi, the Tunga, and the Bhadra are said to have their origin here. A shrine of goddess *Bhagavathi* and a *Varaha* image, 1.8 m within a cave are the main attractions.

The Tunga River and Bhadra River flow freely through the parklands. Kadambi waterfalls area is a specific point of interest for anyone who travels to the spot. The animals found there include the wild dogs, sloth bear, spotted deer and Malabar civet.

Recently, it is declared a Tiger Reserve, as part of the Bhadra Tiger Sanctuary. It was declared by the honorable Union Environmental Minister, Mr. Jairam Ramesh.

**History**

The British Government declared Kudremukh region as a Reserved Forest in 1916, to stop rampant slash and burn cultivation practices from penetrating deeper into the Ghats. Well known environmentalist and Tiger expert Dr. Ullas Karanth, undertook a detailed and systematic survey of the distribution of the endangered Lion Tailed Macaque in Karnataka during 1983-84 with support from Government of Karnataka. He experienced that appropriate and wide-ranging rainforest habitat for Lion-tailed Macaque existed in Kudremukh and that this zone probably harbored the largest contiguous population of lion tailed macaques in the Western Ghats outside the Malabar region. He added proposals telling that Lion Tailed Macaques could be effectively used as a 'flagship' species to conserve the entire biotic community in the region and prepared a conservation plan for survival of wild population of Lion Tailed Macaques in the region delineating the present national park area as a proposed nature reserve. Based on his report, the Karnataka State Wildlife Advisory Board recommended to Government that Kudremukh National Park be created. Subsequently, the first notification of the Kudremukh National
Park was issued. In 1987, the Government of Karnataka declared these Reserved Forests as a National Park based on the above suggestion.77

Kudremukh National Park is spread partially over the thick hilly forests near the coastal plains on the western portion and the shola vegetation on the Western Ghats uplands, covering parts of 3 districts, viz., Chickmagalur, Udupi and Dakshina Kannada. The Kudremukh peak, by which the National Park derived its name, is the highest elevation at 1892 meters.

Kudremukh National Park is made of steep hills and valleys. The hills, which bear the brunt of the severe monsoon wind, preclude any tree growth as a result the landscape is covered with grass. The valleys which are tucked in, have reasonable protection from wind and a deep soil profile, as a result of which stunted evergreen forests exist creating a unique microclimate, rich with mosses, orchids, etc. The whole scenery of grassland interspersed with narrow strips of forests provide a fantastic vista for a trekker. The totally fresh air and the climb up and down, invigorates the body and soothes the soul. During the trek, one can view and study several wildlife species of plants, birds, reptiles, amphibians, butterflies, insects, etc.

Location

The Kudremukh National Park (latitudinal range 13°01'00" to 13°29'17" N, longitudinal range 75°00'55' to 75°25'00" E) is the second largest declared Wildlife Protected Area (600.32 km²) of a tropical wet evergreen type of forest in the Western Ghats. Kudremukh National Park is situated in Dakshina kannada and Chikkamagaluru districts of Karnataka states. The Western Ghats is one of the thirty four hot spots recognized for bio-diversity conservation in the world. Kudremukh

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National Park comes under the Global Tiger Conservation Priority-I, under the format developed jointly by Wildlife Conservation Society (WCS) and World Wide Fund-USA.

Geography

The southern and western sides of the park form the steep slope of the Western Ghat ridge line, with the altitude varying from 100 m - 1892 m (peak). The northern, central and the eastern portions of the park form a chain of rolling hills with a mixture of natural grassland and shola forest. Kudremukh receives an average annual rainfall of 7000 mm, which has evolved forest types of mainly evergreen vegetation.

Ecology

A diverse assemblage of endangered large mammals is found in the park supporting three large mammal predator species Leopard, Wild Dogs and Tiger. The important Tiger prey base found within the Park is Muntjac, Sambar, Wild Pig, Gaur, Chevrotain, Common Langur, Bonnet Macaque, and the Lion Tailed Macaque.

The wet climate and the terrific water retentive capacity of the shola grasslands and forests has led to the development of thousands of perennial streams in the region converging to form three major rivers of the region, Tunga, Bhadra and Nethravathi that shape an important support for the people of Karnataka and Andhra Pradesh. Lobo house is an old deserted house on top of Kuduremukha.78

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**Flora and Fauna**

Plantations of eucalyptus, casuarinas, acacia auriculiformis and Grevillea Robusta are found here.

