

Floristic Diversity of Trees in Ahobilam Reserve Forest of Kurnool District, A.P,India

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Abstract: Present study was conducted in the Ahobilam RF of Kurnool district, A.P. Field trips were undertaken in monsoon and summer months in all parts of the study site and plants were collected during each trip. Tree were excavated and tender twig bearing flowers were taken. The dried specimens were mounted on the herbarium sheets. These herbarium sheets were protected against damages by poisoning them with 1% mercuric chloride and naphthalene balls. Total 75 plant species belonging to 32 families and 66 genera were recorded from the study site. *Caesalpiniaceae*, *Fabaceae*, *Rubiaceae* are the most dominant families with Five genera each, and *Anacardiaceae* and *Verbinaceae* with four genera *Apocynaceae*, *Bignoniaceae*, *Burseraceae*, *Capparaceae*, *Ehphorbiaceae*, *Moraceae*, *Sterculiaceae*, with three genera *Arecaceae*, *Anonaceae*, *Loganiaceae*, *Mimosoideae*, *Rutaceae*, *sapotaceae*, *Ulmaceae* with two genera and remaining families are represented with single genera.

Key words : Ahobilam Reserve forest, Floristic diversity, herbarium

Introduction

India contains about 8% of world's biodiversity on 2% of the earth's surface, making it one of the 12 mega diversity countries in the world. This is based on the species richness and levels of endemism recorded in a wide range of taxa of both plants and animals. India is well known for significant geographical diversity which has favored the formation of different habitats and vegetation type. Biological diversity is of fundamental importance to the functioning of all natural and human-engineered ecosystems and by extension to the ecosystem. Knowledge of forest structure and floristic are necessary for the study of forest dynamics, plant animal interactions and nutrient cycling. (Reddy Sudhakar and Pattnaik Chiranjibi, 2009)1. The existence of human beings is dependent on plants as they provide food, clothes fuel, timber for shelter in addition to important life supporting ecological services. (Gaur RD (1999) [2]. Biodiversity reflects variety and variability within and among living organisms, their associations and habitat oriented ecological complexes. Interest in biodiversity has recently increased in response to the damage caused to ecosystems by anthropogenic activities (Merigot et al., 2007). [3]. A sound understanding of the richness of species is necessary for appropriate conservation and restoration of the biological diversity (Prabakaran R and Greeshma 2012) [4] (Virupaksha K., 2009), 5. Besides the detailed assessment of floristic diversity of area of conservation, endemic, endangered and medicinally important plant species and cause of forest destruction are equally important in assigning conservation values.

Floristic studies are taxonomic studies of a flora or of a major segment of a flora, of a given area. Floristic studies help us to assess the plant wealth and its potentiality of any given area. Floristic studies also help us to understand the basic aspects of biology such as speciation, isolation, endemism and evolution.

Ahobilam, one of the famous temple sanctity area of South India, is located in Andhra Pradesh. The Ahobilam Reserve forest is divided into upper and lower Ahobilam. It is situated between long. 78°23'—78°56'E and lat. 14°55'—15°24'N. It has an average elevation of 327 meters (1076 feet) Rainfall averages about 90 cm and is concentrated in the months of the South West Monsoon (June–Sept). According to Hindu mythology, Lord Narasimha is present in nine forms in nine temples which are on the hill ranges of Ahobilam forest. Ahobilam is a catchment area of the Nallamalais Reserve Forest of the Eastern Ghats. It attracts several devotees from different states. The forest is rich in floristic diversity. The Ahobilam Reserve forest is a dry deciduous forest about 800 m, luxuriant in vegetation. The climate is characteristically dry. The average annual rainfall in the forest is 688.5 mm, while lowest rainfall was 391.5 mm recorded in the Year 2007.

Material and Methods

An floristic survey was carried out in Ahobilam Reserve forest of Kurnool district. Ahobilam reserve forest is a part of Eastern Ghats having rich vegetation. Plant specimens have been collected from all over Ahobilam Reserve forest through several field trips covering all seasons during 2017 – 2018. Herbarium voucher specimens are deposited in Department of Botany at Osmania UG & PG College, Kurnool Andhra Pradesh, India. The Medicinal parasitic plants were identified by the local people with their vernacular names, photographed and sample specimens were collected for the preparation of herbarium. The Flora of Kurnool by Raju and Pullai (1997).

