

# **ANNUAL REPORT**

## **FOR THE YEAR 2016-2017**

### **NORTH BENGAL WILD ANIMALS PARK**



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## NORTH BENGAL WILD ANIMALS PARK, SILIGURI AT A GLANCE

Year of Establishment	2015
Area	297 Hectares
Category of Zoo	Medium
Altitude	80- 100 m
Temperature	Upto 35°C highest and 2°C lowest
Mailing Address	North Bengal Wild Animals Park, 5 <sup>th</sup> Mile, Sevoke Road, Salugara, Siliguri-734008
E-Mail	dirnbwap@gmail.com
Web	www.northbengalwildanimalspark.in
Zoo Timings	9:00 a.m. to 5 p.m.
Closing Day	Monday
Annual Visitors during the year 2016-17	1,43,279
No of Animal Species & Birds (as on 31 <sup>st</sup> March, 2014)	1) <b>6</b> species of Mammals 2) <b>5</b> species of Birds 3) <b>1</b> Species of Reptiles

### Entry fee for the Zoo

<b>Adult</b> (12 years and above) visitor to the Park/Zoo Saturdays and Sundays <b>(ENTRY ONLY)</b>	Rs. 25.00  Rs. 30.00
<b>Child</b> (between 5 years and 12 years) Schoolstudents with ID Senior Citizens (60 years and above) Physically Challenged persons to the Park/Zoo <b>(ENTRY ONLY)</b>	Rs. 10.00
<b>Child less than 5 years</b>	Free
<b>Mixed Herbivorous Safari</b> Adult/Child (above 5years) Including Entry	Rs. 50.00
<b>Tiger Safari</b> Adult/Child (above 5years) Including Entry	Rs. 50.00

Video Camera (non commercial)	Rs. 100.00
Video camera (Commercial)	Rs. 2,000.00

Distance	North Bengal Wild Animals Park is 30 Km from Bagdogra Airport which is served by daily flights from Delhi, Kolkata, Patna & Guwahati. The Railway Junction, New Jalpaiguri, is at a distance of 12 km and is well connected with all Major centres of the country. Siliguri, the major developing city is around 12 kms away.
Best time to visit	January to April and September to December
Climate	January- March: Pleasant April – June: Light Rain July – August: Monsoon September – December: Pleasant

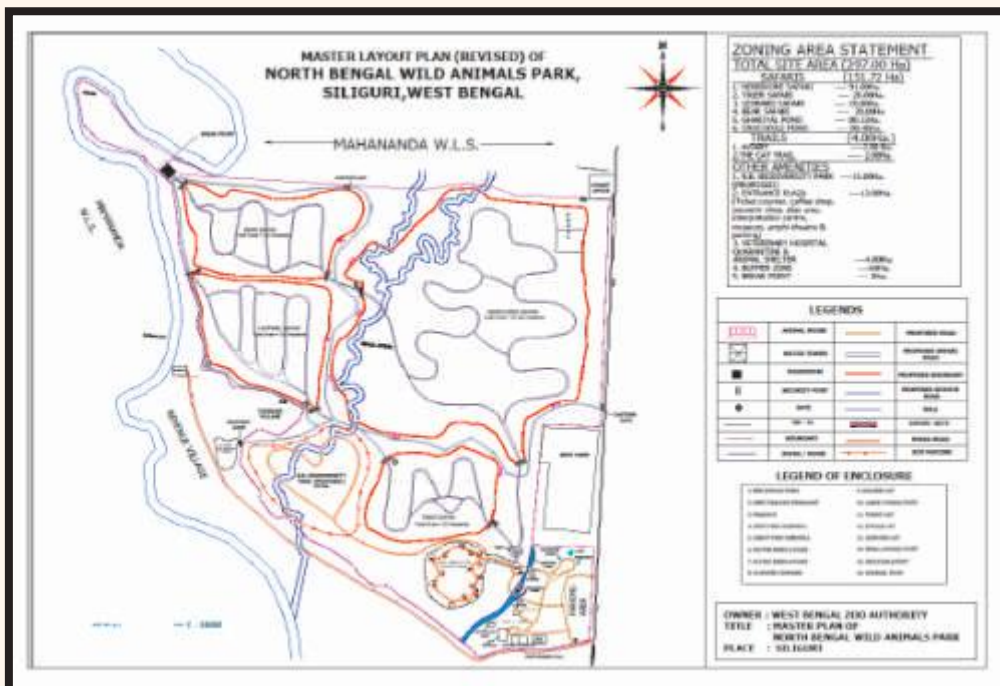


Fig: Master Layout Plan (Revised) of North Bengal Wild Animals Park, West Bengal

# CHAPTER I

## 1.1 Introduction

West Bengal is a rich State in wild life. It has 5 national parks and 15 wild life sanctuaries. This state exhibits varieties of forest types. It has tropical – semi ever green to mangrove scrub, moist bamboo brakes to Terai and Sal forest. Varied habitats provide home and shelter to wild animal like elephant, tiger, leopard, sloth bear, gaur, sambhar, barking deer, small cats, crocodile, gharial, jungle fowl and a number of terrestrial birds. Siliguri is situated in North Bengal and is gate way to North East India. This place is famous for wild life and varied habitat.

The preparation of development project report (DPR) is a complex subject which involves inputs from zoo professionals, architects, veterinarians and wild lifers. The salient features of the DPR include displaying the biodiversity of West Bengal and displaying animal in their natural environment. All enclosures are open safari type with grasses and trees. The visitors will be taken in the safaris in a specially designed vehicle. Physical barrier will be a wet or dry moat. The safari will have one way movement, clear segregation of visitors and service paths. More than 70% of area will be under woodland, water bodies and lawns. The theme of display is taxonomical. Himalayan black bear, herbivore, leopard and tiger safaris, aviary, cat trail and botanical trail will also be developed.

The whole safari has been divided into 8 sections viz animal, veterinary, sanitation & horticulture, security, commissary (store), construction & maintenance, education cum-research, and administration. Each section will be headed by a well qualified and professional incumbent who is in tune with the recommendation of expert committee on zoos.

All the animal enclosures have been divided into 7 beats for proper management. It is proposed to display over 236 animals comprising of 26 species. The quality of animal care, exhibits and conversation education will be of higher level.

A well equipped veterinary hospital with diagnosing and testing facilities, supported by adequate technical man power has been made. The veterinarian takes a daily round of the safari to observe the health, feeding and general hygienic condition of the animals.

The education cum-research wing enhances the knowledge and creates awareness among visitors through signages, published material, lectures and guided tours. It also conducts studies on behavior, growth and nutrition requirement of animals.

About 5 lakh visitors are expected to visit this place every year. This number is likely to increase in future. Efforts have been made to provide adequate facilities like cafeteria / kiosk, parking, toilets, shelters and drinking water points for the visitors for their smooth and rewarding visit.

In order to meet unforeseen incidents, a detailed disaster management plan and contingency plan have been incorporated. A plan to upgrade the skill of animal keepers and other staff, a capacity building plan has also been prepared. With the development in IT sector, e-governance has also been proposed. This will help to maintain the record and data of animals and related issues for easy interaction with national and international experts and institutes.

The North Bengal Wild Animals Park, Siliguri will be one of the role model in terms of facilities, infrastructures and management practices. Moreover, it will showcase the rich biodiversity of state of West Bengal.

## **1.2 Mission**

This Wild Animal Park, Siliguri intends to complement the national efforts in conservation of wildlife through breeding of endangered species of the region and to develop an empathy among visitors for wild animals.

## **1.3 Objective**

A professionally run Park will serve a great variety of roles to benefit both the animals it displays and the visiting public. Breeding programmes can help propagate endangered species and continue gene pools for species whose habitats have been obliterated. Educational programmes can help foster the respect that wild animals deserve and familiarize the visitors with the important role these animals play in the ecosystem. Large scale habitat destruction has resulted in the extinction of many species. The park may have to serve as the last bastion for threatened and endangered species.

The park shall work for the conservation of the rich bio-diversity of the region to the following objectives:

- The objective of the park shall be the conservation of the rich biodiversity of the region i.e. North Bengal, as the animal species displayed shall be from the North Bengal eco-system only.
- To reduce the tourist pressure on the National Parks/Protected Areas.
- To create amongst the visitors empathy towards wild animals through appreciation and better understanding.
- To collect and collate the scientific data on the biology, behaviour and health care of various species of wild animals displayed in the safari and use the same in future management of the safari park.
- Recreation for the purpose of providing wholesome, healthy and educational activity to a large number of people by utilizing the outdoor natural setting without detriment to any of the preceding objectives.

## **1.4 Strategy**

- To conserve natural resources
- To showcase biodiversity of State of West Bengal
- To develop expertise in animal care, wildlife education and awareness
- To develop infrastructure and services of high standards

## CHAPTER II

### 2.1 Administrative Section

It is housed in the administrative building next to the Director's Chamber and is headed by the Office Assistant. The section has been further divided into two sections namely Account Section with one Accountant, one Ticket Clerk and the Engineering Section with one Sub Asst. Engineer and Asst. Engineer. The total staff strength as on 31.3.2017 is stated below.

#### **ESTABLISHMENT (As on 31.3.2017)**

Sl. No.	Designation	Sanctioned Strength	Existing Strength	Vacancy
1	Director	1	1	0
2	Asst. Director	1	1	0
3	Veterinary Officer	1	1	0
4	Zoo Biologist	1	1	0
5	Sub Asst Engineer (Civil)	1	1	0
6	Zoo Supervisor	1	1	0
7	Education Assistant	1	0	1
8	Veterinary Assistant	1	1	0
9	Asst. Zoo Supervisor	2	2	0
10	Ass. Estate/Security Supervisor	1	1	0
11	Gate Keeper	1	0	1
12	Driver	5+1	6	0
13	Zoo Keeper	10	2	8
14	Cook	1	0	0
15	UDC/OA/TA	1	1	0
16	LDC	1	1	0
17	Accountant	0	1	0
18	Ticket Clerk	1	1	0
19	Security	24	24	0
20	Sanitation	6	6	0
21	Garden	6	6	0
22	Attendant	7	5	2
23	Animal Attendants	10	4	6

### 2.2 Accounts

This subsection is responsible for all matters pertaining to revenue and expenditure. As the Park is under the Govt. of West Bengal, the Park is receiving maintenance budget from Deptt. of Forests, Govt. of West Bengal, Dept. Of Tourism, Govt. Of West Bengal and North Bengal Development Dept. Govt. Of West Bengal.

Total Plan Budget: 14.47 Cr.

Total NonPlan Budget: 2.62 Cr

(\*Unaudited)



### 2.3 Animal Section

Breeding was observed in the year 2016-17 in respect of barking deer, spotted deer, sambar and red junglefowl. Death was also not uncommon. In the year 2016-17, 24 deaths were recorded in mammals and 16 in pheasants. There has been considerable improvement in infant mortality of both mammals and pheasants due to constant medical supervision and Zoo keeper alertness.

#### DEATH OF ANIMALS IN THE YEAR 2016<sup>7</sup>

Sl.No.	Animal Name	Sex	Date of Death	Reason of Death
1	Fowl Jungle Red	U	16.03.2017	May be due to Avian Lymphoid Leukosis
2	Fowl Jungle Red	U	16.03.2017	May be due to Avian Lymphoid Leukosis
3	Fowl Jungle Red	U	16.03.2017	May be due to Avian Lymphoid Leukosis
4	Fowl Jungle Red	U	16.03.2017	May be due to Avian Lymphoid Leukosis
5	Deer Sambar	F	21.02.2017	Due to Septicaemia
6	Deer Barking(Kakar)	M	10.02.2017	Due to Pleurisy
7	Deer Spotted (Chital)	M	16.01.2017	Due to Pulmonary Emphyseme
8	Deer Spotted (Chital)	M	16.01.2017	Due to Haemorrhagic shock
9	Deer Spotted (Chital)	M	15.01.2017	Due to Haemorrhagic shock
10	Deer Spotted (Chital)	M	04.01.2017	Due to Tuberculosis
11	Deer Spotted (Chital)	F	02.01.2017	Due to Haemorrhagic Anaemia
12	Deer Spotted (Chital)	M	20.12.2017	Due to Hepatitis
13	Deer Barking(kakar)	M	17.12.2016	Due to Anaemia
14	Deer Spotted (Chital)	F	14.12.2016	Due to Pneumonia
15	Deer Barking (Kakar)	F	09.12.2016	Due to Pleurisy
16	Deer Spotted (Chital)	F	04.12.2016	Due to Pregnancy toxaemia
17	Deer Spotted (Chital)	F	02.12.2016	Due to transit tetany
18	Deer Spotted (Chital)	F	26.11.2016	Due to Pregnancy toxaemia

19	Deer Spotted (Chital)	F	22.11.2016	Due to Traumatic Pericarditis
20	Deer Spotted (Chital)	F	22.11.2016	Due to Haemorrhagic shock
21	Fowl Jungle Red	U	12.10.2016	May be due to Avian Lymphoid Leukosis
22	Fowl Jungle Red	U	07.10.2016	May be due to Avian Lymphoid Leukosis
23	Cat Jungle	F	09.09.2016	Due to Pyelonephritis
24	Deer Spotted (Chital)	F	05.07.2016	Due to Haemorrhagic shock
25	Deer Spotted (Chital)	F	05.06.2016	Due to Haemorrhagic shock resulting from fighting with other animal.
26	Fowl Jungle Red	U	27.05.2016.	May be due to Avian Lymphoid Leukosis
27	Fowl Jungle Red	U	27.05.2016	May be due to Avian Lymphoid Leukosis
28	Fowl Jungle Red	U	23.05.2016	May be due to Avian Lymphoid Leukosis
29	Fowl Jungle Red	U	26.04.2016	May be due to Avian Lymphoid Leukosis
30	Fowl Jungle Red	U	26.04.2016	May be due to Avian Lymphoid Leukosis
31	Fowl Jungle Red	U	25.04.2016	May be due to Avian Lymphoid Leukosis
32	Fowl Jungle Red	U	24.04.2016	May be due to Avian Lymphoid Leukosis
33	Deer Spotted (Chital)	F	24.04.2016	Due to Pyelonephritis
34	Fowl Jungle Red	U	23.04.2016	May be due to Avian Lymphoid Leukosis
35	Fowl Jungle Red	U	20.04.2016	May be due to Avian Lymphoid Leukosis
36	Fowl Jungle Red	U	19.04.2016	May be due to Avian Lymphoid Leukosis
37	Fowl Jungle Red	U	18.04.2016	May be due to Avian Lymphoid Leukosis
38	Fowl Jungle Red	U	13.04.2016	May be due to Avian Lymphoid Leukosis
39	Fowl Jungle Red	U	02.04.2016	May be due to Avian Lymphoid Leukosis
40	Fowl Jungle Red	U	01.04.2016	May be due to Avian Lymphoid Leukosis

