



**ZOOLOGY**  
**SEMESTER I EXCURSION 2023**  
**NORTH BENGAL**



**Semester 1 Excursion Details:-**

**DATE -: 13.03.2024**

**PLACE -: B.B. COLLEGE, ASANSOL**

**STUDENT'S SIGNATURE -:**

**TEACHER'S SIGNATURE -:**



**Fig: Night at Sillery Gaon**



**Fig: Our Team at Jalsa Bungalow, Munsong Rd**

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## PREFACE

Francis Bacon has rightly said, “Travel is the younger sort, is a part of education, in order a part of the experience. To know the unknown and to see the unseen in natural wonder, the thirst of man as we read of ‘Sindbad’ in the Arabian Night Entertainment”.

An educational tour or field visit (i.e., physical inspection of their life process in their natural habitat or their natural resources in a museum, research centre or farm) is now under the academic carnival of the new syllabus formed by the Post-Graduate Department of Zoology of Kazi Nazrul University since 2020-21 session, where the undergraduate honours students of Zoology are advised to submit a field report in the subject in the syllabus during semester 1 practical examination.



Fig: Lord Buddha Idols at Lava Monastery, Kalimpong

## **ACKNOWLEDGEMENT**

I am pleased to extend my sincerest thanks to our Principal Dr Amitava Basu and the Head of the Department Dr Rajrupa Ghosh for bringing forth the chance to attend this field visit.

I also pay my heartfelt thanks to our professors, Dr Rajrupa Ghosh, Dr Sangita Lahiry, Smt. Saswati Chakraborty and Sri Kaushik Mondal of our department for your kind arrangements and for providing us with every facility during the survey and for studying the animals in nature.

Last but not least I must acknowledge my classmates for their kind cooperation throughout the journey and visit.



**Fig: Kanchenjunga View Point, Rhenak Forest Block**

## TEAM

Our excursion was to Bengal Safari Wildlife Sanctuary, Siliguri. We, the students of Zoology Department of Kazi Nazrul University and our teachers were involved in this excursion of semester 1.

On our excursion, the members were

1. 32 students
2. 4 teachers

Course Name	Course Code	List of Students
Zoology	BSCZOOMJ101	<ul style="list-style-type: none"> <li>• Sneha Bhattacharyya</li> <li>• Shruti Mishra</li> <li>• Sohini Chakraborty</li> <li>• Sanchita Mukherjee</li> <li>• Jasmin Akhtar</li> <li>• Manav</li> <li>• Saikat Paul</li> <li>• Pritha Roy</li> <li>• Urmi Chakraborty</li> <li>• Shipra Dawn</li> <li>• Upama Bauri</li> <li>• Dolly Maji</li> <li>• Deb Dutta</li> <li>• Ghazala Tabassum</li> <li>• Ajoy Kumar Soren</li> <li>• Soumili Pailen</li> <li>• Ananya Mondal</li> <li>• Sayoni Halder</li> </ul>

- Deepa Bhattacharjee
- Indrani Sil
- Mohammad Almeen Abbas
- Prity Upadhyay
- Prashant Kumar
- Nityam Nilay
- Debraj Mondal
- Tapabrata Maji
- Soumen Das
- Bikash Nunia
- Rishika Bauri
- Tanushree Bauri
- Vijay Kumar
- Deep Murmu



**Our team at Bengal Safari, Jalpaiguri**

# **EQUIPMENTS**

## **1. FOR OUTDOOR WORK**

- a. Field notebook
- b. Camera
- c. Binocular

## **2. SAFETY EQUIPMENT**

- a. Essential medicine
- b. Bandages
- c. Torch
- d. Sunglasses



**Fig: Camera positioned at Kanchenjunga View Point**



## **AIM OF EDUCATIONAL TOUR**

1. Observation of the behaviour of the animal
2. Idea about the natural habitat of the animal
3. Sequential study of ecosystem
4. To know the food habitat of animals
5. To make an idea of endangered species if any
6. To study about insects and plants diversification
7. To correlate bookish knowledge with practical experience
8. To study the conversation method if any and the economic importance of animals
9. It also provides a sense of proportion of equality and friendships

## **ONWARD JOURNEY**

The places for our zoological excursion were Bengal Safari and Zoological Sanctuary, Siliguri. With God's blessings, we started our journey on 27<sup>th</sup> November from Asansol station at 4:50 pm by Asansol -Bardhamman Local train and reached Bardhamman station by 7:00 pm. Then we had to wait there for a while and we all enjoyed our little snacks and photo sessions. The next part of our train journey started when the Kanchankanya Express arrived at Bardhamman Station by 10:22 pm.

The next morning i.e., 28<sup>th</sup> November at 10:30 am, we reached our destination New Mal Junction. Then we left the station and started our journey to Sillerygaon. On the way, we were taken to a viewpoint from where Kanchanjangha were seen. We were thrilled amidst nature, and the hit of fresh air calmed our souls.

The next morning, 29<sup>th</sup> November, our morning started at 6 AM with watching the sunrise at the peak of the snow-covered mountains, and the sun flushed us with its rays. We left Sillerygaon to advance towards Ramdhura. On the way, we were taken to Jalsa Bungalow, Kalimpong and viewed the Teesta River which was quite exquisite. We then proceeded towards Chamling Homestay, Ramdhura. The roadsides were covered with colourful flowers which was the cherry on top with all the mountain roads. The sunset from the hotel's balcony was worth watching.

The next day, 30<sup>th</sup> November, our day started witnessing the sleeping Buddha on the mountaintop. After breakfast, we seated ourselves in the car and went towards Kolakham. We then got down to watch the famous Lava Monastery and learned about the traditions and culture practised there. The car stopped again on the way with our looking towards the beautiful Changey Falls. With the professors' guidance and care, we went down and were mesmerised by the fall. The clear water, the calmness, and the soothing sound of the fall took our breath away. Then we proceeded towards Kolakham.

On the last day, 1<sup>st</sup> December, our day started early with us leaving for Siliguri Bengal Safari Sanctuary. On our way, we enjoyed the tea gardens and the views. As we reached the main part of our excursion we all did our best to fulfill the given aim. After that, we boarded our train at New Jalpaiguri Station and said goodbye to our beautiful yet knowledgeable excursion.

## ROUTE OF THE VOYAGE

27th November & 28<sup>th</sup> November

Asansol station >> Bardhamman station >> New Mal Station

28<sup>th</sup> November

New Mal >> Kanchanjangha view point >> Sillerygaon

29<sup>th</sup> November

Sillerygaon >> Teesta View Point >> Ramdhura

30<sup>th</sup> November

Ramdhura >> Lava Monastery >> Changey Falls >> Kolakham

1<sup>st</sup> December

Kolakham >> Bengal Safari, Siliguri >> New Jalpaiguri Station

2<sup>nd</sup> December

New Jalpaiguri Station >> Bardhamman Junction >> Asansol Junction

## DAY – 01

### Train Journey: -

We started our journey from Asansol Junction at 4:50 pm on 27<sup>th</sup> November, 2023.

We reached the Bardhamman Junction by Asansol- Bardhamman Local.

Then by Kanchankanya Express which arrived at 10:22 pm at Bardhamman Junction, we reached New Mal Junction by the next morning (28<sup>th</sup> November) at 10:30 AM.



**Fig: Asansol Junction**



**Fig: New Mal Junction**

## **DAY- 02**

### **Kanchenjunga View point**

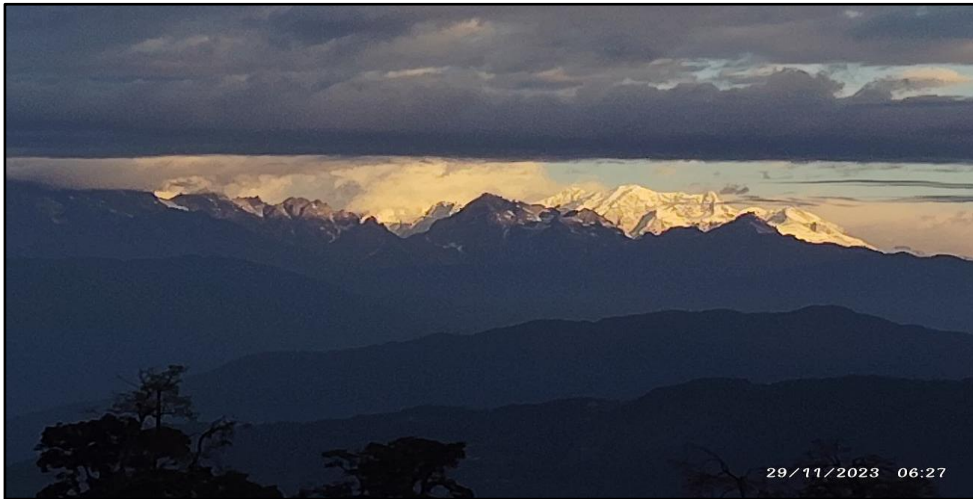
Kanchenjunga is the third-highest mountain in the world. Its summit lies at 8,586 m (28,169 ft) in a section of the Himalayas, the Kangchenjunga Himal, which is bounded in the west by the Tamur River, in the north by the Lhonak River and Jongsang La, and in the east by the Teesta River. It lies in the border region between Nepal and Sikkim state of India, with three of the five peaks, namely Main, Central and South, directly on the border, and the peaks West and Kangbachen in Nepal's Taplejung District.

