EVS field report

Aravali Biodiversity Park

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Table of Contents

1.Preface

Fig 1. Group photo near the Aravali Biodiversity park entrance

I would like to express my gratitude to **Dr. Prem Pandey**, our professor for Environmental Studies at **Shiv Nadar University**, whose passion subject never ceases to amaze me. His endless patience and dedication to this subject is something I truly look up to.

I am thankful to him for providing us with the valuable opportunity to visit **“Aravali Biodiversity Park”** located in **Gurgaon, Delhi** a lush pocket of greenery near the bustling capital city. I have always been fascinated by the nature, its beauty amazes me and its inner workings intrigue me, due to this, visiting Biodiversity parks has been a favourite pastime of mine.

Therefore, I consider myself very fortunate to have gotten the opportunity to visit this beautiful biodiversity park and learn about our environment thorough exploring it.

2.Background

Fig 2. Walking towards the medicinal conservatory

The field study tour to **“Aravalli Biodiversity Park”** was conducted by **Dr. Prem Pandey** to help us the students understand regional biodiversity in Delhi by providing us with practical exposure.

3.Introduction & Itinerary

Fig 3. Photo near the Aravali Biodiversity park entrance

The field study tour was conducted in batches in which I was a part of the Batch 1 which went on the 31st of August, 2024.

We were instructed to gather near the cricket ground at “7:30 A.M.” after which departed. The bus ride was nearly 3-hours long during which we slept as it was still early in the morning.

We arrived at the park at 9:30 A.M. and as soon as I got down and entered the park I was hit by a cool gust of wind, I could hear a myriad of birds chirping and see lush green trees, as it had just rained just a few days prior, the weather was humid and cool hence, it was truly a sight to behold. On our way to meet our trip instructor we saw a beautiful peacock near some of the trees. We also spotted some centipedes on the ground. While walking **Dr. Prem Pandey** told us about the history of the park.

Fig 4. Sighting of a peacock

Afterwards, while we were waiting for our trip instructor "**Ms. Balvinder Kaur"**, **"Dr. Prem Pandey"** told us about the fact that monocot plants have parallel venation, whereas dicot plants have non-parallel venation.

After waiting for approximately 15 minutes, we met our tour instructor, **“Ms. Balwinder Kaur”**. After introductions she told about her experiences in the parks and some fun facts about the park like the fact that **"Viylati Kikar" (*Prosopis juliflora*)** which is a kind of mesquite is the most predominant species of flora found here.

Fig 5. "Viylati Kikar" (*Prosopis juliflora)*

She explained that it is an invasive Mexican species brought by the Britishers before 1947 to increase the green cover of the Aravali range as it had been destroyed by them for mining and other purposes.

Although this did help recover the forest growth, it had adverse side effects, it depleted the groundwater reserve of the Aravali range, left the soil acidic and it also caused asthma problems for people.

Their leaves caused tooth decay in animals and severely depleted the soil health. Hence to cease further growth of the plant it was decided that they would kill off all the saplings and remove the fallen seeds of this tree.

Fig 6. Butterfly cacoon

She informed us about how the park now has more than 120 butterfly and 200 bird species which is the highest recorded in Delhi. Next, she informed us that vultures have gone extinct in India due increace in **”Diclofenac”** in their diet**.** Exposure to this drug caused kidney failure in vultures, leading to their death. Now, a captive breeding program is being run near Meerut, Dehradun, Haryana, Jhajjar, Panchkula, and Chandigarh to reintroduce them in the future.

She also informed us about the funeral ritual of the Parsis and how important vultures were as a part of their death ceremony. In recent times, the government has taken measures so that they don’t leave dead bodies in the jungle. She also informed us that birds of prey can't be identified by simple sighting or some marks on their body even by seniors in the ornithology department. They can only be identified by their call.

Fig 7.1 Mica

Fig 7.2 Mica on Path

Next, she told us about the migration of birds. Birds migrate 365 days and are of two types - summer and winter migration. Birds do so because of the shortage of food on their main grounds.

