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Angiospermic Plants of Career Point University Campus , Kota (Rajasthan)

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ABSTRACT

Plant taxonomy is the branch of sciences which is concerned with the identification, classification and nomenclature of the plants of particular area or region.It is one of the most important branches of plant sciences, plant taxonomy and plant systematics are related to each other, there are no clear difference between the two branches, Plant systematics is the evolutionary relationship between the pants, whereas plant Taxonomy is the actual handling of the plants in nature. However both the branches are intricately related to each other.In plant taxonomy basically three system of classification's are sued, they are artificial, natural and phylogenetic systems .Plants are very important not only for humans but also for other life's on earth, life on earth is not possible without plants. Plants supply food to all humans as well as many other living organisms on the earth, plants maintains the atmosphere, by the process of photosynthesis on the earth gaseous balance occurs in nature. In nature biogeochemical cycles complete by the plants and there metabolism. Plants are habitat for many organism on earth .Plants provides humans timber, firewood, fiber, medicines, other substance's. A Flora is the systematic enumeration of the plant species occurring in a region. A flora can cover a large geographical region, a district, state, country even a continent. A flora may contain a simple description of the plants of that region to the detailed account of the plants. Deforestation is the big reasons for the degradation of the floristic wealth of any area. Increasing anthropogenic activity are the again major causes for the degradation of the flora's of any region. Conservation efforts are necessary for protection of the plants species in relevant area Here in this research article we are presenting preliminary studies on the flora's of the carrier point university campus , kota, in rainy season a number of the herbs, shrubs, trees grown in campus and enhances the beauty of the area .

Keywords: Floristic Diversity, Alaniya Kota, Rajasthan, anthropogenic activities, urbanization, flora, exploitation, conservation.

Introduction:

From ancient times, human beings depend on plant for their survival; the humans are directly depending on plants for their food, shelter, and medicine(Bhandari, 1978).Plants are very important elements' on the earth for ecological balances in the form of biogeochemical cycle's as well as majority of the economic important plants(Meena, 2012). Their distribution depends on the geographical conditions and geo climatic conditions (Parmer & singh, 1982) .It is estimated that on earth ten millions species of plants inhabit the earth, among them 1.7 million species are known to sciences(Pandey & shetty, 1984). India has a very rich biodiversity of plants in different ecological communities, it is estimated that India

has about 45000 plant species, among them 8000 plant species are known to be the medicinal values. A huge number of flora is available in different biogeographic region of India(Prasad, 2014). However many of the plant species are under threat and they are near to endangered or extinction due to several anthropogenic factors and changed ecosystem(Sarup, 1952). In addition to the manmade factors there are some natural factors like herbivore ,pathogens and climate changes which decline's the population of the plants in that area (Sharma & tiyagi, 1979). Many plant species are extincting even before there discovery (Sharma, 2005).In current scenario it is very urgent to protect and conserve these plants as well as animals life for successful cycling of the ecosystem(Shetty& singh, 1987). To study the flora of the state, a small attempt has been done to study the flora of the university campus. Different morphological features are studied like roots, stem, leaves there number, morphology, habits in addition reproductive features are also studied here calyx ,corolla androecium, gynoecium being studied (Saldana, 1984)).

Floristic studies are useful in study of the structure, evolution an endemism & evolution of the flora of the area (Shetty & singh, 1993).

Material and Methods

Area under Study:

The present study was laid down in the Career point university, Kota, Rajasthan. The university is situated in the Alaniya region of Kota district .Alaniya Kota is situated on the National Highway 52, at a distance of about 30 Kilometers from Kota. The campus is rich with floral and faunal diversity and spread on about 50 acres. The campus is known for excellence of education .The campus has fairly excellent diverse ecological settings .The campus is located in scare vegetation due to dry weather types in the area.

The career Point University has rich and diverse kinds of plant communities which are of several ethno botanical importances.

Methods of Study:

The plant materials were selected carefully from the field, we did not collect species which are endangered and rare, and in many cases a part of the plants was selected rather than complete plants. The areas where plants species are prevalent we collect the complete plants form area.

The collection dentil such as date, place, important plant character were noted .The specimens were collected, pressed in newspaper and herbarium sheets were prepared(Jain & Rao, 1977).

Career Point University Campus area was periodic surveyed during November 2022- November2023 to document Botanical information on both wild and cultivated floristic diversity.The Study area was visited on seasonal basis many times during the Collection time period, especially during winter (Dec-Jan), summer (April-May) and rains (Aug-Sept). The represented specimens were collected and herbarium sheets were prepared, preserved and deported in the Herbarium of department of botany. All the observed plant species were listed according to their systematic position with vernacular names.The collected plant specimen were identified by the taxonomic literature.