### **Sillerygaon Homestay**

We stayed in Sillerygaon homestay overnight. Sillery Gaon is a small village near Pedong in the Kalimpong district of West Bengal. This mesmeric village is situated at an altitude of 6000ft from the sea level. This place offers an incomparable view of mount Kanchenjunga and it's allied peaks.



**Fig: Kanchenjunga as viewed from Rhenak Forest Block**



**Fig: Kanchenjunga as viewed from Sillery Gaon**



**Fig: View of Sillery Gaon**



**Fig: Beautiful scenery from homestay at Sillery Gaon**

## DAY -03

### Teesta river:

Teesta is a 414km long river with total drainage area of 12,540 sq.km, flowing through India and Bangladesh. Teesta basin receives major part of its rainfall during the South-West monsoon period. That is the presence of very fine grained rock particles that are the size of slit generated by mechanical grinding of the bedrock. Another inference points to the Teesta's rich inclusion of two minerals:

limestone and dolomite. Both tend to give water a green blue tinge.

### Chamling Homestay, Ramdhura:

We stayed in Ramdhura for a night. It's speciality is that it faces Mount Kanchanjuga, surrounded by pine forests and Chinchona plantations. The roadsides were decorated with colourful flowers. All together , everything looked heavenly.



Fig: Teesta River as viewed from Jalsa Bungalow, Munsong Rd



**Fig: Mountain Ranges captured at Chamling Homestay, Ramdhura**



**Fig: Chamling Homestay, Ramdhura**



## DAY – 04

### Lava Monastery:

The monastery is located in Lava, Kalimpong district in the Indian state of West Bengal. It sits just beside the Neora Reservoir, and serves as a gateway to the Neora Valley National Park. It is at a distance of about 32 km (19.9 mi) from Kalimpong.



Fig: Lava Monastery,  
Kalimpong

### Changey Falls:

The waterfall sits at an elevation of 2,200 m (7,218 ft) and is situated at a distance of about 4 km (2.5 mi) from Kolakham and 10 km (6.2 mi) from the hamlet of Lava in Kalimpong district, West Bengal



Fig: Changey Waterfall,  
Lava Rd

## DAY – 05

After Changey Falls, we reached Kolakham and in those wooden fancy rooms , we stayed for a night. It is a small village in Kolbong Forest within the Neora Valley. We enjoyed playing uno and engaged ourselves in bonfires and music.

Fig: Sunrise at Kolakham

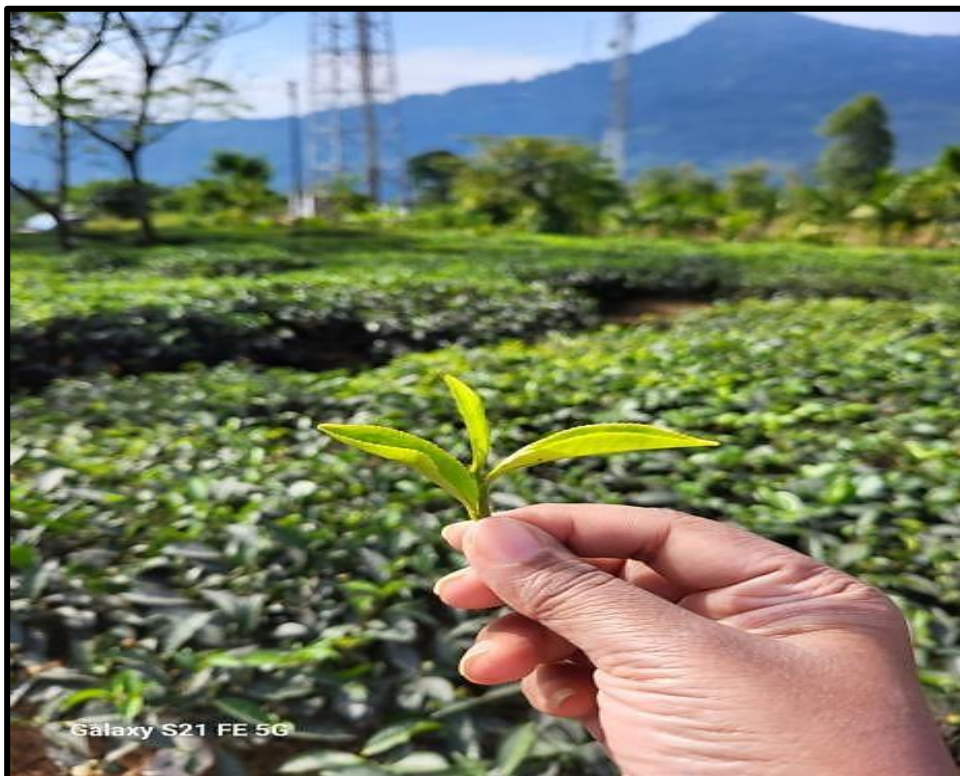


Fig: Tea Gardens on the way to Safari

## DAY - 06

### Bengal Safari

Bengal Safari Park, situated within the verdant forested area of Mahananda Wildlife Sanctuary is the first animal safari park of North Bengal region. It is located on the Sevoke road at a distance of 8km from Siliguri. Bengal Safari Park was inaugurated by the CM Mamata Banerjee on 21<sup>st</sup> Jan 2016 to boost the tourism of North Bengal.

Surrounded with luxuriant forest of Sal trees, Bengal Safari Park with its 700arce land gives closure toward wild side of North Bengal region. Visitors can spots wild animals like sambar deer, jungle fowl, wild boars, rhinoceros, spotted deer, and Royal Bengal of tiger during their visit of Bengal Safari Park. Presently there are two safaris conducted in Bengal Safari Park herbivore safari, and carnivore safari. With a nominal fee of 50rs (subject to change) for jungle safari and 30rs (subject to change) for entry fee, tourists can spot and observe wild animals in their natural habitat at Bengal Safari Park.



**Fig: Our team at the entrance of Bengal Safari**

## Animals we spotted:

### Spotted Deer (*Asix axis*):-



Fig: Spotted deer captured at safari

The spotted deer, or chital, is the most common deer species in Indian forests. With a lifespan of about 20 to 30 years, it stands at about 35 inches tall and weighs about 187 pounds. The deer's golden-rufus colouring is speckled with white spots, and it has a white underbelly. Its curved, three-pronged antlers extend nearly 3 feet and shed each year.

### Asiatic Black Bear (*Ursus thibetanus*):-



Fig: Asiatic Black Bear captured while roaming around the forest

The Asiatic black bear is a bear of medium to large size with a large rounded head and small eyes. It has large ears which are farther apart than those of an American black bear. Its body is heavy, and its legs are strong and thick with broad paws. It walks on the soles of its feet, as humans do. It has a short tail that can hardly be seen under its long, coarse coat. Its fur is black with a "V" shape of light beige to white on its chest, a small beige to white crescent on its throat, and a small white spot on its chin. Its muzzle is white.

## **LEOPARD(*Panthera pardus*)-:**



**Fig: Leopard captured under captivity**

The leopard (*Panthera pardus*) is one of the five extant species in the genus *Panthera*. It has a pale yellowish to dark golden fur with dark spots grouped in rosettes. Its body is slender and muscular reaching a length of 92–183 cm (36–72 in) with a 66–102 cm (26–40 in) long tail and a shoulder height of 60–70 cm (24–28 in). Males typically weigh 30.9–72 kg (68–159 lb), and females 20.5–43 kg (45–95 lb).

## **Tiger(*Panthera tigris*)-:**



**Fig: Tiger captured while marking its territory**

The tiger (*Panthera tigris*) is the largest living cat species and a member of the genus *Panthera*. It is most recognisable for its dark vertical stripes on orange fur with a white underside. An apex predator, it primarily preys on ungulates, such as deer and wild boar. It is territorial and generally, a solitary but social predator, requiring large contiguous areas of habitat to support its requirements for prey and rearing of its offspring. Tiger cubs stay with their mother for about two years and then become independent, leaving their mother's home range to establish their own.

## Marsh Crocodile (*Crocodylus palustris*):-



Fig: Marsh Crocodile spotted near a water body

The marsh crocodile, also known as the mugger crocodile (*Crocodylus palustris*), is a species of crocodile found in South Asia. It inhabits freshwater habitats such as rivers, lakes, and marshes. Marsh crocodiles are medium-sized and have a broad snout. They are opportunistic predators, feeding on fish, amphibians, and small mammals. These crocodiles are known for their ability to tolerate a variety of environments, including both salt and fresh water. Conservation efforts are in place to protect this species, as they face threats from habitat loss and human-wildlife conflict.

