

**2015**

**BIODIVERSITY ASSESSMENT REPORT OF  
MODERN EDUCATIONAL CAMPUS,  
SHIVAJI NAGAR PUNE**



**Submitted By**  
**Department of Biodiversity,**  
**MES Abasaheb Garware College, Pune**  
**Ph.: 020 – 41038236 / 7**  
**Email: biodiversitygarware@gmail.com**



Progressive Education Society's

**MODERN COLLEGE OF ARTS, SCIENCE & COMMERCE**

Shivajinagar, Pune 411 005.

- NAAC Re-accredited 'A' Grade
- 'College with Potential for Excellence', UGC
- 'Best College Award', SPPU
- 'Star College Status', DBT
- UGC : BSR & DST : FIST Funded
- 'Community College Scheme', UGC

**Dr. R. S. Zunjarrao**

*M.Sc. Ph.D.*

**PRINCIPAL**

- P.U. AFFILIATION No. (Id No. PU/PN/ASC/022(1970))
- U.G.C. RECG.NO. included U/S 2 (F) of the U.G.C. Act 1956, Letter No. F.13-371(CD) dated 1st Sept.71
- Govt. RECG. No. D.E.M.S. Pune Oct. 77, Code No. PA/ASC-13.
- Jr. College Permission No. HSC/1077/31029/XII-HS dt/ 4-5-77, HSC College Code No. J-11.11.005.

Ref. No. : MCASC/

Date :

27/12/2016

To,  
Ankur Patwardhan  
Dept. of Abasaheb Garaware College  
Pune.

**Subject: Compliance of Biodiversity Audit Report 2015-16.**

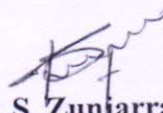
Respected Sir,

With reference to the compliance of Biodiversity Audit Report 2015-16 of our College,  
We are submitting herewith compliance of Biodiversity Audit Report 2015-16.

Kindly Acknowledge.

Thanking You

Your's sincerely

  
**Dr. R. S. Zunjarrao**  
(Principal)

## Compliance of Biodiversity Audit

**Recommendation:** 1. Proper waste material disposal areas need to be set up for avoiding loss of important flora and fauna species present in the campus area.

**Compliance:** Yes, this has been done. All concerned staff members are instructed accordingly.

**Recommendation:** 2. Air pollution due to the burning activities can be minimized.

**Compliance:** All concerned people are instructed to avoid burning of garbage.

**Recommendation:** 3. Large amount of plastic waste was seen in the campus.

**Compliance:** Disposal system with respect to 'Zero Garbage Campus' has been initiated.

**Recommendation:** 4. Presence of the African snails was recorded. It is necessary to control these snails, since they are voracious feeders and can cause damage to almost any plant in the campus.

**Compliance:** Control measures have been taken by the concerned members.

**Recommendation:** 5. Absence of identification boards on trees was observed.

**Compliance:** The process of display of name plates on trees has been initiated.



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# **BIODIVERSITY ASSESSMENT REPORT**

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**OF**

**MODERN COLLEGE AND EDUCATIONAL**

**CAMPUS**

(Including Modern College of Science, Arts and Commerce,  
Modern College of Engineering, Modern Pre – Primary, Primary  
and English Medium School, Modern Marathi School)



**CONDUCTED BY**

**DEPARTMENT OF BIODIVERSITY**

**MES ABASAHEB GARWARE COLLEGE, PUNE**

**2015**

## PROLOGUE

It gives us great pleasure to present the assessment report of "*Biodiversity Assessment of Modern Educational Campus, Shivajinagar*". The present study was conducted during the short period from May 2015 to June 2015. We restricted ourselves to rapid biodiversity survey and systematic photo-documentation as per the directives given by the Principal, Modern College. Therefore, Present study can be considered as a snap-shot of biodiversity of the Modern Educational Campus area. *Systematic documentation coupled with measures for enhancement and protection will prove to be a prudent step towards 'environment protection and green initiative'.*

Place: Pune

Date: 20 / 7 / 2015

AAG.

(Dr. Ankur Patwardhan)

Principal Investigator

## ACKNOWLEDGEMENTS

We express our heartfelt thanks to **Management of Progressive Education Society and Dr. R. S. Zunjarrao, Principal Modern College** for their support and interest.