The Kudremukh National park houses variety of wildlife such as wild dog, sloth bear, leopard, common langur, gaur, Malabar giant squirrel, porcupine, mongoose, barking deer, spotted deer, jackal, tiger, giant flying squirrel and the sambar.

The park also has about 195 species of birds which are imperial pigeon, Malabar whistling thrush, great pied hornbill, Malabar trogon. Reptiles like tortoises and Snakes are also found here.

**Hanumana Gundi Waterfalls**

Located 32 km (20 mi) from the Kalasa, the water fall has water falling onto Natural rock formations from a height of more than 100 feet (30 m). Getting into falls involves some trekking. The best time to visit this place is between October and May.

**Trekking in Kudremukh**

There are about 13 trekking routes in Kudremukh ranging from easy to tough. The most know ones among them are:

1. Samse - Kudremukh - Samse. The duration for this trek is approximately 4 days and 3 nights, covering a total distance of about 40 plus km.
2. Navoor - Hevala - Kudremukh - Navoor. The duration for this trek is approximately 5 days and 4 nights, covering a total distance of about 60 plus km.
3. Navoor - Kudremukh - Samse. The duration for this trek is approximately 5 days and 4 nights, covering a total distance of about 50 plus km.
4. Horanaadu - Sringeri. The duration for this trek is approximately 3 days and 2 nights, covering a total distance of about 30 plus km.

5. Nature Camp in Kudremukh is one of the beautiful places to stay.

**Best time to visit Kudremukh National Park**

- The forests are lush green between October and May. To watch the wildlife the ideal time is between December and February.

**Accommodation**

Tourists can get good lodgings in Forest Rest Houses inside the park. Accommodations are also available at Sringeri, Karkala and Kalasa.

**How to get there**

Nearest Airport: Mangalore
Nearest Railhead: Mangalore

Road: Kudremukh National Park is well connected by road from Chikmagalur, Mangalore and Sringeri. The park is approachable from Bangalore via Chikkamagaluru, or from Mangalore via Karkala.

**Threats**

Kudremukh Iron Ore Company Limited (KIOCL) is a government run company which was mining iron ore from the Kudremukh hills. KIOCL conducted its operations on an area of 4,604.55 ha for over 20 years. Opposition to its activities built up over the years from environmentalists and wildlife conservationists who are concerned about the threat to the region's flora and fauna, and farmers who are affected by the pollution of the streams that originate in the mining area. KIOCL has been banned from working in this beautiful Natural Reserve, according to Supreme Court order.

The rainfall in Kuduremukh, which is perhaps one of the highest for any open cast mining operation in the world, deeply accentuates the
impacts of siltation as claimed by environmentalists. The topographic and rainfall characteristics in combination with the open cast mining of low grade iron ore and other land-surface disturbances caused by the KIOCL operations resulted in very high sediment discharge, with over 60% of the total siltation in the Bhadra system being contributed by the mining area which outlines less than six per cent of the catchment. With high quality practices adopted by KIOCL to mine, the flora and fauna remained intact, causing no adverse effects on the nature.

KIOCL used to send iron ore all the way through pipes running through districts of Udupi and Dakshina Kannada and converted to pellets at their plant in Panambur. These pellets were exported to countries like Japan, China, Iran, etc. by ships.

**Bandipur National Park**

Bandipur National Park is considered as one of the most beautiful and the better-managed national parks of India. It was established in 1973 as a tiger reserve under Project Tiger which is a national park located in the south Indian state of Karnataka. It was once a private hunting reserve for the Maharaja of the Kingdom of Mysore. Bandipur is known for its wildlife and has many types of biomes, but dry deciduous forest is dominant.

The park spans an area of 874 square kilometers (337 sq mi), protecting several species of India's endangered wildlife. Together with the adjoining Nagarhole National Park, Mudumalai National Park and Wynad Wildlife Sanctuary it is part of the Nilgiri Biosphere Reserve totaling 2,183 km^2 (843 sq mi) making it the largest protected area in southern India.

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Bandipur is located in Gundlupet Taluk of Chamarajanagar district. It is about 80 kilometers (50 mi) from the city of Mysore on the route to a major tourist destination of Ooty. As a result, Bandipur sees a lot of tourist traffic and there are a lot of wildlife wounded/death caused by speeding vehicles that are reported each year. There is a ban on traffic from the hours of dusk to dawn to help reduce the count of deaths of wildlife.