## Javan Lutung (*Trachypithecus auratus*):-



Fig: Javan Lutung captured while sitting near the fence

The Javan lutung, also known as the ebony lutung or Javan langur (*Trachypithecus auratus*), is a species of Old World monkey native to Java, Indonesia. These primates are known for their striking appearance, characterized by black fur with a silver or white-coloured mane around their face. They are arboreal and spend much of their time in trees, where they feed on leaves, fruits, and other plant materials. Javan Lutungs live in social groups, and their populations are primarily threatened by habitat loss due to deforestation. Conservation efforts aim to protect their natural habitats and raise awareness about the importance of preserving these unique primates.

## Peacock (*Pavo cristatus*)-:



Fig: Peacock spotted while sitting on a tree branch

Peacock, is any of three species of resplendent birds of the pheasant family, Phasianidae (order Galliformes). Strictly, the male is a peacock, and the female is a peahen; both are peafowl. The two most recognisable species of peafowl are the blue, or Indian, peacock (*Pavo cristatus*), of India and Sri Lanka, and the green, Javanese peacock (*P.muticus*), found from Myanmar (Burma) to Java.

## Macaw (*Ara sp.*)-:



Fig: Two Macaws spotted while sitting with each other

Macaws (*Ara sp.*) are a group of New World parrots that are long-tailed and often colourful. They are native to Central and South America, with various species inhabiting different regions. Macaws are popular as pets but are also found in the wild, living in diverse habitats such as rainforests, woodlands, and savannas. Conservation efforts are crucial for many macaw species, as they face threats like habitat loss and illegal pet trade.

## **LIGHT FLYTRAP**

### **Collection of material and sorting:**

The specimens collected for present study comprise larvae pupae and adults of biting midges. They were procured from different locations of study area. The adults of biting midges had been trapped from different habitats and its vicinities using different types of light traps like, open tray type , UV light trap and sweeping net and also from rearing the juveniles. Traces of glacial acetic acid were used in the trap as attracting and paralysing agent in case of open tray trap while cotton wool soaked in glacial acetic acid or in chloroform during the operation in other light traps.

The larvae of biting midges are very transparent ,fast moving and are too small to locate in natural conditions. Different larval habitats were collected with the aid of different types of plastic and metal scoop samplers. The immature stages were sorted out in the laboratory and those from distant places were brought to the laboratory in vacuum containers filled with water also been employed. The live larvae were placed in different glass vials separately for monoculture with small amount of water and very small amount of their habitats and the open and tightly covered with very thin net to prevent escaping and as the adults comes out, it will easily be noticed. Most of the juveniles were reared in the environment chamber.

#### **Collecting Devices:**

Different types of light traps used during the present study were-

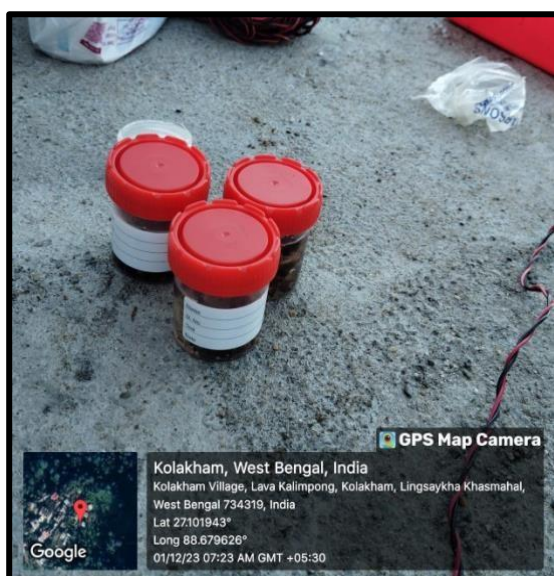
- A. Open-tray type light trap: This trap was designed by Sinha Ray et al.(1969), consists of two or three ordinary table lamps , each of 100-200 watts with their head bent down to the water level in a metallic tray measuring 30cm× 25cm × 4cm covered with a fine wire net of mesh per sq.cm containing trace amount of glacial acetic acid as attracting and killing agent . It is also known as water pan trap which is usually a rectangular container filled with aqueous



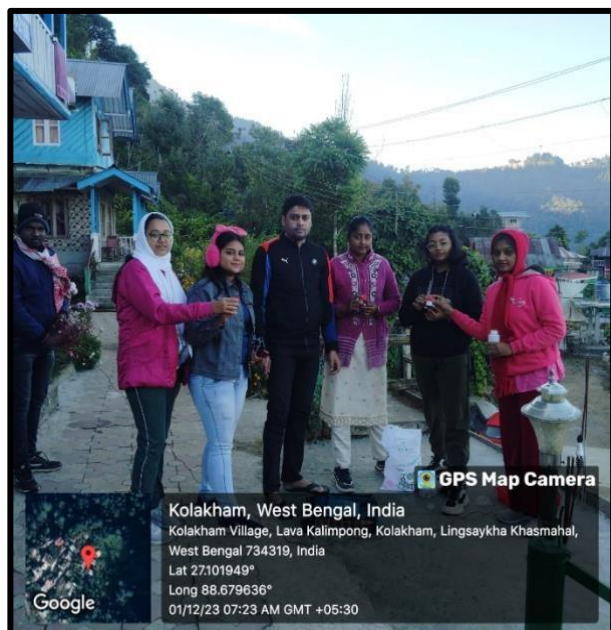
- B. solutions of soap having no odour which may be repellent to target insects.
- C. UV light trap(PLATE I): The battery operated light trap is modified version of CDC light trap( Sudia and Chamberlain,1962). It was designed and fabricated by USIC, University of Burdwan with slight modifications to capture small dipteran flies.



**Fig: Insects collected during Light Flytrap**



**Fig: Samples collected by Light Flytrap**



**Fig: Us with Sir after the conclusion of the practical**

# QUADRATE

## QUADRATE SAMPLING-:

Quadrat is a classic tool for the study of biodiversity in ecology. The organisms in a certain portion of the habitat are counted directly. A quadrat is a four-sided figure which delimits the boundaries of a sample plot. It is used to estimate population abundance (number), density

**Quadrat equations:** It was the population density ( $n$ ) to estimate the total population ( $N$ )  $N = (A/a) \times n$       $A =$  Total area

$n =$  Population density

$N =$  Total population

$a =$  area of the quadrat.

## ASSUMPTIONS-:

The following assumptions are to be made:

1. The no. of individuals in each quadrat is counted.
2. The size of the quadrat is known.
3. The quadrat samples are representative of the study area as a whole.

## ADVANTAGES-:

1. Easy to use and inexpensive
2. Suitable for study of slow moving animals, fast moving animals but in small groups, plants.
3. Applicable in field research with less care.
4. It needs cheap, cost effective equipment.

## DISADVANTAGES-:

1. Not applicable for studying fast-moving animals.
2. Collect superficial present taxa but ignore taxa present deep inside/ buried underground.
3. Sometimes the taxa may be harmed if the scientist collects, only on the quadrat and not on actual field.



## RETURN JOURNEY

Besides enjoying and collecting information during the excursion we also had to keep in time that the clock is still ticking and this will end soon. We gathered ample amount of memories and moments which will framed in our heart and mind. So putting a completion to our journey of 5 days we all sat on the platform seats of New Jalpaiguri Station on 1<sup>st</sup> December waiting for our train which arrived at 10:10 pm. We reached Bardhaman Station by 8:00 am the next morning and then boarded the Bardhaman Asansol local by which we reached Asansol.

We walked towards our home carrying a baggage of laughter, cheers and memories and with a hope of experiencing this again.



Fig: Beautiful mountains captured on the day of our return from North Bengal

## MY IMPACT

Starting from the mere thought of this trip filled me with excitement. It's was My first time going on a trip with my friends. I'm a very closed-off person so this trip allowed me to make bonds with people and I'm very grateful for that. We formed immense strong bonds with our faculties, seniors and of course my friends.

As we played UNO, I found myself being comfortable with the people I never thought of being close to. This trip taught me how much joy life can bring you when surrounded by people who support you.

During this trip, I learned how to be a team player and play in a group. We took care of each other and spent the trip enjoying the fullest.

The safari was a huge statement of the trip. As a person who loves photography, I was very excited to capture all the animals present in the safari. I learned so many interesting facts about them as I clicked away.



Fig: Bonfire at night

Fig: Roommates of my first excursion



## CONCLUSION

It was truly an educational tour and this excursion helped us to compare and analyse between our theoretical knowledge with the visual ones. I am really grateful and thankful to our teachers for conducting this beautiful excursion as a successful educational tour.

Every student of zoology subject should join such types of educational tour, which will give them enough knowledge and help them to cope up with the theoretical basis to practical ones.



