DEPARTMENT OF ZOOLOGY

A Brief Activity Report on Ecological Field Study and Avi-fauna Diverity Study at Bhitarkonika Mangrove Forest & National Park, Odisha, India

CITY COLLEGE
DEPARTMENT OF ZOOLOGY
(Affiliated to **University of Calcutta**)
102/1 Raja Rammohan Sarani
Calcutta – 700 009, India

श्रद्धावान् लभते ज्ञानम्

Allowed for Group Conducted Excursion at Bhitarkonika National Park, Odisha & Adjacent Area.
Principal
CITY COLLEGE
KOL-9

To
The Principal
City College
102/1 Raja Rammohan Sarani
Kolkata 700 009

29.11.2022

Subject: **Intimation about upcoming *Zoology Honours (SEM V) Excursion, 2022* at Bhitarkonika National Park, Odisha and Plea for grant of On-duty**

Sir,
This is to inform you that an excursion of B. Sc. **Semester V Zoology Honours (ZOOA)**, 2022 be conducted as per CU Curriculum, Paper DSE-B-2 (Ecology & Wildlife Biology), is scheduled to be held on and from **11th December, 2022 (Sunday) to 14th December, 2022 (Wednesday), at Bhitarkonika National Park, Odisha**.

In this connection, the undersigned would like to request your good self to sanction **"On-duty" for Dr Debasish Karmakar, Dr Krishnendu Das, Dr Indranil Roy and Sri Rajpat Ram** for the above-mentioned days and oblige.

Thanks, in anticipation,

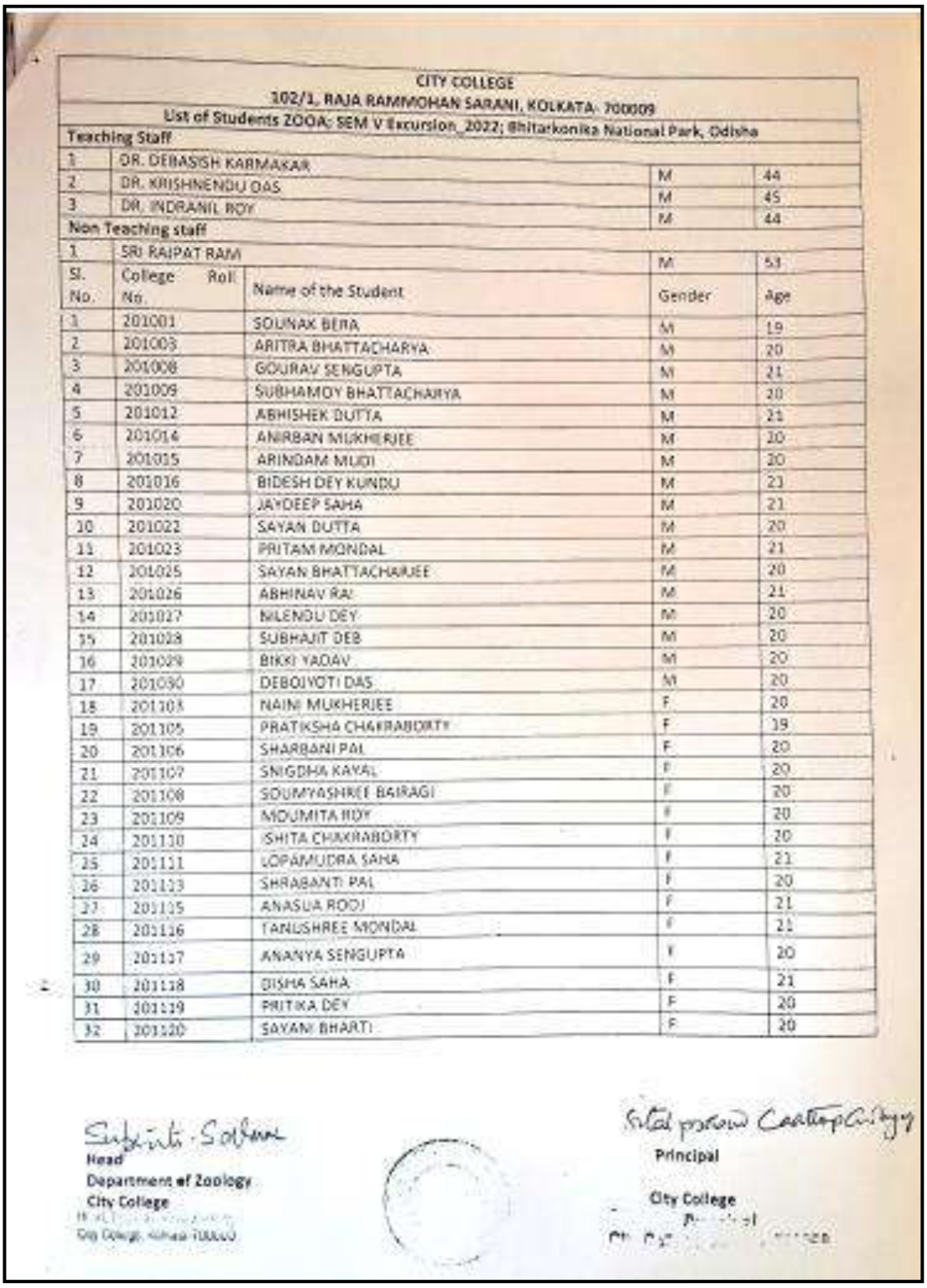
Yours truly
Supriti Sarkar
(DR SUPRITI SARKAR)
Associate Professor & Head
Department of Zoology
City College, Kolkata- 9
Head, Department of Zoology
City College Kolkata-700009