**History**

The Maharaja of the Kingdom of Mysore created a sanctuary of 90 km² (35 sq mi) in 1931 and named it the Venugopala Wildlife Park. The Bandipur Tiger Reserve was established under Project Tiger in 1973 by adding nearly 800 km² (310 sq mi) to the Venugopala Wildlife park.

**Climate**

The area is warm and comfortable for most parts of the year with temperatures ranging from 24 to 28°C, except for the brief winter that lasts from October to January when the temperature drifts around the 19°C mark. Monsoon is erratic, but it generally rains from June to September.

**Geography**

Bandipur National Park located where the Deccan Plateau meets the Western Ghats and the altitude of the park ranges from 680 meters (2,230 ft) to 1,454 meters (4,770 ft). As a result, the park has a variety of biomes including dry deciduous forests, moist deciduous forests and shrublands. The extensive choice of habitats helps to support

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81 "Night traffic ban at Bandipur extended from 9 to 12 hours". Deccanherlad.com. Retrieved 2012-10-08.

a varied range of organisms. The park is surrounded by Kabini River in the north and the Moyar River in the south. The Nugu River runs through the park. The highest point in the park is on a hill called Himavad Gopalaswamy Betta, where there is a Hindu temple at the summit. Bandipur has typical tropical climate with distinct wet and dry seasons. The dry and hot period typically begins in early March and can last till the arrival of the monsoon rains in June.

**Biology and Ecology**

Bandipur National Park helps protect several species of India's endangered wildlife and also provides refuge to other threatened and vulnerable species of flora and fauna.

**Flora**

Bandipur supports a wide range of timber trees including: Teak (Tectona grandis), Rosewood (Dalbergia latifolia), Sandalwood (Santalum album V), Indian-laurel(Terminalia tomentosa), Indian Kino Tree (Pterocarpus marsupium), giant clumping bamboo(Dendrocalamus strictus), clumping bamboo(Bambusa arundinacea) and Grewia tiliaefolia.

There are also several notable flowering and fruiting trees and shrubs including: Indian Crape-myrtle (Lagerstroemia lanceolata), Black Cutch(Acacia catechu), gooseberry (Emblica officinalis), Kadam tree(Adina cordifolia), axlewood (Anogeissus latifolia), Schleichera trijuga, Black Myrobalan (Terminalia chebula), Odina wodiar, Golden Shower Tree (Cassia fistula), Flame of the Forest(Butea monosperma), indigoberry (Randia uliginosa) satinwood (Chloroxylon swietenia), Shorea talura (E).
Fauna

Bandipur supports a good population of endangered and vulnerable species like sloth bears, Indian elephants, muggers, Indian rock pythons, tigers, dholes and four-horned antelopes. The commonly seen mammals along the public access roads in the park include Indian giant squirrels, gray langurs, chital, and elephants.

Peafowl are among the most commonly seen birds in Bandipur along with grey crows, junglefowl and drongos. Bandipur is home to over 200 species of birds including red-headed vultures, honey buzzards, brown fish owls, flowerpeckers, hoopoes, Indian rollers, Indian vultures, changeable hawk-eagles and crested serpent eagles.

How to Reach Bandipur Wildlife Sanctuary

Bandipur National Park is located on the highway connecting Mysore and the hill station of Ootacamund (Ooty). Reaching Bandipur by bus is very convenient. All regular and express state transport buses plying between Ooty and Mysore pass through the park fringes and the Forest Department Center is a designated bus stop. It takes 2½ hours to reach Bandipur forest from Mysore and about 3 hours from Ooty. The nearest rail junction is Mysore (65 km) and the nearest international airport is the software Mecca of Bangalore (204 km).

Where to Stay in Bandipur

The forest department maintains reasonably priced lodges, rest houses and cottages.
Nagarahole National Park

Considered by one expert to be the 'finest tiger turf in the country' Nagarahole is also one of the best places to see Asiatic Elephants. It is part of the Nilgiri Biosphere Reserve, which consists of a contiguous complex of Protected Areas.