## **BIRTH OF ANIMALS IN THE YEAR 2016-17**

<b>Date of Birth</b>	<b>Animal</b>
01.04.2016	<i>Red Junglefowl (Gallus gallus)</i>
01.04.2016	<i>Red Junglefowl (Gallus gallus)</i>
01.04.2016	<i>Red Junglefowl (Gallus gallus)</i>
01.04.2016	<i>Red Junglefowl (Gallus gallus)</i>
01.04.2016	<i>Red Junglefowl (Gallus gallus)</i>
01.04.2016	<i>Red Junglefowl (Gallus gallus)</i>
01.04.2016	<i>Red Junglefowl (Gallus gallus)</i>
01.04.2016	<i>Red Junglefowl (Gallus gallus)</i>
13.05.2016	<i>Red Junglefowl (Gallus gallus)</i>
13.05.2016	<i>Red Junglefowl (Gallus gallus)</i>
13.05.2016	<i>Red Junglefowl (Gallus gallus)</i>
13.05.2016	<i>Red Junglefowl (Gallus gallus)</i>
12.06.2016	<i>Spotted Deer (Axis axis)</i>
14.06.2016	<i>Spotted Deer (Axis axis)</i>
15.06.2016	<i>Spotted Deer (Axis axis)</i>
15.06.2016	<i>Spotted Deer (Axis axis)</i>
28.07.2016	<i>Barking Deer (Muntiacus muntjak)</i>
18.09.2016	<i>Spotted Deer (Axis axis)</i>
19.09.2016	<i>Barking Deer (Muntiacus muntjak)</i>
24.09.2016	<i>Red Jungle Fowl (Gallus gallus)</i>
24.09.2016	<i>Red Jungle Fowl (Gallus gallus)</i>
18.09.2016	<i>Spotted Deer (Axis axis)</i>
19.09.2016	<i>Barking Deer (Muntiacus muntjak)</i>
November,2016	<i>Barking Deer (Muntiacus muntjak)</i>
November,2016	<i>Spotted Deer (Axis axis)</i>

<b>Date of Birth</b>	<b>Animal</b>
<b>November, 2016</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>November, 2016</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>November, 2016</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>November, 2016</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Barking Deer (Muntiacus muntjak)</i></b>
<b>January, 2017</b>	<b><i>Barking Deer (Muntiacus muntjak)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>January, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>
<b>27.02.2017</b>	<b><i>Sambar (Rusa unicolor)</i></b>
<b>March, 2017</b>	<b><i>Sambar (Rusa unicolor)</i></b>
<b>March, 2017</b>	<b><i>Sambar (Rusa unicolor)</i></b>
<b>March, 2017</b>	<b><i>Sambar (Rusa unicolor)</i></b>
<b>March, 2017</b>	<b><i>Spotted Deer (Axis axis)</i></b>

Date	Animals	Sex Ratio	Acquired From
05.06.2016	Indian Pond Heron ( <i>Ardeola grayii</i> )	1:0:0	Rescued from Shaktigarh, Siliguri
06.08.2016	Indian Peafowl ( <i>Pavo cristatus</i> )	0:1:0	Kunjanagar Mini Zoo
06.09.2016	Indian Elephant ( <i>Elephas maximas</i> )	0:2:0	Olympic Circus
01.10.2016	Gharial ( <i>Gavialis gangeticus</i> )	2:3:0	Bethuadahari Wildlife Sanctuary
22.11.2016	Spotted Deer ( <i>Axis axis</i> )	13:32:5	Hizli Eco Park
30.12.2016	Royal Bengal Tiger ( <i>Panthera tigris tigris</i> )	1:1:0	Zoological Garden, Alipore
02.02.2017	Barking Deer ( <i>Muntiacus muntjak</i> )	1:0:0	Rescued from Kurseong Division
25.02.2017	Fulvous Friut Bat	0:0:1	Rescued fro, Hakimpura, Siliguri
15.02.2017	Barn Owl	0:0:1	Rescued from Champasari
23.02.2017	Crested Serpent Eagle	0:0:1	Rescued from Baikunthapur Division
10.03.2017	Spotted Deer ( <i>Axis axis</i> )	0:1:0	Rescued from Baikunthapur Division
27.03.2017	Asian Palm Civet ( <i>Paradoxurus hermaphroditus</i> )	8:2:0	Wild Animal Rescue and Transit Facility, Salt Lake, Kolkata
27.03.2017	Jungle Cat ( <i>Felis chaus</i> )	1:0:1	Wild Animal Rescue and Transit Facility, Salt Lake, Kolkata
31.03.2017	Spotted Munia	0:0:2	Padmaja Naidu Himalayan Zoological Park
31.03.2017	Black Headed Munia	0:0:2	Padmaja Naidu Himalayan Zoological Park

**ANNUAL INVENTORY REPORT OF THE YEAR 2016-17 AS SUBMITTED TO CZA**

North Bengal Wild Animals Park	West Bengal	2016-2017							
S. No.	SPECIES NAME	ANIMAL NAME	SCIENTIFIC NAME	OPENING STOCK M F U T	BIRTH M F U	ACQUISITIONS M F U	DISPOSAL M F U	DEATHS M F U	CLOSING STOCK M F U T
<b>Endangered Species (Schedule I and II)</b>									
1	Bird	Peafowl	<i>Pavo cristatus</i>	0 0 0 0	0 0 0	0 1 0	0 0 0	0 0 0	0 1 0 1
2	Mammal	Cat Jungle	<i>Felis Chaus</i>	2 0 0 2	0 0 0	1 0 1	0 0 0	1 0 0	2 0 1 3
3	Mammal	Rhinoceros Indian One Horned	<i>Rhinoceros unicornis</i>	1 0 0 1	0 0 0	1 0 1	0 0 0	0 0 0	1 0 0 1
4	Mammal	Tiger Bengal	<i>Panthera tigris tigris</i>	0 0 0 0	0 0 0	1 1 1	0 0 0	0 0 0	1 1 0 1
5	Reptile	Crocodile Long Sonouted (Gharial)	<i>Gavialis gangeticus</i>	0 0 0 0	0 0 0	2 3 0	0 0 0	0 0 0	2 3 0 5
			Total of endangered Species	3 0 0 3	0 0 0	4 5 1	0 0 0	1 0 0	6 5 1 12
6	Bird	Fowl Jungle Red	<i>Gallus gallus</i>	3 3 4 10	0 0 17	0 0 0	0 0 0	0 0 19	3 3 2 8
7	Bird	Heron Pond	<i>Ardeola grayii</i>	0 0 0 0	0 0 0	0 0 1	0 0 0	0 0 0	0 0 1 1
8	Mammal	Deer Barking (Kakar)	<i>Muntiacus muntjak</i>	10 7 12 19	0 0 5	1 0 0	0 0 0	1 1 0	10 6 7 23
9	Mammal	Deer Sambar	<i>Rusa unicorn</i>	6 9 2 17	1 1 2	0 0 0	0 0 0	0 1 0	7 9 4 20
10	Mammal	Deer Spotted (Chital)	<i>Axix axis</i>	69 64 2 135	1 18 8	19 32 5	0 0 0	10 6 0	79 108 15 202
			<b>Total of Species (Sch III and IV)</b>	88 83 10 118	2 19 32	20 32 6	0 0 0	11 8 19	99 126 29 254
1	Bird	Pheasant Golden	<i>Chrysolopphus pictus</i>	3 3 0 6	0 0 0	0 0 0	0 0 0	0 0 0	3 3 0 6
2	Bird	Pheasant Silver	<i>Lophura nycthemera</i>	1 2 0 3	0 0 0	0 0 0	0 0 0	0 0 0	1 2 0 3
			<b>Total of Exotic Species</b>	4 5 0 9	0 0 0	0 0 0	0 0 0	0 0 0	4 5 0 9
			<b>Grand Total</b>	95 88 10 193	2 19 32	24 37 7	0 0 0	12 8 19	109 136 30 275
End of Report									

## 2.4 Veterinary Section

The veterinary hospital is housed inside the Park premises. The hospital is equipped with almost all the equipments required for the up keeping of the health and maintenance of the animals in the zoo. The section is headed by the Veterinary Officer (on contract) who is assisted by a Veterinary Assistant. The treatment cards, Out patient register, In patient register, Post mortem register and report, Laboratory analysis register, Stock register of medicines/instrument etc. are maintained and updated.

Daily diet of meat like beef, chicken along with dry ration etc. are inspected by the Veterinary Officer for their quality and quantity on daily basis. The tree fodder given to herbivores is also weighed and checked.

Animal health care receives utmost attention in the zoo. A Veterinary Doctor assisted by the Veterinary Assistant carries out day to day checkups and treatments of the animals.

All the enclosures, cages are thoroughly washed with disinfectants early in the morning before the zoo is opened for the day to the visitors. Filtered water are provided to every animal. As part of the animal health care, deworming, testing of stool, urine and blood samples of all the animals are done on regular basis.

The Section treated a total of 130 animals in the year 2016-17, both indoor and out-door, the details of indoor treatments are as follows:

Sl. No.	Animals / Acquired from	Date of Treatment	Name of V.O.	Diagnosis	Duration of Treatment	Treatment provided	Remarks
01.	Hawk (Zoo area)	25-01-2017	Dr. S. C. Das	Electrocuted	5 day	First aid, dressing, ORS	Released
02.	Monkey (National Highway)	29-01-2017	Dr. S. C. Das	Accidental Injured	1 day	Dressing, Antibiotic, Painkiller etc.	Died on next day.
03.	Parakeet (Zoo area)	07-02-2017	Dr. S. C. Das	Wings injured	10 day	Dressing, ORS	Released after recovery.
05.	Barn Owl (Siliguri)	23-02-2017	Dr. S. C. Das	Weakness	3 day	Multivitamin	Released
06.	Bat (Haiderpara)	08-03-2017	V.A.	Wings injured	28 day	Dressing, ORS	Released
07.	Parakeet (Zoo Area)	17-03-2017	V.A.	Drowsiness	2 day	ORS	Died
08.	Barn Owl (Champasari)	22-03-2017	V.A.	Wings injured	5 day	Dressing, ORS, Vitamin	Released

### 2.4.1 Dis-infection programme

As a part of daily programme, the concrete and the wooden floor are cleaned with Savlon. Feeding and watering trough are cleaned with KmnO<sub>4</sub> @ 2gm/ltr. Water. The drains are cleaned thoroughly by the Zoo Keepers. The daily Dis-infection works are completed before the Zoo opens for the public in the morning.

Due attention is also given for ensuring a good health care to the Zoo staffs. All the Zoo keepers and other field staffs who are in direct and indirect contact with the zoo animals are vaccinated against Rabies and Tetanus to control communicable diseases.

Incidences of Avian Influenza Virus (bird flu) have been reported in some parts of India, though incidences have not been reported in West Bengal. The Park had taken a few preventive measures against the spread of the virus by disinfecting the aviaries and the surroundings with Kohrsolin,

Virkon S and Lime at repeated intervals. The entrance of the visitor pathways around the aviaries were provided with footbaths containing solution of Potassium Permanganate (KMnO<sub>4</sub>) along with gunny bags soaked in KMnO<sub>4</sub> solution placed strategically along the visitor pathways.

No major problems were witnessed in any of the animals at the Park. The veterinary section remained involved in rescuing animals and their treatment from the wild. The section also assisted the Forest Department in conducting a number of post mortems of Spotted Deer, Indian Bison and Barking Deer.

#### 2.4.2 Camps Organized

The veterinary section organized some free camps during the financial year in nearby villages. The details are as follows:

<b>CAMPS ORGANIZED</b>			
<b>Sl. No.</b>	<b>Date</b>	<b>Camp</b>	<b>Venue</b>
1	14.08.2016	Free Animal Health Check Up Camp	Toribari Forest Village
2	02.08.2016	Free Human Health Check Up Camp	Toribari Forest Village
3	JuneJuly, 2016	Vaccination against Foot and Mouth Disease	Toribari Forest Village

#### 2.5 Commissary Section

The Park has a well established Commissary section with dry ration store, meat house, Freezer. The Commissary Section weighs all diet materials they receive in the weighing machine. Meat and fruits if required early the next day are kept in deep freezer. All dry rations are stored in stainless steel drums. All the animal diets are acquired by annual tenders. All the diet items are checked for quality and quantity by the Veterinary Officer before issuing the same to the animal section on proper challan. All items are recorded in the BUSY Software for easy access.

#### 2.6 Education

The Education Section is headed by the Zoo Biologist. The section is in-charge of regular school visits, visit by the college and university students including forest officials. The section is in-charge of publication of pamphlets, newsletters and books concerning zoo issues and also updating the signages of different kinds.