Fig: Sillery Gaon, Kalimpong



Fig: Ramdhura, Kalimpong

# KAZI NAZRUL UNIVERSITY



## Banwarilal Bhalotia College Report On Field Visit

### BALLAVPUR WILDLIFE SANCTUARY & DEER PARK, BOLPUR

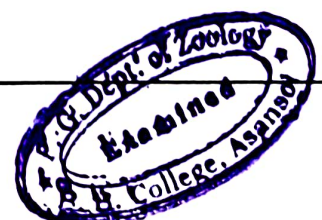


Name : Sonu Kumar Shaw

Semester : IV

Registration No : 102221220293

Session : 2022-2023



A FIELD REPORT ON  
THE EDUCATIONAL  
EXCURSION TO  
BALLAVPUR WILDLIFE  
SANCTUARY &  
DEER PARK,  
BOLPUR  
ORGANISED BY THE  
DEPARTMENT OF ZOOLOGY





# List of national parks in India



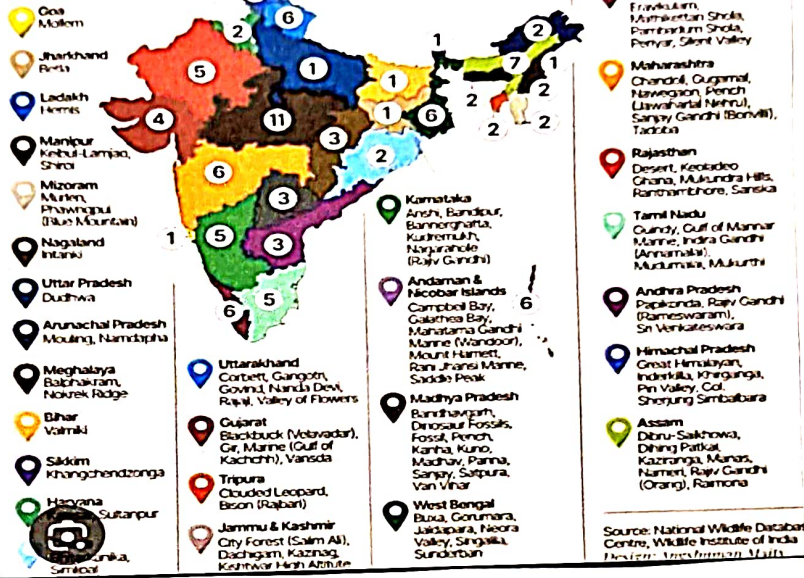
Total 106 national parks

Coverage: 1.23% of country

Largest: Hemis, Ladakh 3,350km<sup>2</sup>

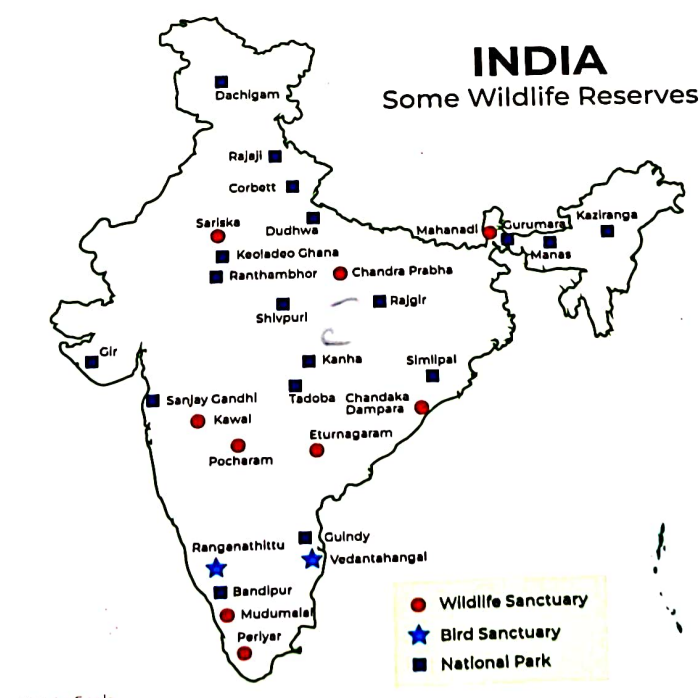
Oldest: Corbett

Maximum: 11 in Madhya Pradesh



Source: National Wildlife Database Centre, Wildlife Institute of India  
 Design: Anshuman Math

## INDIA Some Wildlife Reserves



\*Not to Scale



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- Importance of wildlife sanctuary
- Conclusion
- Reference



# Acknowledgement

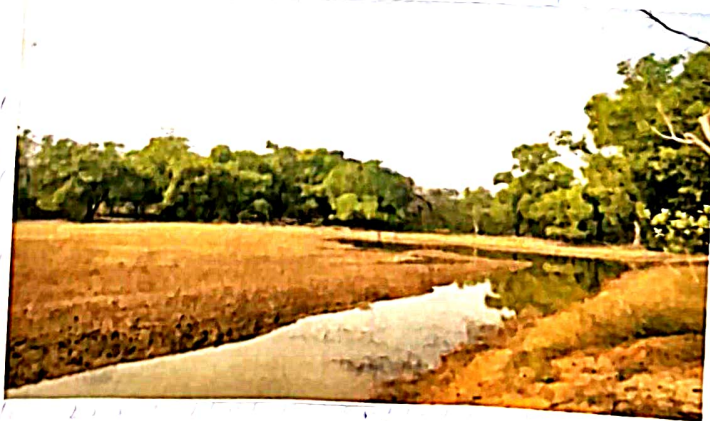
The cheerful presence of several in the Ballaupur Wildlife Sanctuary & Deer park Bolpur has filled our mind with full of enthusiasm and freshness. For the exciting study trip, I express my heartiest gratitude to Dr. Rajrupa Ghosh, Dr. Sangita Lahiry, Dr. Atreyee Dey, Sucheta Mondal and the staff Samar Karmokar and also the bus operator, for their continuous encouragement and also guidance. It was impossible for me to successfully complete the field study and report without their guidance & inspiration.

I am thankful to my Professor's for his support during the field study, thanks are also due to all my batchmates of our department, my friends and family members for their continuous support for encouraging me every time and also for my future benefits I am very much grateful to them...

# Introduction

For the sake of conservation of an ecosystem knowledge and understanding of the biotic and abiotic factors are essential. As students of Zoology, we need to understand the geographical distribution of different animals, their relationship with the respective habitats and possible threats to the ecosystem, and for that we need to study the biodiversity of a certain area of interest.

To study the biodiversity in its all aspects, we need to visit areas which are full of diverse flora and fauna, for knowing and gathering information about surrounding animals and plants. People have to travel long distance in the midst of the nature and this is how the notion of the excursion i.e. field study has been emphasized. It is a good way to enrich our knowledge about the distribution of different species throughout the globe and to break free from shackle of theoretical learning. Not only that we can learn the facts about animals, but also we can gather a lot of information regarding the biodiversity as well as biogeography of the particular space.....



# Our Expedition

On the appointed day of 16<sup>th</sup> April, 2024 we all assembled at B.B. College at 6:30 a.m and we all reached to college gate at 7:00 a.m. Then we got up SBSTC AC Bus at 7:15 a.m under the leadership of Dr. Rajrupa Ghosh, Dr. Sangita Lahiry, Dr. Atrayee Dey and the staffs.

At B.B. College we felt much excited and joyful but as the bus started, for a moment, we had a felling of sadness as had to leave our parents, friends and fews. Very soon we could overcome the situation. During the bus journey, we had enjoyed a lot with classmates.

I am very excited and enjoyed every single moment during this journey with my friends, by singing, dancing making reels, joking, playing sad games and leg pulling also.

We reached at Ballaupur Wildlife sanctuary at 10:30 am. Then, our journey begins by walking around and seeing the beauty on either side was really exciting particularly to us who have got the opportunity of havining visit to this region first time.

After having lunch, we visited to Rajbari & the nearby temple and taking pics and also we jaunt around it.

Then around at 3:00 p.m we started our journey again to returning to our destiny. and that's all about the field trip on the educational excursion.

# Team

## • Teachers :-

- Dr. Rajrupa Ghosh
- Dr. Sangita Lahiry
- Dr. Atrayee Dey
- Sucheta Mondal

## • Non-teaching staff :-

- Samar da.