We would like to extend our appreciation towards Shri. Gopale Sir, who was the Nodal point contact for Modern Educational Campus. Further, we would like to acknowledge the efforts of Shri. Omkar Joshi, who took care of the logistics, and was our guide during the process of site visits, and looked after the permissions and arrangements during the visits.

We would also like to thank Dr. Shrikant Gupta, Principal, MES Abasaheb Garware College for his support to the department in conducting such projects.



Dr. Ankur Patwardhan  
**Head of Department**  
**Department of Biodiversity**

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**ADMINISTRATIVE TEAM**

- 1) Dr. Ankur Patwardhan – Principal Investigator
- 2) Sagar S. Apte – Nodal Contact

**EXPERT TEAM**

- 1) Dr. Ankur Patwardhan – Plants and Butterflies
- 2) Ms. Amruta Joglekar – Plants and Photo documentation
- 3) Mr. Amit Bansude – Photo documentation
- 4) Mrs. Medhavi Tadwalkar – Data Assessment
- 5) Mr. Sagar S. Apte – Data Compilation



## **CHAPTER - 1**

### **BIODIVERSITY ASSESSMENT – AN INSIGHT**

India is one of the countries globally recognized for its mega-diversity. India is also a signatory to the United Nations Convention on Biological Diversity and allied Conventions that concern Climate Change, Desertification and Wetlands. Biological Diversity (Biodiversity), which in its most abbreviated sense is the variation in life in and around us, is therefore of national and international importance.

Explosion of human population and increased pressure on land and water resources for daily needs and infrastructure development, have led to rapid depletion of the biodiversity all over the country. A large chunk of the remnant biodiversity, which in itself is less than 5% of India's land, is conserved by a system of legally Protected Areas. Outside this system, India's biodiversity has found refuge in many private lands, which, day and now are diminishing in numbers as well.

The handful of biodiversity rich and privately managed refuges include the sprawling campuses of education institutions in otherwise ecologically devastated urban landscapes. Institution campuses that shelter native biodiversity within mega-cities are essentially ecological islands. Sustainable management of these ecological islands is the greatest challenge that is currently faced by biodiversity conservation initiatives.

The Pune Urban Area is a location surrounded by many hills, which offer a very suitable environment for the different species of flora and fauna to thrive. Keeping this in mind, localized studies of some biodiversity rich campuses was carried out by some researchers. Vartak (1964) was the first researcher who carried out such a study of Pune Corporation Campus. He was also the first to record the diversity composition of Katraj hills, which is one of the major biodiversity areas of Pune. Resurvey of Katraj was done by many more researchers including Varadpande (1973), Ghate (1989) etc. Similar studies were carried out for Parvati – Pachgaon Forest Hill by Kulkarni et al., (1989) and for Ganeshkhind area as well. Joshi et al. (1992) recorded plants from Vetar hills. Many such

locations, mainly hilly sides are present near pune, which are important biodiversity shelters.

These studies were a resultant of careful research and endeavors of conservationists to protect and conserve the biodiversity of pune area. Areas described above are just some of the many ecological islands, which are housed in pune, and now, more and more people are getting involved in the conservation of such locations.

Modern Education Campus, housed in Shivaji Nagar, Pune is one such organization, which has a positive mindset towards biodiversity conservation. The area of Modern Educational campus has a large green zone, right in the heart of pune city, which can be a critical area from conservation perspective. Coupled with the progressive opinioned approach of the management of the organization, the campus personnel have been seriously involved in the protection of the areas diversity. The main aim of this study was to assess the overall status of biodiversity of the educational campus.

## **PRESENT ASSESSMENT OBJECTIVES**

1. To create a baseline data of biodiversity of Modern Educational Campus.
  - a. To record the floral diversity present in the Campus of Modern College (Including the Engineering Campus) and Modern School Campus (Marathi and English Medium)
  - b. To record the different species of Birds and Butterflies observed in the Campus of Modern College (Including the Engineering Campus) and Modern School Campus (Marathi and English Medium)
2. To generate a database of the floral and faunal diversity and locate biodiversity rich areas and record of occurrence of the unique species.

