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Some floristic diversity in Vidyabharti College Campus, Seloo, dist. Wardha (Maharashtra) India

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ABSTRACT: The present study was carried out to assess floristic diversity to collect the information and number of plant species in college campus. Up to this date, the progress is relatively slow, as the number of common names, synonyms is high in studied area. One of the grand tasks of current taxonomy is to prepare a checklist of plants of the globe. For this purpose critically examined data are required in regional floras and checklists with all the taxonomic tools. Certain areas mostly the rural areas remain poorly explored as the majority of novelties come from the tropics and numerous species in these areas still waiting to get recognition. Taking into consideration the importance of taxonomy, I have selected to study the floristic diversity of Vidyabharti Mahavidyalaya campus area Seloo of Wardha District with special reference to the number of individual species in the area. The Seloo is situated at 20°50′6″N and 78°42′33″E. In 2011, the Town population was nearer 40,000. The present study attempts to understand and highlight the rainy season floristic diversity of vast plant resources of the campus in a conservation perspective. A total of 80 species of flowering plants are documented in which 44 were herbs, 20 shrubs and 16 trees distributed in 25, 15, and 12 families respectively.

Keywords: *Floristic Diversity, taxonomy, survey*

INTRODUCTION

Floristic explorations and the taxonomic study provides resourceful and opportune information about the distribution, nomenclature, ecology, utility of diversities in plant species and thus consequently about an ecosystem. From the very beginning of inception of human beings on the earth man has relied on plants to fulfill his basic needs for his survival. Plants provide food, shelter and health. India is one among the 12 mega-biodiversity centers identified in the world having rich biodiversity indices, vast flora and fauna coupled with different topographical, ecological, climatic factors and about 18,664 taxa of vascular plants with 5725 endemics (Nayar, 1997). It is estimated that about ten million species of plants inhabit the planet earth. Out of that only 1.7 million species are known to science. Therefore, it is a strong need to study and explore the floristic wealth. However the plant diversity is under serious threat due to various anthropogenic activities and several species are disappearing and most of the species are awaiting to study. Various species are becoming extinct. Such a scenario indicated that, there is an urgent need of conservation of floristic diversity. To originate diverse strategies, the first important step is to explore and make inventories the flora of selected areas. Keeping this point in view, the present studies were initiated to explore and make inventories the plant species.

Therefore, an attempt has been made to study the plant species present in the Vidyabharti College Campus area. Different Morphological (external) characters are being studied like habit, height, stem, leaf, flowers, inflorescence and fruits etc representing diversity of plants in the college campus.

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The variability and variety of plants species in a given area is known as Floristic diversity. It can be refers to the number of taxa in a given area or group. Floristic diversity can be measured at any level from overall global diversity to ecosystem, community, species, populations, individuals and even to genes within a single individual (Wagay et al., 2015).
The present study deals with the floristic diversity of our college campus in the earlier sense i.e. the number of individual species in the area. The present research attempts to highlight the diversity of vast plant resources of the college campus in a conservation point of view.

AREA OF STUDY

Seloo is a taluka of Wardha district in the state of Maharashtra which situated at 20°50′6″N and 78°42′33″E. Vidyabharati College is situated in the prime location with heritage building along with a play ground and beautiful herbal and medicinal Garden over the 6.20 acres of a piece of land of the Seloo taluka. The total garden area covers about 2500 sq. feet. The study area has well distinguished three seasons as a rainy monsoon, a hot summer and a winter. The area has sub tropical climatic conditions with liberal rainfall in the monsoon resulting in wealthy plant diversity in the campus area.

Map: Seloo Taluka in the state of Maharashtra

MATERIAL AND METHODS

All the plants were observed during all seasons of the year 2016-2019. During observation field notes were recorded and voucher specimens of studied plants species were collected. The collected specimens were processed using usual taxonomic methods of drying and mounting. The specimens were identified with the help of floras and existing literature (Bentham & Hooker, 1862-83; Cooke, 1958; Naik, 1977,1998; Singh & Karthikeyan, 2000; Singh et al., 2001) and herbariums were prepared and deposited in the Department of Botany, Vidyabharati Mahavidyalya, Seloo.

RESULTS AND DISCUSSION

The Present study deals with the documentation of the total number of herbs, shrubs and angiospermic trees species present in the campus. Out of these, some of the plants have been planted here which is brought from different areas of the state and maintain well in the garden. The list of studies plant species of campus is provided here in table with some photographs. A total of 80 species of flowering plants are documented in which 44 were herbs, 20 shrubs and 16 trees distributed in 25, 15, and 12 families respectively.

