

Environmental Studies Field Trip Report



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Aravalli Biodiversity Park

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ACKNOWLEDGMENT

I would like to thank Dr. Prem Pandey, our professor for Environmental Studies at Shiv Nadar University, whose immense knowledge of the subject never ceases to amaze me.

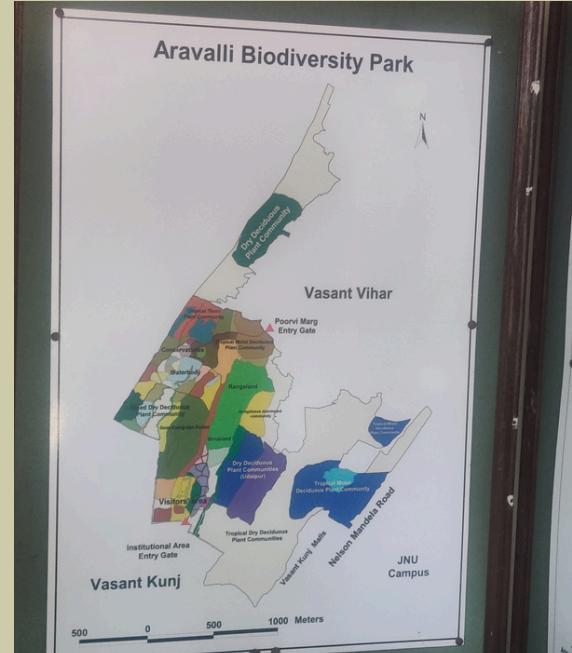
I owe a great deal to the teachers at Shiv Nadar University for their direction, ongoing supervision, and encouragement to complete all of my work on time. They also provided the project with the information that was required and helped me finish the project.

I have worked hard on this project. It would not have been feasible without my friends, seniors and classmates' generous assistance and support. I want to express my sincere gratitude to each one of them.

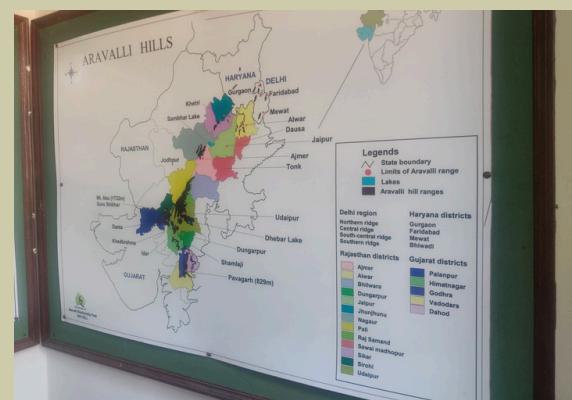
I want to express my gratitude and appreciation to the Ms. Balwinder Kaur and Aravali Biodiversity Park team for hosting me and all the students there.

INTRODUCTION

Aravalli Biodiversity contains variety of flora and fauna extending over 692 acres and the area of Aravalli hill range is 692kms which is a very big coincidence. Aravalli Range starts from Gujarat and ends at Delhi.



This park was started in 2004. The land belongs to DDA. DDA handed over the park to DU for development of the park.



Earlier lot of mining activities used to take place in the park, which is why we could see bits and pieces of mica at various places.



ITINERARY

Departure from Campus- 7:45 A.M.

Arrival at Aravalli- 9:30 A.M.

Tour started- 10:00 A.M.

Tour ended- 11:30 A.M.

Departure from Aravalli- 11:45 A.M.

Arrival at Campus- 1:45 P.M.



OBSERVATIONS

The park was extremely well maintained and clean. There was no littering, and every inch of the park was well-kept.

What was extremely surprising to me was that even in a crowded metropolitan city like Delhi, a beautiful and green location like Aravalli Biodiversity Park could exist. Inside the park, it felt like I was in an entirely new location.

Ms. Kaur explained to us that when the Aravalli Biodiversity Park was taken up as a project, there were only 10-15 species of butterflies in the area at the time. However, there are presently over 120 species of butterflies there. This shows the success of the project.

Also, initially there were only 20 species of birds, now there are over 200 species in the park.

FLORA

CURRY PATTA- Curry leaves are a source of calcium. It's tablets are recommended in case of calcium deficiency, if not taken regularly can result in kidney stone. It is boiled with coconut oil and applied on hair for shiny growth, removal of dandruff and blackening of hair. It also helps diabetes and blood pressure patients to keep health under control.



PIPER LONGUM

It has a cylindrical fruit and is used in treatment of cold, cough and fever. It's oil is also used in skin aroma therapy.

ARJUNA TERMINALIA

Cardiac, diabetes and blood pressure patients drink tea of bark of this tree. Leaves of this plant are used in ayurvedic medicine which cure ear pain.

