



**“Survey of Dicots in College Campus”.**

## **Project Report**

under

**DBT Star College Scheme**

**Department of Biotechnology, New Delhi**

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Submitted to

**Dept. of Botany**

**Mula Education Society's**

**Arts, Commerce and Science College, Sonai**

**Tal- Newasa, Dist-Ahmednagar**


**Academic Year 2020-21**




**Mula Education Society's**  
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## Certificate

This is to certify that the work incorporated in the project report on **“Survey of Dicots in College Campus”** by Miss. Komal N. Chaudhari, Miss. Pooja S. Chaudhari, Miss. Shradha V. Jawale and Miss. Rutuja S. Shinde are students of Arts, Commerce and Science College Sonai, Tal. Newasa, Dist. Ahmednagar. Affiliated to the Savitribai Phule Pune University Pune successfully completed project.

  
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# Acknowledgment

It gives pleasure to express my sincere thanks to my research project guide Dr. A.R. Tuwar for his timely help, constant support, encouragement, valuable suggestion and generous treatment right from beginning till the end of project.

We convey our special thanks to Hon. Shri. Prashant Patil Gadakh President of Mula Education Society, Sonai, Shri. U.M. Londhe (Secretary of MES, Sonai) and Dr. V.K. Deshmukh Joint Secretary of MES, Sonai.

We are also thank-full to Dr. S.L. Laware Principal and Dr. A.R. Tuwar Head of Department of Botany of the college.

We completed this project under DBT Star College Scheme so we are thankful to Department of Biotechnology, Government of India. Our sincere thanks to all our teachers of chemistry department for their encouragement and support. We are indebted to our parents and best friends for their support and encouragement whatever we invented to be in future is becomes of them.

## **Project students**

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## Declaration

We hereby declare that the work done in this thesis entitled "**Survey of Dicots in College Campus**" is submitted to Department of Botany, Arts, Commerce and Science College Sonai. This project is completed under the DBT Star College Scheme and the supervision of **Dr. A.R. Tuwar**. The work is original and not submitted in part or full by me or any other to this or any other University.

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## **INTRODUCTION:**

Plants are very important in human life. He is dependent on plants to fulfil his basic needs for his survival. Plants provide food, shelter and health. It is estimated that about ten million species of plants inhabit the planet earth of which, however only 1.7 million species are known to science. It is therefore the need of the hour to explore the floristic wealth of the earth so as to know what we have. The plant diversity however is under serious threat due to various anthropogenic factors and many plant species are disappearing. Many species are becoming extinct even before their discovery. This scenario necessitates the urgent need of conservation of this diversity. To formulate various strategies for this purpose, the first important step is to explore and inventories the flora. Keeping this perspective in iew the present studies were conducted to explore and inventories the plant species. Therefore, an attempt has been made to study the plant species present in the campus. Different Morphological characters are being studied like habit, height, leaf, inflorescence, flowers, and fruits etc representing diversity of plants in the campus of Arts, Commerce and Science College, Sonai.

Dicot diversity can be defined as the variety and variability of plants in a given region. It refers to the number of types or taxa in a given region or group. Dicot 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. The present survey deals with the floristic diversity of college campus in the former sense, i.e., the number of individual species in the area. The present report attempts to highlight the on dicots of the college campus. In this survey we have focused only on the flowering plants of the campus.

### **Area of study:**

Sonai, Ahmednagar is in the state of Maharashtra with its district headquarters situated at 39°19'56" N and 74° 81'85" E. Our college is situated 8 km away from Pune- Aurangabad highway. Our college campus is very beautiful, thousands of plants present in campus e.g. Mango, Coconut, Chikku, Peltophorum, *ficus benjamina* etc. It has a set of beautiful buildings along with a playground & Gardens situated over the 8.00 acres of a piece of a land. The total area under the gardens is about 20,000 sq. feet. The study area has well demarcated four seasons as a hot summer, heavily raining monsoon, a brief autumn and a mild winter. The area has sub-tropical climatic conditions with ample rainfall in the monsoon resulting in a rich diversity of vascular plants.