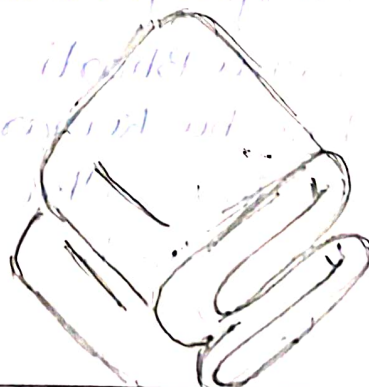
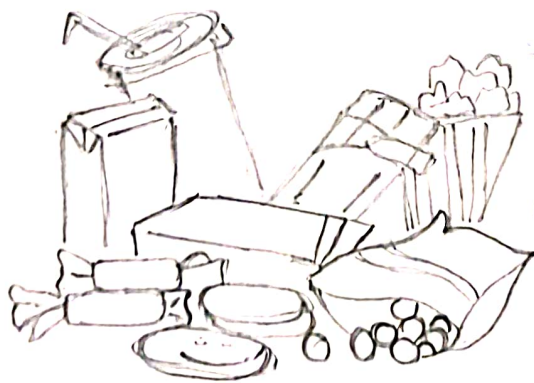
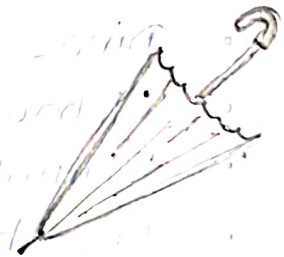
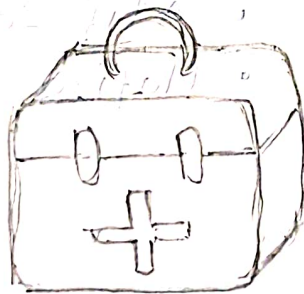
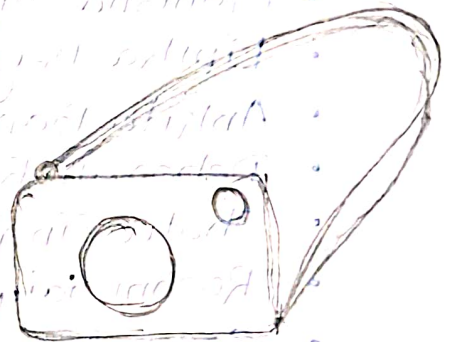
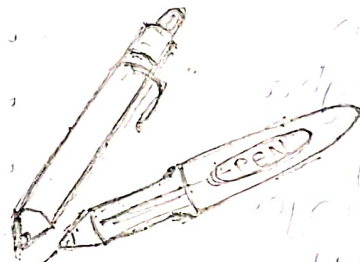
## • Students :-

- Sonu Kumar Shaw
- Vishal Kumar
- Manisha Singha
- Lipika Dey
- Ankita Banerjee
- Debarati Roy
- Shalu Singh
- Roshni Saiyada
- Sana Afreen
- Faiza Arjumand
- Dinaz Khatoom
- Mehroz Fatma
- Raunak Afroze
- Rupesh Kumar Ram
- Soomyadip Mukherjee
- Tannu Bharti
- Khusbu Kumari Roy
- Kostav Sadhu
- Rubi Ghosh
- Anushka Layek

- Kahkashan Parween
- Fasi Akhtar Ansari
- Muskan Parveen
- Anushree Mukherjee
- Ritika Yadav
- Pushpa Thakur
- Sanjana Shaw
- Atif Zafar
- Hafiza.

# Equipments

- Field Note Book
- Pen
- Camera
- Medication, first aid & Anti-allergies
- Sanitizer
- Snacks and water
- Towel
- Umbrella



# Aim of An Educational

- i) Observation of animal behaviour
- ii) Idea about natural habitat of animal
- iii) Sequential study of ecosystem.
- iv) To know the food habitat of animals
- v) To make an idea about endangered species, if any.
- vi) To study behaviour, food habitat of animal in Zoo's and in Parks.
- vii) To circulate bookish knowledge with practical experience.
- viii) To study about conservation method if any and economic importance of animal in farm.

It also provides us the sence of pronution of equality and friendship. From this considerance, it is proposed to visit places such as Ballavpur Wildlife sanctuary and Deer park, Bolpur and study the habitats under natural condition.





• What is an Excursion?

An excursion is a trip usually made for educational purpose. The aim of excursion is to study geographical peculiarities, biodiversity composition of a certain place. In addition travelling as a team, visiting new places, meeting new people, experiencing wildlife brings such memorable moments in a student's life that mold's the pupil's mind in the right way.

It also means to :-

- i) Exploring
- ii) Observation
- iii) Immersion
- iv) Enrichment

• Aim of Excursion :-

To know the unknown and to see the unseen - is the eternal curiosity of human beings. This curiosity is to be filled by a pleasurable trip to the heart of wilderness.

At zoological excursions travel and learning go hand in hand. The world becomes our classroom and the lifeless black letters printed in our textbooks come alive in front of our eyes.

Excursion is an essential part of education which increases and supplements our knowledge.

# Study Of Biodiversity

## • Introduction:-

Biodiversity is a contraction of the term biological diversity. Diversity is a concept that refers to range of variation or differences within some set of entities. The term biodiversity, therefore, refers to describe the number, variety and variability within living organisms on the earth.

## • Definition:-

Biodiversity refers to the variability among living organisms from all sources, including terrestrial, marine, other aquatic systems and the ecological complexes of which they are a part. This includes biodiversity within species and of ecosystems on our planet - the earth.

## • History:-

The term biodiversity was coined by Walter G. Rosen in national forum on biodiversity, held in Washington D.C, in 1986. The proceeding of that forum were edited by socio-biology Edward O Willson, 1988 under the title biodiversity.

## • Levels of biodiversity:-

The ecologists have defined biodiversity at three levels. They are:-

1. Species diversity

2. Genetic diversity

3. Ecosystem or habitat diversity.

## Features :-

### 1. Species diversity :-

Species diversity refers to the diversity of species on the globe from the familiar plants and animals to the less conspicuous fungi, bacteria, protozoans and viruses. They are the fundamental unit of biodiversity.

#### Features :-

- i. Distribution of species is not uniform across the globe; they vary from one place to another, such as, tropical rain forests have very high species diversity.
- ii. Species diversity has two components :-
  - a. species richness :-  
Number of different species in an area
  - b. species evenness :-

It is a measure of the taxa distribution of individuals among total species occupying a given area.

### 2. Genetic diversity :-

It represents the variation in the genetic composition of individuals within and among species. The differences present either in alleles, in entire genes or in chromosomal structures.

#### Features :-

- i. Genetic diversity is the basis of the variety of life on earth.
- ii. A species with more genetic diversity has an increased potential for evolution and has a greater potential for survival.

### 3. Ecosystem or Habitat diversity :-

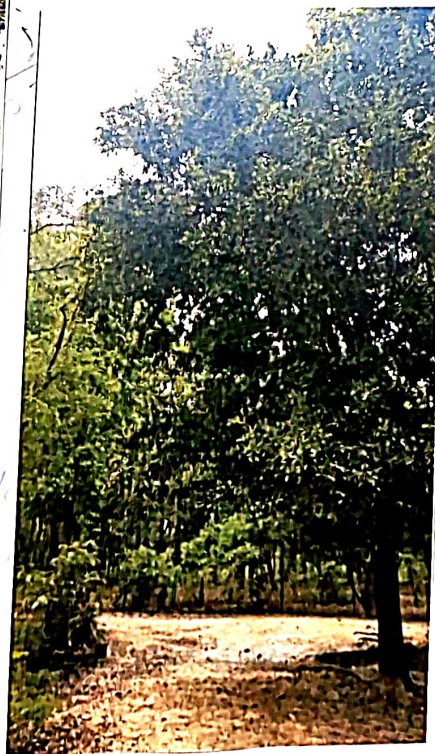
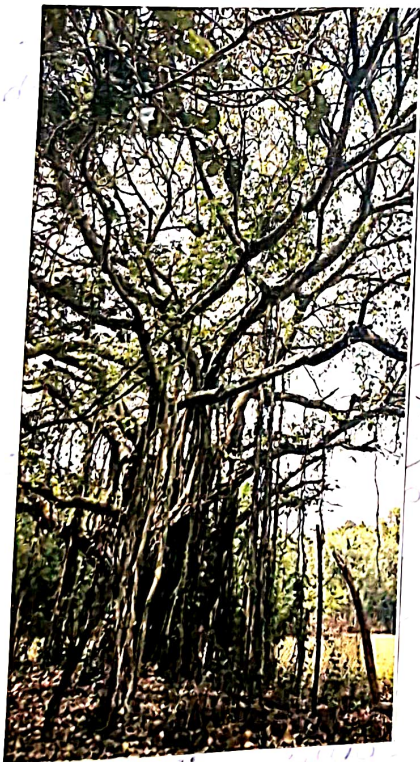
Habitat diversity refers to the great variety of ecosystems which make up habitats or communities in which the organisms live.

### Features:-

- i. It describes the number of niches, trophic levels, and various ecological processes that sustain energy flow, food webs and recycling of nutrients.
- ii. It depends on the physical characteristics of the environment, diversity of species present and the interaction of species between each other and with their physical environment.

### # Note:

When genetic biodiversity increases then both diversity increases.



# General Notes

Biodiversity refers to the variety of life on Earth, encompassing all living organisms, their genetic diversity, and the ecosystems they inhabit.

In the context of a "wild life sanctuary", biodiversity takes center stage. These protected areas serve as vital havens for diverse flora and fauna. Within their boundaries, you'll find a rich tapestry of species — ranging from majestic tigers and elusive leopards to vibrant butterflies and ancient trees.

Wildlife sanctuaries play a crucial role in preserving biodiversity by providing safe habitats, safeguarding endangered species, and promoting ecological balance. They serve as living laboratories for scientific research, education, and conservation efforts. As visitors step into these natural realms, they connect with the essence of biodiversity — the intricate web of life that sustains our planet.

