

## **Biodiversity study of Satpuda National Park, Madhai, Dist. Hoshangabad, Madhya Pradesh.**

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### **Abstract:**

**Introduction:** Satpura National Park is located in district Hoshangabad of Madhya Pradesh in India. It gets the name from Satpura hill ranges (Mahadeo hills). The national park is not very far from the borders of Maharashtra.

It is spread over an area of 524 km<sup>2</sup>. Satpura National Park along with the adjoining Bori and Panchmarhi Sanctuaries, provides 1427 km<sup>2</sup> of unique Central Indian Highland ecosystem. It was set up mainly for the conservation of Tigers hence also called as 'Satpura Tiger Reserve'.

Satpura Tiger Reserve spreads through the dense woody forest of evergreen sal, teak and bamboo. This reserve is extremely rocky and it is bestowed with sandstone peaks, narrow gorges, and ravines, an ideal habitat for the big cats viz. tigers and leopards. Satpura National Park is very rich in biodiversity and it houses some of the rare species of the animal kingdom and a large variety of birds.

The terrain of the national park is extremely rugged and consists of fascinating deep valleys, sandstone peaks, narrow gorges, rivulets, waterfalls, thickly dense green forest of Sal and other medicinal herbs and Tawa vast reservoir. Un-even altitude ranges from 290m. to 1352 m. Highest peak of national park is in Satpura National Park i.e. Dhoopgarh at an altitude of 4500 feet (1400 m.). As it is the highest peak of Madhya Pradesh, sunlight reaches this peak earlier than any other landscape of Madhya Pradesh.

Department of Zoology B.N Bandodkar College Thane, has been going to the Satpura National Park in January every year since 2010 for their excursion. The ecosystem has been observed for the past 3 years and certain observations are made.

**Method:** Being a tiger reserve ,trails are not allowed in the forests. Hence, observations and identification was done only while moving on the terrain in a gypsy. The flora and fauna were visually estimated and whenever necessary, by using binoculars of 10 x 50.

**Observations:**

**TABLE 1: FLORA**

Sr. No.	Scientific Name	Common Name	Habit
1	<i>Tectona grandis</i>	Teak	Trees
2	<i>Shorea robusta</i>	Sal	Trees
3	<i>Sweitenia mahogany</i>	Mahogany	Trees
4	<i>Pinus roxburgii</i>	Pine	Trees
5	<i>Pongamia pinnata</i>	Karanj	Trees
6	<i>Azadirachta indica</i>	Neem	Trees
7	<i>Chloroxylon sps</i>	--	Trees
8	<i>Boswellia serrata</i>	Sarai	Trees
9	<i>Zizyphus jujuba</i>	Bor	Trees
10	<i>Embelia officinalis</i>	Amla	Trees
11	<i>Mallotus philippinensis</i>	Kapila*	Tree
12	<i>Grewelia robusta</i>	Silver oak	Tree
13	<i>Aegle marmelos</i>	Bael	Tree
14	<i>Ferromia elephantum</i>	Kavat	Tree
15	<i>Acacia auriculiformis</i>	Australian babool	Tree
16	<i>Acacia arabica</i>	Babool*	Tree
17	<i>Terminalia arjuna</i>	Arjuna	Tree
18	<i>Terminalia tomentosa</i>	Ain	Tree
19	<i>Sweitenia macrophyla</i>	Honduras mahogany	Tree
20	<i>Ficus benghalensis</i>	Banyan	Tree
21	<i>Ficus religiosa</i>	Peepal	Tree
22	<i>Anogeissus latifolia</i>	Dhavda	Tree
23	<i>Buchnanania lanzun</i>	Charoli	Tree
24	<i>Phoenix sylvestris</i>	Shindi	Tree
25	<i>Madhuca indica</i>	Mahua	Tree
26	<i>Blepharis madraspattana</i>	--	Herb
27	<i>Glycosmis pentaphyla</i>	--	Shrub
28	<i>Opuntia sps</i>	Nivdung*	Shrub
29	<i>Strobilanthes sps</i>	--	Shrub
30	<i>Euphorbia squarosum</i>	--	Shrub
31	<i>Clematis sps</i>	--	Climber
32	<i>Acacia pinnata</i>	--	Climber
33	<i>Loranthus longiflorus</i>	--	Semi parasite
34	<i>Bambusa sps</i>	Bamboo	Grass