## **KEY FINDINGS**

The site visits and the database collected provided the following key findings for the Biodiversity Assessment of Modern College Pune

- 1) A total of 107 species of flora were observed during the biodiversity survey of the Modern Educational Campus.
- 2) 13 species of Birds were observed during the survey.
- 3) 10 species of butterflies were seen.
- 4) 2 species of mammals, 1 amphibian specie and 1 mollusc specie was recorded.
- 5) 3 IUCN Listed species of conservation significance were recorded in the survey.



## CHAPTER – 2

### STUDY AREA

The study area of the present assessment included the following campuses situated in Shivajinagar Area, Pune. The total area of the entire study was 14 acres.

1. Modern College of Arts, Science and Commerce College
2. Modern College of Engineering
3. Modern English Medium School
4. Modern Marathi Medium School

**Figure 2.1: Study Area Location**

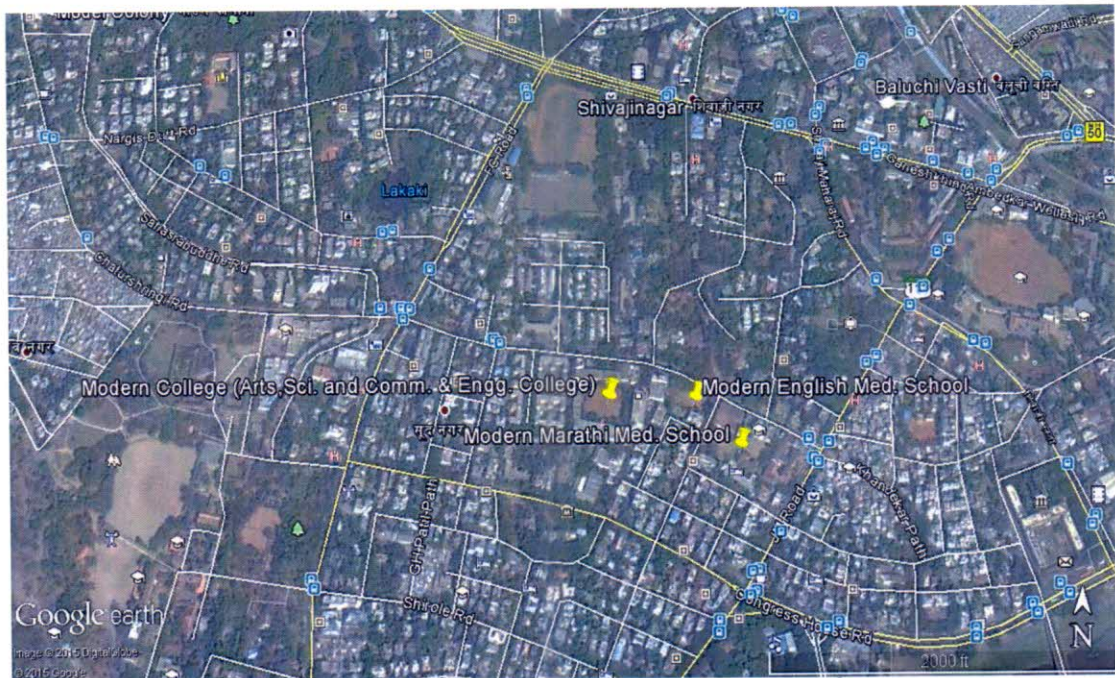
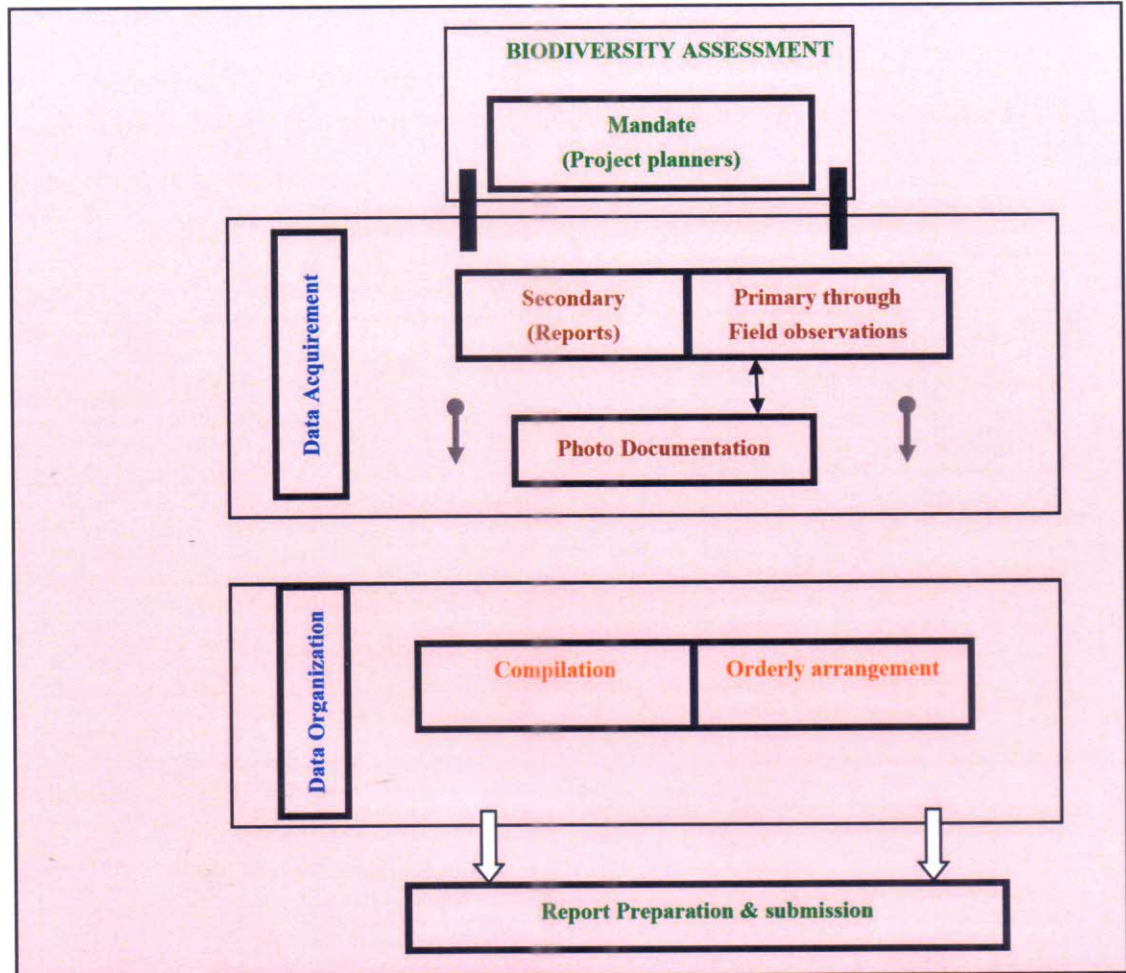