## **MATERIAL AND METHODS:**

Plants were observed during all seasons of the year 2020-21. During observation field notes were recorded in field notebooks and voucher specimens of these species were collected. The collected specimens were processed using usual taxonomic methods of drying and mounting. The specimens were identified with the help of existing literature (Bentham & Hooker, 1862-83; Cooke, 1901-1908; Dhore, 1986; Naik, 1966,1977,1998; Singh *et al.*,2000; Singh *et al.*; 2001) and have been preserved in the herbarium of Department of Botany, Arts, Commerce and Science College, Sonai.

## **RESULTS AND DISCUSSION:**

The research area covers an area of about 8 acres in the Arts, Commerce and Science college, Sonai. In the present investigation, a total of 109 species representing 95 genera belonging to 43 families have been recorded. Of the 43 families, the most dominant family is Caesalpinaceae with 10 species. Euphorbiaceae with 8 species, followed by Apocynaceae and Asteraceae (6 species), Bignoniaceae, Fabaceae, Lamiaceae, Mimosaceae, Moraceae and Myrtaceae with 4 species and remaining families with 1-3 species (Table 1).

The study found that the plants recorded from the campus area are economically very important. Some of them are medicinal value; some are ornamental value and few are edible. The documentation of plant is the only way to preserve the fundamental knowledge of the plant resources and it will be useful to the campus students for further research.

## **CONCLUSION:**

In terms of preserving the floral biodiversity, it is very important to set up a botanical garden in the confines of the campus and cultivate these plants, and protect the ones that grow naturally on the grounds. The study found that the plants recorded from the campus area are economically very important. Some of them are medicinal value; some are ornamental value and few are edible. Since in recent years the usage of plants for medicinal purpose is increasing, the knowledge of Ethno botany should be made available to all students and faculties. The documentation of plant is the only way to preserve the fundamental knowledge of the plant resources and it will be useful to the campus students and faculties for further research. Due to over exploitation and deforestation in the natural habitat, few of the presently reported plant species are endangered. Strict conservational measures are to be taken to protect these plants species from becoming rare or endangered.

**Table 1:** List of Plant species with family present in A, C & S College, Sonai.

<b>Family</b>	<b>Botanical Name</b>	<b>Common Name</b>
Acanthaceae	<i>Adhatoda vasica</i>	Adulsa
	<i>Barleria prionitis</i> Linn.	Kate Koranti
	<i>Justicia procumbens</i> Linn.	Ghati pittapapada
Amaranthaceae	<i>Achyranthes aspera</i> Linn.	Aghada
	<i>Amaranthus spinous</i> Gmelin.	Tandulcha
	<i>Celosia argentea</i> Linn.	Kurdu
Anacardiaceae	<i>Mangifera indica</i>	Aamba
Annonaceae	<i>Anona squamosa</i> Linn.	Seetaphal
	<i>Polyalthea longifolia</i> Linn.	Ashok
Apocynaceae	<i>Alstonia scholaris</i>	Saptarni
	<i>Catharantus roseus</i> G.Don	Sadfuli
	<i>Nerium indicum</i> Mill.	Kanher
	<i>Plumeria alba</i>	Chafa
	<i>Tabernaemontana coronaria</i> R.Br.	Tagar
	<i>Thevetia peruvinia</i> A.Juss.	Bitti
Aristolochiaceae	<i>Aristolochia bracteolata</i> Retz.	Gindhan
Asclepiadaceae	<i>Calotropis gigantea</i> (Linn.) R.Br.	Mothi Rui
	<i>Pergularia daemia</i> R.Br.	Utarand
Asteraceae	<i>Chrysanthemum indicum</i> Linn.	Shevanti
	<i>Echinops echinatus</i> Roxb.	Kate chedu
	<i>Eclipta alba</i> Hassk.	Kala maka
	<i>Tagetes erecta</i> Linn	Zendu
	<i>Tridax procumbens</i> Linn.	Tantani
	<i>Vernonia cineraria</i> Less.	Shahadevi
Bignoniaceae	<i>Spathodea companulata</i> P.Beauv.	Spathodia
	<i>Tabebuia pentaphylla</i> R.Br.	Tabebua
	<i>Tabebuia</i> sp.	Tabebua
	<i>Thunbergia laevis</i> Nees.	Thunbergia
Caesalpinaceae	<i>Bauhinia Perpuria</i>	Kanchan
	<i>Caesalpinia bonducella</i> Fleming.	Sagargota
	<i>Cassia auriculata</i> Linn.	Tarwad
	<i>Cassia fistula</i> Linn.	Bahava
	<i>Cassia javanica</i> Linn.	Pinkeshwar
	<i>Cassia siamea</i> Linn.	Kashid
	<i>Caesalpinia pulcherrima</i> (Linn.) Sw.	Shankasur
	<i>Delonix regia</i> (Bhoj.ex Hook) Raf.	Gulmohar
	<i>Peltoforum pterocarpum</i>	Pilmohor
	<i>Tamarindus indica</i> Linn.	Chinch
Capparaceae	<i>Capparis decidua</i> Retz.	Kiral