The park originates its name from the 'Nagarahole' or Snake River which flows through the Northern end of the Park. The Southern end is worn out by the Kabini River which has now been dammed to create a large reservoir, lot of which lies within the Park. The waters of the lake support crocodile and others. Other animals include Wild Dog, Leopard, Sambar, Barking Deer, Gaur and Chital.\(^8\)

The birdlife of Nagarahole is particularly exciting with Indian Great Black Woodpecker, Malabar Trogon, Crested Serpent Eagles, Blyh's Baza, Osprey, Peregrine Falcon, Black headed Cuckoo Shrikes, Scarlet Minivets, Owls, Cuckoos, various species of Barbets, Flycatchers, etc. being recorded here. The game viewing is by motor launch, jeep and coracle.

Introduction and History

The name Nagarahole is derived from the winding river which flows through the Park (In Kannada the word 'Naga' means snake and 'Hole' means stream). Nagarahole National Park is located in the foothills of the misty blue Brahmagiri mountain range and straddles the picturesque districts of Kodagu (Coorg) and Mysore. Initially constituted as a Sanctuary in 1955, it was subsequently enlarged and conferred the status of a National Park in 1974. The Southern end is weakened by the Kabini River (a tributary of the Cauvery) which has now been dammed to create

a large reservoir, much of which lies within the park and which today separates Nagarahole National Park from Bandipur Tiger Reserve.84

Hunter-gatherer tribes have occupied these forests for several centuries. Among them, nearly 1500 or more people live within the park and an approximate 5 to 6 thousand on the suburbs, most are tribals called Betta Kuruba, Yerava and Jenu Kuruba. These tribals cut and burn cultivation and collecting non-timber forest products for sale to urban markets. Today, many of these people work as labourers in coffee plantations or farms and also engage in seasonal work provided by the Forest Department. Between 1870 and 1980, 14% of the area of the present Park was clear-cut to raise monocultures of teak. A dense secondary forest occurs in places where these plantations failed. Until lately, both the moist and dry deciduous forests have been selectively logged.

The long term management goal of the British was to replace natural forests with the more profitable teak and they actively practised this until Independence. Between 1947 and 1955, the new Indian Government's policy turned to harvesting as much of timber, and to grow more food. Tribal and non-tribal people were encouraged to reside in Nagarahole's 'hadlus', they were also encouraged to cultivate rice and in addition provided cheap logging labour. There were no wildlife protection laws and hunting of predators was actively encouraged. In 1955, hunting of large mammals became illegal, but logging and encroachments into the Park continued. In 1974, Nagarahole was declared as a National Park and tough new wildlife protections laws came into force then the situation started to change. In a complete setback of functions, the management tried to reduce poaching, livestock grazing and removal of illegal encroachments! Between 1970 and 1980 about a 1000 illicit residents

were moved out of the Park into resettlements. Forest product exploitation was regulated in response to entrance by wildlife conservationists and a core zone of 200sq. km. was demarcated to the exclusion of forestry activities and tourism.

Nagarhole National Park, also known as "Rajiv Gandhi National Park", is a national park located in Kodagu district and Mysore district in Karnataka state in South India.

This park was declared the thirty seventh Project Tiger tiger reserve in 1999. It is part of the Nilgiri Biosphere Reserve. The Western Ghats Nilgiri Sub-Cluster of 6,000 km2 (2,300 sq mi), including all of Nagarhole National Park, is under consideration by the UNESCO World Heritage Committee for selection as a World Heritage Site.

Location

The Park is located in the South-Western corner of the state of Karnataka. Its Western boundaries touch that of the state of Kerala - and the Wynad Wildlife Sanctuary.

Climate

Nagarahole in general has a moderate climate. Summer temperatures touch a maximum of 32° C (89.6° F) during the months of April / May, while winter temperatures hardly ever go below 15° C (59° F)

Rainfall

June to September are the wettest months with an average of 1500mm. (59 inches)

Vegetation

The northern and western parts of Nagarahole National Park receive higher rainfall (above 1200mm /47inches) and the vegetation here is
naturally moist deciduous. The moist deciduous forests are tall and dense. The dominant tree species are valuable timber trees such as Nandi (Lagerstroemia lanceolata), Tadasalu (Grewia tilaefolia) Mathi (Terminalia tomentosa) and Honne (Pterocarpus marsupium).