#### SCHOOL AND INSTITUTION VISITS DURING THE YEAR 2016-17

<b>Sl. No.</b>	<b>Date of Visit</b>	<b>Name of Institute</b>	<b>No. of Students</b>	<b>No. of Faculty</b>
1	16.04.2016	Light of Life Academy, Melli	28	07
2	30.04.2016	Gangotri HS School, Kalimpong	12	08
3	04.05.2016	Father Leblond School	38	09
4	19.05.2016	Bright Academy, Punjab	26	06
5	24.05.2016	Sri Ram Centennial School	48	17
6	26.05.2016	Fusion Group, Summer of Siliguri	45	06
7	29.05.2016	We3 Events and Innovation	80	03
8	02.06.2016	Father Leblond School	45	05
9	10.06.2016	Hello Kids Pramarti's, Siliguri	24	08
10	19.07.2016	Project Girl's High School, Bihar	30	06



11	19.07.2016	West Bengal Forest School, Dow Hill	34	02
12	20.09.2016	Forestry Training Centre, Rajabhatkhawa	50	2
13	25.09.2016	State Forest Training Institute, Hijli, Kharagpur	36	2
14	29.09.2016	Ambarly High School (H.S.), Kamala Bagan, Darjeeling, West Bengal	90	08
15	04.10.2016	Bright Academy, Jyotinar, Siliguri	10	04
16	21.10.2016	Boorsheba Orphans home, Salugara	100	15
17	21.10.2016	Father Lebenon School	20	01
18	22.10.2016	Mahbert High School, Dagapur	58	5
19	27.10.2016	Martha Tholmit Khaling school, Shivmandir	45	5
20	28.10.2016	El-Ebenezer Academy	31	05
21	04.11.2016	Bright Academy	31	06
22	05.11.2016	Hebron International School, Shivmandir	55	17
23	09.11.2016	Holy Hand Academy, Teesta Valley	16	11
24	11.11.2016	Little Angel's School, Siliguri	150	16
25	14.11.2016	K.H. Memorial, Kurseong	40	12
26	15.11.2016	Dab Jorial Academy, Kurseong	40	08
27	15.11.2016	Bethel English School, Siliguri	40	03
28	17.11.2016	St. Michael's School	81	07
29	18.11.2016	Children's home Eng. School	40	08
30	27.11.2016	Howrah South Point Handicapped Children Home, Jalpaiguri		
31	02.12.2016	Grace Academy, Dagapur	65	22
32	03.12.2016	Tender Buds School, Darjeeling	32	06
33	04.12.2016	Ramakrishna School	22	10
34	04.12.2016	State Forest Training Institute, Hijli, Kharagpur	43	02
35	06.12.2016	West Bengal Forest School, Dow Hill	19	02
36	08.12.2016	Ashalata Baru Vidyalaya, Jalpaiguri	34	28
37	10.12.2016	Tender Bud's School, Darjeeling	27	02
38	21.12.2016	St. Joseph's High Schhol	85	05
39	27.12.2016	Dakshin Santinagar Primary School, Siliguri	17	04
40	20.01.2017	Sri Ram Centennial School	54	06
41	21.01.2017	Jermel's Academy	75	12

42	31.01.2017	Sacred Heart School, Matigara, Siliguri	74	4
43	05.02.2017	Sacred Heart School	77	05
44	07.02.2017	Indian Red Cross Society	102	15
45	08.02.2017	Tarai Tarapada Adarsha Vidyapith	21	02
46	09.02.2017	Sunrise English medium School	59	04
47	10.02.2017	Sunrise English Medium School	85	04
48	10.02.2017	Dulaljote Nepali Junior High School	181	05
49	14.02.2017	BSF Primary School	41	03
50	14.02.2017	Pinehall Academy, Soureni	26	03
51	15.02.2017	BSF Priamry School, Kadamtala	41	03
52	15.02.2017	Ranidanga Jr. Girls High School	101	06
53	16.02.2017	Sunrise English Medium School	90	04
54	17.02.2017	St. Joseph's School	47	04
55	17.02.2017	Sunrise English Medium School	140	06
56	18.02.2017	Little Scholars	40	12
57	18.02.2017	Atharakhai Balika Vidyalaya	122	13
58	18.02.2017	Loyola High School	60	04
59	18.02.2017	Swastika Sec. School, Nepal	40	04
60	21.02.2017	Mangal Singh Jote Jr. High	55	08
61	21.02.2017	Dakshin Kotia Jr. H.S.	132	06
62	22.02.2017	Air Force School, Bagdogra	46	05
62	25.02.2017	AFS Bagdogra	84	05
64	25.02.2017	Siliguri Girls' High School	20	02
65	28.02.2017	Air Force School, Bagdogra	102	06
66	01.03.2017	Air Force School, Bagdogra	79	06
67	03.03.2017	Air Foirce School, Bagdogra	99	08
68	03.03.2017	Gossainpur Jr. High School	99	01
69	09.03.2017	HRDD, Govt. Of Sikkim	98	01
70	15.03.2017	HRDD, Govt. Of Sikkim	97	01
71	18.03.2017	HRDD, Govt. Of Sikkim	87	01
72	21.03.2017	HRDD, Govt. Of Sikkim	51	10
73	21.03.2017	Bikash Sangha Primary School, Kalimpong	17	07
74	23.03.2017	Siliguri Baradakanta VIdyapith	50	01
75	24.03.2017	HRDD, Govt. Of Sikkim	87	04
76	29.03.2017	HRDD, Govt. Of Sikkim	93	05

<b>TRAININGS ORGANIZED</b>			
<b>Sl. No.</b>	<b>Date</b>	<b>Name of Institute</b>	<b>No. of Participants</b>
1	06.12.2016	West Bengal Forest School, Dow Hill	19
2	04.12.2016	State Forest Training Institute, Hijli, Kharagpur	43
3	25.09.2016	State Forest Training Institute, Hijli, Kharagpur	36
4	20.09.2016	Forestry Training Centre, Rajabhatkhawa	50
5	19.07.2016	West Bengal Forest School, Dow Hill	34

<b>NATURE EDUCATION AND AWARENESS PROGRAMMES</b>			
<b>Sl. No.</b>	<b>Date</b>	<b>Occasion</b>	<b>Event</b>
1	21.03.2017	World Forestry Day	Wall Painting Competition and plantation by school students
2	16.02.2017	State Pollution Control Board Annual Meet	Awareness about degradation of biodiversity and pollution, Safari tour
3	07.02.2017	Red Cross Society Annual Meet	Flora and fauna awareness of school students.
4	14.11.2016	Children's Day	Cultural Programme and Safari with differently abled students
5	05.06.2016	World Environment Day	Sit & Draw Competition and Nature Awareness and plantation with school students

## 2.7 Research

The update of animal records such as History cards, Stud books, and others were done using the CZA format.

The total area of the Park is about 297 ha of which 151.72 ha shall come under the different Safaris. The area is largely plain with thick to sparse vegetation providing ideal habitat for the wildlife. To know the present status of free living fauna and flora of the park, the technical committee of West Bengal Zoo Authority has agreed and recommended a project "Status Survey of Free Living Flora and Fauna of North Bengal Wild Animals Park", for a total cost of Rs. 3.96 lakhs for one year. Two Research Scholars have been selected, Ms. Namrata Ghosh and Mr. Rajib Biswas for the faunal and floral part of the project respectively, who have started work from 01.11.2016.

Below is a list of trainings attended by the Zoo staff during the financial year.

<b>TRAININGS ATTENDED</b>				
<b>Sl. No.</b>	<b>Date</b>	<b>Name of Institute</b>	<b>Venue</b>	<b>No. of Participants</b>
1	15.02.2017-19.02.2017	Zoo Keepers' Training	Padmaja Naidu Himalayan Zoological Park, Darjeeling	2
2	16.09.2016-20.09.2016	Zoological Information Management Software Training	Padmaja Naidu Himalayan Zoological Park, Darjeeling	2

## 2.8 Garden Section

The Garden Section was given proper attention. For proper care of the medicinal plant garden, bonsai, nursery and the orchids, succulent and ornamental plants. Proper storage room has also been created for storing of gardening throughout the year in the Park. A vermicompost unit and rain water harvesting unit has been set up. All the peasantries, lesser cats enclosures. Regular infilling and new plantation is done to provide suitable habitat for the zoo animals. The trees at the peripheral areas/display areas of the park were labelled for the convenience of the visitors, students, researcher's etc with name plates which includes scientific name, local name and family.

## 2.9 Sanitation Section

Sanitation in the Park has been given due importance. On one hand enclosures are being cleaned with disinfectants every morning and on the other hand cleaning of the debris as well as remains of the animal waste and left over of animal feeds are done every day. In the mean time, all the left out bones of the animal's feeds, excreta, of the animals is being disposed off in proper manner.

Large number of dustbins has been provided at different locations in the Park. Wasteful materials, polythene & waste papers are regularly cleaned.

## 2.10 Security Section

The section under the supervision of the Asst. Security Supervisor looks after the security of the Park both day & night. The main area of the Park has been encircled by chain link fencing. This has stopped the fear of encroachment. Security personnels have been engaged and torches.

## 2.11 Maintenance Section

The Section in the year 2016-17 undertook works like road network, fencing etc.

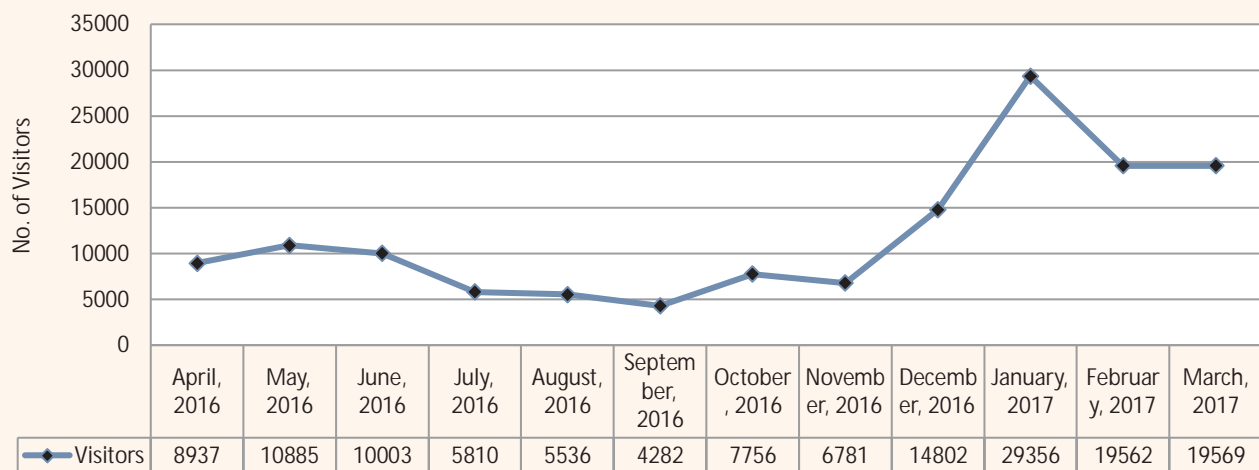
# CHAPTER III

## 3.1 Visitor Statistics

Months	Zoo Entry		Online	Total Visitors in Zoo	Herbivore Safari		Online	Tiger Safari		Online	Total Visitors in Safari	Total Visitors	Total Revenue
	Adult	Child			Adult	Child		Adult	Child				
April, 2016	2779	270	0	3049	5710	138	40	0	0	0	5888	8937	357030
May, 2016	3175	270	2	3447	7361	9	68	0	0	0	7438	10885	438880
June, 2016	2472	305	0	2777	7120	4	102	0	0	0	7226	10003	414680
July, 2016	1735	77	0	1812	3982	0	16	0	0	0	3998	5810	235540
August, 2016	1821	59	0	1880	3529	116	11	0	0	0	3656	5536	220230
September, 2016	1283	59	0	1342	2857	70	13	0	0	0	2940	4282	173390
October, 2016	1450	92	0	1542	5969	128	117	0	0	0	6214	7756	353210
November, 2016	1570	172	0	1742	4840	100	99	0	0	0	5039	6781	298225
December, 2016	3169	414	0	3583	10591	227	401	0	0	0	11219	14802	663132
January, 2017	10016	1063	0	11079	13542	292	1004	3375	63	1	18277	29356	1224555
February, 2017	2506	207	0	2713	7146	130	421	8989	163	0	16849	19562	921513
March, 2017	2062	170	0	2232	7450	215	547	8896	229	0	17337	19569	930967
Grand Total	34038	3158	2	37198	80097	1429	2839	21260	455	1	1060841	143279	6231352

(\*Unaudited Financial Figure)

## VISITOR FLOW DURING THE YEAR 2016 -17



### 3.2 Parking Revenue Collected

MONTHS	CAR/AUTO	MOTOR - CYCLE	BYCYCLE	BUS	TOTAL
<b>APRIL -2016</b>	22020/-	13090/-	198/-	400/-	35705/-
<b>MAY - 2016</b>	21840/-	15120/-	258/-	200/-	43415/-
<b>JUNE -2016</b>	27780/-	11580/-	105/-	200/-	40165/-
<b>JULY -2016</b>	14880/-	7910/-	120/-	100/-	23010/-
<b>AUGUST -2016</b>	12630/-	8780/-	115/-	-	21525/-
<b>SEPTEMBER - 2016</b>	8550/-	7510/-	100/-	300/-	16460/-
<b>OCTOBER- 2016</b>	20340/-	9440/-	60/-	-	29840/-
<b>NOVEMBER -2016</b>	16740/-	9480/-	-	1200/-	27420/-
<b>DECEMBER-2016</b>	34440/-	17790/-	-	1700/-	53930/-
<b>JANUARY-2017</b>	58410/-	34480/-	-	1400/-	94290/-
<b>FEBRUARY-2017</b>	30330/-	18840/-	-	4000/-	53170/-
<b>MARCH -2017</b>	37500/-	15740/-	-	2000/-	55240/-
<b>TOTAL</b>	311460/-	169760/-	950/-	12000/-	494170/-

(\*Unaudited Financial Figure)

### 3.3 What The Dignitaries Had To Say

Sl. No.	Date of Visit	Dignitaries	Designation	Comments
1	03.04.2016	Mr. R. Hithendra, IPS	Addl. Commissioner Admin	Visited the North Bengal Safari. The staff is courteous and showed its facilities. The rhino, deer, peacocks were remarkable. They also told me that they will add some more animals to this facility. This facility is a great help for children and animals lovers. I wish all the good to them.
2	14.04.2016	Mr. Arun Shinde	IAS, Govt. Of Maharashtra	Good initiative by the Forest Dept. The incharge is co-operative, biologist is quite knowledgeable. Forest safari gave real feel. I wish best of luck in future.
3	09.05.2016	Mr. Anurag Chaudhary	IFS, Member Secretary, Maharashtra Zoo Authority, Nagpur	Very good initiative for tourists coming to North East India. We serve great purpose of educating the tourist.
4	22.05.2016	Dr. Ravi Dubey	IFS (Retd.), Ex PCCF, Govt. Of Guwahati	Excellent endeavour for the benefit of people visiting North Bengal. Wishing a grand success to develop this effort into a one of the best Safari
	24.06.2016	Mr. S.S Negi.	DG Forsest. Govt. Of India, New Delhi	A very interesting beginning has been made. It will attract common citizens towards nature and conservation.
5	02.11.2016	Mr. Sanjoy Basu	District Magistrate, Dakshin Dinajpur, Balurghat, Govt. of West Bengal	It is an excellent initiative. It will be highly attractive to all kinds of tourists, especially foreign tourists. Overall management is very good
6	02.11.2016	Mr. S.K. Sinha	Divisional Forest Officer, Saharsa	Excellent work. Management is very good. Overall it is excellent.

