



DCT's
Dhempe College of Arts and Science
Miramar, Panaji-Goa

**Report on Overnight Field Visit to Cotigao Wildlife Sanctuary organized
by the Department of Zoology under the DBT Star College Scheme**

Date of Field Visit: 22nd-23rd February 2025

Destination: Cotigao Wildlife Sanctuary, Canacona

Organized by: Nature Club, Department of Zoology

Total Participants: 28

Faculty /Staff: Dr. Trupti Jadhav, Ms. Swizel Quadros, Mr. Abhed Suresh and Mr. Akshay

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Resource Person: Dr. Nitin Sawant, Assistant Professor, School of Biological Sciences, Goa University

The overnight field trip to Cotigao Wildlife Sanctuary, Canacona was organized for the students of F. Y., S. Y. and T.Y. B. Sc. by the Nature Club, Department of Zoology under the DBT Star College Scheme, with the aim of providing them with hands-on learning experiences in wildlife conservation, animal behaviour studies, and ecological management. The Sanctuary, rich in biodiversity, served as an ideal environment for students to explore the practical applications of their theoretical knowledge.

Learning Objectives

The primary learning objectives of this field visit were:

- To observe and understand the behaviour of animals in their natural habitats.
- To study conservation practices, especially concerning vulnerable species like sea turtles.
- To introduce students to nocturnal animals, their behaviour and nocturnal fieldwork techniques.

- To enhance skills in field-based research, animal identification, especially birds, and to understand the importance of biodiversity monitoring.
- To study the management and conservation practices in Protected Areas e.g. use of water holes, watch towers etc. in wildlife sanctuaries and their role in habitat conservation.

Activities and Sessions

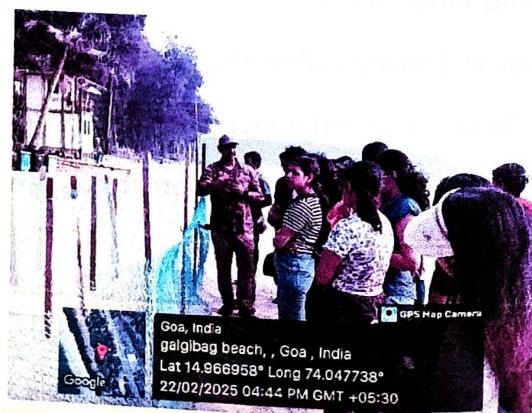
Day 1 (22nd February 2025)

1. Visit to Sea Turtle (Olive Ridley Turtle) Nesting Site at Galgibag Beach, Canacona for Conservation Study and explore the coastal ecosystem.

- **Objective:** To gain insights into sea turtle conservation initiatives, their nesting behaviours, and to explore the dynamics of the coastal ecosystem.
- **Activities Undertaken:**

A] Visit to sea turtle nesting site

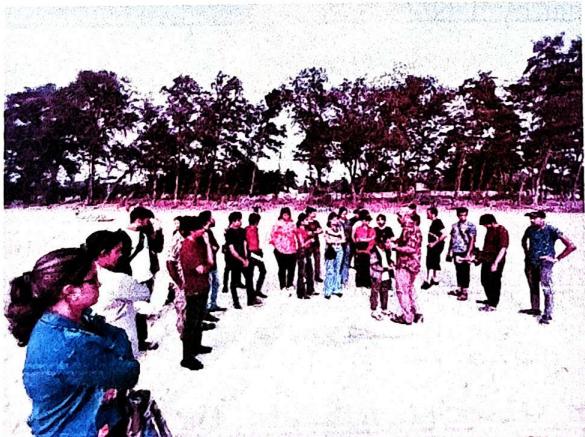
- Students visited the turtle nesting site under the guidance of Dr. Nitin Sawant and Dr. Trupti Jadhav. This hands-on experience allowed students to directly engage with the environment where sea turtles come ashore to lay their eggs, offering valuable insights into their natural habitat.
- **Discussion on Threats to Turtle Populations:** A series of discussions were held where students were briefed on the critical threats that endanger sea turtle populations. Topics included habitat destruction due to human activity, poaching of eggs and adult turtles, and the impact of climate change on their nesting sites and migration patterns.
- **Conservation Efforts and Sanctuary Programs:** Students were also informed about the ongoing efforts of the sanctuary in protecting and preserving sea turtle species. This included the monitoring of nesting sites, the implementation of protective measures for eggs and hatchlings, and awareness programs aimed at educating the public about the importance of sea turtle conservation.