These forests are also home to two most expensive timbers - Teak (Tectona grandis) and Rosewood (Dalbergia latifolia). Bende (Kydia calycina), whose bark is favoured by elephants is everywhere as is Bamboo (Dendrocalamus strictus). An attractive trait of these moist deciduous forests is the open swampy grasslands called 'hadlus'. The soil in the 'hadlus' being clayey and perennially moist supports a lush growth of green grass throughout the year. The 'hadlus' therefore attract large concentrations of ungulates like gaur and sambar and significantly boost the carrying capacity of these forests.

**Fauna**

Considered by one expert to be the 'finest tiger turf in the country' Nagarahaole is also one of the best places to see Asiatic elephants (Elephas maximus). There is a seasonal movement between the four Protected Areas of Wynad, Bandipura, Nagarahaole and Mudumalai, which together form the Nilgiri Biosphere Reserve.

Other mammals seen here are wild boars, gaurs, samabrs and chitals etc.

The birdlife of Nagarahaole is particularly exciting with over 250 species of birds. The species mix different habitats of this area, and includes birds like Crested Serpent Eagles, Indian Great Black Woodpecker, Flycatchers, Malabar Trogon, Honey Buzzards, Peregrine, Owls, Blyth's Baza, Blackheaded Cuckoo Shrikes, various species of Barbets, Cuckoos, and Scarlet Minivets.
Tribal and Native Inhabitants

The Jenu Kurubas, primary inhabitants of this forest area, are a tribe in Karnataka state and their traditional practices and rituals are slowly disappearing. The government is restricting their entry inside the National park and forest due to multiple factors including limited conservation efforts and bringing the community to the mainstream society.

The Ministry of Home Affairs, Government of India, identified the Jenu Kuruba and the Koraga as tribal groups in Karnataka. The Jenu Kurubas are traditional food gatherers and honey collectors. In Kannada, the term ‘Jenu’ means ‘honey’ and the term ‘kuruba’ generally mean ‘shepherd’. It is derived from the Kannada word ‘kuri’ which means ‘sheep’. The term kuruba is also linked with non-shepherd communities. They speak a variant form of Kannada commonly known as Jenu-nudi within their family kin group, and Kannada with others. They use Kannada script. According to the Census of 1981, the population of Jenu Kuruba community is 34,747 out of which 17,867 are male and 16,880 are female.

The Jenu Kurubas are found scattered in the jungles as with other tribal groups. They are excellent climbers of tree and are skilled in the use of sling, bows and arrows. They express a strong emotional attachment to the forest as their mother divinity and represent a whole way of life. Their dress, worship, food, house, medicine storing articles furniture etc. all is linked with forest. Parts of the tribe which have resisted exposure to modernization still live in thatched huts made of mud, leaves and grass.

The Jenu Kurubas mainly depend on forest for their day to day life. They occupy forested regions where for a long period in their history, they lived in isolation but in harmony with nature. They demonstrate

85 http://www.ecoinfoindia.org/lldb_rajivgandhi_np.php
significant knowledge of the forest including varied species of flora and fauna and relate to the forest very well. Collecting honey, wax and other forest produce like roots and tubers has been the mainstay of their survival and in recent times they have been found selling them in the market through organized trade groups, both legal and illegal which has led to a furor of anxiety amongst the conservationists.

Many of the cultural traits they have are common with the neighboring tribes such as Betta Kuruba / Kadu Kuruba. In the forest the tribes also practice agriculture, the main crops grown are Bengal gram, Ragi, black gram, Horse gram and Cow gram.

In the recent years, a lot of commercialization has occurred due to increase in tourism and fragmentation of forest ranges leading to severe. The tribal communities have long since given up the traditional ways of life and have easily indulged in poaching activities and indiscreet hunting of birds and forest animals. Numerous cases of such backing provided by the tribal folk to poachers in trying to sell game, live or dead, medicinal herbs have been observed and controlled by the forest department leading to a clash between the tribal communities protected by law and law enforcement agencies. To resolve this conflict and imminent threat to the bio-diversity in this forest, numerous relocation efforts and anti-poaching efforts have been made in the last decade. An increase in poaching was endorsed to the tribal support received by poachers in getting assistance from the tribal groups to find the way the forest and tracking game, in exchange for money or other supply of necessaries.\textsuperscript{86}

\textbf{Relocation efforts}

In the last decade there has been enormous activity undertaken both by the Government and certain NGOs to relocate tribal’s to the fringe

of the forests. The relocation efforts are part of a larger focus to protect the existing Tiger populations and elephant habitats which were under serious threat due to change in lifestyles (through exposure to sophisticated society) of the tribal folk resident within the forests.