7	06.12.2016	Mr. Basudeb Banerjee, IAS	Chief Secretary, Govt. of West Bengal	Thanks for the visit
8	09.12.2016	Mr. Amitabh Agnihotri	Director, National Zoological Park, New Delhi, Govt. of India	Enjoyed the safari. Great effort. Congratulations!
9	27.12.2016	Mr. Sunil Naskar	Joint Secretary, PAR Dept. Govt. Of West Bengal	We here enjoyed ourselves. Hopefully tiger project will enrich the project.
10	01.02.2017	Brig Gen Abdullah Al Azhar	Commander Army Aviation Group, Bangladesh Army	We enjoyed the beauty of Great Bengal Safari. A great effort for preservation of wild life. Best of Luck!

### **3.4 Events Worth Special Mention During The Year 2016-17**

#### **3.4.1 Inauguration Of Tiger Safari And Different Other Projects**

The North Bengal Wild Animals Park Had Acquired A Pair Of Tigers From Alipore Zoo in December and the animals had been kept in quarantine for more than 3 weeks. On 22<sup>nd</sup> January, 2017, the hon'bl Chief Minister of West Bengal, Mamata Banerjee inaugurated the much awaited Tiger Safari along with the Administrative Office, Veterinary Hospital, Commissary Unit and the Cafeteria from Kurseong.

#### **3.4.2 Event Organised By The Red Cross Society**

On the 7<sup>th</sup> of February, 2017, the Red Cross Society of India organized a one day event at the Park along with students of various schools. The event included felicitation of hon'bl MIC, Tourism, Sri Gautam Deb followed by a guided tour of the Park, where the students were taught about the various aspects of biodiversity and conservation.

#### **3.4.3 Yearly Meet Of State Pollution Control Board**

The State Pollution Control Board organized a yearly meet on the 16<sup>th</sup> of February at the park premises along with dignitaries and students of various schools. The students were informed about the daily degradation of biodiversity and how to reduce pollution. The event came to a close with a guided tour of the Safari.

#### **3.4.4 Bengal Travel Mart**

The Park participated in the 5 day fair organized by the tourism dept. at Siliguri every year. The stall was visited by both common visitors as well as various national tour operators. People showed deep interest to visit the park.

#### **3.4.5 Celebration Of World Forestry Day**

The park celebrated its first International Forestry Day on 21<sup>st</sup> March, 2017, by organizing a wall painting competition by students of various schools. While each school brought out unique messages in their creation, the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> positions were occupied by Saradamani Girl's High School, Sarada Shishutirtha School and BSF Senior Secondary School respectively.

#### **3.4.6 Human Health Check Up Camp At Toribari**

A Health Check Up Camp was organized by the Park officials along with Neotia Getwel on 02.08.2016 at Toribari for the Park adjacent Villagers. The event was attended by Dr. Sabin Rai, General Physician, Neotia Getwel. Approximately 100 Villagers attended the camp.

### **3.4.7 Animal Health Check Up Camp at Toribari**

The Veterinary wing of the Park in an effort to treat the vast population of livestock in the adjacent village, organized an Animal Health Check Up Camp at Toribari on 14.08.2016. The event included free check up and free distribution of medicines to the livestock owners.

### **3.4.8 Independence Day Celebration**

The national flag was hoisted on 15.08.2016 by the Zoo Supervisor, in the presence of all the employees of the Park, followed by the National Anthem and a short motivational speech by the Zoo Supervisor and Security Supervisor.

### **3.4.9 Raksha Bandhan Celebration**

Small girls from the adjacent villages tied Rakhi on the Member Secretary, West Bengal Zoo Authority (WBZA) and Mr. Nantu Paul, Member, WBZA on their visit to the Park on 18.08.2016. The Park had ordered custom made Bengal Safari rakhis for the occasion.

### **3.4.10 Visit of PCCF (HoFF), W.B.**

Shri Pradeep Shukla, IFS, Principal Chief Conservator of Forests (HoFF) along with other forest officials made a visit to the Park on 23.08.2016 to check the progress of various on-going projects.

### **3.4.11 Visit of MIC (Forest), Principal Secretary, PCCF (HoFF), PCCF**

#### **(General) and other Forest Officials**

Shri Binay Krishna Barman, Minister-In-Charge, Forest, W.B., visited the Park twice, i.e. on the 25<sup>th</sup> of August and again on the 2<sup>nd</sup> of September. On his second visit, he was accompanied by Shri Chandan Sinha, IAS, Principal Secretary, Forests, Shri Pradeep Shukla, IFS, PCCF (HoFF), Shri N.K. Pandey, IFS, PCCF (General), Shri V.K. Yadav, Member Secretary, WBZA and APCCFs, CCFs, CFs, DFOs and ADFOs of North Bengal. The event included a brief inspection followed by tree plantation inside the Park premises and tree distribution by the dignitaries to the villagers.

### **3.4.12 Fish Release inside the Herbivore Safari**

The Park in an effort to maintain a healthy ecosystem inside the Herbivore Safari and to attract aquatic birds, released around 50 kgs of a variety of fish, including, Rohu, Katla, Mrigel, Bata etc. As a result of which a notable increase in Black Ibis, Little Cormorant, Cattle Egret and Pond Heron population has been observed inside the safari area.

### **3.4.13 Visit of Member Secretary, Central Zoo Authority**

Mr. D. N. Singh (IFS), Member Secretary, Central Zoo Authority made a visit to the Park on 15.09.2016 along with Mr. V.K. Yadav (IFS), Member Secretary, WBZA. He gave a few suggestions and advices for the better management of the Park, which were immediately acted upon.

### **3.4.14 Zoological Information Management Software Training**

A 5 days training on ZIMS was organized by Central Zoo Authority and Species 360 from 16.09.2016 to 20.09.2016 at Padmaja Naidu Himalayan Zoological Park, Darjeeling, which was attended by representatives of Guwahati Zoo, Itanagar Zoo, Sikkim Zoo, Alipore Zoo, Bengal Safari and West Bengal Zoo Authority. The training was presided by Mr. Moin Ahmed of Species 360 and chief guests present were Mr. D.N. Singh (IFS), Member Secretary, CZA and Mr. V.K. Yadav (IFS), Member Secretary, WBZA.

### **3.4.15 Inauguration Of Gharial Quarantine Enclosure**

Gharial or long-snouted crocodile (*Gavialis gangeticus* (Gmelin, 1789) a critically endangered (IUCN 3.1) and Schedule I (WPA,1972) species is most predominantly found in the Indus, Ganges, Brahmaputra and the Mahanadi river systems in the Indian subcontinent. The North Bengal Wild Animals Park in an initiative to upgrade its animal collection plan and for the better upkeep of the



rescued wildlife has acquired 5 nos. (2:3) Gharial from Bethuadahari Wildlife Sanctuary on 01.10.2016. The animals have been marked and after providing suitable house IDs been exhibited in a quarantine enclosure near the yet to be constructed Gharial and Mugger enclosures. The enclosure has been designed keeping in view of the behavioural needs of the animals.

The Gharial Enclosure along with 5 nos. new Safari Buses were inaugurated by Sri Binay Krishna Barman, Hon'ble Minister-in-Charge, Dept. of Forests, Govt. of West Bengal, who was accompanied by Forest Officials on 04.10.2016.

#### **3.4.16 Children's Day Celebration**

The Park celebrated the occasion of Children's Day by organizing a small cultural programme for the differently abled children from various schools. The chief guest of honour at the event was Sri Gautam Deb, Hon'ble Minister-in-Charge, Dept. of Tourism, Govt. of West Bengal.

#### **3.4.17 Morter Shell Discovered Inside Park Premises**

A mortar shell was discovered on 05.12.2016 evening by labourers inside the Park premises, following which the Army and Bhaktinagar Police Station were informed. Visitors were barred from entering the park. The shell was diffused under close observation of the Indian Army. Before the establishment of the Park, the area was used by the army as a firing range. The shell remained unnoticed at the spot until its discovery on Monday evening. The Park handed the Indian Army a certificate as a token of appreciation and bravery.

## PHOTO PLATE I



**CATTLE HEALTH CHECK UP CAMP**



**VACCINATION AGAINST FMD**



**FREE HEALTH CHECK UP CAMP**



**VISIT OF DG, FOREST, GOVT OF INDIA**



**VISIT OF HON'BL MIC, FOREST DEPT.  
WEST BENGAL**



**VISIT OF PCCF (HOFF), WEST BENGAL**

## PHOTO PLATE II



**FISH RELEASE IN HERBIVORE SAFARI**



**WORLD ENVIRONMENT DAY CELEBRATION**



**VISIT OF HON'BL CHIEF SECRETARY WEST BENGAL**



**INAUGURATION OF TIGER SAFARI BY HON'BL CHIEF MINISTER, WEST BENGAL**



**HON'BL MIC, TOURISM DEPT, WEST BENGAL AT EVENT BY RED CROSS SOCIETY**



**WORLD FORESTRY DAY CELEBRATION**

## CHAPTER IV

### 4.1 Biodiversity Of North Bengal Wild Animals Park

As per the short term research project, titled “Survey of free living Flora and Fauna of North Bengal Wild Animals Park”, the following preliminary checklist has been prepared of the biodiversity of the Park:

#### 4.1.1 Preliminary Checklist of Flora

**A total of 188 species under 135 genera belonging to 46 families have been recorded.**

Tree species = 42 (under 29 genera of 18 families)

Climbers species and lianas = 23 (covering 18 genera of 14 families)

Total herbaceous plants species = 82 (under 60 genera of 28 families)

Shrub layer presented = 41 species (under 28 genera of 9 families)

#### Check List:

Sl. No.	Name of the plant Species	Vernacular Name	Families	Habit
1	<i>Achyranthes aspera</i> L.	Apang	Amaranthaceae	Herb
2	<i>Achyranthes bidentata</i> Blume	Bon apang	Amaranthaceae	Herb
3	<i>Acmella calva</i> (DC.) R.K.Jansen	Piraj	Compositae	Herb
4	<i>Acmella uliginosa</i> (Sw.) Cass.	Piraj	Compositae	Herb
5	<i>Ageratum conyzoides</i> (L.) L.	Uchunti	Compositae	Herb
6	<i>Ageratum houstonianum</i> Mill.	Uchunti	Compositae	Herb
7	<i>Aglaia spectabilis</i> (Miq.) S.S.Jain & S.Bennet	Lali	Meliaceae	Tree
8	<i>Alangium chinense</i> (Lour.) Harms		Cornaceae	Tree
9	<i>Albizia chinensis</i> (Osbeck) Merr.	Kalo Shiris	Leguminosae	Tree
10	<i>Allamanda cathartica</i> L.	Varkolke	Apocynaceae	Liana
11	<i>Alstonia scholaris</i> (L.) R. Br.	Chatim	Apocynaceae	Tree
12	<i>Alternanthera sessilis</i> (L.) R.Br. ex DC.	Chhenchi	Amaranthaceae	Herb
13	<i>Amaranthus spinosus</i> L.	Kanta Note	Amaranthaceae	Herb
14	<i>Amaranthus viridis</i> L.	Note	Amaranthaceae	Herb
15	<i>Ambroma augusta</i> L.f.	Ulat kambal	Malvaceae	Shrub
16	<i>Amerimnon stipulatum</i> (Wall.) Kuntze	Sisu Lorong	Leguminosae	Liana
17	<i>Amischatolype hookeri</i> (Hassk.) H.Hara		Commelinaceae	Herb
18	<i>Andrographis paniculata</i> (Burm.f.) Nees	Kalmegh	Acanthaceae	Herb
19	<i>Argyreia roxburghii</i> (Wall.) Arn. ex Choisy		Convolvulaceae	Climber
20	<i>Aristolochia indica</i> L.	Ishwar Mul	Aristolochiaceae	Climber
21	<i>Axonopus compressus</i> (Sw.) P.Beauv.	Choto Chepti	Poaceae	Herb
22	<i>Bambusa tulda</i> Roxb.	Bansh	Poaceae	Tree
23	<i>Barleria cristata</i> L.	Janti	Acanthaceae	Herb
24	<i>Barleria strigosa</i> Willd.	Nil Janti	Acanthaceae	Herb
25	<i>Bombax ceiba</i> L.	Shimul	Malvaceae	Herb
26	<i>Bridelia retusa</i> (L.) A.Juss.		Phyllanthaceae	Liana
27	<i>Brugmansia suaveolens</i> (Humb. & Bonpl. ex Willd.) Bercht. & J.Presl	Bon Dhutura	Solanaceae	Shrub