CONCLUSIONS

The present results could be a pilot to strengthen conservation measures across the campus area by understanding the impact of the presence of plant species and

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is also useful for future assessment of floristic diversity in the campus.

Table : List of plant species: Herb

Sr.No.	Botanical Name	Family	Category
1.	*Achyranthus aspera* L.	Amaranthaceae	Herb
2.	*Adenium* Roem. & Schult.	Apocyanaceae	Herb
3.	*Aloe vera* L.	Liliaceae	Herb
4.	*Andrographis paniculata* Nees.	Acanthaceae	Herb
5.	*Asparagus racemosus* (L.) Willd.	Asparagaceae	Herb
6.	*Baliosperm um montanum* Blume	Euphorbiaceae	Herb
7.	*Bryophylu m pinnatum* L.	Crassulaceae	Herb
8.	*Catharanth us roseus* (L.) G.Don	Apocynaceae	Herb
9.	*Centella asiatica* (L.) Urban	Apiaceae	Herb
10.	*Chlorophyt um comosum* (Thunb.) Jacques	Liliaceae	Herb
11.	*Chrysanthe mum morifolium* Ramat.	Asteraceae	Herb
12.	*Cissus qudrangula ris* L.	Vitaceae	Herb
13.	*Clitoria ternatea* L.	Fabaceae	Herb
14.	*Colocasia esculanta* (L.) Schott	Araceae	Herb
15.	*Curcuma longa* L.	Zingiberaceae	Herb
16.	*Cyanotis axillaris* (L.) D.Don	Commelinaceae	Herb
17.	*Datura metal* L.	Solanaceae	Herb
18.	*Eleusine indica* (L.) Gaertn	Poaceae	Herb
19.	*Euphorbia geniculata* L.	Euphorbiaceae	Herb
20.	*Euphorbia hirta* L.	Euphorbiaceae	Herb
21.	*Dracaena reflexa* Lam.	Asparagaceae	Herb
22.	*Hemidesm us indicus* (L.) R. Br. ex Schult.	Apocynaceae	Herb
23.	*Hymenocal lis littoralis* (Jacq.) Salisb.	Amaryllidaceae	Herb
24.	*Ipomoea cairica* (L.) Sweet.	Convolvulaceae	Herb
25.	*Ipomoea obscura* (L.) Ker Gawl	Convolvulaceae	Herb
26.	*Jasminum sambac* (L.) Aiton	Oleaceae	Herb
27.	*Mentha spicata* L.	Lamiaceae	Herb
28.	*Mimosa pudica* L.	Fabaceae	Herb
29.	*Ocimum sanctum* L.	Lamiaceae	Herb
30.	*Partheniu m hysteropho rus* L.	Asteraceae	Herb
31.	*Pentanema indicum* (L.) Ling	Asteraceae	Herb

32.	*Phyllanthus amarus* (L.) Schumach. & Thonn.	Euphorbiaceae	Herb
33.	*Physalis minima* L.	Solanaceae	Herb
34.	*Plumbago zeylanica* L.	Plumbaginaceae	Herb
35.	*Rouwlfia serpentine* (L.) Benth. *ex* Kurz	Apocynaceae	Herb
36.	*Sopubia delphinifolia* (L.) G. Don	Scrophulariaceae	Herb
37.	*Spilanthus acmella* Murr.	Compositae	Herb
38.	*Tephrosia purpurea* (L.) Pers	Fabaceae	Herb
39.	*Themada quadrivalvis* (L.) Kuntze	Poaceae	Herb
40.	*Thunbergia fragrans* Roxb.	Acanthecea e	Herb
41.	*Tribulus terestris* L.	Zygophyllaceae	Herb
42.	*Trichodesma indicum* R. Br.	Boraginaceae	Herb
43.	*Withania somnifera* (L) Dunal.	Solanaceae	Herb
44.	*Xenostegia tridentata* L.	Convolvulaceae	Herb
Table : List of plant species: Shrub			
45.	*Abelmoschus moschatus* L.	Malvaceae	Shrub
46.	*Abitulon indicum* (L.) Sweet	Malvaceae	Shrub
47.	*Abrus precatorius* L.	Fabaceae	Shrub
48.	*Bougainvillea* sp.	Nyctaginaceae	Shrub
49.	*Calotropis procera* (Ait) R. Br.	Asclepiadaceae	Shrub
50.	*Cassia tora* L.	Caesalpinaceae	Shrub
51.	*Duranta repens* L.	Verbenacea e	Shrub
52.	*Hibiscus rosa-sinensis* L.	Malvaceae	Shrub
53.	*Jatropha curcas* L.	Euphorbiaceae	Shrub
54.	*Justicia adhatoda* L.	Acanthacea e	Shrub
55.	*Lantana camara* L.	Verbenacea e	Shrub
56.	*Morus alba* L.	Moraceae	Shrub
57.	*Murraya koenigii* (L.) Sprengel	Rutaceae	Shrub
58.	*Musa sp.* L.	Musaceae	Shrub
59.	*Nerium oleander* L.	Apocynaceae	Shrub
60.	*Piper betle* L.	Piperaceae	Shrub
61.	*Plumeria pudica* Jacq.	Apocynaceae	Shrub
62.	*Ricinus communis* L.	Euphorbiaceae	Shrub