Results and Discussion

With a view to bring out a comprehensive floristic account, the study area has been intensively explored. Total 75 plant species belonging to 32 families and 66 genera were recorded from the study site (Table 1). *Caesalpiniaceae*, *Fabaceae*, *Rubiaceae* are the most dominant families with Five genera each, and *Anacardiaceae* and *Verbinaceae* with four genera *Apocynaceae*, *Bignoniaceae*, *Burseraceae*, *Capparaceae*, *Ehphorbiaceae*, *Moraceae*, *Sterculiaceae*, with three genera *Arecaceae*, *Anonaceae*, *Laniaceae*, *Mimosoideae*, *Rutaceae*, *sapotaceae*, *Ulmaceae* with two genera and remaining families are represented with single genera (Plate 1,2,3). Understanding the floristic diversity of an area is a prerequisite for proper conservation efforts. Species need to be conserved along with the habitat for which proper understanding the diversity of the species and their association is very essential.

CONCLUSION

It may be concluded from the above mentioned survey and study that the Bhiwani district have valuable wealth of flowering plant as well as a rich traditional and folk knowledge of medicinal uses of plan. The result in the present study clearly shows that the flora is very rich floristically which may be attributed to its varied topography and variation in climatic conditions.

Acknowledgements

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Buchanania axillaris

PLATE 1

Cassia fistula*Gardenia gummifera**Pterospermum xylocarpum**Terminalia bellirica**Terminalia arjuna*