28	<i>Bulbostylis densa</i> (Wall.) Hand. -Mazz.		Cyperaceae	Herb
29	<i>Caesalpinia cucullata</i> Roxb.	Bhaise Kanta	Leguminosae	Liana
30	<i>Cajanus cajan</i> (L.) Millsp.	Arhar	Leguminosae	Shrub
31	<i>Caladium bicolor</i> (Aiton) Vent.		Araceae	Herb
32	<i>Calliandra trinervia</i> Benth.	Powder Puff	Leguminosae	Shrub
33	<i>Careya arborea</i> Roxb.	Kumbhi	Lecythidaceae	Tree
34	<i>Carica papaya</i> L.	Pepe	Caricaceae	Herb
35	<i>Cassia fistula</i> L.	Swarna jhuri	Leguminosae	Tree
36	<i>Cassia javanica</i> subsp. <i>nodosa</i> (Roxb.) K.Larsen & S.S.Larsen		Leguminosae	Tree
37	<i>Catunaregam spinosa</i> (Thunb.) Tirveng.	Maynakanta	Rubiaceae	Tree
38	<i>Chromolaena odorata</i> (L.) R.M.King & H.Rob.		Compositae	Herb
39	<i>Cinnamomum verum</i> J.Presl	Daruchini	Lauraceae	Tree
40	<i>Citrus limon</i> (L.) Osbeck	Lebu	Rutaceae	Shrub
41	<i>Citrus maxima</i> (Burm.) Merr.	Jambura	Rutaceae	Tree
42	<i>Citrus medica</i> L.	Gandharaj	Rutaceae	Shrub
43	<i>Clausena excavata</i> Burm.f.	Bon Kari	Rutaceae	Shrub
44	<i>Cleome rutidosperma</i> DC.		Cleomaceae	Herb
45	<i>Cleome spinosa</i> Jacq.		Cleomaceae	Herb
46	<i>Clerodendrum infortunatum</i> L.	Vant	Lamiaceae	Shrub
47	<i>Clerodendrum thomsoniae</i> Balf.f.		Lamiaceae	Liana
48	<i>Clitoria ternatea</i> L.	Aparajita	Leguminosae	Climber
49	<i>Codariocalyx motorius</i> (Houtt.) H.Ohashi	Ulatchandal	Leguminosae	Shrub
50	<i>Colocasia esculenta</i> (L.) Schott	Kochu	Araceae	Herb
51	<i>Crinum amoenum</i> Ker Gawl. ex Roxb.		Amaryllidaceae	Herb
52	<i>Crotalaria alata</i> D.Don		Leguminosae	Shrub
53	<i>Crotalaria cytisoides</i> DC.		Leguminosae	Shrub
54	<i>Crotalaria pallida</i> Aiton		Leguminosae	Shrub
55	<i>Cuphea procumbens</i> Ortega		Lythraceae	Herb
56	<i>Cyanthillium cinereum</i> (L.) H.Rob.		Compositae	Herb
57	<i>Cynodon dactylon</i> (L.) Pers.	Durba	Poaceae	Herb
58	<i>Cynoglossum lanceolatum</i> Forssk.		Boraginaceae	Herb
59	<i>Cyperus compressus</i> L.		Cyperaceae	Herb
60	<i>Cyperus cyperoides</i> (L.) Kuntze		Cyperaceae	Herb
61	<i>Cyperus haspan</i> L.		Cyperaceae	Herb
62	<i>Cyperus iria</i> L.		Cyperaceae	Herb
63	<i>Cyperus rotundus</i> L.	Mutha Ghas	Cyperaceae	Herb
64	<i>Dalbergia stipulacea</i> Roxb.	Sisu Lorong	Leguminosae	Liana
65	<i>Deeringia amaranthoides</i> (Lam.) Merr.		Amaranthaceae	Liana
66	<i>Desmodium gangeticum</i> (L.) DC.		Leguminosae	Shrub
67	<i>Desmodium laxiflorum</i> DC.		Leguminosae	Herb
68	<i>Desmodium triflorum</i> (L.) DC.		Leguminosae	Herb
69	<i>Dimeria ornithopoda</i> Trin.		Poaceae	Herb
70	<i>Dioscorea alata</i> L.	Chupri aalu	Dioscoreaceae	Climber
71	<i>Dioscorea bulbifera</i> L.	Chupri aalu	Dioscoreaceae	Climber
72	<i>Dioscorea deltoidea</i> Wall. ex Griseb.	Chupri aalu	Dioscoreaceae	Climber
73	<i>Dioscorea prazeri</i> Prain & Burkill	Chupri aalu	Dioscoreaceae	Climber
74	<i>Drynaria propinqua</i> (Wall. ex Mett.) Bedd.		Polypodiaceae	Epiphyte

75	<i>Duranta erecta</i> L.	Duranta	Verbenaceae	Shrub
76	<i>Elephantopus scaber</i> L.		Compositae	Herb
77	<i>Eleusine indica</i> (L.) Gaertn.		Poaceae	Herb
78	<i>Emilia sonchifolia</i> (L.) DC. ex DC.		Compositae	Herb
79	<i>Eragrostis amabilis</i> (L.) Wight & Arn.		Poaceae	Herb
80	<i>Eragrostis amabilis</i> (L.) Wight & Arn.		Poaceae	Herb
81	<i>Euphorbia hirta</i> L.	Pushi Dudh	Euphorbiaceae	Herb
82	<i>Euphorbia tirucalli</i> L.		Euphorbiaceae	Herb
83	<i>Ficus benghalensis</i> L.	Bot	Moraceae	Tree
84	<i>Ficus hispida</i> L.f.	Dumur	Moraceae	Tree
85	<i>Ficus racemosa</i> L.	Jagdumur	Moraceae	Tree
86	<i>Ficus religiosa</i> L.	Pakur	Moraceae	Tree
87	<i>Hibiscus mutabilis</i> L.	Sthalpadma	Malvaceae	Tree
88	<i>Hibiscus rosa-sinensis</i> L.	Joba	Malvaceae	Shrub
89	<i>Holarrhena pubescens</i> Wall. ex G.Don	Kurchi	Apocynaceae	Tree
90	<i>Hoya parasitica</i> Wall. ex Traill			Epiphyte
91	<i>Hyptis capitata</i> Jacq.		Lamiaceae	Shrub
92	<i>Hyptis suaveolens</i> (L.) Poit.	Bon Tulsi	Lamiaceae	Shrub
93	<i>Ichnocarpus frutescens</i> (L.) W.T.Aiton	Dudhi Lohora	Apocynaceae	Climber
94	<i>Ixora coccinea</i> L.	Rangan	Rubiaceae	Shrub
95	<i>Kyllinga nemoralis</i> (J.R.Forst. & G.Forst.) Dandy ex Hutch. & Dalziel		Cyperaceae	Herb
96	<i>Lagerstroemia indica</i> L.		Lythraceae	Tree
97	<i>Lagerstroemia microcarpa</i> Hance	Sidha	Lythraceae	Tree
98	<i>Lagerstroemia parviflora</i> Roxb.	Sidha	Lythraceae	Tree
99	<i>Lagerstroemia speciosa</i> (L.) Pers.	Jarul	Lythraceae	Tree
100	<i>Lannea coromandelica</i> (Houtt.) Merr.	Jika	Anacardiaceae	Tree
101	<i>Lantana camara</i> L.		Verbenaceae	Shrub
102	<i>Lepidagathis incurva</i> Buch.-Ham. ex D. Don		Acanthaceae	Herb
103	<i>Leucas aspera</i> (Willd.) Link	Donda Kolas	Lamiaceae	Herb
104	<i>Leucas zeylanica</i> (L.) W.T.Aiton	Donda Kolas	Lamiaceae	Herb
105	<i>Lindernia ciliata</i> (Colsm.) Pennell		Linderniaceae	Herb
106	<i>Lindernia crustacea</i> (L.) F.Muell.		Linderniaceae	Herb
107	<i>Litsea glutinosa</i> (Lour.) C.B.Rob.	Kawlo	Lauraceae	Tree
108	<i>Litsea glutinosa</i> var. <i>brideliifolia</i> (Hayata) Merr.	Kawlo	Lauraceae	Tree
109	<i>Litsea monopetala</i> Lour.	Bonkathal	Lauraceae	Tree
110	<i>Ludwigia octovalvis</i> (Jacq.) P.H.Raven		Onagraceae	Herb
111	<i>Ludwigia perennis</i> L.		Onagraceae	Herb
112	<i>Mallotus nudiflorus</i> (L.) Kulju & Welzen	Pithali	Euphorbiaceae	Tree
113	<i>Mallotus philippensis</i> (Lam.) Müll.Arg.	Sindure	Euphorbiaceae	Tree
114	<i>Malvaviscus penduliflorus</i> Moc. & Sessé ex DC.	Lankajaba	Malvaceae	Shrub
115	<i>Mangifera indica</i> L.	Aam	Anacardiaceae	Tree
116	<i>Melastoma malabathricum</i> L.	Dant Rangi	Melastomataceae	Shrub
117	<i>Melia azedarach</i> L.	Ghora nim	Meliaceae	Tree
118	<i>Melochia corchorifolia</i> L.		Malvaceae	Herb

119	<i>Meyna spinosa</i> Roxb. ex Link	Maynakanta	Rubiaceae	Shrub
120	<i>Micromelum integerrimum</i> (Buch.-Ham. ex DC.) Wight & Arn. ex M. Roem.		Rutaceae	Tree
121	<i>Mikania micrantha</i> Kunth		Compositae	Climber
122	<i>Mimosa himalayana</i> Gamble		Leguminosae	Shrub
123	<i>Mimosa invisa</i> Colla		Leguminosae	Shrub
124	<i>Mimosa invisa</i> var. <i>macrostachya</i> (Benth.) Barneby		Leguminosae	Shrub
125	<i>Mimosa pudica</i> L.	Lajjabanti	Leguminosae	Herb
126	<i>Mitracarpus hirtus</i> (L.) DC.		Rubiaceae	Herb
127	<i>Murdannia nudiflora</i> (L.) Brenan		Commelinaceae	Herb
128	<i>Murraya koenigii</i> (L.) Spreng.	Kari	Rutaceae	Shrub
129	<i>Murraya paniculata</i> (L.) Jack	Kamini	Rutaceae	Shrub
130	<i>Natsiatum herpeticum</i> Buch.-Ham. ex Arn.		Icacinaceae	Climber
131	<i>Oldenlandia corymbosa</i> L.		Rubiaceae	Herb
132	<i>Paederia foetida</i> L.	Gandal	Rubiaceae	Climber
133	<i>Pandanus unguifer</i> Hook.f.	annagondha	Pandanaceae	Herb
134	<i>Phaseolus vulgaris</i> L.		Leguminosae	Herb
135	<i>Phaulopsis imbricata</i> (Forssk.) Sweet		Acanthaceae	Herb
136	<i>Phyllanthus amarus</i> Schumach. & Thonn.		Phyllanthaceae	Herb
137	<i>Phyllanthus urinaria</i> L.		Phyllanthaceae	Herb
138	<i>Physalis minima</i> L.	Bon Tepari	Solanaceae	Herb
139	<i>Piper longum</i> L.	Pipul	Piperaceae	Herb
140	<i>Piper nigrum</i> L.	Golmorich	Piperaceae	Herb
141	<i>Plumeria alba</i> L.	Kanthchampa	Apocynaceae	Tree
142	<i>Plumeria rubra</i> L.	Kanthchampa	Apocynaceae	Tree
143	<i>Pouzolzia zeylanica</i> (L.) Benn.		Urticaceae	Herb
144	<i>Premna bengalensis</i> C.B. Clarke	Gineri	Lamiaceae	Tree
145	<i>Premna mollissima</i> Roth		Lamiaceae	Tree
146	<i>Psidium guajava</i> L.	Payara	Myrtaceae	Tree
147	<i>Pteris biaurita</i> L.		Pteridaceae	Herb
148	<i>Pupalia lappacea</i> (L.) Juss.		Amaranthaceae	Herb
149	<i>Richardia scabra</i> L.		Rubiaceae	Herb
150	<i>Rungia pectinata</i> (L.) Nees		Acanthaceae	Herb
151	<i>Saccharum spontaneum</i> L.	Kash	Poaceae	Herb
152	<i>Sauropus compressus</i> Müll.Arg.		Phyllanthaceae	Herb
153	<i>Sauropus quadrangularis</i> (Willd.) Müll.Arg.		Phyllanthaceae	Herb
154	<i>Scoparia dulcis</i> L.	Mitha pata	Plantaginaceae	Herb
155	<i>Senna occidentalis</i> (L.) Link		Leguminosae	Shrub
156	<i>Senna tora</i> (L.) Roxb.	Jhun jhuni	Leguminosae	Shrub
157	<i>Shorea robusta</i> Gaertn.	Sal	Dipterocarpaceae	Tree
158	<i>Sida acuta</i> Burm.f.	Berala	Malvaceae	Shrub
159	<i>Sida cordata</i> (Burm.f.) Borss. Waalk.	Swet Berala	Malvaceae	Shrub
160	<i>Sida cordifolia</i> L.	Swet Berala	Malvaceae	Shrub
161	<i>Sida rhombifolia</i> L.	Pit Berala	Malvaceae	Shrub
162	<i>Solanum aculeatissimum</i> Jacq.	Gotbegun	Solanaceae	Shrub
163	<i>Solanum americanum</i> Mill.	Kakmachhi	Solanaceae	Herb
164	<i>Solanum indicum</i> L.		Solanaceae	Shrub