	<i>Cleome viscosa</i> Linn.	Pivli Tilwan
	<i>Gynandropsis pentaphylla</i> DC.	Safed tilwan
Casuarinaceae	<i>Casuarina equisetifolia</i> Linn.	Suru
Combretaceae	<i>Quisqualis indica</i> Linn.	Madhumalati
	<i>Terminalia catappa</i> Linn.	Badam
Convolvulaceae	<i>Argyrea nervosa</i> Sweet.	Samudrashok
	<i>Evolvus alsinoides</i> Linn	Shankhpushpi
Crassulaceae	<i>Bryophyllum</i> spp.	Panfuti
	<i>Opuntia</i> spp.	Nivdung
Cucurbitaceae	<i>Benincasa hispida</i> (Thunb.) Cogn.	Kohala
Cuscutaceae	<i>Cuscuta reflexa</i> Roxb.	Amarvel
Euphorbiaceae	<i>Acalypha indica</i> Linn.	Khokali
	<i>Croton tiglium</i> Linn.	Jamalgota
	<i>Euphorbia hirta</i> Linn.	Dudhi
	<i>Euphorbia mili</i> (Rott.) Linn.	Lal-Dudhani
	<i>Euphorbia tirucauli</i> Linn.	Sher
	<i>Jatropha gossypifolia</i> Linn	Mogli Erand
	<i>Phyllanthus niruri</i> Linn.	Bhui amla
	<i>Ricinus communis</i> Linn.	Erand
Fabaceae	<i>Abrus precatorius</i> Linn.	Gunj
	<i>Clitoria ternatea</i> Linn.	Gokarn
	<i>Pongamia pinnata</i> (Linn.)Merr.	Karanj
	<i>Tephrosia perpurea</i> (Linn.)Pers.	Unhali
Lamiaceae	<i>Mentha arvensis</i> Linn	Pudina
	<i>Ocimum basilicum</i> Linn.	Sabja
	<i>Ocimum canum</i> Sims.	Ram tulas
	<i>Ocimum sanctum</i> Linn	Krishna tulas
Lythraceae	<i>Lagerstromia parviflora</i> R.Br.	Taman
Malvaceae	<i>Abelmoschus tetraphylla</i>	Ranbhendi
	<i>Hibiscus rosa-sinensis</i>	Jaswand
	<i>Sida cordifolia</i> Linn.	Chikna
Meliaceae	<i>Azadiracta indica</i> A.Juss.	Kadu-Nimb
	<i>Melia azadirach</i> Linn.	Bakan
Mimosaceae	<i>Albizia lebbeck</i> Benth.	Shirish
	<i>Dalbergia sisoo</i> Linn.	Sisav
	<i>Mimosa pudica</i> Linn.	Lajalu
	<i>Prosopis spicigera</i> Linn.	Soundad
Moraceae	<i>Artocarpus heterophyllus</i>	Fanas
	<i>Ficus bengaloneses</i> Linn.	Wad
	<i>Ficus benjamina</i> Linn	Pimprni
	<i>Ficus religiosa</i> Linn.	Pimpal
Moringaceae	<i>Moringa oleifera</i> Lam.	Shevga