Ecology Lab, ZOOA-CC5-11-P

Full Marks 30	60 Hours	2 Credits

List of Practical

1. Determination of population density in a natural/hypothetical community by quadrate method and calculation of Shannon-Weiner diversity index for the same community
2. Study of an aquatic ecosystem: Phytoplankton and zooplankton, Measurement of area, temperature, salinity, determination of pH, and Dissolved Oxygen content (Winkler's method), Chemical Oxygen Demand and free CO_2
3. Report on a visit to National Park/Biodiversity Park/Wild life sanctuary/ any place of ecological interest/ ecological uniqueness/ Zoological garden



CITY COLLEGE
102/1, RAJA RAMMOHAN SARANI, KOLKATA- 700009
List of Students ZOOA: SEM V Excursion_2022; Bhitarkonika National Park, Odisha

Teaching Staff			
1	DR. DEBASISH KARMAKAR	M	44
2	DR. KRISHNENDU DAS	M	45
3	DR. INDRANIL ROY	M	44
Non Teaching staff			
1	SRI RAIPAT RAM	M	53

Sl. No.	College Roll No.	Name of the Student	Gender	Age
1	201001	SOUNAK BERA	M	19
2	201003	ARITRA BHATTACHARYA	M	20
3	201008	GOURAV SENGUPTA	M	21
4	201009	SUBHAMOY BHATTACHARYA	M	20
5	201012	ABHISHEK DUTTA	M	21
6	201014	ANIRBAN MUKHERJEE	M	20
7	201015	ARINDAM MUDI	M	20
8	201016	BIDESH DEY KUNDU	M	21
9	201020	JAYDEEP SAHA	M	21
10	201022	SAYAN DUTTA	M	20
11	201023	PRITAM MONDAL	M	21
12	201025	SAYAN BHATTACHARJEE	M	20
13	201026	ABHINAV RAI	M	21
14	201027	NILENDU DEY	M	20
15	201028	SUBHAJIT DEB	M	20
16	201029	BIKKI YADAV	M	20
17	201030	DEBOJYOTI DAS	M	20
18	201103	NAINI MUKHERJEE	F	20
19	201105	PRATIKSHA CHAKRABORTY	F	19
20	201106	SHARBANI PAL	F	20
21	201107	SNIGDHA KAYAL	F	20
22	201108	SOUMYASHREE BAIRAGI	F	20
23	201109	MOUMITA ROY	F	20
24	201110	ISHITA CHAKRABORTY	F	20
25	201111	LOPAMUDRA SAHA	F	21
26	201113	SHRABANTI PAL	F	20
27	201115	ANASUA ROOJ	F	21
28	201116	TANUSHREE MONDAL	F	21
29	201117	ANANYA SENGUPTA	F	20
30	201118	DISHA SAHA	F	21
31	201119	PRITIKA DEY	F	20
32	201120	SAYANI BHARTI	F	20

Head
Department of Zoology
City College

Principal
City College

- **Date of Visit:** 11.12.2022 to 14.12.2022
- **Place of Visit:** Bhitarkonika Mangrove Forest & National Park, Odisha, India
- **Under the Guidance of:** Dr Debasish Karmakar, Assistant Professor in Zoology, City College, Kolkata