165	<i>Solanum sisymbriifolium</i> Lam.		Solanaceae	Shrub
166	<i>Solanum torvum</i> Sw.	Titbegun	Solanaceae	Shrub
167	<i>Solanum villosum</i> Mill.		Solanaceae	Herb
168	<i>Spermacoce alata</i> Aubl.	Alu Ghas	Rubiaceae	Herb
169	<i>Spermacoce neohispida</i> Govaerts		Rubiaceae	Herb
170	<i>Spermacoce ocymoides</i> Burm.f.		Rubiaceae	Herb
171	<i>Stephania glabra</i> (Roxb.) Miers		Menispermaceae	Climber
172	<i>Stephania hernandiifolia</i> (Willd.) Walp.		Menispermaceae	Climber
173	<i>Stephania japonica</i> (Thunb.) Miers		Menispermaceae	Climber
174	<i>Sterculia villosa</i> Roxb.	Odal	Malvaceae	Tree
175	<i>Syzygium cumini</i> (L.) Skeels	Jamun	Myrtaceae	Tree
176	<i>Syzygium nervosum</i> A.Cunn. ex DC.	Godajam	Myrtaceae	Tree
177	<i>Tabernaemontana divaricata</i> (L.) R.Br. ex Roem. & Schult.	Tagar	Apocynaceae	Shrub
178	<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Bohera	Combretaceae	Tree
179	<i>Thunbergia grandiflora</i> (Roxb. ex Rottl.) Roxb.		Acanthaceae	Climber
180	<i>Tinospora crispa</i> (L.) Hook. f. & Thomson	Gulanca	Menispermaceae	Climber
181	<i>Trema orientalis</i> (L.) Blume		Cannabaceae	Tree
182	<i>Tridax procumbens</i> (L.) L.		Compositae	Herb
183	<i>Triumfetta rhomboidea</i> Jacq.		Malvaceae	Shrub
184	<i>Typhonium trilobatum</i> (L.) Schott	Karkon	Araceae	Herb
185	<i>Uraria picta</i> (Jacq.) DC.		Leguminosae	Shrub
186	<i>Urena lobata</i> L.		Malvaceae	Shrub
187	<i>Wrightia arborea</i> (Dennst.) Mabb.	Khira	Apocynaceae	Tree
188	<i>Xanthosoma brasiliense</i> (Desf.) Engl.	Dudh Kochu	Araceae	Herb

#### 4.1.2 Preliminary Checklist of Fauna

Total Recorded Species = 200

Avifauna = 65 species

Mammals = 10 species

Amphibians & Reptiles = 9 species

Fishes = 10 species

Damselflies and Dragonflies = 17 species

Butterflies & moths = 50 species

Arachnids and insects = 56 species

#### 1: Checklist of BIRDS of North Bengal Wild Animals Park (Bengal Safari), as observed between November and December, 2016

SL. NO	COMMON NAME	SCIENTIFIC NAME	FAMILY	ORDER	IUCN STAT US
1.	Common Myna	<i>Acridotheres tristis tristis</i> (Linnaeus, 1766)	<u>Sturnidae</u>	<u>Passeriformes</u>	LC
2.	Jungle Myna	<i>Acridotheres fuscus</i> (Wagler, 1827)	<u>Sturnidae</u>	<u>Passeriformes</u>	LC
3.	Bengal Green Pigeon	<i>Treron phoenicoptera phoenicoptera</i> (Latham, 1790)	<u>Columbidae</u>	<u>Columbiformes</u>	LC



		(Latham, 1790)			
4.	Spotted Dove	<i>Streptopelis chinensis</i> (Scopoli, 1768)	Columbidae	Columbiformes	LC
5.	Bronze Winged Jacana	<i>Metopidius indicus</i> (Latham, 1790)	Jacanidae	Columbiformes	LC
6.	Grey Plover	<i>Pulialis squatorala</i> (Linnaeus, 1758)	Charadriidae	Columbiformes	LC
7.	Jungle Owlet	<i>Glaucidium radiatum</i> (Tickell, 1833)	Strigidae	Strigiformes	LC
8.	Greater Necklaced Laughing Thrush	<i>Garrulax pectoralis</i> (Gould, 1836)	Leiothrichidae	Passeriformes	LC
9.	Jungle Prinia	<i>Prinia sylvatica</i> (Jerdon, 1840)	Cisticolidae	Passeriformes	LC
10.	Rose ringed Parakeet	<i>Psittacula krameri</i> (Scopoli, 1769)	Psittaculidae	Psittaciformes	LC
11.	Black Headed Oriole	<i>Oriolus xanthornus</i> (Linnaeus, 1758)	Oriolidae	Passeriformes	LC
12.	Black Kite	<i>Milvus migrans</i> (Boddaert, 1783)	Accipitridae	Accipitriformes	LC
13.	Indian Pond Heron	<i>Ardeola grayii</i> (Sykes, 1832)	Ardeidae	Pelecaniformes	LC
14.	Cattle Egret	<i>Bubulcus ibis</i> (Linnaeus, 1758)	Ardeidae	Pelecaniformes	LC
15.	Median Egret	<i>Mesophoyx intermedia</i> (Wagler, 1828)	Ardeidae	Pelecaniformes	
16.	Little Egret	<i>Egretta garzetta</i> (Linnaeus, 1766)	Ardeidae	Pelecaniformes	LC
17.	Indian Black Ibis	<i>Pseudoibis papillosa</i> (Temminck, 1824)	Threskiornithidae	Pelecaniformes	LC
18.	Red Jungle Fowl	<i>Gallus gallus</i> (Linnaeus, 1758)	Phasianidae	Galliformes	LC
19.	Indian Peafowl	<i>Pavocristatus</i> (Linnaeus, 1758)	Phasianidae	Galliformes	LC
20.	Red Wattled Lapwing	<i>Vanellus indicus</i> (Boddaert, 1783)	Charadriidae	Charadriiformes	LC
21.	Wood Sandpiper	<i>Tringa glareola</i> (Linnaeus, 1758)	Scolopacidae	Charadriiformes	LC
22.	Common Golden Backed Woodpecker	<i>Dinopium javanense</i> (Ljungh, 1797)	Picidae	Piciformes	LC
23.	Lineated Barbet	<i>Megalaima lineate</i> (Vieillot, 1816)	Megalaimidae	Piciformes	LC
24.	Black Drongo	<i>Dicrurus macrocercus</i> (Vieillot, 1817)	Dicruridae	Passeriformes	LC
25.	Greater RackeTailed Drongo	<i>Dicrurus paradiseus</i> (Linnaeus, 1766)	Dicruridae	Passeriformes	LC
26.	Asian– Pied Starling	<i>Sturnus contra</i> (Linnaeus, 1758)	Sturnidae	Passeriformes	LC
27.	Indian Treepie	<i>Dendrocitta vagabumda</i> (Latham, 1790)	Corvidae	Passeriformes	LC
28.	Common Raven	<i>Corvus corax</i> (Linnaeus, 1758)	Corvidae	Passeriformes	LC
29.	Purple Sunbird	<i>Cinnyris asiaticus</i> (Latham, 1790)	Nectariniidae	Passeriformes	LC
30.	Little Cormorant	<i>Phalacrocorax niger</i> (Vieillot, 1817)	Phalacrocoracidae	Suliformes	LC
31.	Blue rock Pigeon	<i>Columba livia</i> (Gmelin, 1789)	Columbidae	Columbiformes	LC
32.	Little Brown Dove	<i>Streptopelia senegalensis</i> (Linnaeus, 1766)	Columbidae	Columbiformes	LC
33.	Lesser Coucal	<i>Centropus sinensis</i> (Gmelin, 1788)	Cuculidae	Cuculiformes	LC
34.	House Swift	<i>Apus affinis</i> (Gray, 1830)	Apodidae	Apodiformes	LC
35.	Common Iora	<i>Aegithina tiphia</i> (Linnaeus, 1758)	Aegithinidae	Passeriformes	LC
36.	Brown Headed Barbet	<i>Megalaima zeylanica</i> (Gmelin, 1788)	Megalaimidae	Piciformes	LC
37.	Chestnut Headed Bee-eater	<i>Merops leschenaultia</i> (Vieillot, 1817)	Meropidae	Coraciiformes	LC
38.	Greater Spotted Eagle	<i>Aquila elanga</i> (Pallas, 1811)	Accipitridae	Accipitriformes	VU
39.	Paddy Field Pipet	<i>Anthus rufulus</i> (Vieillot, 1818)	Motacillidae	Passeriformes	LC
40.	Longtailed Minivet	<i>Pericrocotus flammeus</i> (Bangs & Philips, 1914)	Campephagidae	Passeriformes	LC
41.	Jungle Babbler	<i>Turdoides striatus</i> (Dumont, 1893)	Leiothrichidae	Passeriformes	LC
42.	Indian Bushlark	<i>Mirafra erythroptera</i> (Blyth, 1845)	Alaudidae	Passeriformes	LC
43.	Purple Rumped Sunbird	<i>Nectarinia zeylonica</i> (Linnaeus, 1766)	Nectariniidae	Passeriformes	LC
44.	Scarlet Minivet	<i>Pericrocotus flammeus</i> (Forster, 1781)	Campephagidae	Passeriformes	LC
45.	Oriental Pied Hornbill	<i>Anthracoceros albirostris</i> (Shaw, 1811)	Bucerotidae	Bucerotiformes	LC
46.	Great Pied Hornbill	<i>Buceros bicornis</i> (Linnaeus, 1758)	Bucerotidae	Bucerotiformes	NT
47.	Greenish Leaf Warbler	<i>Phylloscopus trochiloides</i> (Sundevall, 1837)	Phylloscopidae	Passeriformes	LC

48.	Large Green-Billed Malkoha	<i>Phaenicophaeus tristis</i> (Lesson, 1830)	Cuculidae	Cuculiformes	LC
49.	Oriental Dwarf Kingfisher	<i>Ceyx erithacus</i> (Linnaeus, 1758)	Alcedinidae	Coraciiformes	LC
50.	Striated Bulbul	<i>Pycnonotus striatus</i> (Blyth, 1842)	Pycnonotidae	Passeriformes	LC
51.	Black Crested Bulbul	<i>Pycnonotus melanicterus</i> (Gmelin, 1789)	Pycnonotidae	Passeriformes	LC
52.	Pied-Flycatcher Shrike	<i>Hemipus picatus</i> (Sykes, 1832)	Tephrodornithidae	Passeriformes	LC
53.	Red Vented Bulbul	<i>Pycnonotus cafer</i> (Linnaeus, 1766)	Pycnonotidae	Passeriformes	LC
54.	Blue-Cheeked Beaeater	<i>Merops persicus</i> (Pallas, 1773)	Meropidae	Coraciiformes	LC
55.	Short Eared Owl	<i>Asio flammeus</i> (Pontoppidan, 1763)	Strigidae	Strigiformes	LC
56.	Little Scaly-Bellied Woodpecker	<i>Picus xanthopygaeus</i> (Vigors, 1831)	Picidae	Piciformes	LC
57.	Black Bulbul	<i>Hypsipetes leucocephalus</i> (Gmelin, 1789)	Pycnonotidae	Passeriformes	LC
58.	Tickell's Blue Flycatcher	<i>Cyornis tickelliae</i> (Blyth, 1843)	Muscicapidae	Passeriformes	LC
59.	Rufous Backed Shrike	<i>Lanius schach</i> (Linnaeus, 1758)	Laniidae	Passeriformes	LC
60.	Small Blue Kingfisher	<i>Alcedo atthis</i> (Linnaeus, 1758)	Alcedinidae	Coraciiformes	LC
61.	Oriental Magpie-Robin	<i>Copsychus saularis</i> (Linnaeus, 1758)	Muscicapidae	Passeriformes	LC
62.	Large Billed Crow	<i>Corvus macrorhynchos</i> (Wagler, 1827)	Corvidae	Passeriformes	LC
63.	Blue-tailed Beaeater	<i>Merops philippinus</i> (Linnaeus, 1766)	Meropidae	Coraciiformes	LC
64.	Striated Marsh Warbler	<i>Megaluru spalustris</i> (Horsfield, 1821)	Locustellidae	Passeriformes	LC
65.	Bengal Bush Lark	<i>Mirafra asamica</i> (Horsfield, 1840)	Alaudidae	Passeriformes	LC

2: Checklist of MAMMALS of North Bengal Wild Animals Park (Bengal Safari), as observed between November and December, 2016

S.NO	COMMON NAME	SCIENTIFIC NAME	FAMILY	ORDER	IUCN STATUS
1.	Wild boar	<i>Sus scrofa cristatus</i> (Linnaeus, 1758)	Suidae	Artiodactyla	LC
2.	Spotted deer	<i>Axis axis</i> (Erxleben, 1777)	Cervidae	Cetartiodactyla	LC
3.	Barking deer	<i>Muntiacus muntjak</i> (Zimmermann, 1780)	Cervidae	Cetartiodactyla	LC
4.	Bengal Monkey	<i>Macaca mulata</i> (Zimmermann, 1780)	Cercopithecidae	Primates	LC
5.	Jungle Cat	<i>Felis chaus</i> (Schreber, 1777)	Felidae	Carnivora	LC
6.	Small Indian Mongoose	<i>Herpestes auropunctatus</i> (Illiger, 1811)	Herpestidae	Carnivora	LC
7.	Fulvous Fruit Bat	<i>Rousettus leschensultii</i> (Desmarest, 1820)	Pteropodidae	Chiroptera	LC
8.	Common five striped Squirrel	<i>Funanbulus pennantii</i> (Wroughton, 1905)	Sciuridae	Rodentia	LC
9.	Bengal Mole Rat	<i>Bandicoota bengalensis</i> (Gray & Hardwicke, 1833)	Muridae	Rodentia	LC
10.	Hispid Hare	<i>Caprolagus hispidus</i> (Pearson, 1839)	Leporidae	Lagomorpha	EN
11.	Bengal Bandicoot	<i>Bandicoota bengalensis</i> (Gray, 1835)	Muridae	Rodentia	LC
12.	Black Giant squirrel	<i>Ratufa bicolor</i> (Sparrman, 1778)	Sciuridae	Rodentia	NT