Muntingiaceae	<i>Muntingia calabura</i>	Cherry
Myrtaceae	<i>Callistemon lanceolatus</i> (Sm.)	Bottle Brush
	<i>Psidium guajava</i> Linn.	Peru
	<i>Punica granatum</i> Linn.	Dalimb
	<i>Syzygium cumini</i> (Linn.)Linn.	Jambul
Nyctaginaceae	<i>Mirabilis jalapa</i> Linn.	Gulbaksh
Oleaceae	<i>Jasminum officinale</i> Linn.	Jai
	<i>Jasminum sambac</i> Ait.	Mogara
	<i>Nyctanhus arbor-tristis</i> R.Br.	Parijatak
Oxalidaceae	<i>Oxalis corniculata</i> Linn.	Amboshi
Palmaceae	<i>Borassus flabelifer</i> Gmelin.	Bottle Palm
Papaveraceae	<i>Argemone Mexicana</i> Linn.	Bilayat
Phylanthaceae	<i>Embllica officinalis</i> Gaertn.	Amla
Piperaceae	<i>Piper longum</i> Linn.	Lendi-pimpli
Proteaceae	<i>Grevillea robusta</i> A.Cunn. ex R.Br.	Silver Oak
Rosaceae	<i>Rosa domascena</i> Mill	Gulab
Rubiaceae	<i>Hamelea patens</i> Jacq.	Hamelea
	<i>Ixora coccinia</i> Linn	Ixora
Rutaceae	<i>Aegle marmelos</i> Corr.	Bael
	<i>Citrus aruntifolia</i>	Limbu
	<i>Murraya koenigii</i> Spreng.	Kadhipatta
Santalaceae	<i>Santalum album</i> Linn.	Chandan
Solanaceae	<i>Datura stramonium</i> Mill.	Safed Dhotara
	<i>Solanum nigrum</i> Linn.	Kangni
Verbenaceae	<i>Duranta erecta</i> R.Br.	Golden Duranta
	<i>Lantana camara</i> Linn	Ghaneri
	<i>Tectona grandis</i> Linn.	Sag
Zygophyllaceae	<i>Tribulus terrestris</i> Linn.	Sarata

PLATE FIG-I



*Lagerstromia parviflora* R.Br.



*Peltoforum pterocarpum*



*Delonix regia* (Bhoj.ex Hook)Raf.



*Ceasalpinea pulcherrima* (Linn.) Sw.



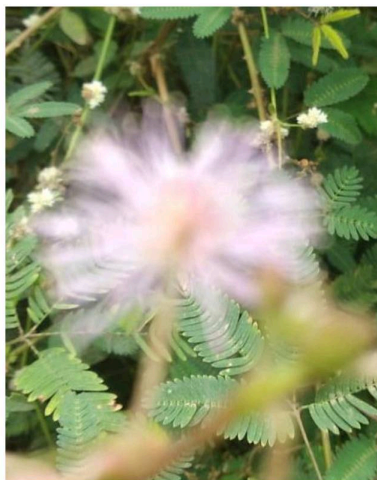
*Hamelea patens* Jacq.



*Adhatoda vasica*



*Chrysanthemum indicum* Linn.



*Mimosa pudica* Linn.



*Clitorea ternatea* Linn.



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