There has been much resistance to relocation efforts from the oldest groups of tribal’s but success has been met in last few years. Many schools and houses with basic amenities like lighting, hospitals and roads being built to support the relocated tribal population.

**Threats and Conservation Efforts**

**Timber smuggling**

Apart from the regular threats like smuggling of timber and petty poaching there are many other threats which are mentioned below

**Forest fire**

In January, 2012, there was a catastrophic forest fire that destroyed over 6,000 acres (2,400 ha) of forest. Huge trees were reduced to ashes. Burnt remains of giant malabar squirrels, snakes, and monitor lizards leave widen on the charred leftovers of what was once a verdant patch of moist-deciduous forest. Forest fires and seasonal droughts coupled with water shortage have caused many wild animals to migrate to other greener spaces.

**Human wildlife conflict**

A human-wildlife deviation is lifted up because wild animals and elephants on nearby villages along with the consequent vengeance by the villagers are another important threat to the parks wildlife. In 2001, the Karnataka state government sanctioned Rs 2 crores to dig elephant proof
trenches and fit solar fencing around the park to prevent elephants from straying into the farmer's fields.

**Human habitations**

In 1997, tribal activist groups won public interest litigation in the Karnataka High Court to cut short the setting up of a resort called the Gateway Tusker Lodge planned to be set up by the Taj Group of Hotels with nearly 125 villages present inside the park, NGOs actively working to protect the tribal communities include, Living Inspiration for Tribals (LIFT), Coorg Organization of Rural Development (CORD), DEED, FEDINA-VIKASA and Nagarhole Budakattu Janara Hakkustapana Samithi. In 2000, the first relocation attempt initiated by a World Bank funded eco-development project of the local tribal population was begun with 50 tribal people. The relocated families were given land possession certificates for five acres of land and houses at Veeranahosalli, near Hunsur. The state and union government planned to relocate 1,550 tribal families at a cost of Rs. 15.5 crores.

**Best time to visit**

Though the Park is open throughout the year, the ideal time to visit the Park is between September and May and the monsoon period not fine.

**How to get there**

Air: Bangalore

Rail: The nearest railhead is Mysore which is well connected from Bangalore and Chennai.

Road: The nearest town to Nagarahole is Kutta (7 km). Major towns that are reachable by road are Madikere (93 km), Mysore (96 km) and Bangalore (236 km). We can take taxi from Mysore to either Nagarahole or to Karapura where the Kabini River Lodge is located. There are also State
Transport buses operating between Bangalore and Kabini River Lodge and Mysore and Mercara.

**Accommodation**

There are Forest Rest Houses at Nagarahole, Kalhalla, Murkal and Tithimathi. The tariffs range from Rs.600/- for dormitories to Rs.1000/ to Rs.2000/- for a suite.

The Kabini River Lodge has 14 well-appointed rooms, 6 cottages and tented accommodation as well. It offers a jungle plan for its clients, which include board, lodging and 2 safaris drives (including an elephant ride and a coracle ride) into the Park in open vehicles accompanied by trained naturalists.

**Ranganathittu Wildlife Sanctuary**

Ranganathittu Bird Sanctuary also known as Paksi Kashi of Karnataka is a Bird Sanctuary in the Mandya District of the state of Karnataka in India. It is a very small sanctuary, of only 67 km² in area, and comprises six islets on the banks of the Kaveri River. Ranganthittu is located three kilometers away from the historic town of Srirangapatna and 16 kilometres (9.9 mi) north of Mysore.87

**History**

The islets came into being when a dam across the Kaveri River was built in the 18th century.88 The ornithologist Dr. Salim Ali experimented that the isles formed an important nesting ground for birds, and

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88“Ranganathittu Bird Sanctuary”.

91
persuaded the Wodeyar kings of Mysore to declare the area a wildlife sanctuary in 1940.\footnote{“Ranganathittu Bird Sanctuary”, The Hindu (Chennai, India). 25 September 2006. Retrieved 23 November 2010.}

**Biomes**

Most of the park comes under the Riparian biome, matching to the Indomalaya eco-zone.