35	<i>Drosera burmani</i>	Sun dew plant	Insectivorous plant
36	<i>Sterculia urens</i>	Ghost tree	Tree
37	<i>Eucalyptus globulous</i>	Nil giri	Tree

At Satpuda National Park the forest type is mainly semi deciduous with an astounding Bio-diversity including over 1300 species of plants. There was immense floral diversity .Due to the dense forest cover all the plants could not be identified. However, 36 types of trees were identified and studied, as we could move only in jeeps. The study showed dominance of trees like Teak and Sal followed by 4 types of shrubs and solitary species of semi parasitic, insectivorous plants and grasses.

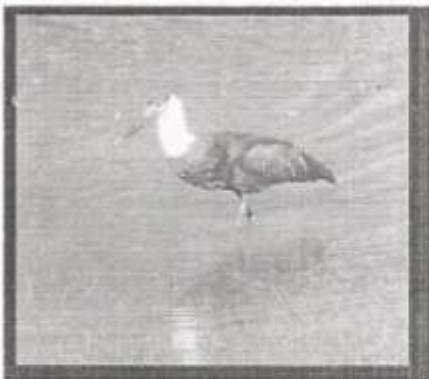
#### AQUATIC BIRDS



Painted stork



pen billed stork



Wooly necked stork



Grey necked stork



Purple heron



Bar headed geese

FLORA AND FAUNA



Plum headed Parakeet



Wild Boar



Gaur



Teak



Muggar Crocodile

Photographs by : Dr Mrs Poonam N. Kurve and Mr. Dilip D. Shenai.

#### **FAUNA:**

The fauna observed were predominantly mammalian and avian. The mammals sighted in the area included the grazers like herds of gaur, sambar and spotted deer along with the solitary black buck female. The monkeys like the Rhesus Macaque and the Hanuman Langurs were the companions of the safari throughout. Rhesus Macaque were more in number than the hanuman langurs. The Malabar giant squirrel and jackal were also sighted. Herds of wild boars consisting of males, females and piglets were feeding at various places of the national park. It has been mentioned that a few of the big cats like the tigers and the leopards are present in the national park ([www.google.com](http://www.google.com)) but none were sighted during the last 3 visits however the pug marks of a tigress and a leopard were spotted at many parts along the route of the safari thereby confirming their presence in the park. The droppings of a porcupine were also keenly observed to try and track its presence nearby as the droppings were fresh.

Comparatively lower temperatures were experienced in the region than the previous 2 years. The temperatures in Panchmarhi and Madhai were approximately 4-6°C. Diverse species of birds were noticed. Among them flocks of red vented bulbuls and blossom headed parakeets were most dominant. On the whole 50 species of birds were observed at various junctures of the Satpura national park. Yellow footed green pigeon the State bird of Maharashtra was a common resident of many of the trees there. Malabar pied hornbill, an endangered species also made its presence felt. Diversity of aquatic birds could be seen in the areas surrounding the Dendra rivers and other small pockets of water in the National Park.

Malabar whistling thrush a bird sighted at high altitude. This bird charmed everyone.

Among reptiles crocodiles and a snake was seen. However the snake could not be identified.

Table 2: List of mammals sighted at Madhai forest.

Sr. No.	Scientific Name	Common Name
1	<i>Antelope cervicapra</i>	Black Buck
2	<i>Bos gaurus</i>	Gaur (Indian Bison)
3	<i>Melursus ursinus</i>	Sloth Bear
4	<i>Sus scrofa</i>	Indian Wild Boar
5	<i>Axis axis</i>	Spotted Deer (Cheetal)
6	<i>Cervus unicolor</i>	Sambar
7	<i>Ratufa indica</i>	Malabar Giant Squirrel
8	<i>Funambulus palmarum</i>	Three Stripped Palm Squirrel
9	<i>Herpestes edwardsil</i>	Common Mongoose
10	<i>Macaca mulatta</i>	Rhesus Macaque
11	<i>Semnopithecus entellus</i>	Hanuman Langurs
12	<i>Canis aureus</i>	Golden Jackal
13	<i>Boselaphus tragocamelus</i>	Blue Bull (Nilgai)