She also told us about sparrows and how they migrated from cities to other places because of enclosed homes.

Fig 8. Bird sighting at Aravli Biodioversity park

She informed us that sparrows are called "house sparrows" because they used to build their nests in the homes of humans, and now due to completely enclosed homes they have migrated to other region to build their nests.

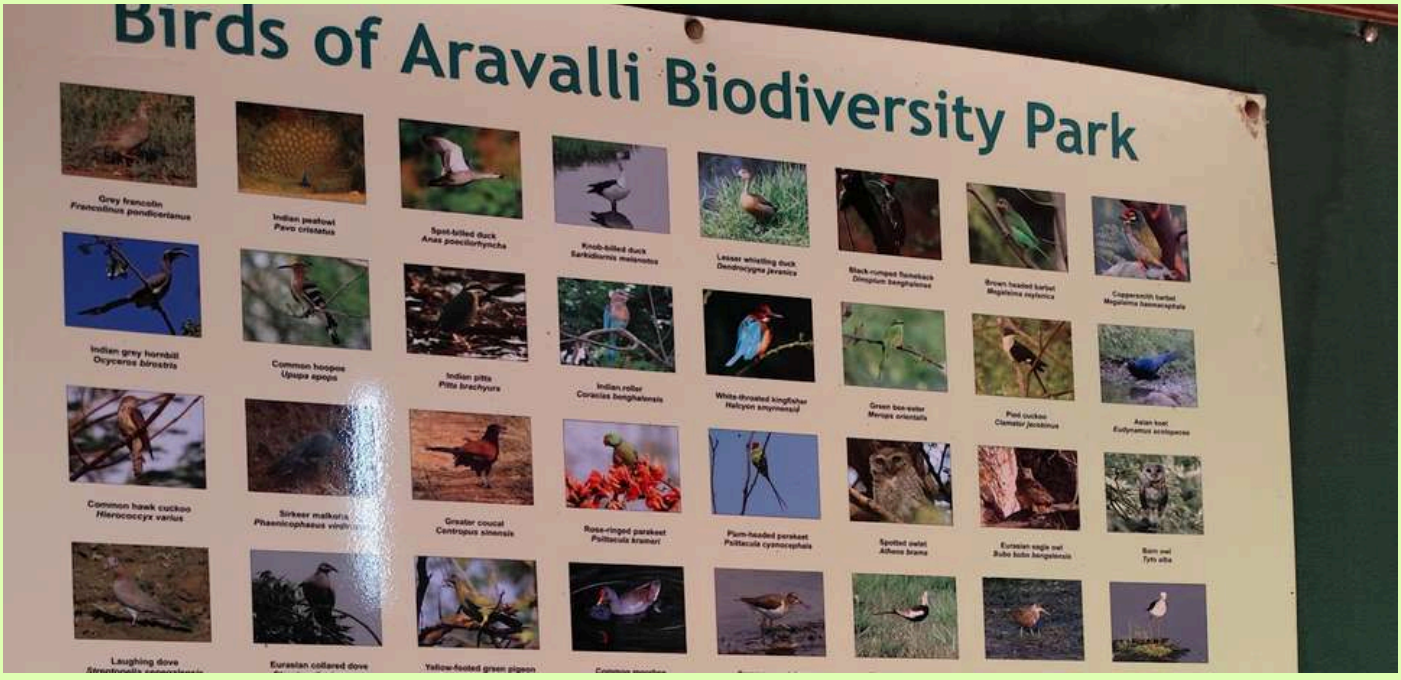

Fig 9. Poster of the birds found at Aravali Biodiverty park

4.Butterfly Conservatory

Fig 10. Overview of the butterfly conservatory at Aravali Biodiversity Park

After climbing down from some stairs we reached the butterfly conservatory where Ms Balvindar Kaur told us that a **butterfly conservatory** is a place where all the elements that a butterfly require to complete their whole life cycle can be found. There are plants with flowers for nectar, leafy plants where they may lay their eggs, and marshy lands for the salt-licking process.