63.	*Tecoma stans* (L.) ex Kunth	Bignoniaceae	Shrub
64.	*Tinospora cardifolia* (Thunb.) Miers	Meninspermaceae	Shrub
Table: List of plant species: Trees			
65.	*Acacia nilotica* (L.) Delile	Mimosoideae	Tree
66.	*Alstonia scholaris* (L.) R.Br.	Apocynaceae	Tree
67.	*Azadirachta indica* A. Juss.	Meliaceae	Tree
68.	*Butea monosperma* (Lam.) Taub.	Fabaceae	Tree
69.	*Cassia fistula* L.	Fabaceae	Tree
70.	*Delonix regia* (Boj. Ex Hook.) Raf.	Fabaceae	Tree
71.	*Ficus benjamina* L.	Moraceae	Tree
72.	*Gliricidia sepium* (Jacq.)Walp.	Fabaceae	Tree
73.	*Mimusops elengi* L.	Sapotaceae	Tree
74.	*Moringa oleifera* Lam.	Moringaceae	Tree
75.	*Phyllanthus emblica* L.	Phyllanthaceae	Tree
76.	*Pongamia pinnata* (L.) pierre	Fabaceae	Tree
77.	*Prunus dulcis* (Mill.) D.A. Wbb	Rosaceae	Tree
78.	*Scaevola taccada* (Gaertn.) Roxb.	Goodeniaceae	Tree
79.	*Saraca asoca* (Roxb.) DC Wild	Caesalpiniaceae	Tree
80.	*Tectona grandis* L. f.	Verbenaceae	Tree

Some of the photographs of studied Plants:

Cassia tora L.

Duranta repens L.

Trichodesma indicum R. Br.

Sopubia delphinifolia (L.) G.Don.

Xenostegia tridentata L.

Lantana camara L.

Acacia nilotica (L.) Delile

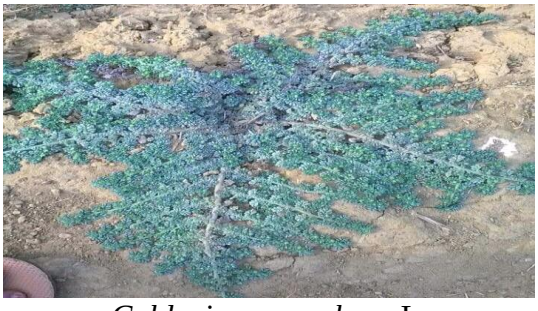
Pentanema indicum (L.) Ling.

Euphorbia geniculata L.

Spilanthus acmella Murr.

Clitoria ternatea L.

Abitulon indicum (L.) Sweet



Coldenia procumbens L.

Thunbergia laevis Nees

Ipomoea obscura (L.) Ker Gawl

Phyllanthus amarus L.

Tribulus terestris L.

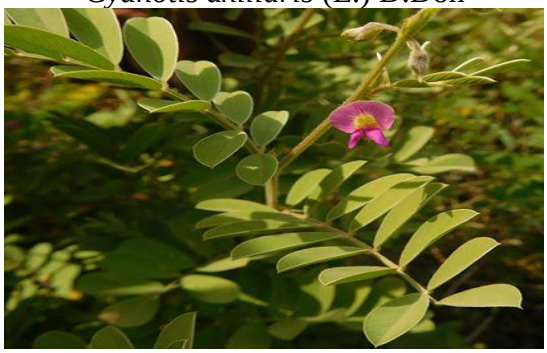
Parthenium sp.

Euphorbia hirta L.

Justicia adhatoda L.

Cyanotis axillaris (L.) D.Don

Hemidesmus indicus R.Br.



Tephrosia purpurea (L.) Pers

Physalis minima L.

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