Result and Discussion:

In present investigation, which deals with study of vegetation in the Career Point University campus, Kota, a total of 94 plant species have been recorded based on the literature of kirtikar *et al*., 1998.We

exclude lichen ,bryophytes, pteridophytes from the list. A perusal of table-1 depicts that the recorded plant species belong to 40 plant families. Among the recorded plant families, the dominant family is Fabaceae which is represented by mainly 14 plant species. The present study shows that campus of Career point university, kota is rich with the vascular flora, the floristic composition is dominated by the angiosperms. A higher proportion of the flora is represented by the ornamental plants which are basically trees and shrubs. In the present studies each plants in the campus is carefully studied with also there future prospection. Many of these plants are used by adjoining tribal communities of Alaniya village for their primary healthcare treatment of diseases(WHO, 2002). There are few herbs which are used for the treatment of disorders of digestive system, liver, cardiovascular system by the tribal communities. These herbs, shrubs, trees are the sources of antioxidants for treatment of free reactive oxygen (Yoganarasimhan,2000).

Expression of Gratitude

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Table 1: List of Plant Species in the Career Point University Campus, Kota (Rajasthan)

Trees			
S.N.	***Botanical name***	***Common name***	***Family***
1	*Vachellia nilotica*(L.) P.J.H.Hurter & Mabb	Desi Babool	Fabaceae
2	*Aegle marmelos* (L.) Correa	Beal/ Bel patra	Rutaceae
3	*Albizia lebbeck* (L.) Benth.	Siris	Fabaceae
4	*Annona squamosal L.*	Sitafal	Annonaceae
5	*Azadirachta indica* **A. Juss**	Neem	Meliaceae
6	*Bauhinia variegate* Linn.	Kachnar	Fabaceae
7	*Butea monosperma* (Lam.) Taub.	Dhak, Plash	Fabaceae
8	*Cassia fistula L.*	Amaltash	Fabaceae
9	*Cassia siamea* (Lam.) H. S. Irwin & Barneby	Shyam Amaltash	Fabaceae
10	*Cratava religiosa* G.Forst.	Varun	Capparadaceae
11	*Callistemon lanceolatus*	Bottle brush	Myrtaceae
12	*Dalbergia sissoo* **(Roxb.) Kuntze**	Shisam	Fabaceae
13	*Delonix regia* **(Bojer ex Hook**.) Raf	Flame Tree	Fabaceae
14	*Embelica officinalisL.*	Amala	Euphorbiaceae
15	*Ficus benghalensisL.*	Bargad	Moraceae

16	*Ficus caricaL.*	Anjeer	Moraceae
17	*Ficus religiosaL.*	Pipal	Moraceae
18	*Gossypium hirsutumL.*	Gossypium	Malvaceae
19	*Manilkara hexandra* (Roxb.) Dubard	Rani	Sapotaceae
20	*Morinda tomentosa* (B.Heyne ex Roth)	Aal	Rubiaceae
21	*Musa paradisiaca L* .	Banana	Musaceae
22	*Prosopis cineraria* (L.) Druce	Khejrdi	Fabaceae
23	*Phoenix sylvestrisL.*	Date Palm/ Khajur	Arecaceae
24	*Polyalthia longifolia* (Sonn.) Thwaites	Ashok	Annonaceae
25	*Pongamia pinnata* (L.) Pierre	Karang	Fabaceae
26	*Psidium guajawa*	Amrrod	Myrtaceae
27	*Syzygium cumini* (L.) Skeels	Jamun	Myrtaceae
Shrubs			
1	*Adhatoda vasica* Nees	Adusa	Acanthaceae
2	*Alstonia scholaris* (L.) R. Br.	Satpatti	Apocynaceae
3	*Calotropis procera* (Aiton) W.T. Aiton	Aak	Asclepiadaceae
4	*Datura metal L.*	Dhatura	Solanaceae
5	*Euphorbia trucalliL.*	Thor	Euphorbiaceae
6	*Hibiscus rosa- sinensisL.*	China rose	Malvaceae
7	*Lawsonia inermisL..*	Mehandi	Lythraceae
8	*Murraya paniculateL.*	Bux/ Kamini	Rutaceae
9	*Nerium spp.L.*	Oleander / Kaner	Apocynaceae
10	*Nyctanthes arbor-tristisL.*	Harsingar Parijat	Nyctaginaceae
11	*Plumeria rubraL.*	Deshi Champa	Apocynaceae
12	*Tabernemontana divaricate* (L.) R.Br. ex Roem. & Schult.	Chandni	Apocynaceae
13.	*Cycas revoluta* Thunb.	Sago palm	Gymnosperm , Cycadales
14	*Cycas circinalis*	Queen sago	Gymnosperm , Cycadales
Herbs			
1	*Aloe vera* (L.) Burm.f.	Gwar	Asphodelaceae
2	*Aegeratum conzoides*	Chick weed	Compositae