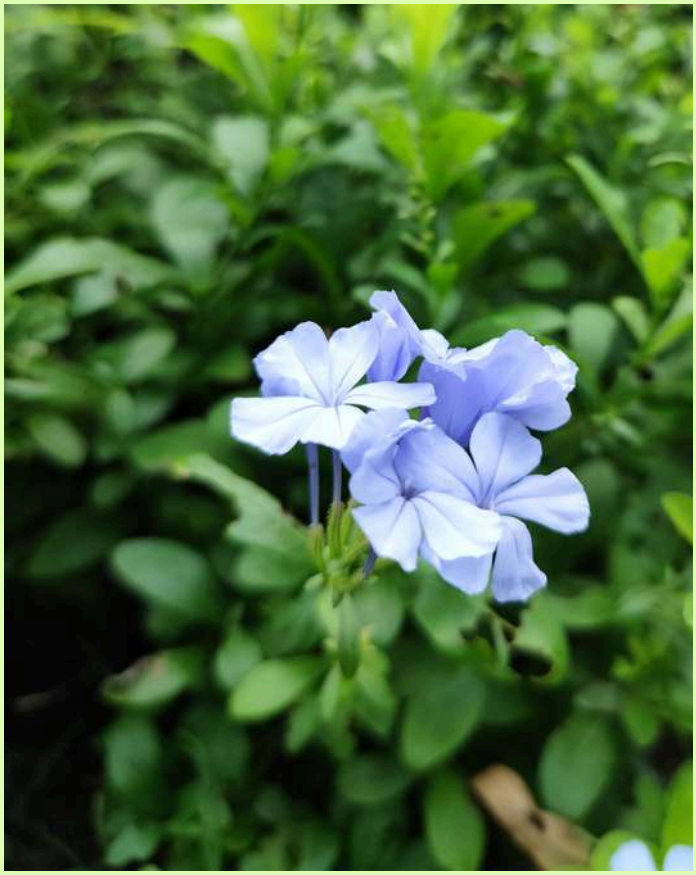

Fig 11. *Plumbago Auriculata*

Fig 12. Sunflowers

She also told us some interesting facts about **dragonflies**, such as the presence of dragonflies prevents the spread of dengue. The reason behind this is that both mosquitoes and dragonflies lay eggs in clean and stagnant water, and dragonfly's offsprings are caterpillars that feed on mosquito's eggs.

Fig 13. LilLy pond at Butterfly Conservatory

5.Medicinal Conservatory

Fig 14. Medicinal Conservatory at Aravli Biodiversity Park

Ms. Balvinder Kaur gave us a tour of the medicinal Conservatory and during it also told us about the medicinal values of various plants there.

Drumstick tree (*Moringa oleifer*)- Drumsticks are used in soups and sambar and are very good for our health.

Fig 15 Drumstick Tree

Fig 16. Aloe vera (*Aloe barbadensis Mill*)

Aloe vera (*Aloe barbadensis Mill*)- is used in shampoos, face wash, and it is also eaten by several people because it helps in flushing out the waste from the body.

Fig 17. Long pepper (*Piper longum*)

Long pepper (*Piper longum*)- It's fruit is cylindrical and it helps to cure cold, cough, and fever. It's oil is also used in skin aromatherapy.

Fig 18. Harsingar (*Nyctanthes arbor-tristis)*

Harsingar (Nyctanthes arbor-tristis)- The problem of joint pain and arthritis can be solved if we drink the fresh juice of its leaves.

Fig 19. Arbi (*Wild Colocasia*)

Arbi(*Wild Colocasia*)– It helps cure problems related to ulcers.