Wrightia tinctoria



Wrightia arborea



Haldenia cardifolia



Cleistanthus collinus

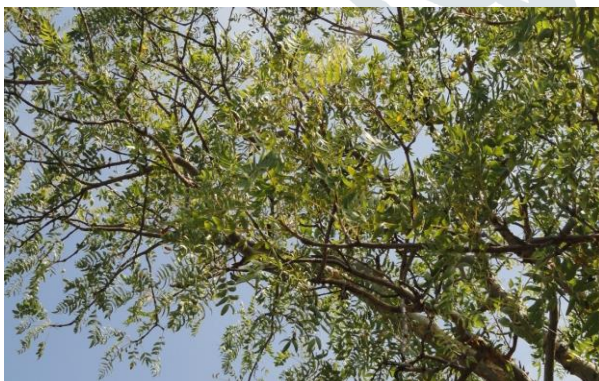
PLATE2



Boswellia serrata



Coumifera caudate



Cordial oblique



Anogeeissus latifolia



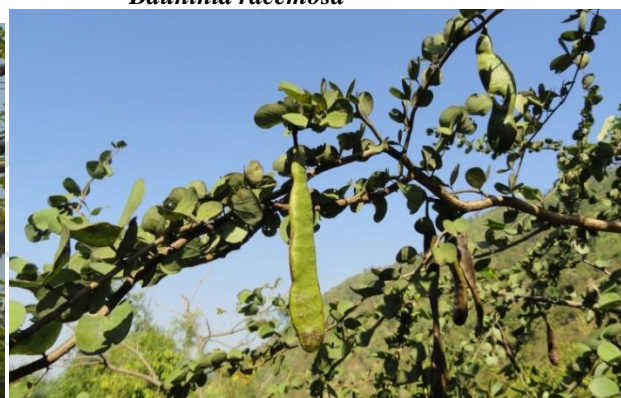
Aegle marmelos



Bauhinia racemosa

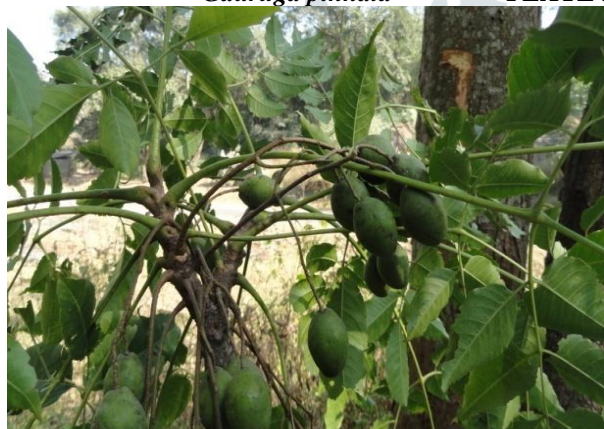


Gauruga pinnata



Givotia rottliformsi

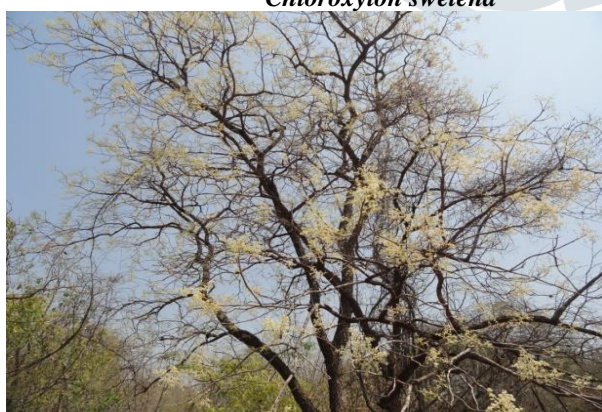
PLATE 3



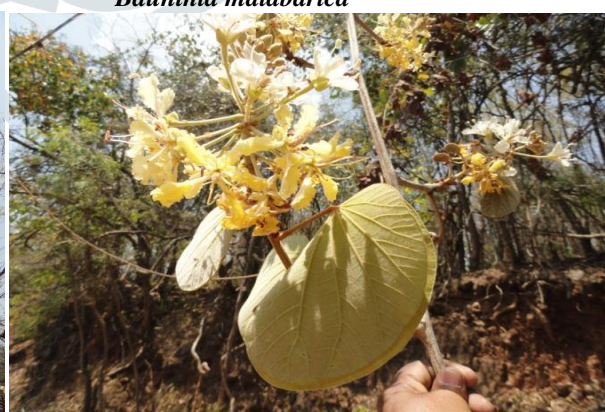
Chloroxylon swetena



Bauhinia malabarica



Gyrocarpus Americana



Alangium salvifolium

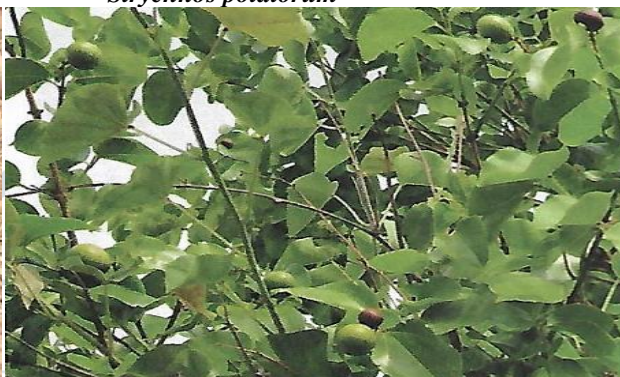
*Strychnos nux-ovmica**Strychnos potatorum*

Table.1 List of trees in Ahobilam RF		
S.No	Scientific name	Family
1	Capparis divaricata Lam.	Capparaceae
2	Capparis grandis L.f	Capparaceae
3	Crataeva magna (Lour.) DC.	Capparaceae
4	Cochlospermum religiosum(L.)	Cochlospermaceae
5	Helicteres isora L.Sp..Pl.	Sterculiaceae
6	Pterospermum xylocarpum(Gaertn.)	Sterculiaceae
7	Sterculia urens(R0sb.Pl.Cor.	Sterculiaceae
8	Aegele marmelos (L.)	Rutaceae
9	Limonoia Acidissima L.Sp.Pl.	Rutaceae
10	Balanites aegyptiaca (L.)	Balanitaceae
11	Boswellia serrata Roxb.ex.Colebr.	Burseraceae
12	Commiphora caudata (wifg	Burseraceae
13	Gauruga pinnata (Wight & Arn.)	Burseraceae
14	Chloroxylon seetenia DC.Prodr	Flideraceae
15	Sapindus emarginatus Vahl	Sapindaceae
16	Buchanania axillaris (Desr)	Anacardiaceae
17	Buchanania lanzan Spreng	Anacardiaceae
18	Lanea cormandelica(Houtt)	Anacardiaceae
19	Mangifera indica L. Sp.Pl.	Anacardiaceae
20	Bauhinia malbarica roxb.	Caesapinaceae
21	Bauhinia variegata L.Sp.P;l	Caesapinaceae
22	Caeslapinia pulcherrima (L.)	Caesapinaceae
23	Delonix elata (L.)	Caesapinaceae
24	Harwickia binata Roxb.Pl	Caesapinaceae
25	Acacia nilotica (L.)	Mimisoideae