  Dr Krishnendu Das, Assistant Professor in Zoology, City College, Kolkata

Dr Indranil Roy, SACT - I in Zoology,

City College, Kolkata

Mr. Rajpat Ram, Laboratory Attendant in Zoology, City College, Kolkata

- **No. of Participants:** **32 (Semester – V, Zoology Honours)**

Summary

Ecology deals with organisms and their environment and it is important that we understand the relationship between them. Probably the most important statement that we can make about this relationship is that different kinds of organisms are not distributed at random amongst different kinds of environment. There is a correspondence between the two. The correspondence is part of our sense of the order of the things. But, what exactly is the nature of the match between organism and their environment. It is quite impossible to think of an organism without an environment, but easily possible to think of environments without organism. It is convenient therefore to consider first the variations that exist in environment and amongst those variations "Biodiversity" is being considered as one of the important components of the environment. Thus "Biodiversity" is the variability of life in all forms, levels, and combinations. It is not the sum of ecosystems, species and genetic material, but rather represents the variability within and among them (IUCN, 1994). Field excursions are very much essential unlike theoretical studies and monotony associated with it, an excursion may help the mind of students to assimilate much information regarding such Biodiversity and interaction of animals with the environment right from the school of nature, along with lots of a bonus. Study of species population in the natural habitat is the spirit of zoological excursions. Out of different Bio-diverse regions of India, mangroves are accounted for its unique floral and faunal diversity. The Bhitarkanika Mangroves are a mangrove wetland located in north-eastern corner of Kendrapara district of India's Orissa State. It presents a salt tolerant, complex and dynamic eco-system that occurs in tropical and subtropical inter-tidal regions. The rich, lush green, vibrant eco-system lies in the estuarine region of Brahmani and Baitarani rivers. Comprising of mangrove forests, rivers, creeks, estuaries, back water, accreted land and mud flats. Bhitarkanika is significant for its unique ecological, geomorphological and biological profile that has evolved over centuries to its present status. The Bhitarkanika Mangroves cover an area of 650 sq. km and harbours inter alia one of India's largest populations of saltwater crocodiles (*Crocodylus porosus*). The Gahirmatha Beach, which separates the mangroves from the Bay of Bengal, is the world's most important nesting beach for Olive Ridley Sea Turtles (*Lepidochelys olivacea*). The wetland also hosts a large and diverse population of resident and migratory birds from Central Asia and Europe that congregate in Bagagahan heronry, an area of approximately 4 hectares within the Bhitarkanika Forest Block near Suajore creek during June to October every year. Bhitarkanika also houses endangered wildlife like Indian python, King cobra, black ibis, Spotted dear, Sambar, Wild boar, Jungle cat, fishing cat, fox, jackal and darters. It is the best reptile refuge in the country. Since the estimate of Blasco (1977), it is believed that the Indian mangroves are under severe decline. The Forest Survey of India (Dehradun) assessed the mangrove areas in India using remote sensing technology. Their most recent estimate of 4827 km^2 is now regarded as a reliable estimate. Even though there was lot of ambiguity in the earlier estimates of tidal forests in India, it is now agreed that the extent of mangroves in India has gone down drastically during the 20th century. At this juncture an appropriate policy is needed to arrest such losses, which could only be achieved by educating the people about the values of conserved mangrove

ecosystems, and by developing a sound policy based on economic understanding of the benefits derived from this ecosystem that can only flow from sufficient research to document the benefits.

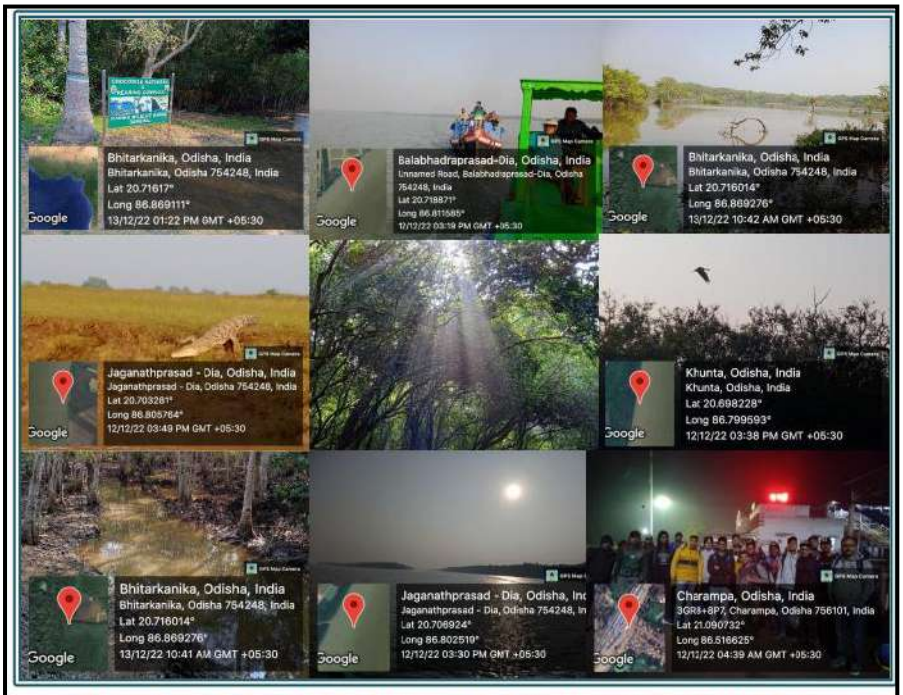


PLATE 1: SOME SPECTACULAR GLIMPSES OF BHITARKONIKA NATIONAL PARK, ODISHA, DURING THE FIELD STUDY TOUR OF DEPARTMENT OF ZOOLOGY, CITY COLLEGE, KOLKATA

PLATE 2: SOME GLIMPSES OF IN-FIELD STUDIES BY THE STUDENTS, LIKE PITFALL TRAPPING, PLANKTON COLLECTION FROM POND WATER AND ESTIMATION OF VARIOUS AQUATIC PARAMETERS AT COTTAGE PREMISES,