Fig. 2.2: Framework for Biodiversity Assessment



## CHAPTER - 3

### METHODOLOGY

Flora and key fauna of the study area was inventoried throughout the study period on regular basis. Faunal survey included monitoring of i) Birds, ii) Butterflies For detailed activity chart, refer to Table 3.1.

**Table 3.1: Details of Activities carried out during the project**

Date	Experts & Team Members	Activity
09 / 05 / 2015 10.30 am – 12.00 pm	Dr. Ankur Patwardhan, Ms. Amruta Joglekar, Mr. Sagar Apte	Initial meeting with Dr. R. S. Zunjarrao, Principal, Modern College.
26 / 05 / 2015 07.00 am – 09.30 am	Ms. Amruta Joglekar, Mr. Amit Bansude, Mr. Sagar Apte Mr. Omkar Joshi (College Representative)	Visit Area – Engineering College Campus, Society Area
13 / 06 / 2015 07.00 am – 09.30 am	Ms. Amruta Joglekar, Mr. Amit Bansude Mr. Omkar Joshi (College Representative)	Visit Area – Modern English Medium School and Modern Marathi Medium School Campus
16 / 06 / 2015	Mr. Sagar Apte	Receipt of Interim Reports on Trees from Gopale Sir
23 / 06 / 2015 07.00 am – 09.30 am	Ms. Amruta Joglekar, Mr. Amit Bansude, Mr. Sagar Apte Mr. Omkar Joshi (College Representative)	Visit Area – Modern Arts, Science and Commerce College Campus
23 / 06 / 2015 – 25 / 06 / 2015	Mr. Sagar Apte	Data Compilation and Report Preparation
26 / 06 / 2015 – 28 / 06 / 2015	Dr. Ankur Patwardhan, Ms. Amruta Joglekar, Mrs. Medhavi Tadwalkar	Data reconfirmation and Change inputs.
29 / 06 / 2015 - 30 / 06 / 2015	Mr. Sagar S. Apte	Report Finalization