### 3: Checklist of BUTTERFLIES of North Bengal Wild Animals Park (Bengal Safari), as observed between November and December, 2016

S.NO	COMMON NAME	SCIENTIFIC NAME	FAMILY	ORDER
1.	Peacock Pansy	<i>Junonia almanac</i> (Linnaeus, 1758)	Nymphalidae	<u>Lepidoptera</u>
2.	Chocolate Pansy	<i>Junonia iphita</i> (Cramer, 1779)	Lycaenidae	<u>Lepidoptera</u>
3.	Gray Pansy	<i>Junonia atlitis</i> (Linnaeus, 1763)	Nymphalidae	<u>Lepidoptera</u>
4.	Tiger Hopper	<i>Ochus subvittatus</i> (Moore, 1878)	Hesperiidae	<u>Lepidoptera</u>
5.	Indian Awlking	<i>Choaspes benjamini</i> (Guérin-Méneville, 1843)	Hesperiidae	<u>Lepidoptera</u>
6.	Tricolor Pied Flat	<i>Coladenia indrani</i> (Moore, 1865)	Hesperiidae	<u>Lepidoptera</u>
7.	Large Snow Flat	<i>Tagiades gana</i> (Moore, 1865)	Hesperiidae	<u>Lepidoptera</u>
8.	Himalayan Notched Seseria	<i>Seseria sambara</i> (Moore, 1866)	Hesperiidae	<u>Lepidoptera</u>
9.	Common Banded Awl	<i>Hasora chromus</i> (Cramer, 1782)	Hesperiidae	<u>Lepidoptera</u>
10.	Orange tailed Awl	<i>Bibasis sena</i> (Moore, 1865)	Hesperiidae	<u>Lepidoptera</u>
11.	Veined Scrub Hopper	<i>Aeromachus stigmata</i> (Moore, 1878)	Hesperiidae	<u>Lepidoptera</u>
12.	Indian Palm Bob	<i>Suastes gremius</i> (Fabricius, 1798)	Hesperiidae	<u>Lepidoptera</u>
13.	Chocolate Demon	<i>Ancistroides nigrita</i> (Latreille, 1824)	Hesperiidae	<u>Lepidoptera</u>
14.	Grass Demon	<i>Udaspes folus</i> (Cramer, 1775)	Hesperiidae	<u>Lepidoptera</u>
15.	Common Banded Demon	<i>Notocrypta paralysos</i> (Wood-Mason & de Nicéville, 1881)	Hesperiidae	<u>Lepidoptera</u>
16.	Orange Tip	<i>Ixias Marianne</i> (Cramer, 1779)	Pieridae	<u>Lepidoptera</u>
17.	Dark Velvet Bob	<i>Koruthaialos butleri</i> (Watson, 1893)	Hesperiidae	<u>Lepidoptera</u>
18.	Dark Pierrot	<i>Tarucus ananda</i> (Nicéville, 1884)	Lycaenidae	<u>Lepidoptera</u>
19.	Copper flash	<i>Rapala pheritima</i> (Hewitson, 1863)	Lycaenidae	<u>Lepidoptera</u>
20.	Lesser Grass Blue	<i>Zizinia otis</i> (Fabricius, 1787)	Lycaenidae	<u>Lepidoptera</u>
21.	Indian Oakblue	<i>Arthropala atrax</i> (Hewitson, 1862)	Lycaenidae	<u>Lepidoptera</u>
22.	Dark Judy	<i>Abisara fylla</i> (Westwood, 1851)	Riodinidae	<u>Lepidoptera</u>
23.	Lime Butterfly	<i>Papilio demoleus</i> (Linnaeus, 1758)	Papilionidae	<u>Lepidoptera</u>
24.	Veined Jay	<i>Graphium Chiron</i> (Honrath, 1884)	Papilionidae	<u>Lepidoptera</u>
25.	Black Rajah	<i>Charaxes solon</i> (Fabricius, 1793)	Nymphalidae	<u>Lepidoptera</u>
26.	Straight Banded Tree brown	<i>Lethe verma</i> (Kollar, 1844)	Nymphalidae	<u>Lepidoptera</u>
27.	Common Red Forester	<i>Lethe mekara</i> (Moore, 1858)	Nymphalidae	<u>Lepidoptera</u>
28.	Sylhet Courtesan	<i>Euripus nyctelius</i> (Doubleday, 1845)	Nymphalidae	<u>Lepidoptera</u>
29.	Glassy Tiger	<i>Parantica aglea</i> (Stoll, 1782)	Nymphalidae	<u>Lepidoptera</u>
30.	Striped Tiger	<i>Danaus genutia</i> (Cramer, 1779)	Nymphalidae	<u>Lepidoptera</u>
31.	African Monarch	<i>Danaus chrysippus</i> (Linnaeus, 1758)	Nymphalidae	<u>Lepidoptera</u>
32.	Common Leopard	<i>Phalanta phalantha</i> (Drury, 1773)	Nymphalidae	<u>Lepidoptera</u>
33.	Brown Awl	<i>Badamia exclamationis</i> (Fabricius, 1793)	Hesperiidae	<u>Lepidoptera</u>
34.	Black Prince	<i>Rohana parisatis</i> (Westwood, 1850)	Nymphalidae	<u>Lepidoptera</u>
35.	Common Crow	<i>Euploea core</i> (Cramer, 1780)	Nymphalidae	<u>Lepidoptera</u>
36.	Common Sailor	<i>Neptis hylas</i> (Linnaeus, 1758)	Nymphalidae	<u>Lepidoptera</u>
37.	Common five ring	<i>Ypthima baldus</i> (Fabricius, 1775)	Nymphalidae	<u>Lepidoptera</u>
38.	Common Four Ring	<i>Ypthima huebneri</i> (Kirby, 1871)	Nymphalidae	<u>Lepidoptera</u>
39.	Lemon Emigrant	<i>Catopsilia pomona</i> (Fabricius, 1775)	Pieridae	<u>Lepidoptera</u>
40.	Chocolate Albatross	<i>Appias lyncida</i> (Cramer, 1777)	Pieridae	<u>Lepidoptera</u>
41.	Common Jezebel	<i>Deliaspasithoe parthenope</i> (Drury, 1773)	Pieridae	<u>Lepidoptera</u>
42.	Tree Yellow	<i>Gandaca harina</i> (Horsfield, 1829)	Pieridae	<u>Lepidoptera</u>

1.	RedspotSawtooth	<i>Prioneris clemanthas</i> (Doubleday, 1846)	Pieridae	<u>Lepidoptera</u>
2.	Himalayan Plain Puffin	<i>Appias indra</i> (Moore, 1857)	Pieridae	<u>Lepidoptera</u>
3.	Common Grass Yellow	<i>Eurema hecabe</i> (Linnaeus, 1758)	Pieridae	<u>Lepidoptera</u>
4.	Common Spotted Flat	<i>Celanorrhinus leucocera</i> (Kollar, 1848)	Hesperiidae	<u>Lepidoptera</u>
5.	Common Tit	<i>Hypolycaen aerylus</i> (Godart, 1823)	Lycaenidae	<u>Lepidoptera</u>
6.	Common Earl	<i>Tanaecia julii</i> (Lesson, 1837)	Nymphalidae	<u>Lepidoptera</u>
7.	Small White	<i>Pieris rapae</i> (Linnaeus, 1758)	Pieridae	<u>Lepidoptera</u>
8.	Indian Cabbage White	<i>Pieris canidia indica</i> (Sparrman, 1768)	Pieridae	<u>Lepidoptera</u>

4: Checklist of DRAGONFLIES AND DAMSELFLIES, ARACH NIDS and Other Insects of North Bengal Wild Animals Park (Bengal Safari), as observed between November and December, 2016

S.NO	COMMON NAME	SCIENTIFIC NAME	FAMILY	ORDER
1.	Southern Hawker	<i>Aeshna cyanea</i> (Müller, 1764)	<u>Aeshnidae</u>	Odonata
2.	Broad- Bodied Chasier	<i>Libellula depressa</i> (Linnaeus, 1758)	<u>Libellulidae</u>	Odonata
3.	Epaulet skimmer	<i>Orthetrum chrysostigma</i> (Burmeister, 1839)	<u>Libellulidae</u>	Odonata
4.	Common darter	<i>Trithemis annulata</i> (Beauvois, 1807)	<u>Libellulidae</u>	Odonata
5.	Banded Damoiselle	<i>Calopteryx splendens</i> (Harris, 1780)	<u>Calopterygidae</u>	Odonata
6.	Beautiful Damoiselle	<i>Calopteryx virgo</i> (Linnaeus, 1758)	<u>Calopterygidae</u>	Odonata
7.	Azure Damselfly	<i>Coenagrion puella</i> (Linnaeus, 1758)	<u>Coenagrionidae</u>	Odonata
8.	Common blue Damselfly	<i>Enallagma cyathigerum</i> (Charpentier, 1840)	<u>Coenagrionidae</u>	Odonata
9.	Black Meadowhawk	<i>Sympetrum danae</i> (Sulzer, 1776)	<u>Libellulidae</u>	Odonata
10.	Black-tailed Skimmer	<i>Orthetrum cancellatum</i> (Linnaeus, 1758)	<u>Libellulidae</u>	Odonata
11.	Blue-tailed Damselfly	<i>Ischnura elegans</i> (Vander Linden, 1820)	<u>Coenagrionidae</u>	Odonata
12.	Broad Scarlet Darter	<i>Crocothemis erythraea</i> (Brullé, 1832)	<u>Libellulidae</u>	Odonata
13.	Club-tailed Dragonfly	<i>Gomphus vulgatissimus</i> (Linnaeus, 1758)	<u>Gomphidae</u>	Odonata
14.	Ruddy darter	<i>Sympetrum sanguineum</i> (Müller, 1764)	<u>Libellulidae</u>	Odonata
15.	Southern darter	<i>Sympetrum meridionale</i> (Selys, 1841)	<u>Libellulidae</u>	Odonata
16.	Yellow winged Darter	<i>Sypmetrum flaveolum</i> (Linnaeus, 1758)	<u>Libellulidae</u>	Odonata
17.	Green Marsh Hawk	<i>Orthetrum Sabina</i> (Drury, 1770)	<u>Libellulidae</u>	Odonata
18.	Great green Bush Cricket	<i>Tettigonia viridissima</i> (Linnaeus, 1758)	<u>Tettigoniidae</u>	Orthoptera
19.	Dark bush Cricket	<i>Pholidoptera griseoptera</i> (De Geer, 1773)	<u>Tettigoniidae</u>	Orthoptera
20.	Common Green Grasshopper	<i>Omocestus viridulus</i> (Linnaeus, 1758)	<u>Acrididae</u>	Orthoptera
21.	Meadow Grasshopper	<i>Chorthippus parallelus</i> (Zetterstedt, 1821)	<u>Acrididae</u>	Orthoptera
22.	Oriental paper Wasp	<i>Polistes olivaceus</i> (Latrielle, 1802)	<u>Vespidae</u>	Hymenoptera
23.	Garden carabus	<i>Carabus hortensis</i> (Linnaeus, 1758)	<u>Carabidae</u>	Coleoptera
24.	Forest caterpillar hunter	<i>Calosoma sycophanta</i> (Linnaeus, 1758)	<u>Carabidae</u>	Coleoptera
25.	Green tiger beetle	<i>Cicindela campestris</i> (Linnaeus, 1758)	<u>Carabidae</u>	Coleoptera
26.	Ground beetle	<i>Broscus cephalotes</i> (Linnaeus, 1758)	<u>Carabidae</u>	Coleoptera
27.	Black banded spider wasp	<i>Anoplius viaticus</i> (Linnaeus, 1758)	<u>Pompilidae</u>	Hymenoptera
28.	Common wasp	<i>Vespula vulgaris</i> (Linnaeus, 1758)	<u>Vespidae</u>	Hymenoptera
29.	Grass spider	<i>Agelenopsis sp</i> (Giebel, 1869)	<u>Agelenidae</u>	<u>Araneae</u>
30.	Mole Cricket	<i>Gryllotalpidus sp</i> (Saussure, 1870)	<u>Gryllotalpidae</u>	Orthoptera