B| Coastal Ecosystem Exploration:

- Students participated in a guided tour of the coastal ecosystem, allowing them to observe firsthand, the diverse organisms and habitats that make up this unique environment. They studied the interdependence of plant and animal species, the importance of intertidal zone, including the role of vegetation in protecting nesting sites for sea turtles.
- Study of Environmental Factors:** Through guided discussions and observations, students examined key environmental factors that influence the health of coastal ecosystems. These factors included tidal patterns, seasons and the impacts of human activity such as pollution and coastal development.



C| Night Trail for Nocturnal Animal Study

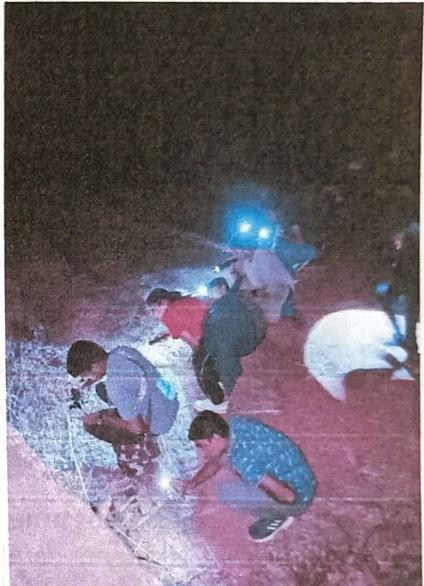
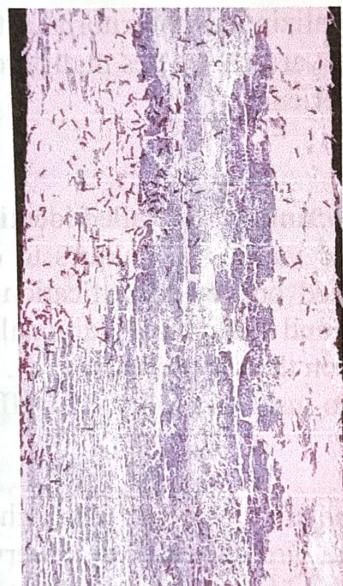
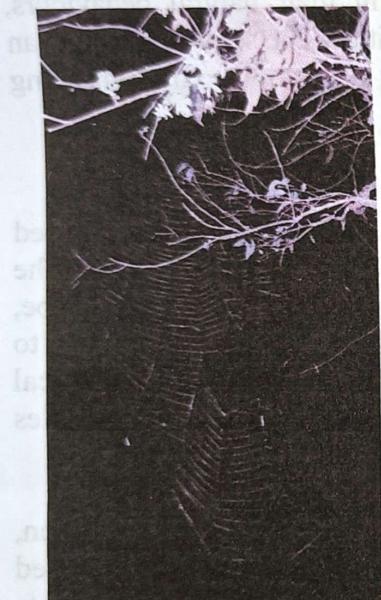
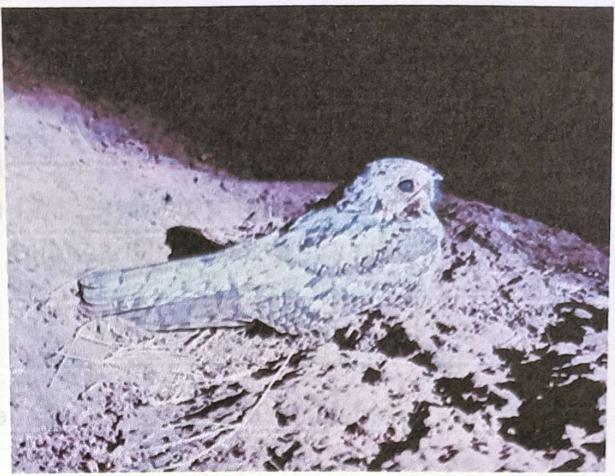
- **Objective:** The primary objective of this activity was to train students in the identification and study of nocturnal animals, enabling them to understand the behaviours, adaptations, and environmental roles of animals active during the night.