**The floral diversity** was extensively explored throughout the study area. We adopted a checklist-based approach of diversity documentation. Trees and shrubs were focussed during the survey. There were two distinguishing landscape types - naturally grown and manicured spaces. Many species of plantation showed flowering as well as fruiting. *Record of occurrence of unique species and diverse vegetation patches were maintained with characteristic features.* Scientific literature (Flora of Botanical survey of India, Field guides). Photo-documentation was found to be useful tool for post survey taxa identification in case of rapid survey.

**The faunal diversity** was recorded during recurrent visits to the study site. Each and every bird and butterfly was recorded when encountered. Birds and butterflies (when necessary) were observed using a Nikon binocular and photographed occasionally. Field guides and online databases were referred to identify birds (Grimmett *et al.* 2011, <http://orientalbirdimages.org>) and butterflies (Kunte 2000, Kehimkar 2008).

Since this project was conducted during the Pre – Monsoon Phase. Hence, this data does not constitute the yearly-observed floral and faunal data.

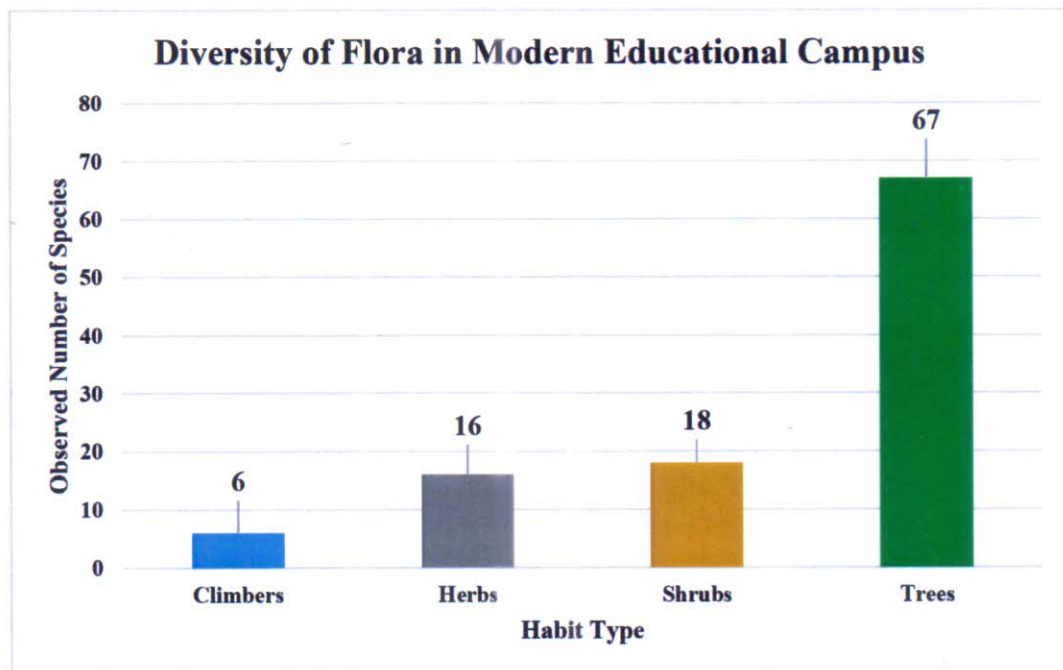
## CHAPTER – 4

### RESULTS

The Biodiversity survey of the Modern Educational Campus, Shivajinagar gave the following results:

- 1) The campus of Modern Educational Institutes demonstrated the presence of more than 15 species of flora which have been listed under the IUCN Redlist.
- 2) Out of these 15 species of plants, 3 species, namely *Pterocarpus marsupium* (Bibala), *Santalum album* (Chandan) and *Jacaranda mimosifolia* (Neelmohar) are listed under the Vulnerable Category of IUCN Redlist.
- 3) On similar lines, 11 bird species, 2 mammal species and 1 amphibian species has been listed under the IUCN Redlist.