Fig 20. Curry leaves (*Bergera koenigii*)

Curry leaves (*Bergera koenigii*)-

It’s a source of calcium. When its leaves are boiled with oil, it helps with hair-related issues such as hair fall and greying of hairs.

Apart from this, if a patient suffering from diabetes and blood pressure eats its leaves, then it can be controlled. If someone not dealing with the problem of diabetes and blood pressure eats its leaves, there's a high probability that he or she will not face any issue related to blood pressure or diabetes.

She also told us that peacock feathers are a source of calcium for porcupines, which helps them in the formation of quills.

6.Aravali Range

Fig 20. Viewpoint-Restored Barren mine

At last, she took us to a view point where we could see a part of the Aravli range. She told us that the valley was a mine before where illegal mining of mica and china clay took place and after taking over the land they planted trees and restored it. This was the last part of our field visit.

7. Observations

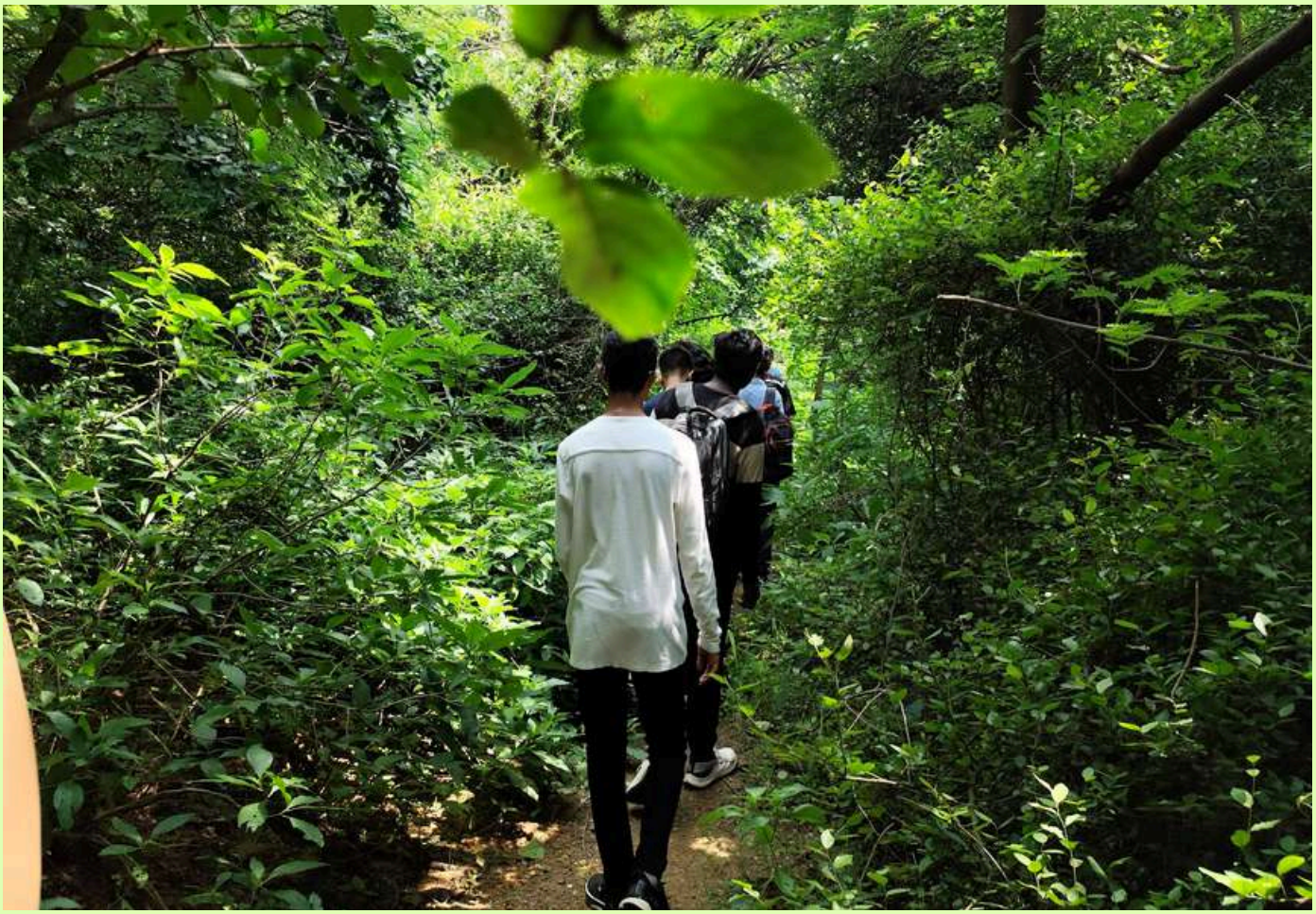

Fig 21 Students walking in the nature trail

This field trip was on of the best trips of my life, not only did I learn a lot about the flora and fauna I also experienced it. Breathing in the fresh air, feeling the cool breeze on my face , listening to the chirping of different birds and the sweet smell of flowers in the air, the glittering mica on the walking track- everything took my breath away.

Ms. Balvindar Kaur informed us about the various medicinal benefits of the plants and also many interesting facts about birds, plants and animals.

Fig 22. Mushrooms

I also observed several mushrooms growing on the ground, several beautiful trees and moss on stones.

Fig 23 A tree

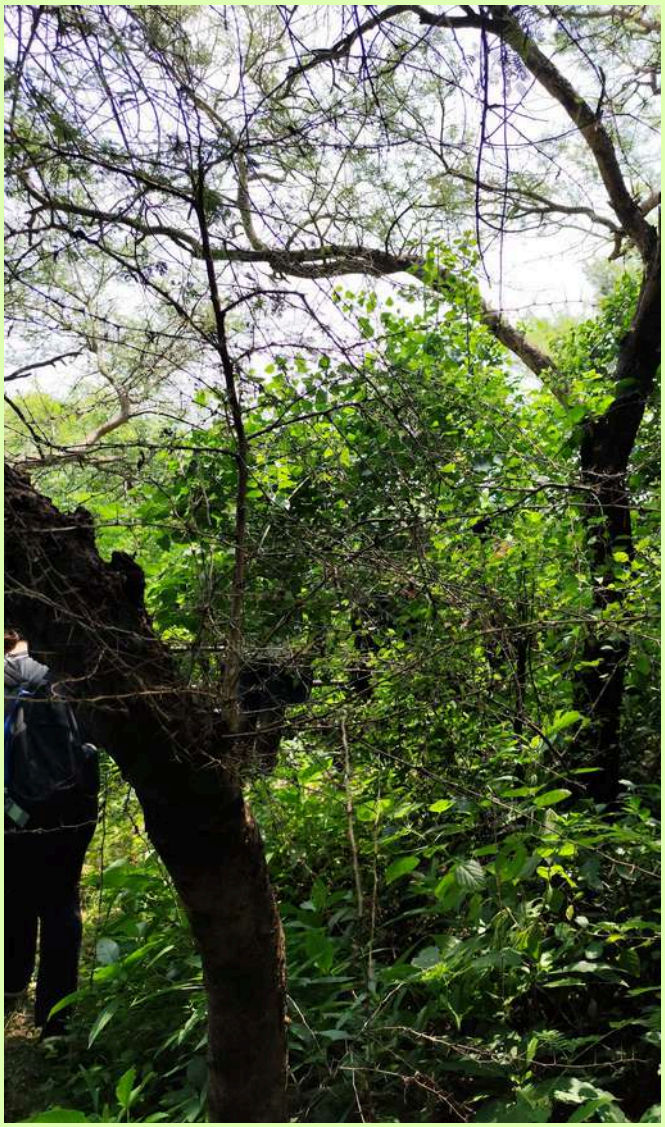

Fig 24 Greenry at Aravali Biodiversity Park

8. Collage