Table 3: List of Birds sighted at Madai

Sr. No.	Scientific name	Common name
1.	<i>Coracias benghalensis</i>	Indian Roller
2.	<i>Halcyon smyrnensis</i>	White throated Kingfisher
3.	<i>Turdoides striata</i>	Jungle Babbler
4.	<i>Pavo cristatus</i>	Pea cock
5.	<i>Accipiter badius</i>	Shikra
6.	<i>Psittacula eupatria</i>	Alexandrin parakeet
7.	<i>Psittacula roseate</i>	Blossom headed parakeet
8.	<i>Dinopium benghalense</i>	Flame back Woodpecker
9.	<i>Corvus culminatus</i>	Jungle crow
10.	<i>Pycnonotus cafer</i>	Red vented bulbul
11.	<i>Leptocoma zeylonica</i>	Purple sunbird
12.	<i>Gallus sonneratii</i>	Jungle fowl

13.	<i>Spilornis cheela</i>	Crested Serpent eagle
14.	<i>Athene brama</i>	Spotted owl
15.	<i>Treron phoenicoptera</i>	Yellow footed green pigeon
16.	<i>Chloropsis aurifrons</i>	Chloropsis
17.	<i>Ceryle rudis</i>	Pied kingfisher
18.	<i>Treron phoenicoptera</i>	Green pigeon
19.	<i>Dendrocitta vagabunda</i>	Rufous tree pie
20.	<i>Pericrocotus flammeus</i>	Scarlet minivet
21.	<i>Anthracoceros coronatus</i>	Malabar pied hornbill
22.	<i>Dicrurus caerulescens</i>	White bellied drongo
23.	<i>Dicrurus remifer</i>	Racket tailed drongo
24.	<i>Dicrurus macrocercus</i>	Common drongo
25.	<i>Myophonus horsfieldii</i>	Malabar whistling thrush
26.	<i>Acridotheres fuscus</i>	Jungle myna
27.	<i>Merops orientalis</i>	Green bee eater
28.	<i>Ocyrceros birostris</i>	Grey hornbill
29.	<i>Upupa epops</i>	Hoopoe
30.	<i>Phoenicurus ochruros</i>	Black red start
31.	<i>Anthus rubescens</i>	Pipit
32.	<i>Coturnix coturnix</i>	Quail
33.	<i>Ardea alba</i>	Large egret
34.	<i>Vanellus indicus</i>	Red wattled lapwing
35.	<i>Mycteria leucocephala</i>	Painted stork
36.	<i>Nycticorax nycticorax</i>	Night heron
37.	<i>Sterna aurantia</i>	River tern
38.	<i>Anser indicus</i>	Bar headed goose
39.	<i>Tadorna ferruginea</i>	Ruddy shelduck
40.	<i>Vanellus duvaucelii</i>	River lapwing
41.	<i>Anastomus oscitans</i>	Open billed stork
42.	<i>Pseudibis papillosa</i>	Black ibis
43.	<i>Ciconia episcopus</i>	Wooly necked stork
44.	<i>Himantopus himantopus</i>	Black winged stilt
45.	<i>Sarkidiornis melanotos</i>	Comb duck
46.	<i>Phalacrocorax pygmaeus</i>	Large cormorant
47.	<i>Ardeola grayii</i>	Indian Pond heron
48.	<i>Ardea cinerea</i>	Grey heron
49.	<i>Ardea purpurea</i>	Purple heron
50.	<i>Ficedula albicilla</i>	Red throated flycatcher

#### CONCLUSION:

- The bio diversity of the terrain was studied to inculcate interest among students.
- The temperature was low, as low as 3°C at night.
- The forest was dense.
- The peaks and cliff side were specially of sand stone. As a result the streams continue to flow throughout the year.

- Dominant trees were Teak, Sal, Neem, Nil giri, Bamboos, Banyan, Peepal and various cacti. Clematis spp. a climber was seen in fruiting stage throughout the forest cover.
- Waders were sighted near water bodies. Some were residential King Fisher, Purple heron, Black winged stilts, etc. While some were migratory for example Painted stork, Wooly necked Stork, Open Bill Stork, Black Ibis, Bar headed Geese, Ruddy Shel Duck, River lap wing, etc.
- Malabar Pied Horn Bill an endangered bird species was sighted.
- Green pigeon the state bird was also sighted in large numbers.
- The endangered mammal species the flying squirrel was also sighted.

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