Figure 4.1: Floral Diversity in Modern Educational Campus Shivajinagar





**Table 4.1: List of Plants recorded in Engineering College Campus**

Sr. No.	Scientific Name	Common Name	Habit	IUCN RET Status
1)	<i>Acalypha sp.</i>		H	
2)	<i>Ailanthus excels</i>	Maharukh	T	Not Assessed
3)	<i>Alstonia scholaris</i>	Satvin	T	Lower Risk
4)	<i>Alternanthera sessilis</i>		H	Least Concern
5)	<i>Azadirachta indica</i>	Kaduneem	T	Not Assessed
6)	<i>Bougainvillea sp.</i>	Boganvel	Cl	
7)	<i>Canna indica</i>	Kardal	S	Not Assessed
8)	<i>Carica papaya</i>	Papaya	T	Not Assessed
9)	<i>Caryota urens</i>	Bherli Mad	T	Least Concern
10)	<i>Cassia fistula</i>	Bahava	T	Not Assessed
11)	<i>Casuarina equisetifolia</i>	Suru	T	Not Assessed
12)	<i>Citrus sp.</i>	Limbu	T	
13)	<i>Cynodon dactylon</i>	Durva	H	Not Assessed
14)	<i>Datura sp.</i>	Dhotara	S	
15)	<i>Delonix regia</i>	Gulmohor	T	Least Concern
16)	<i>Duranta erecta</i>		S	Not Assessed
17)	<i>Emilia sonchifolia</i>		H	Not Assessed
18)	<i>Euphorbia sp.</i>		S	
19)	<i>Ficus benjamina</i>		T	Not Assessed
20)	<i>Ficus elastic var. decora</i>	Rubber	T	Not Assessed
21)	<i>Ficus glomerata</i>	Umbar	T	Not Assessed
22)	<i>Ficus religiosa</i>	Pimpal	T	Not Assessed
23)	<i>Holoptelia integrifolia</i>	Vavla	T	Not Assessed
24)	<i>Ixora coccinea</i>		S	Not Assessed
25)	<i>Jacaranda mimosifolia</i>	Neelmohar	T	Vulnerable B1+2ac Ver. 2.3

Sr. No.	Scientific Name	Common Name	Habit	IUCN RET Status
26)	<i>Leucaena latisiliqua</i>	Subabhul	T	Not Assessed
27)	<i>Leucas sp.</i>		H	
28)	<i>Mangifera indica</i>	Mango tree	T	Data Deficient
29)	<i>Millingtonia hortensis</i>	Buch	T	Not Assessed
30)	<i>Morus alba</i>	Tuti	T	Not Assessed
31)	<i>Nerium sp.</i>	Kaner	S	
32)	<i>Oxalis sp.</i>		H	
33)	<i>Pithecellobium dulce</i>	Vilayati Chinch	T	Not Assessed
34)	<i>Pongamia pinnata</i>	Karanj	T	Least Concern
35)	<i>Psidium guajava</i>	Peru	T	Not Assessed
36)	<i>Pterocarpus marsupium</i>	Bibala	T	Vulnerable A1cd
37)	<i>Ravenala madagascariensis</i>	Travellers Palm		Not Assessed
38)	<i>Roystonea regia</i>	Bottle Palm	T	Not Assessed
39)	<i>Samanea saman</i>	Raintree	T	Not Assessed
40)	<i>Swietenia mahogani</i>	Mahogany	T	Not Assessed
41)	<i>Syzygium cumini</i>	Jambhul	T	Not Assessed
42)	<i>Tamarindus indica</i>	Tamarind	T	Not Assessed
43)	<i>Thevetia peruviana</i>	Bitti	T	Not Assessed
44)	<i>Thuja sp.</i>		T	
45)	<i>Tridax procumbens</i>		H	Not Assessed
46)		Golden Bamboo	S	