2	*Alcea roseaL.*	(Holly hock)	Malvaceae
3	*Canna indicaL.*	(Keli)	Cannaceae
4	*Bryophyllum serratum*	Miracle leaf	Crassulaceae
5	*Barleraia spp.*	Porcupine flower	Acanthaceae
6	*Catharanthus roseus (Linn.) Don*	(Sadabahar)	Apocynaceae
7	*Calliandra calothyrsus*	------	Leguminosae
8	*Calotropis procera*	Akra	Asclepediaceae
9	*Celosia cristataL.*	(Cock's comb)	Amaranthaceae
10	*Chloris verigata* **(**Kunth) Stapf.	Fingergrass	Poaceae
11	*Cleome viscosaL.*	Hulhul	Capparidaceae
12	*Comelina sinensisL.*	Machunga	Commelinaceae
13	*Coriandrum sativumL.*	(Corinder)	Asteraceae
14	Cordyline fruticosa	Ti plant	Asparagaceae
15	*Cynodon dactylon* (L.) Pers	Doob	Poaceae
16	*Cyperus rotundus L.*	Nagarmotha	Cyperaceae
17	*Digitaria ciliaris* (Retz.) Koeler	Summer grass	Poaceae
18	Desmostachya bipinnata	Halfa grass	Graminae
19	***Eclipta alba*** (L.) Hassk.	Bhringraj	Euphorbiaceae
20	*Euphorbia hirta L.*	Doodi	Euphorbiaceae
21	*Euphorbia mili* Des Moul.	Poinsettia	Euphorbiaceae
22	*Helianthus annuusL.*	(Sun Flower)	Asteraceae
23	*Indigofera cordifolia*B.Heyne ex Roth	Bekara	Fabaceae
24	*Indigofera linniaei* (L.f.) Retz.	Leel	Fabaceae
25	*Jasminum sambac* (L.) **Aiton**	(Mogra)	Oleaceae
26	*Mirabilis jalapa L.*	(Four o' clock plant)	Nyctaginaceae
27	*Ocimum gratissum L.*	(Basil)	Lamiaceae
28	*Ocimum sanctum L.*	(Tulsi)	Lamiaceae
29	*Papaver rhoeas L.*	(GardenPoppy)	Papaveraceae
30	*Parthenium Spp.*	Congress grass	Asteraceae
31	*Sonchus asper* (L.) Hill	Dudhi	Asteraceae
32	*Phyllanthus niruri L.*	Bhumi amla	Euphorbiaceae
33	*Physalis minima L.*	Gooseberry	Solanaceae

34	*Rosa indica L.*	Gulab	Rosaceae
35	*Tagetes erecta L.*	(Genda)	Asteraceae
36	*Tagetes petula L.*	(Hajara)	Asteraceae
37	*Tephrosia purpuria (L.) Pers.*	Sharpunka	Fabaceae
38	*Bouteloua dactyloides (Nutt.) Columbus*	Lawn grass	Graminae
39.	*Heteropogon contortus* **(L.) P. Beauv. ex** Roem. & Schult	Back spear grass	Graminae
40	*Zoysia spp. L.*	Lawn grass	Graminae
41	*Sorgastrum nutans L.*	Blue indian grass	Graminae
42	Panicum *virgatum*	Switch grasss	Graminae
43	*Tridex procumbensL.*	Gorkhmundi	*Asteraceae*
Climbers			
1	*Bougainvillea glabra* Comm. ex Juss.	Kagaj fool	*Nyctaginaceae*
2	*Bougainvillea spectabilis* Willd.	great bougainvillea	*Nyctaginaceae*
3	*Cestrum nocturnumL.*	(Raat Rani)	Solanaceae
4	*Jasminum grandiflorumL.*	(Chamali)	Oleaceae
5	*Quisqualis indicaL.*	(Malti bel)	Combretaceae
6	*Pergularia demia* (Forssk.) Chiov.	Utaran	Asclepiadaceae
7	*Cayratia trifolia(L.) Mabb. & J.Wen*	Jangli angoor	Vitaceae
8	*Rhynchosia minima* (L.) DC.	Tin patti	Fabaceae
9	*Coccinia indica* (L.) Voigt	Kandoori	Cucurbitaceae
10	*Cocculus hirsutus* (L.) W.Theob.	Jal –jamni	Menispermaceae

Fig: 1 Presenting flora of CPU campus area 1

Fig: 2 Presenting flora of CPU campus area 2

Fig: 3 Presenting flora of CPU campus area 3

Fig: 4 Presenting flora of CPU campus area 4

Conclusion

The human life directly depend on the flora and fauna of the specific area ,the survival of the human life depends on the specific products obtained from the pants and animals from that area .plants have several beneficiation like food ,medicines ,fuel , aesthetic ,ecological role in that area (Sharma,1986).

Plant resources are depleting due to the deforestation, and increases anthropogenic activities, many of the important plant species are near to extinction due to degraded habitat of that area so we have to conserve the flora of that area by national and international effort's, these kinds of floristic studies are helpful in the analysis of the vegetation of that area as well as their utility for the human beings.

Present study highlighted plant biodiversity in the Career Point University, campus Kota. The study resulted in identification and documentation of 83 plant species belonging to 35 families. The university campus including Botanical garden may be further used to protect important plant species of general and medicinal uses.

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