- **Activities Undertaken:**

Night Trail Observation:

Students participated in a guided night trail, where they had the opportunity to observe various nocturnal animals in their natural habitats. During the trail, the group encountered and studied animals such as bats, Nightjar, Frogmouth, Tunnel Spider, and small mammals like Civet Cat and Jerbil. The students also heard the call of Slender Loris and owls. This experience allowed students to observe the behavioural patterns and activities of these creatures in the dark, helping them understand how these animals interact with their environment at night.

- **Discussion on Nocturnal Adaptations:** A detailed discussion was held by the resource person on the various adaptations that enable nocturnal animals to thrive in low-light conditions. Students learned about sensory adaptations, such as enhanced hearing, sight, and echolocation, that allow these animals to navigate and hunt effectively in the dark. The resource person also explained different hunting strategies employed by nocturnal animals, such as silent flight in owls and the use of sonar by bats.
- **Silent Observation Techniques:** A key component of the activity was teaching students how to observe nocturnal animals without disturbing them. The group was instructed on how to move quietly through the environment, minimizing noise and light pollution that could disrupt the animals' natural behaviour.
- **Practical Application of Observation Skills:** Throughout the night trail, students had the chance to practice the skills they had learned, including silent observation and using source of light during the night time without disturbing the animals. This practical application allowed them to refine their techniques and develop a deeper understanding of how to study nocturnal animals while respecting their natural habitats.



3. Morning Bird Walk for Bird Identification Training

- **Objective:** The objective of this activity was to train students in bird identification techniques and to study the behaviour of different bird species, enhancing their understanding of avian diversity and ecological roles.

Activities Undertaken:

- **Bird-Watching Session:** Students participated in a bird-watching session early in the morning, a time when many bird species are most active. This early observation allowed students to witness birds in their natural behaviours, including feeding, socializing, and territorial activities. The session provided an opportunity to observe various species in different stages of the day, enhancing the students' field experience.
- **Bird Identification Training:** A detailed identification session was conducted where students learned various techniques to differentiate bird species. The resource person focused on key identification features such as size, shape, colour patterns, beaks, and markings. Additionally, students were taught how to recognize birds based on their sounds and calls. The session provided practical knowledge of how to use these features effectively for accurate species identification.
- **Cataloguing Observed Bird Species:** Throughout the bird-watching session, students catalogued the bird species they observed. This exercise encouraged the use of field guides and binoculars to enhance identification skills. Students recorded the species, their behaviours, and the specific habitat in which they were observed, further improving their ability to recognize birds in future outings. The catalogue also allowed for a comprehensive study of the bird diversity in the area. Some of the bird species recorded were White-bellied Woodpecker, Green Imperial Pigeon, Racket-tailed Drongo, Crested Serpent Eagle, Flame-throated Bulbul, Loten's Sunbird, Thick-billed Flowerpecker, Malabar Grey Hornbill, Red Spurfowl, Peafowl, Orange-headed Thrush. Species like Malabar Whistling Thrush, Coppersmith Barbet, Malabar Barbet, Brown Headed Barbet, Racket-tailed Drongo, Green Imperial Pigeon, Greater Coucal, Hornbill, Woodpeckers were also identified based on their calls.





4. Visit to Sanctuary to study animal diversity, Sanctuary management and conservation practices

- **Objective:** The objective of this activity was to provide students with a comprehensive understanding of conservation and management practices, focusing on the role of water holes and watch towers in supporting wildlife conservation and management efforts and to study animal diversity by direct sighting or signs.

Activities Undertaken:

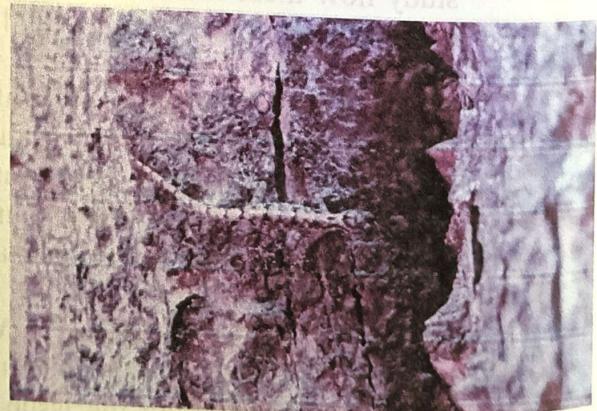
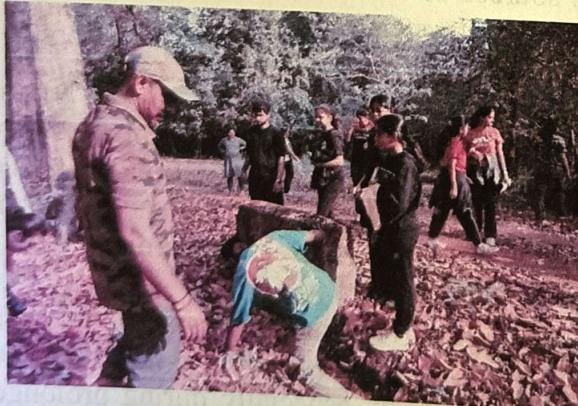
Visit to Key Water Holes: Students visited key water holes like Bela Lake and Tree Top area within the sanctuary to observe their crucial role in sustaining wildlife, particularly during the dry season when water is scarce. The visit allowed students to study how these areas serve as vital sources of water for various species, playing an essential part in their survival and overall ecosystem balance.

Discussion on the Role of Water Holes: A detailed discussion was held on the importance of water holes in supporting both herbivores and carnivores. Students learned how these water sources attract a diverse range of species, from Gaurs, deers to predators like leopards. The resource person explained how the presence of water holes is vital for survival, especially in areas where water resources are limited.

Challenges of Water Resource Management: The resource person provided insights into the challenges faced in managing water resources within wildlife sanctuaries. Students learned about the issue of water scarcity, especially during prolonged dry periods, and the impact it has on local wildlife populations. The discussion also covered strategies used by wildlife managers to ensure the sustainable management and distribution of water, such as artificial water holes and conservation practices to preserve natural resources.

Role of Watch Towers in Wildlife Management: The resource person briefly discussed the importance of watch towers in monitoring wildlife activity around water holes. Watch towers allow wildlife managers to monitor animal movements, track populations, and assess any potential human-wildlife conflicts. The role of watch towers in enforcing regulations and providing security for wildlife was emphasized.

Study of Animal Diversity by Direct Sighting and Signs: The resource person briefed the students on observing animals in their natural habitat through visual sightings. This included tracking movements and behaviours, Signs of presence of animals, such as pugmarks, droppings, nests, scratch marks, and feeding signs.

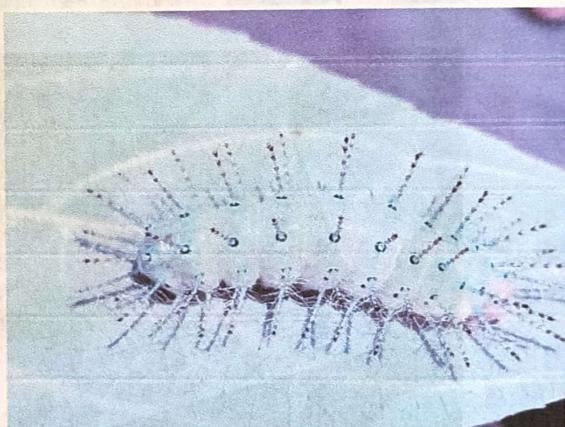


5. Visit to Butterfly Garden to Study Conservation

Objective: The objective of the visit to the Butterfly Garden was to gain insight into the vital role of butterflies in biodiversity conservation, observe the ongoing conservation efforts, and understand the measures being taken to protect these pollinators and their habitats.