26	<i>Albizia anara</i> (Roxb.)	Mimisoideae
27	<i>Butea monosperma</i> (Lam.)	Fabaceae
28	<i>Dalbergia latifolia</i> Roxb.Pl.Cor.	Fabaceae
29	<i>Pongamia pinnata</i> (L.)	Fabaceae
30	<i>Pterocarpus j marsupium</i> Roxb.Pl.Cor	Fabaceae
31	<i>Sesbania grandiflora</i> (L.)	Fabaceae
32	<i>Anogeissus laitfolia</i> (Roxb.ex.DC)	Combretaceae
33	<i>Combretum albidum</i> G.Don.inTrans	Combretaceae
34	<i>Terminalia arjuna</i> (Roxb.ex.DC)	Combretaceae
35	<i>Terminalia bellirica</i> (Gaertn)	Combretaceae
36	<i>Terminalia chbula</i> Retz.Obs	Combretaceae
37	<i>Lagerstroemia parviflora</i> Roxb. Pl.Cor	Lythraceae
38	<i>Allangium salvifolium</i> (L.f.)	Alangiaceae
39	<i>Gardenia gummifera</i> L.f	Rubiaceae
40	<i>Gardenialatifolia</i> Ait.Hort.Kew	Rubiaceae
41	<i>Haldenai cordifolia</i> (Roxb.)	Rubiaceae
42	<i>Ixora pavetta</i> Andrews bot.rep	Rubiaceae
43	<i>Morinda tomentosa</i> Heyne ex.Roth.	Rubiaceae
44	<i>Maduca indica</i> gamel.syst.Nat	Sapotaceae
45	<i>Manilara hexandra</i> (Roxb.)	Sapotaceae
46	<i>Diopyros melanoxylon</i> Roxb.Pl.Cor	Ebenaceae
47	<i>Salvadora persica</i> L.Sp.Pl.	Salvadoraceae
48	<i>Holarrhena pubescens</i> (Buch-Ham)	Apocynaceae
49	<i>Wrightia arborea</i> (Dennst.)	Apocynaceae
50	<i>Wrightia tinctoria</i> r.Br.	Apocynaceae
51	<i>Strychnos nux-vomica</i> L.Sp.Pl.	Loganiaceae
52	<i>Strychnos potatorum</i> L.f.suppl.	Loganiaceae
53	<i>Cordia obliqua</i> Willd.Phytogr.	Cordiaceae
54	<i>Dolichandrone falcata</i> (wall.ex.DC)	Bignoniaceae
55	<i>Millingtonia hortensis</i> L.f.Suppl.	Bignoniaceae
56	<i>Oroxylum indicum</i> (L.)	Bignoniaceae
57	<i>Gmelina arborea</i> Roxb.Pl.Cor.	Verbinaceae
58	<i>Premna tomentosa</i> Willd.Sp.Pl.	Verbinaceae
59	<i>Tectona grandis</i> L.f.Suppl.	Verbinaceae
60	<i>Vitex negundo</i> L.Sp.Pl.	Verbinaceae
61	<i>Gyrocarpus americanus</i> Jacq.Select.	Hernadiaceae
62	<i>Santalum album</i> L.Sp.Pl.	Santalaceae
63	<i>Cleistanthus collinus</i> (Roxb.)	Euphorbiaceae
64	<i>Givotia tottleriformis</i> Griff .in.Calcutta	Euphorbiaceae
65	<i>Mallotus philippensis</i> (Lam.)	Euphorbiaceae
66	<i>Holoptelia integrifolia</i> (Roxb.)	Ulmaceae
67	<i>Trema orietalis</i> (L.)	Ulmaceae
68	<i>Ficus benghalensis</i> L.Sp.Pl.	Moraceae
69	<i>Ficus microcarpa</i> L.f.Suppl.	Moraceae
70	<i>Ficus religiosa</i> L.Sp.Pl.	Moraceae

71	Borassus falbellifer L.Sp.Pl.	Arecaceae
72	Phoenix sylvestris (L.) Roxb.	Arecaceae
73	Dillenia pentagyna Roxb.Pl.Cor.	Dilleniaceae
74	Anona squamopsa L.Sp.Pl.	Anonaceae
75	Polyalthia cersaodes (Roxb.)	Anonaceae