31	Tiger beetle	<i>Cicindela sp</i> (Latreille, 1802)	Carabidae	Coleoptera
32	Green sawfly	<i>Rhogogaster viridis</i> (Konow, 1884)	Tenthredinidae	Hymenoptera
33	Dock leaf bug	<i>Coreus marginatus</i> (Linnaeus, 1758)	Coreidae	Hemiptera
34	Pond skater	<i>Geris lacustria</i> (Linnaeus, 1758)	Gerridae	Hemiptera
35	Water measurer	<i>Hydrometra stagnorum</i> (Linnaeus, 1758)	Hydrometridae	Hemiptera
36	Green Leaf Weevil	<i>Phyllobius pomaceus</i> (Germar, 1824)	Curculionidae	Coleoptera
37	GreenDock Leaf beetle	<i>Gastrophys aviridula</i> (De Geer, 1775)	Chrysomelidae	Coleoptera
38	Klamath Weed Beetle	<i>Chrysolina hyperici</i>		
39	Tussock Moth	<i>Lymantria sp</i> (Hübner, 1819)	Erebidae	Lepidoptera
40	Common Looper	<i>Hyposidra talaca</i> (Walker, 1860)	Geometridae	Lepidoptera
41.	Tea Looper	<i>Biston suppressaria</i> (Guenée, 1858)	Geometridae	Lepidoptera
42.	Asian Weaver Ant	<i>Oecophylla smaragdina</i> (Fabricius,1775)	Formicidae	Hymenoptera
43.	Procession Ant	<i>Leptogenys processionalis</i> (Jerdon, 1851)	Formicidae	Hymenoptera
44.	Carpenter Ant	<i>Camponotus radiates</i> (Mayr, 1861)	Formicidae	Hymenoptera
45.	Short-legged Hunchback Ant	<i>Myrmicaria brunnea</i> (Saunders,1842)	Formicidae	Hymenoptera
46.	Acrobat Ant	<i>Crematogaster rothneyi</i> (Mayr, 1879)	Formicidae	Hymenoptera
47.	Giant Carpenter Ant	<i>Camponotus compressus</i> (Fabricius 1787)	Formicidae	Hymenoptera
48.	Long necked Sugar Ant	<i>Camponotus angusticollis</i> (Jerdon, 1851)	Formicidae	Hymenoptera
49.	Fire Ant	<i>Solenopsis germinate</i> (Fabricius, 1804)	Formicidae	Hymenoptera
50.	Two-tailed spider	<i>Hersilias avignyi</i> (Lucas, 1836)	Hersiliidae	Araneae
51.	Wolf Spider	<i>Hippasa greenalliae</i> (Blackwall, 1867)	Lycosidae	Araneae
52.	Lynx spider	<i>Oxyopes ashae</i> (Gajbe, 1999)	Oxyopidae	Araneae
53.	Adanson's house jumper	<i>Hasarius adansoni</i> (Audouin, 1826)	Salticidae	Araneae
54.	Common housefly catcher spider	<i>Plexippus petersi</i> (Karsch,1878)	Salticidae	Araneae

5: Checklist of FISHES of North Bengal Wild Animals Park (Bengal Safari), as observed between November and December, 2016

S.NO	COMMON NAME	SCIENTIFIC NAME	FAMILY	ORDER	IUCN STATUS
1.	Bata	<i>Labeo bata</i> (F. Hamilton, 1822)	Cyprinidae	Cypriniformes	LC
2.	Chapila	<i>Gudusia chapra</i> (F. Hamilton, 1822)	Clupeidae	Cypriniformes	LC
3.	Darkina	<i>Rasbora daniconius</i> (Hamilton, 1822)	Cyprinidae	Cypriniformes	LC
4.	Tengra	<i>Mystus vittatus</i> (Bloch, 1794)	Bagridae	Siluriformes	LC
5.	Singi	<i>Heteropneustes fossilis</i> (Bloch, 1794)	Heteropneustidae	Siluriformes	LC
6.	Kuchia	<i>Monopterusuchia</i> (Hamilton, 1822)	Synbranchidae	Synbranchiformes	LC
7.	Chang	<i>Channa orientalis</i> (Bloch & Schneider, 1801)	Channidae	Perciformes	LC
8.	Sati/taki	<i>Channa punctatus</i> (Bloch, 1793)	Channidae	Cypriniformes	LC
9.	Kholsha	<i>Trichogaster fasciatus</i> (Bloch & Schneider, 1801)	Osphronemidae	Perciformes	LC
10.	Punti	<i>Puntius sophore</i> (Hamilton, 1822)	Cyprinidae	Cypriniformes	LC

6: Checklist of AMPHIBIANS AND REPTILES of North Bengal Wild Animals Park (Bengal Safari), as observed between November and December, 2016

S.NO	COMMON NAME	SCIENTIFIC NAME	FAMILY	ORDER	IUCN STATUS
1.	Common Tree Frog	<i>Polypedatus teraiensis</i> (Dubois, 1987)	Rhacophoridae	Anura	LC

2.	Indian Bullfrog	<i>Hoplobatrachus tigerinus</i> (Daudin, 1803)	Dicroglossidae	Anura	LC
3.	Common Indian Toad	<i>Duttaphrynus melanostictus</i> (Schneider, 1799)	Bufo	Anura	LC
4.	Asian Common Toad	<i>Bufo melanostictus</i> (Schneider, 1799)	Bufo	Anura	LC
5.	Indian tree frog	<i>Polypedatus maculatus</i> (Gray, 1830)	Rhacophoridae	Anura	LC
6.	Oriental Garden Lizard	<i>Calotes versicolor</i> (Daudin, 1802)	Agamidae	Squamata	
7.	Small Forest Lizard	<i>Oriocalotes paulus</i> (Smith, 1935)	Agamidae	Squamata	
8.	Bengal Monitor Lizard	<i>Varanus benghalensis</i> (Merrem, 1820)	Varanidae	Squamata	LC
9.	Wahlberg's Snake eyed Skink	<i>Panaspis wahlbergi</i> (Smith, 1849)	Scincidae	Squamata	

## ANNEXURE

### Status of the points raised by The Central Zoo Authority, Govt. of India

SL	Norm	Violation of Recognition of Zoo Rules, 2009	Time period to rectify	Action Taken
<b>General Requirements</b>				
1	1(5)	The zoo has failed to provide perimeter fence passing along the village at west end of Zoo which should be replaced with a 2m high boundary wall to allay all possible future threats to the zoo animals.	2 years	The fence shall be upgraded with a 2m high wall within the given time period.
<b>Administrative &amp; staffing pattern</b>				
2	2(2)	a) The zoo aspires to become a medium category zoo. However, the zoo has failed to post a fulltime Curator and an Education officer. b) The zoo has failed to post a full time veterinarian for health care of animals.	With immediate effect	The zoo service & recruitment rules have been soon been finalized and accordingly recruitment of Education officer shall be done by 3 months. At present Asst Director working as curator. Full time veterinarian exist
3	3(7)	The zoo has failed to provide isolation cum quarantine enclosure near the Veterinary hospital campus. All newly arriving animals shall be subjected to quarantine before admitting them into the safari/ display enclosure.	6 months	The isolation cum quarantine unit already e tendered and be constructed by 4 months
<b>Animal housing, display of animals and animal enclosures</b>				
4	4(3)	a) The zoo has failed to provide sliding gates operated from keeper gallery with handles for safe use.	With immediate effect	Safe handle of sliding gate been made after evaluation. Pictures enclosed

### Veterinary and Infrastructure Facilities

5	6(3)	The zoo has failed to provide Post-mortem room, isolation and quarantine equipment's.	With immediate effect	During evaluation post mortem room was under construction and now it is completed & most of Vet equipments purchased and will be purchased based on requirement. Picture enclosed.
<b>Visitor Facilities</b>				
6	12(2)	The zoo has failed to provide Anti-venom and lifesaving in the zoo campus	With immediate effect	Anti venom procured and stored in zoo hospital

### General Requirements

1	1(3)	Currently there is no clean pickup and drop areas for safari visitors. The zoo authorities shall clearly demarcate zones for visitor pick up and drop by buses. Appropriate signage shall be provided for guidance in this regard.	With immediate effect	The visitors pick up point is clearly demarcated with appropriate board Drop point is also been made clear after evaluation. Pictures enclosed.
2	1(4)	a) It was observed that a portion of the perimeter fence facing the Sevoke Road had tilted and could collapse. The same may be strengthened and its structural stability ensured.  b) It was observed that the iron flats used as binders to chainlink have just been fixed through welding. This may give way due to weathering. It is advised that additionally the flats may be bind together by use of nut & bolt, to provide strength to the fence.	With immediate effect	a) The matter is rectified immediately.  b) Additional strengthening of fence will be made through bolting.
3	1(7)	The Zoo should put in place appropriate mechanism to dispose off all solid wastes generated in the zoo.	With immediate effect	5 nos Vermicompost units already present. In addition to that solid waste Treatment Plant already e tendered and will install (by 3 months)

### Development and planning

4	3(5)	a) A parking plaza having designated areas/sheds for two wheelers and four wheelers should be provided at the entrance. The plaza may also consist of a toilet complex (gents & ladies each), a baby care room for nursing mothers first aid facility etc. and a cloak room for luggage.  b) The bonsai pavilion currently located near the gate may also be shifted to the parking plaza. The above facilities should be provided with minimum change in the landscape.	1 year	For the construction of Cloak room e tender already been done. Near that room care for nursing mothers will be organized in a room with First aid. At present First aid facility available in all safari vehicle and a room near entrance. Bonsai pavilion also be shifted lateron.
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5	3(6)	The current animal collection plan is very vague in nature and has included all free ranging animals found in the geography. It should be revised having focus on conservation of endangered fauna of riverine grassland, river Mahananda and tropical forests of Eastern Himalayan foothills. Similar plan may be prepared for conservation of flora in the proposed biodiversity park.	6 months	Detail revised animal collection plan be given as advised. Similar plan for conservation of flora in the proposed biodiversity park also be sent
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#### Animal housing, display of animals and animal enclosures

6	4(3)	<p>a) Electrical wiring has been done inside the feeding cells of tiger. To avoid electrocution, the same should be removed out of the cell immediately. LED halogen lamp could be provided on the keeper gallery wall for illumination of feeding cells.</p> <p>b) Currently the sliding gates opening into the safari are operated from outside the night shelter complex. This may become difficult to operate in inclement weather. The zoo authorities may explore providing drop down gates with gears, which are safe and can be operated from inside the night shelter.</p> <p>c) Rain shelter should be provided for safari gate operators</p>	Immediately	<p>Rectified</p> <p>The matter is explored however drop down gates already discouraged in Central Zoo Authority manual and guidelines</p>
6	4(6)	Thick wooden platforms should be provided inside the feeding and retiring cubicles of tiger. They should also be cleaned on daily basis and disinfected.	Immediately	At present thick ply board is provided in the feeding and retiring cubicles of tiger which will be replaced by wooden ones

#### Upkeep and healthcare of animals

7	5(2)	Meat inspection and processing room is located within the zoo commissary complex. A separate meat inspection and processing room should be created. Separate entrance should be provided to the room and its access from the store and kitchen should be closed. The room should be made flyproof and provided with necessary granite the room should be disposed off in a hygienic manner.	Immediately	<p>A separate meat processing and a separate meat store room already present with all fly proof net and fly catcher.</p> <p>However a separate entrance is not present which will be constructed soon (by 3 months)</p>
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8	5(3)	Concentrate feed to herbivores in safari is being provided on the ground. This is unhygienic and prone to bacterial and fungal infestation. It is advised that the same may be provided on raised concrete platforms. Suitable shade may also be provided on top of the platforms for protection of the food from rain. These platforms may be created away from visitor view and waterholes and the entire structure should merge with the forest environment.	6 months	Initially Concentrate feed to herbivores in safari was given over the bamboo & leaf platform with thatch roof on top. Later on it has been discouraged by many senior Forest officers. Based on the present advise Concrete floor will be provided instead on bamboo & leaf with shade merging with Forest environment.(by 6 months)
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13	5(5)	a) All the feeding cells should be disinfected and cleaned on day to day basis. Appropriate disinfectants should be used to clean the floors. The cells should also be blow lamped once every week and cleaned with hot water.  b)Leftover food should be disposed of in a manner that it has no adverse impact on the immediate environment and the landscape surrounding the centre. Meat leftovers should be incinerated.	Immediately	Complied
14	5(9)	All staff involved in upkeep and healthcare of animals should be subjected to annual health check-up to avoid spread of Zoonotic diseases.		Complied

#### **Veterinary & Infrastructure Facilities**

15	6(5)	A lab assistant should be appointed to help the veterinarian in day to day investigations.	1 year	Will be engaged (by 3 months)
16	6(6)	The zoo should enter into a written agreement with the veterinary college for: 1. Round the year veterinary support 2. Training of zoo personnel 3. Veterinary internship	Immediately	Under process

#### **Post-mortem and disposal of carcass of animals**

17	7(3)	In the event the post-mortem being inconclusive and no specific reason for death is identified, the authorities should send samples of tissues, organs, blood & viscera etc. for further examination to the nearest veterinary laboratory having adequate specialization for further investigation. Samples may also be sent to Indian Veterinary Research Institute as referral.	With immediate effect	Complied
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18	7(4)	An incinerator may be installed near the post-mortem room for safe disposal of animal carcasses and other bio wastes. Carcasses of all large cats shall be disposed of by burning in presence of the Director of the Zoo or any officer in next rank to him and authorized by him in this regard.	Immediately	Will be complied in due course
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**Acquisition and breeding of animals**

19	9(9)	Effective population control measures should be put in place to have a check on the prolifically breeding species like chital.	With immediate effect	Will be complied
20	9(10)	Effective safeguards shall be put in place to retrieve animals escaping accidentally from the safari park.	Immediately	complied

**Research activities**

21	10	The zoo authorities may enter into an agreement with the North Bengal University & local colleges for engaging graduate/postgraduate students in studying the behavioural changes of animals which are released from small enclosures to near natural large open enclosures, which will aid in better management.	2 years	At Present research Scholars of NBU are undergoing projects on Free living fauna & flora of the Park. The project as suggested will be complied by next year
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**Education and outreach activity**

22	11(1)	The zoo is constructing a Nature Information Centre (NIC). The plan shared during the evaluation revealed creating an amphitheatre for closed projections and an open-air theater. It is advised that a detailed proposal for utility of Centre may be prepared prior to the Centre may be designed accordingly to accommodate smooth entry and exit of visitors on a crowded day.	Immediately	Will be complied
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**Visitor Facilities**

23	12(3)	The safari bus should be made disabled friendly both in terms of embarkation/ disembarkation and seating.		Exploring the possibilities
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