DRUMSTICK

It helps improve digestive system, regulates blood sugar levels and relieves respiratory disorders.

FLORA

VILAYTI KEEKAR (*prosopis juliflora*) - Mexican species planted by British before 1947. It was selected because it is a fast growing tree. But since, it is a plant of marshy land, roots go towards the ground water table and deplete it.

People who's houses are near this plant face problems like asthma. Soil turns acidic in places where leaves fall. If animals consume the leaves, they face tooth decay problems.

Now, ABD authorities have started dumping the saplings of this plant to preserve fertility of the soil. It takes 1 million years to revive fertility of 1 inch of soil.

It is also called devil tree in local language because of the side effects.



VILAYTI KEEKAR
(*prosopis juliflora*)

DESI KEEKAR
(Indigenous plant)

JUNGLEE ARBI
(*coclocasia esculenta*)
Used as cure for ulcers

ALOEVERA- Its gel is used on hair and skin. Gels are of 2 colours- transparent and yellow. Yellow one is more effective. Aloevera is also used in juice, sabzi and is also consumed with black salt and ajwain.



FAUNA

BUTTERFLIES

Now the butterfly conservatory used to be the farmhouse of Madhora Singhia.

Lifecycle of a butterfly has 4 stages- egg, larva/caterpillar, pupa and butterfly. After mating, butterfly lays eggs. This entire process is known as Metamorphosis.

Minimum lifespan of a butterfly is 25 minutes and maximum is 6-9 months. Their average lifespan is 25-50 days.

Butterflies feed on flower nectar.

Caterpillars feed on curry patta leaves, peas leaves, cauliflower leaves and more.

Caterpillar will eat the egg shell out of which it comes out, when it becomes healthy, it develops a clear skin around itself and is known as pupa.

Every butterfly has a specific plant on which the baby feeds and that plant is called the host plant of that particular butterfly. If that plant is extinct, that particular species of butterfly will get extinct.

Butterflies camouflage to save themselves from predators like frogs, lizards, birds and snakes.

Some butterflies mimic other butterflies whose host plan does not taste good so that predators don't eat them due to bad taste.

Bright colour of butterflies indicates that they are young. As they grow old, their colour fades.

Largest butterfly found in ABD is golden bird wing.



Butterfly
Conservatory



Leaves eaten by
caterpillars



Butterfly
Conservatory Chart

FAUNA

BIRDS

Initially there were only 20 species, now there are over 200 species which include urban birds, residential birds, migratory birds, birds of prey.

Urban and Residential birds- Birds that live around houses like sparrows, mainas, house crow, pigeons.

Sparrow is the state bird of Delhi, but is no longer present in Delhi because of excessive barricading in houses. House sparrows used to make their nests in houses. ABD has hundreds of sparrows.

The types of **migratory birds** are- summer migratory, winter migratory.

Long term migration includes winter and summer migration.

Migration happens 365 days. Original ground is breeding ground and the other ground is feeding ground. The areas in between distance of grounds where birds take breaks, they are known as passage migratory birds of that area.

They travel during night times to avoid attack of predators.

Elder birds stay in the front and juvenile stay at the back as air pressure is more in the front. If a migratory bird is spotted in some other place, it is placed in the vagrant group by the ornithology department of that area.

Short term migration:

They go for food in another area and then come back.

Birds of prey- eagles, vultures, kites, shikras

They look very similar and are differentiated by their calling. Pariya kite can be identified because of its distinctive tail.

Vultures are almost extinct from India.

LESSONS LEARNT

Conservation: We must conserve our depleting environment since we are responsible for it. If we don't act now, it might be too late.

Do our part: We need to do our part in conserving biodiversity, like not purchasing products made by hurting animals and stopping using those products that affect our environment like plastic, etc.

Appreciate Nature's Beauty: Nature is beautiful, and so is the ABD park. I was awestruck by the park's beauty and would love to revisit it if possible.

Communal Harmony: I better understood the meaning of communal harmony by visiting the park. I saw how many different kinds of plants and animals live together peacefully in a limited space.

Importance of Biodiversity Parks: Parks like Aravali Biodiversity parks are essential to conserve endangered species by providing freedom and natural habitat-like conditions.

Hunting and Poaching are both killing of animals. Hunting is legal whereas poaching is illegal. After hunting, animals are eaten and after poaching body parts of animals are sold. Animals like tigers and elephants are poached for their skin, claws and tusk respectively.

REFERENCES

1. All photos in the report are self taken
2. https://en.wikipedia.org/wiki/Aravali_Biodiversity_Park
3. delhitourism.gov.in
4. Physical reference charts put up in Aravalli Biodiversity Park





Thank you