## \* Wildlife sanctuary field visit:

- A wildlife sanctuary field visit offers an opportunity to explore a protected area where animals are safe-guarded in their natural habitats.
- Managed by wildlife authorities or conservation organizations, these sanctuaries prioritize the well-being of animals, ensuring their comfort and protecting their surroundings.
- Hunting, poaching, and other exploitative activities are strictly prohibited, and human presence is limited to minimize disturbances.



\* About Shantiniketan :-

- Shantiniketan, a town near Bolpur, West Bengal, was founded by Maharshi Debendranath Tagore in 1862. While on a boat journey, he discovered a scenic landscape and decided to plant saplings and build a house, naming it Shantiniketan, meaning "abode of peace".

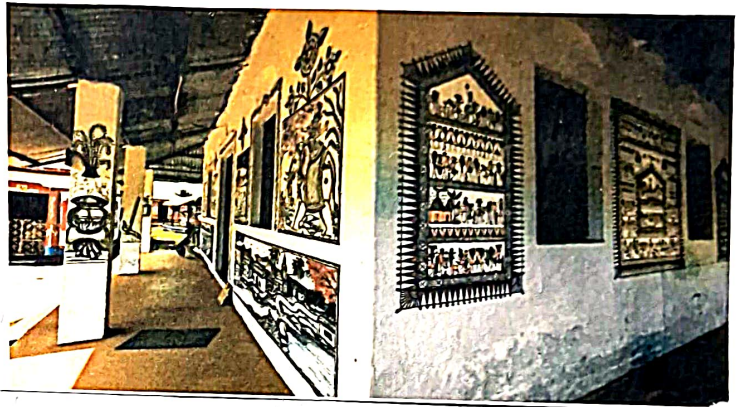
In 1863, he established an Ashram and became the initiator of the Brahmo Samaj, a religious reform movement.

- Shantiniketan, expanded by Rabindranath Tagore, is now a university town known as Visva-Bharati University, attracting numerous visitors annually.
- In 1901, Tagore established Brahmacharya Ashram, later called Patha Bhavana, and in 1921, he founded Visva Bharati University, recognized as a central university and an institute of national importance in 1951. The campus showcases splendid sculptures, frescoes, murals, and paintings by renowned artists.
- Poush Mela, an annual fair and festival held in Shantiniketan, features live performances of Bengali folk music, particularly bauls, traditional wandering minstrels, and tribal dances like Santali.

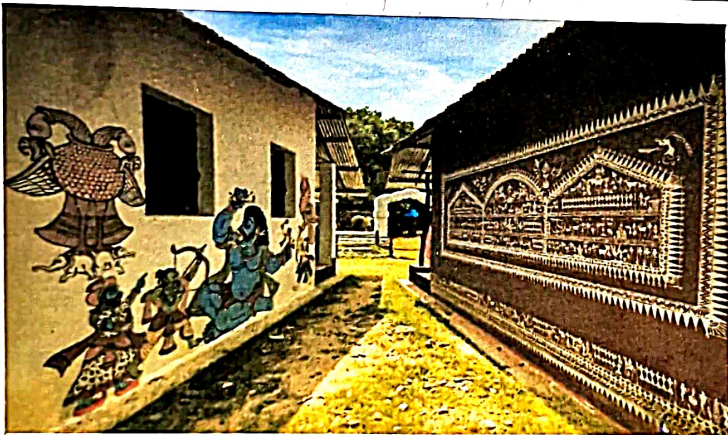




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*Handwritten text, possibly a description or caption, written in cursive.*

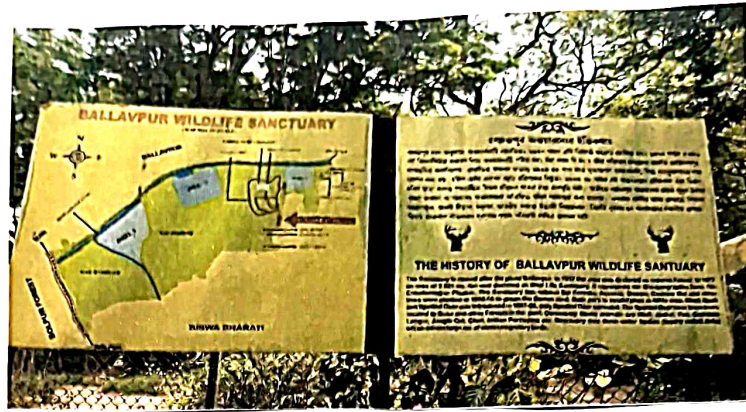


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*Handwritten text, possibly a description or caption, written in cursive.*





## Ballavpur Wildlife Sanctuary - A Mesmerizing Deer Park in Bolpur, West Bengal :-

A trip to the Ballavpur wildlife sanctuary is a great adventure if you are seeking tranquility. With its gorgeous forest cover, a big waterway network, and an abundance of animals and migratory birds, Sultanpur National park will be your companion. With that said, without further ado, let us learn a little more about the jungle.

### \* The Ballavpur Wildlife Sanctuary :-

- Shantiniketan's Ballavpur Abhayaranya is yet another. On July 11<sup>th</sup>, 1977, the deer park was opened to the public. This reserved forest was established on about 700 acres of lush land with a range of plants such as creatures such as Krishna Sar, peacock, rabbit, mongoose, fox, snake, and various birds.
- Ballavpur wildlife sanctuary is one of the most well liked tourist spot, where the people from various parts of India and West Bengal visit and enjoy the tour to forest land and the deer.
- The Ballavpur Wildlife sanctuary is home to various deer species and numerous migratory birds during winter, including lesser whistlings, Pintails and Teals.
- Visitors can explore the entire sanctuary on foot and observe wildlife from strategically located watchtowers.

• Located in Santiniketan, this wildlife sanctuary spans 200 hectares and is known for its successful deer conservation efforts.

\* **Location:**

Ballaupur, Santiniketan, Bolpur, Birbhum district;  
West Bengal, India.

\* **Nearest city:**

Bolpur Santiniketan

\* **Coordinates:**

$23.685011^{\circ}\text{N } 87.653021^{\circ}\text{E}$

\* **Area:**

2 square kilometres (0.77 sq mi)

\* **Established:**

1977

\* **Flora:**

The sanctuary has dense local vegetation of Sal, Akashmoni, sishoo, cashewnut, Amlaki, Bahera and Haritaki.

\* **Fauna:**

The sanctuary has a deer conservation park which is home to a large number of deer including jackals, foxes and a variety of water birds.

• It is home to three large lakes which hosts a large number of migratory birds every year.

\* **Elevation:**

It has an average elevation of 56 meters.

• It is also known as Deer Park.

## The Deer Park - Bolpur :-

Deer Park is the name given to Balaupur Wildlife Sanctuary. It is located within the 'Khoai' region, which features a big woodland and a unique bird sanctuary with numerous deer's.

- Bhadra Wildlife sanctuary and Tiger Reserve in Bolpur, Birbhum district, boasts lush green forests and attracts numerous birds during the cold season.
- The sanctuary is home to various deer species, including Cheethal deer and Blackbucks as well as foxes, jackals and monkeys.
- The area is known for its three waterways, which attract migratory and seasonal birds.
- Visitors can enjoy the scenic beauty and observe wildlife from a watchtower.
- The Bolpur subdivision of the Birbhum district is notable for its lush field and red soil.

People flock to Bhadra wildlife sanctuary and Tiger reserve because of the beautiful green forest and its evergreen beauty.

Numerous birds (named in Bengali dialect) such as balihans, morals, pandubi, metehans, jalpipi, titir, and machhranga, as well as hornbill, pockard, gadwall, shoveller, pintail, egret and multitudes of other migrating birds flock here during the cold season (November to March) in the massive adjacent pond beside the Deer park.

When they fly to their nests at sunset, the scene is breathtaking.

\* Climate:-

During summer, the temperature can shoot well above 40°C (104°F) and in winters it can drop around 10°C (50°F). The annual average rainfall is 1,212 millimetres (47.7 in), mostly in the monsoon months (June to October).



*Faint handwritten notes, possibly describing the dry season or climate conditions.*

*A bullhorn antelope is a large antelope with long, spiraling horns.*

*They are found in the savanna and open woodlands of East and Southern Africa.*



*They are found in the savanna and open woodlands of East and Southern Africa.*

*A bullhorn antelope is a large antelope with long, spiraling horns.*



# Importance of wildlife sanctuary

There are a number of reasons for establishing wildlife sanctuaries. Some of the reasons are listed below:

- The wildlife sanctuaries are established to protect the endangered species.
- It is quite difficult to always relocate the animals from their natural habitat, therefore, protecting them in their natural environment is advantageous.
- The endangered species are especially monitored in the wildlife sanctuaries. If they reproduce and grow in number while under protection, few specimens can be kept for breeding in the conservation parks for their survival.
- Biologist activities and researches are permitted in the wildlife sanctuaries so that they can learn about the animals living there.
- A few sanctuaries take in injured and abandoned animals and rehabilitate them to health before releasing them in forest.
- Wildlife sanctuaries preserve the endangered species and protect them from humans and predators.