**Flora**

Riverine reed beds cover the banks of the islands, while the islands themselves are covered in broadleaf forests, with dominant species being Terminalia arjun (Arjun tree), bamboo groves, and Pandanus trees. Eucalyptus and Acacia trees have also been planted, which might lead to long-term eradication of native species. The endemic and threatened lily Iphigenia mysorensis of the family Colchicaceae grows in the sanctuary.

**Fauna**

The islands are swarm to numerous small mammals, including Bonnet Macaque, colonies of Flying Fox and common small mammals like Common Palm Civet and Indian Gray Mongoose and the monitor lizard. The Mugger Crocodile or Marsh Crocodile is a common inhabitant of the riverine reed beds.

Roughly around 170 birds have been recorded here in great numbers over the years. Birds like Asian Open bill Stork, Painted Stork, Common Spoonbill, Black-headed Ibis Woolly-necked Stork, , Lesser Whistling Duck, Stork-billed Kingfisher, Indian Shag and other common birds like cormorants, egrets, Oriental Darter, and herons breed here regularly. The Great Stone Plover and River Tern also
nest here. The park is home to a large flock of Streak-throated Swallows.90

Painted stork colony, Rangantittu B.S

Open billed storks, Rangantittu B.S

90 http://www.mysorenature.org/mandya-sector/ranganathittu-bird-sanctuary/bird-checklist
Climate

There is no fringe of temperature at Ranganathittu Sanctuary. The temperature stays between the 23.29°C ranges for most parts of the years. In June, when the southwest monsoon peaks throughout Karnataka state, heavy to very heavy rainfall, accompanied by water logging and mild flooding, has been reported from the area.

The sanctuary, even though it lacks a sprawling area, is an amusing place to visit. What makes it attractive is that it is an important Asian nesting and breeding ground for migratory birds from all over the earth. Park officials and experts have traced the origins of some of these bird species to as far as Australia, North America and even Siberia. A record number of 1,400 painted storks visited the area in 1999, 2000 Local inhabitants like Kingfishers and peacocks are also found in this avian bliss.

Migratory birds lay their eggs on islets in the river. The authorities have created additional islets at the sanctuary to make way for more number of birds to lay eggs and breed. The birds begin arriving in the sanctuary with their little ones in August, only to return yet again the following year.

Boats are available at the sanctuary to take the tourists for a ride along the river and the islets where they can observe trees full of beautiful birds of myriad verities. Most of the oarsmen are also excellent guides and can provide tourists the exact as to where the birds may be spotted. The Kaveri river bank also offers excellent spots for picnics.

How to reach the sanctuary

Since the sanctuary is on the Bangalore, Mysore highway, approach is through either of the two cities. The nearest rail junction is Mysore (18 km). The nearest international airport is Bangalore (125 km).
Accommodation

Accommodation is available at Ranganathittu with three riverside cottages. Most tourists however prefer to stay nearby Mysore.

National Parks visited by the researcher outside Karnataka

During the course of this study the researcher got opportunities to visit National Parks outside Karnataka both in India and abroad. The observation made by the researcher was found interesting and thereby it was included in the study. Hence the following.

Rajaji National Park – Rajaji National Park is a combined unit of three sanctuaries established in 1948, mothichur sanctuary established in 1964 and chilla sanctuary established in 1977. The park spreads over three districts in the state of Uttarakhand covering an area of 820sq kms, with almost all types of flora and fauna. This place was visited by us during the last week of October 2009.

Keoladeo National Park- Keoladeo National park formerly known as Bharathpur National Park is situated in Rajasthan. More than 200 species of birds have made this place as their home. Uptill 1972 this place was the hunting ground for the princely maharajas of rajasthan.

Parambikulam Tiger Reserve

Parambikula, is located in the palakkad district of Kerala state, South India. Established in 1973, the parambikulam Wildlife Sanctuary is in the sungam range of hills, sprawling over 285km.

Beside being an adobe of elephants, wild boar, sambar, gaur, crocodiles and a few tigers and panthers, parambikulam has a rich diversity of flora and fauna. The rich diversity of animal life includes 39 species of mammals, 16 species of amphibians, 268 species of birds, 61
species of reptiles, 47 species of fish and more than thousand species of insects.

This area was visited by us during september 2010.