- The visit to the Butterfly Garden was informative and engaging. The garden showcased various species of butterflies such as Clipper butterfly, Common

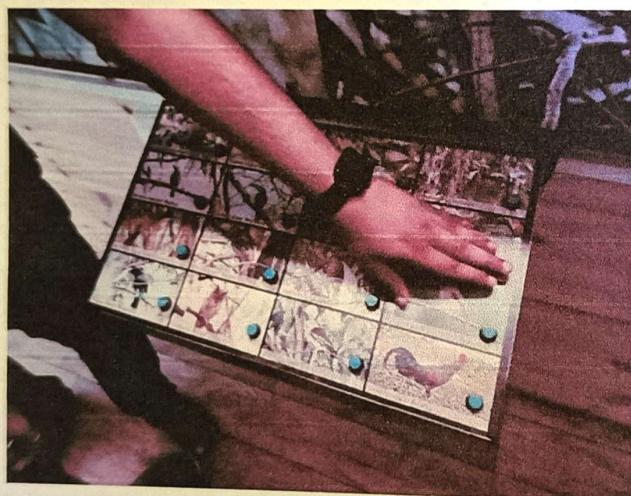
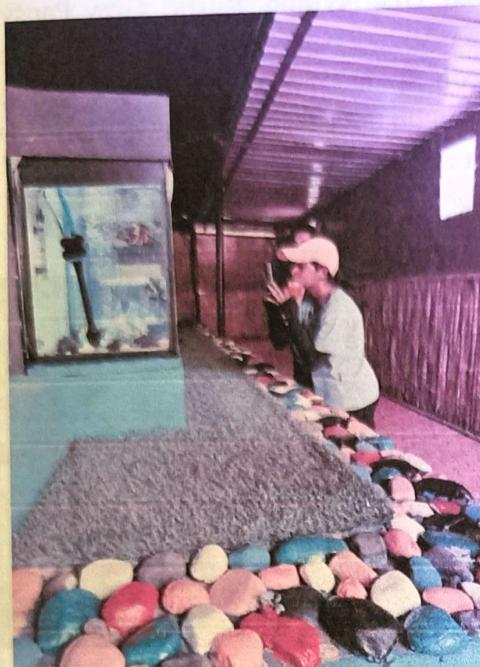
Leopard, Striped tiger, Malabar Tree Nymph, Rustic, Grey Pansy, Chocolate Pansy etc. During the visit, the resource person explained how butterfly species are being conserved, and the concept behind developing butterfly gardens. The garden also provided information on the lifecycle of butterflies and the need for specific plants to support them at different stages.



6. Visit to Nature Interpretation Centre

Objective of the Activity: The primary objective of the visit to the Nature Interpretation Centre was to learn about the methods used for environmental education and how such centres contribute to the preservation of natural resources.

- The Nature Interpretation Centre (NIC) served as a valuable educational resource for students to explore and understand the natural environment. The centre focused on educating the students about local wildlife, ecosystems, and the importance of protecting nature through various exhibits, informational panels, and interactive displays.



Learning Outcomes

By the end of the field trip, the students achieved the following learning outcomes:

1. Practical Application of Conservation Principles:

- The students gained firsthand experience in conservation techniques, especially in the protection of species like sea turtles. They developed a deeper understanding of the complexities involved in habitat conservation, species monitoring, and the implementation of management strategies to safeguard biodiversity.

2. Enhanced Field Research Skills:

- Students learned the importance of careful observation, data recording, and analysis of animal behaviour in their natural habitat. Through activities like the

night trail and bird watching, they improved their skills in field research methods and learned the significance of non-invasive research in wildlife studies.

3. Understanding Nocturnal Ecology:

- The night trail provided valuable insight into the behaviour and adaptations of nocturnal animals. Students learned how to observe nocturnal creatures without disturbing them and gained an appreciation for the unique ecological roles of these animals in the sanctuary's ecosystem.

4. Improved Animal Identification Skills:

- Through the bird-watching session, students enhanced their identification skills, learning to recognize key species and their behaviour. They also gained an understanding of the ecological significance of various bird species and their roles in maintaining the balance of the ecosystem.

5. Awareness of Water Hole Management:

- By studying the sanctuary's water holes, students developed an understanding of the importance of water resources in the conservation of wildlife. They were able to observe how different species interact with these water sources and how their management is crucial for maintaining ecosystem stability.

6. Importance of butterflies in ecosystem:

- By visiting the butterfly garden students gained a deeper understanding of the crucial role butterflies play in maintaining biodiversity and ecosystem health, the threats they face and their conservation.

7. Importance of Environmental Education:

- Participants learned how centres like NIC play an essential role in raising public awareness about environmental issues. The educational materials and exhibits at the centre demonstrated how people can be empowered to adopt eco-friendly practices and support conservation initiatives.



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