## \* Protection of Endangered Species:

Many species of plants and animals are on the verge of extinction. Such creatures are conserved in the wildlife sanctuaries. Various sanctuaries have been established such as the Fleurieu peninsula sanctuary is maintained to protect sheoak habitat for glossy black cockatoos.

## \* Conservation of Biodiversity :

The landowners of a wildlife sanctuary are involved in:

- Production and distribution of electricity.
- Horticulture, grazing and farming enterprises
- Wine production
- Organic horticulture

## \* Ecotourism:-

Many sanctuaries are involved in ecotourism.

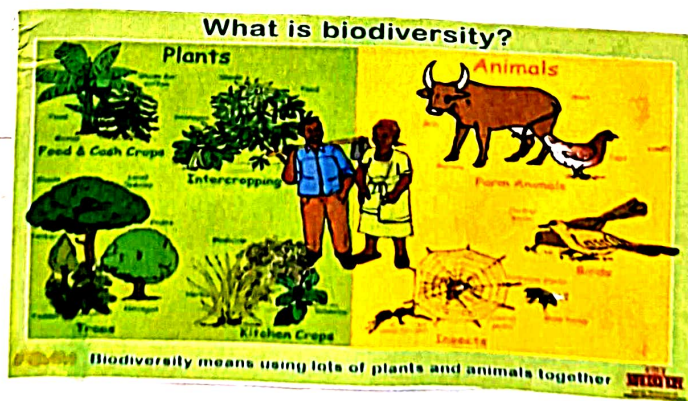
They offer accommodation, tour guides, nature walks, etc.

## \* Educational and Public use:-

The sanctuaries that are created on public land are involved in public use along with the conservation of biodiversity. For e.g, golf courses, picnic areas, lakes for boating and swimming.

Thus, we know that a wildlife sanctuary is one of the finest ways of preserving the endangered species.

Hence, for the study and exploring idea of students there has museums to.



## Precautions to take when visiting wildlife sanctuaries like Bolpur Deer park :-

- Respect the natural habitat by not littering, feeding, disturbing wildlife, and sticking to the designated paths.
- Follow the instructions provided by park authorities and guides for your safety and the preservation of the environment.
- Carry essentials like water, food, a first aid kit, sunscreen, insect repellent, and suitable clothing for tropical weather.
- Do not disturb the wildlife, even if it is harmless.
- Follow guidelines and rules given by the authorities.
- Do not smoke, as it can cause forest fires.
- Do not play music, as it can disturb the animals.
- Do not pollute the water sources.
- Do not touch or damage the flora.
- Be quite and peaceful, and enjoy the moment.



## \* Observation:-

Wildlife observation is the practice of noting the presence of animals in a specific location and time, for research or recreation.

When observing wildlife in a sanctuary, it's important to be respectful and ethical:

- Awareness:  
Keep the location of rare, threatened, or endangered species a secret.
- Silence:  
Don't shout, imitate birdsong, or mimic animal calls.
- Safety zone:  
Maintain a safe distance between yourself and the animal.
- Don't feed animals:  
Feeding animals can alter their natural behaviour, cause malnutrition, disease, and even death.
- Don't force animals:  
If an animal flees, don't approach it.





# Conclusion

Wildlife sanctuaries serve as guardians of our natural heritage, ensuring the survival of countless species and preserving the delicate balance of ecosystems. By protecting endangered species, conserving biodiversity, promoting ecotourism, and implementing conservation measures, these sanctuaries play a crucial role in safeguarding our planet's biological treasures. It is our collective responsibility to support and respect these sanctuaries, ensuring a harmonious coexistence between humans and wildlife for generations to come.

Our visit to Bolpur Deer Park was an enriching and enlightening experience.

The park's serene surroundings and diverse wildlife, including spotted deer, blackbucks, and various bird species, left us in awe.

We were impressed by the park's conservation efforts and the dedication of the staff in maintaining a natural habitat for the animals.

Our observation of the deer park's ecosystem reinforced the importance of protected areas in preserving biodiversity.

The visited served as a reminder of the beauty and significance of wildlife conservation and the need to protect these natural treasures for future generations...

This special trip will remain evergreen in my memory as long as I live on this.

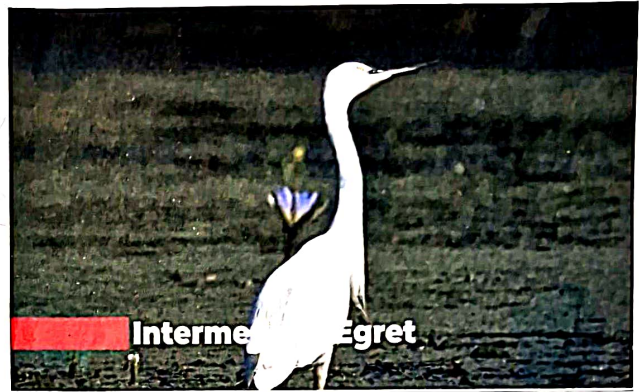


Cotton Pygmy Goose

12/13

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Intermediate Egret



Slender-billed Oriole

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Black-rumped Flameback



Common Sandpiper



# Reference

i. "The Book of India Birds" by Salim Ali

ii. Wikipedia

iii. Website references:

a) "Ballavpur Wildlife Sanctuary"

b) "Deer Park - Bolpur"  
West Bengal forest

iv. Book references:

"Wildlife Sanctuaries of West Bengal"  
by - A.K. Ghosh, published by Oxford  
University Press, 2017.

v. Smith, J., & Brown, A. (2023).

Biodiversity and Conservation Efforts at Ballavpur  
Wildlife Sanctuary (Report No. 2023-01).

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<https://www.example.com/full-report-url>.

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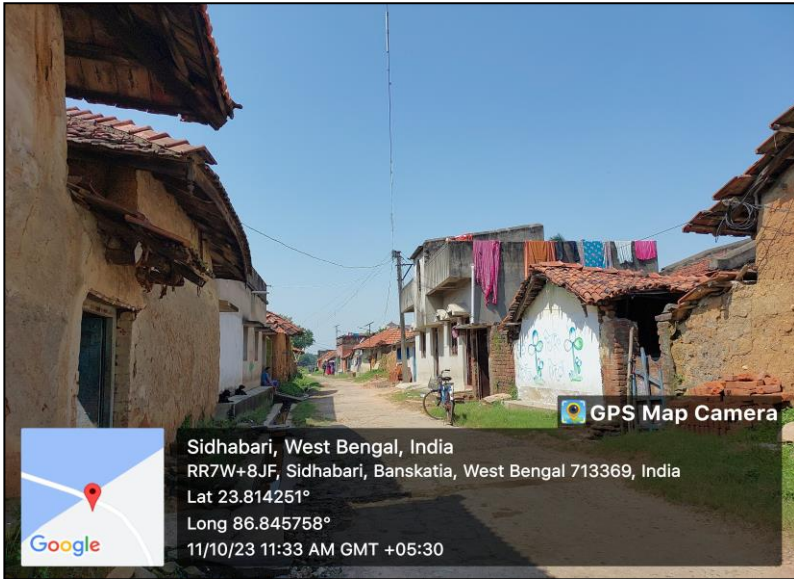