Top Slip EcoTourism Area

Top Slip is located 800 feet above sea level on anamalai mountain range. It is a small place in Indira Gandhi National Park and wildlife Sanctuary that lies in Coimbatore district of Tamil Nadu at the southern part of the Nilgiri Biosphere Reserve. Separated from the Nilgiri Hills by the palaghat Gap on the north, the park is contiguous to the Parambikulam Wildlife sanctuary (Kerala) to its west.

It has a very pristine eco-system of its own with shola forest with its own micro climate, which is a very suitable area of eco-tourism. This place was visited by us during september 2010.
Tsavo National Park is located in the coast province of Kenya. The park covers an area of 9065 square kilometres, established in 1948 and governed by Kenya Wildlife Service.

Tsavo National Park has a variety of wildlife, such as black rhino, Cape buffalo, elephant, leopard and Maasai lion. There are also other smaller animals that can be spotted in the park, such as the bush baby, hippo, lesser kudu and Maasai giraffe. This place was visited by us during December 2011.

During the discussion it was found that the major income for maintenance of this park was from ecotourism.
Amboseli National Park

Amboseli National Park, formerly known as Maasai Amboseli Game Reserve is in Kajiado District, Rift Valley province in Kenya. The park is 39,206 hectares (392km, 151 sq mi) in size at the core of an 8000 square kilometers(3100 sq mi) ecosystem that spreads across Kenya-Tanzania border established in 1974.

The park is famous for being the best place in Africa to get close to free-ranging elephants. The park also offers spectacular views of mountain Kilimanjaro. This place was visited by us during December 2011. During the discussion it was found that the major income for maintenance of this park was from ecotourism.
Nairobi National Park

Nairobi Safari walk is located at the heart of KWS headquarters at Nairibi. Safari Walk offers the rare chance of viewing different African animals’ behavior as they would in their natural habitat. Nairobi animal orphanage is also located near the Nairobi National park. It is a rescue and rehabilitation center for orphaned, abandoned or wounded animals. It is also an attraction for tourists. This place was visited by us during December 2011. During the discussion it was found that the major income for maintenance of this park was from ecotourism.
**Aberdare National Park**

Aberdare National Park covers the higher areas of the Aberdare mountain Range of central Kenya and the Aberdare Salient to their east. It is at an altitude of 4300 meters. It was established in May 1950. There are variety antelopes and a large number of birds species found here. This place was visited by us during December 2011. During the discussion it was found that the major income for maintenance of this park was from ecotourism.

**Lake Nakuru National Park**

Lake Nakuru National Park has an area of 188 sq kms. It is situated 1756 meters above MSL in the Rift Valley Province. It was gazetted in 1968 and has warm and dry climate. The number of plant species identified in the park are around 550. The important fauna in the park includes thomsons and grants gazelle, impala, striped hyena, giraffe etc. During the discussion it was found that the major income for maintenance of this park was from ecotourism.

**Hells Gate National park**

Hells Gate National Park is a part of Naivasha eco-system. Total area of the national park is 68 sqkms and it was notified in 1984. Various tourism activities taken in the park include hiking, rock climbing, Cycling and walking inside the park. This park has geo-thermal hot springs and also geo-thermal plants which cater 15 percent of the energy requirement of the country. During the discussion it was found that the major income for maintenance of this park was from ecotourism.

**Masai Mara National Reserve**

The Masai Mara reserve was notified in 1961. This reserve has two parts viz. Western and eastern, which are controlled by Transmara and Narok county councils. The total area of this national reserve is around
1510 sq. Kms. It is surrounded by 6000 sq. Kms of wildlife areas from various ranches, conservancies and community/privately owned lands. There are more than 2800 elephants in the eco-system. 55 percent of the total revenue from wildlife tourism goes back to service delivery system.

**Lake Naivasha**

Lake Naivasha is a freshwater lake in Kenya. The lake has a surface area of 139km, and it is surrounded by a swamp which covers an area of 64sq kms. The lake is home of variety of wildlife and has a sizeable population of hippos. This place was visited during December 2011. During the discussion it was found that the major income for maintenance of this park was from ecotourism.

**Conclusion**

It is found that in all the national parks of Karnataka ecotourism is an upcoming activity and a huge potential is still to be unravelled in different aspects by maintaining the sustainability factor unlike in the national parks of Kenya where the ecotourism has been established in a very sound footing, still many activities are going round in Kenya by the Kenya wild life service (KWS) where the main aim is to improve the ecotourism by the conservation of wild life and thereby enhance the GDP of the country.