

Diversity of Tree Species of Sophia Girls' College Campus, Ajmer, Rajasthan

Abstract

Ajmer is located at the centre of Rajasthan and is surrounded by Aravali Mountains. It is sited on the slopes of the Taragarh hill of Aravali range. However the land of Ajmer is plain and not hilly. To the north-west is the Nagpathar range of Aravali mountain ranges which protects it from desertification from the Thar desert.

Ajmer has a hot, semi-arid climate with over 55cm of rain every year. Temperatures remain relatively high throughout the year.

Sophia College Ajmer is situated on the outskirts of the historic and holy city of Ajmer, the college has an exquisite garden with verdant and well-maintained lawns. The lushly green campus is spread over an area of 9.9 acres with a sports field, 3 gardens, administrative block etc. on the strategic entrance of the city of Ajmer on Jaipur road. In the present study a thorough survey of the college campus was made to estimate the tree diversity of the campus.

Keywords: Vegetation, Phytodiversity, Aravali, Flora, Soil, Arboreal.

Introduction

Rajasthan was once filled with lush green vegetation but those days have elapsed and presently a major portion of Rajasthan is desiccated. This is due to the continuous soil erosion and the recurrence of droughts. The sandy soil has very less capacity to store water. The ground water level is very low due to over-exploitation and the limited, erratic rainfall averaging 360mm per year allows the growth of scanty, shrub-like thorny vegetation. Grasses and species like *Prosopis cineraria* grow in the regions where little water is available.

Ajmer is watered by river Banas and its tributaries and thus the fertile soil sustains mixed xerophytic and mesophytic vegetation. Almost all types of plant habits i.e. Grasses, Herbs and Trees are present in this area.

The study of flora of Rajasthan has been attended by several workers in the past years. Bhandari² has worked on flora of Western Rajasthan, Sharma and Tiagi⁹ worked on flora of North-Eastern part of Rajasthan. Shetty and Singh^{11,12,13} have presented the flora of Rajasthan.

Although phytodiversity of Ajmer has been studied in part like Grasses and sedges of Ajmer (Sharma, Gena and Joshi⁸). Medicinally important wild plants (Sharma⁶), Ethano-medicinal plants (Mishra, Billore, Yadav and Chaturvedi⁵), Leguminous diversity (Harsh and Tak⁴) and Medicinal plants (Dixit and Mishra³). But the study of complete phytodiversity of Ajmer district has not been recorded.

Charan et al¹ has divided western Indian desert into the five major phytogeographical division (PHD) i.e. sand dunes, sandy plains, stony & hilly tracts, gravel & compact tracts and saline areas. Basically these PHD'S differ from each other in their floristic composition due to topographical and geological formations. Being the position of Ajmer in central Aravallis and just on the line of demarcation between western arid and middle semiarid zone the climate conditions are slightly favorable and the area shares the floristic elements of both sandy and hilly tracts. Therefore Ajmer region is represented by all kinds of habitats. The area is rich in flora and this aspect has not been studied so far except a list of trees and shrubs given by Sharma¹⁰ and Sharma⁷.

Sandhya

Assistant Professor & Head,
Dept. of Botany,
Sophia Girls' College,
(Autonomous)
Ajmer, Rajasthan, India

Annu Bhardwaj

Assistant Professor,
Dept. of Botany,
Sophia Girls' College,
(Autonomous)
Ajmer, Rajasthan, India

Methodology

In the present study an attempt has been made to study the arboreal diversity and count the trees present within the campus of Sophia College Ajmer. For this the campus was divided into four regions for convenience and systematic study. Each region was thoroughly surveyed to collect the data and estimate the numbers of trees present there. This study will help in analyzing the tree cover of the campus and will give an idea about the diversity of trees present.

Efforts were made to identify the trees. The species were identified with the help of the flora of Rajasthan Vol.-I, II, III. Identification of trees was also done with the help of well known botanist and taxonomist Dr. C. B. Gena.