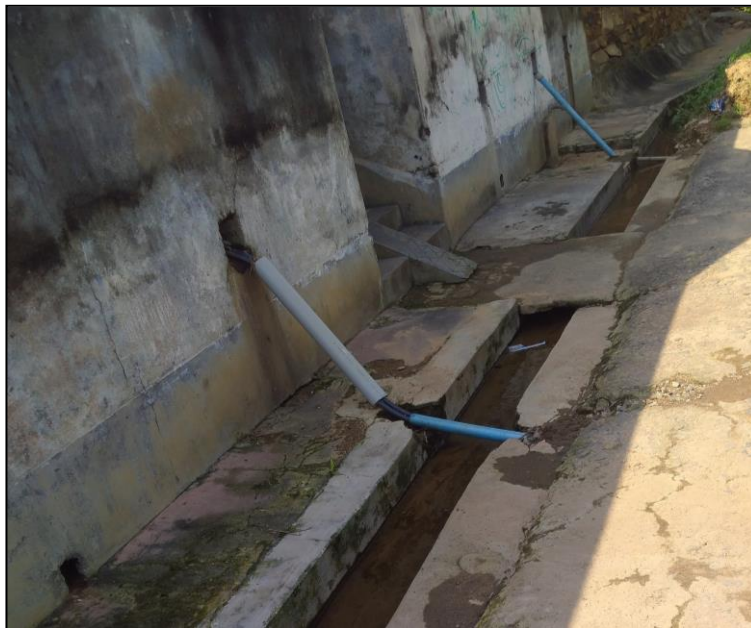
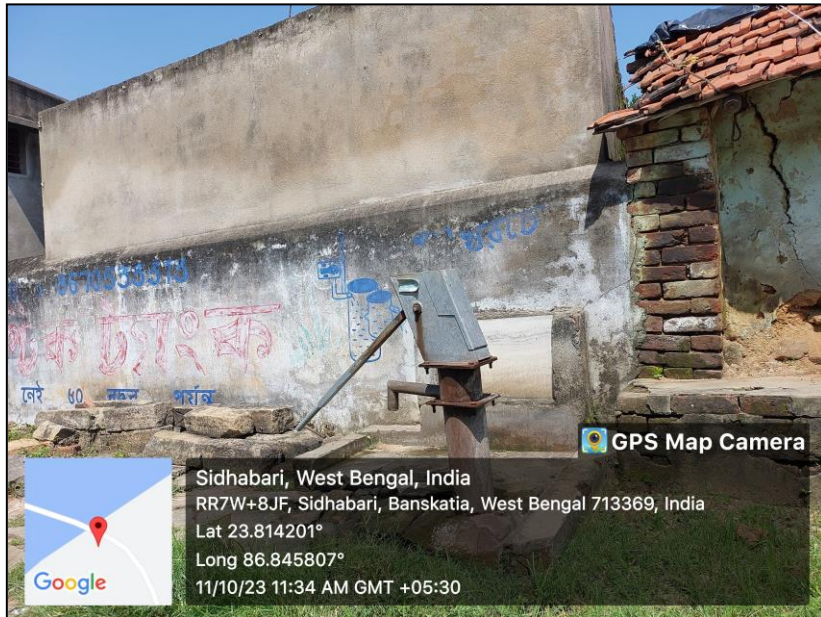
**Group Photograph, 5<sup>th</sup> Semester (2021-2024), Sidhabari, 11<sup>th</sup> October, 2023**



Primary survey, Sidhabari, 11<sup>th</sup> October, 2023



**Housing structure and Primary school (From left to right)**



**Drinking water, Sanitation and Solar light (From left to right)**

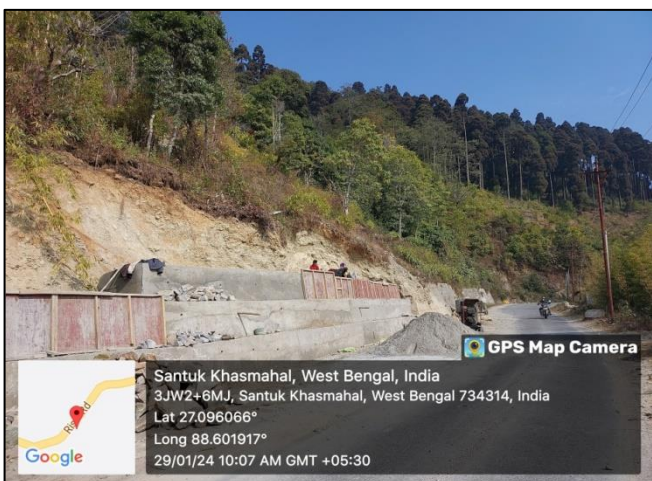




Group photographs of Landslide survey team, Semester VI, 2024, Lava, Kalimpong, West Bengal



**Primary data collection, Algarah and its surroundings, dated 29/01/2024**



**Structural measures taken to protect landslide areas, Algarah and its surroundings, Kalimpong district, West Bengal**

**2.3.1 Student centric methods, such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences (supportive document)**

**STUDY TOUR WITH UG SEMESTER V HONOURS STUDENTS CONDUCTED BY DEPARTMENT OF GEOGRAPHY (DAY SHIFT) AT BOLPUR**



STUDY TOUR WITH UG SEMESTER VI HONOURS STUDENTS CONDUCTED BY DEPARTMENT OF GEOGRAPHY (DAY SHIFT) AT BISHNUPUR



STUDY TOUR WITH UG SEMESTER VI HONOURS STUDENTS CONDUCTED BY DEPARTMENT OF GEOGRAPHY (DAY SHIFT) AT SUNDARBAN



**SOCIO-ECONOMIC SURVEY CONDUCTED BY UG SEMESTER V HONOURS STUDENTS  
DEPARTMENT OF GEOGRAPHY (DAY SHIFT) AT SAUNTAL PARA, BOLPUR**



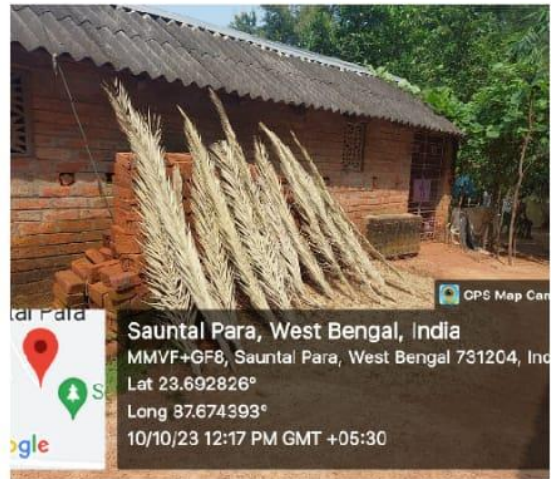
**During field survey at SAUNTAL PARA**



**During field survey interaction with school teacher and students at primary school**



**WATER SOURCES AT SAUNTAL PARA**



**HOUSE TYPES AT SAUNTAL PARA**

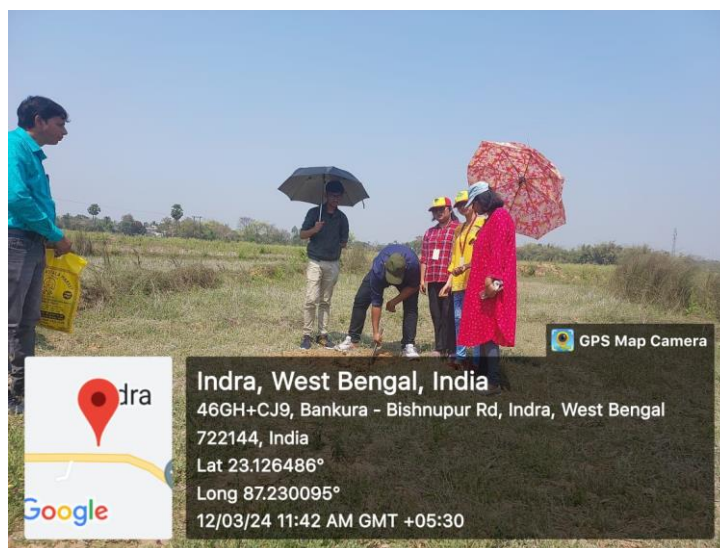
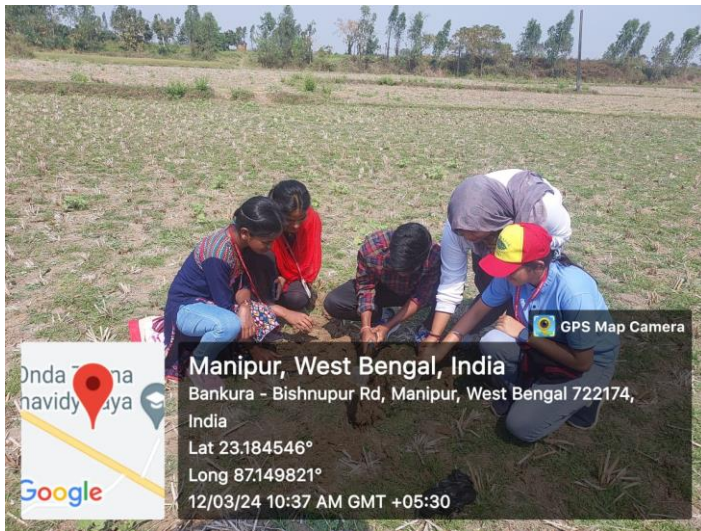
**DETERMINATION OF SOCIAL DIMENSION OF DISASTER IN SUNDARBAN CONDUCTED BY UG SEMESTER VI HONOURS STUDENTS OF DEPARTMENT OF GEOGRAPHY (DAY SHIFT)**

**Interaction with villagers during field survey in Sundarban**





SOIL SURVEY IN ONDA, BANKURA CONDUCTED BY UG SEMESTER VI HONOURS STUDENTS DEPARTMENT OF GEOGRAPHY (DAY SHIFT)



Soil Sample Collection from the Field

**MANGROVE PLANTATION AT CHARGHERI SUNDARBAN CONDUCTED BY UG SEMESTER VI HONOURS STUDENTS DEPARTMENT OF GEOGRAPHY (DAY SHIFT) In collaboration with PURBASHA ECO HELPLINE SOCIETY**



**Mangrove Plantation at Chargheri, Sundarban by the students with Mangrove Army to build shield against cyclones in Sunderbans**



Awareness Programme on Sanitary Napkin Use and Hygiene for Mangrove Army at Chargheri Village, Sundarban