Result

As a result of exhaustive field survey of the campus about 400 trees belonging to 31 genera and 21 families were reported from the study area. The dominant species of the campus was found to be *Azadirachita indica* (Neem).

The campus has a rich arboreal diversity. Trees of various families i.e. meliaceae, fabaceae, apocynaceae etc.were recorded in the study. The findings of the study have been tabulated in Table no. 1.

Discussion

The present study provides the basic information about the different tree species, which are currently found in the campus of Sophia Girls' College, Ajmer.

This check list of plants is quite comprehensive and almost complete so far as the trees of the campus are concerned. It is quite evident that the arboreal diversity of Sophia College campus is very rich and varied.

Conclusion

Vegetation is an important aspect of environment and forms the substratum of a suitable habitat for other life forms. Plants which dominate the habitat may be taken as parameters to evaluate

habitat conditions. The existence of certain plants and plant communities are good indicators of general climatic conditions of the area.

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Table 1: Trees of Sophia Girls' College, Ajmer Campus

S.No.	Botanical Name	Common Name	Vernacular Name	Family
1	<i>Ailanthus excelsa</i>	Tree Of Heaven	Aru	Simaroubaceae
2	<i>Alstonia scholaris</i>	Devil Tree	Shaitan	Asparagaceae
3	<i>Araucaria spp.</i>	Monkey Puzzle Tree	Araucaria	Araucariaceae
4	<i>Azadirachta indica</i>	Margosa Tree	Neem	Meliaceae
5	<i>Bauhinia variegata</i>	Camel's Foot Tree	Kachnar	Caesalpiniaceae
6	<i>Borassus flabellifer</i>	Palmyra Palm	Tar	Arecaceae
7	<i>Butea monosperma</i>	Fire Of Forest	Dhak	Fabaceae
8	<i>Callistemon citrinus</i>	Bottle Brush	Bottle Brush	Myrtaceae
9	<i>Cassia fistula</i>	Indian Laburnum	Amaltas	Fabaceae
10	<i>Cassia siamea</i>	Popcorn Tree	Kasod	Fabaceae
11	<i>Cocos nucifera</i>	Coconut	Nariyal	Arecaceae
12	<i>Cordia dichotoma</i>	Glue Berry	Lasora	Boraginaceae
13	<i>Cycas spp.</i>	Sago Palm	Cycas Palm	Cycadaceae
14	<i>Dalbergia sisso</i>	Indian Rosewood	Shisham	Fabaceae
15	<i>Ehretia laevis</i>	Chamror	Chamror	Boraginaceae
16	<i>Ficus benjamina</i>	Benjamin Fig	Ficus	Moraceae
17	<i>Ficus religiosa</i>	Sacred Fig	Peepal	Moraceae
18	<i>Holoptelea integrifolia</i>	Indian Elm	Bandar Ki Roti	Ulmaceae
19	<i>Leucaena leucocephala</i>	White Leadtree	Subabool	Mimosaceae
20	<i>Mangifera indica</i>	Mango	Aam	Anacardiaceae
21	<i>Moringa oleifera</i>	Drumstick	Sahjana	Moringaceae
22	<i>Murraya paniculata</i>	Orange Jasmine	Meetha Neem	Rutaceae
23	<i>Phyllanthus emblica</i>	Indian Gooseberry	Amla	Euphorbiaceae
24	<i>Plumeria alba</i>	Temple Flower	Champa	Apocynaceae
25	<i>Polyalthia longifolia</i>	Buddha Tree	Ashoka	Annonaceae
26	<i>Prosopis cineraria</i>	Prosopis	Khejadi	Fabaceae
27	<i>Roystonea regia</i>	Royal Palm	Bottle Palm	Arecaceae
28	<i>Tabernaemontana divaricata</i>	Crape Jasmine	Chandni	Apocynaceae
29	<i>Thuja spp.</i>	White-Cedar	Morpankhi	Cupressaceae
30	<i>Zizyphus (hybrid)</i>	Plum	Pemli Ber	Rhamnaceae
31	<i>Zizyphus mauritiana</i>	Indian Plum	Ber	Rhamnaceae