**Table 4.2: List of Plants observed in Society Premises**

Sr. No.	Scientific Name	Common Name	Habit	IUCN RET STATUS
1)	<i>Albizzia lebeck</i>	Shirish		Not Assessed
2)	<i>Azadirachta indica</i>	Kaduneem	T	Not Assessed
3)	<i>Carica papaya</i>	Papaya	T	Not Assessed
4)	<i>Delonix regia</i>	Gulmohor	T	Least Concern
5)	<i>Duranta erecta</i>		S	Not Assessed
6)	<i>Eucalyptus globulus</i>	Nilgiri	T	Not Assessed
7)	<i>Ficus benjamina</i>		T	Not Assessed
8)	<i>Hamelia patens</i>		S	Not Assessed
9)	<i>Pithecellobium dulce</i>	Vilayati Chinch	T	Not Assessed
10)	<i>Samanea saman</i>	Raintree	T	Not Assessed

**Table 4.3: List of Plants Recorded in Modern Marathi Med. School Campus**

Sr. No.	Scientific Name	Common Name	Habit	RET Status
1)	<i>Aegle marmelos</i>	Bel	T	Not Assessed
2)	<i>Agave americana</i>	Ghaypat	S	Not Assessed
3)	<i>Alstonia scholaris</i>	Satvin	T	Not Assessed
4)	<i>Annona reticulata</i>	Ramphal	T	Not Assessed
5)	<i>Aphanamixis polystachya</i>	Raktrohida	T	Lower Risk
6)	<i>Azadirachta indica</i>	Kaduneem	T	Not Assessed
7)	<i>Bauhinia sp.</i>	Kanchan	T	
8)	<i>Caryota urens</i>	Bherli mad	T	Not Assessed
9)	<i>Catharanthus roseus</i>	Sadafuli	H	Not Assessed
10)	<i>Citrus sp.</i>	Limbu	T	
11)	<i>Clitoria sp.</i>	Gokarna	Cl	

Sr. No.	Scientific Name	Common Name	Habit	RET Status
12)	<i>Cynodon dactylon</i>	Durva	H	Not Assessed
13)	<i>Delonix regia</i>	Gulmohor	T	Not Assessed
14)	<i>Duranta erecta</i>		S	Not Assessed
15)	<i>Eucalyptus globulus</i>	Nilgiri	T	Not Assessed
16)	<i>Euphorbia parviflora</i>		H	Not Assessed
17)	<i>Euphorbia sp.</i>		H	
18)	<i>Ficus benghalensis</i>	Vad	T	Not Assessed
19)	<i>Ficus benjamina</i>		T	Not Assessed
20)	<i>Ficus glomerata</i>	Umber	T	Not Assessed
21)	<i>Ficus religiosa</i>	Pimpal	T	Not Assessed
22)	<i>Gardenia sp.</i>		S	
23)	<i>Grevillea robusta</i>	Silver Oak	T	Not Assessed
24)	<i>Hamelia patens</i>		S	Not Assessed
25)	<i>Hibiscus sp.</i>	Jaswand	S	
26)	<i>Holoptelia integrifolia</i>	Vavla	T	Not Assessed
27)	<i>Jasminum sp.</i>	Mogra	S	
28)	<i>Leucaena latisiliqua</i>	Subabhul	T	Not Assessed
29)	<i>Mangifera indica</i>	Mango tree	T	Data Deficient
30)	<i>Millingtonia hortensis</i>	Buch	T	Not Assessed
31)	<i>Mimosa pudica</i>	Lajalu	H	Not Assessed
32)	<i>Moringa oleifera</i>	Shevga	T	Not Assessed
33)	<i>Murraya koenigii</i>	Kadipatta	T	Not Assessed
34)	<i>Nyctanthes arbor-tristis</i>	Parijatak	T	Not Assessed
35)	<i>Parthenium hysterophorus</i>	Congress grass	H	Not Assessed
36)	<i>Phyllanthus amarus</i>	Bhui Amla	H	Not Assessed
37)	<i>Plumeria rubra</i>	Chafa	T	Not Assessed
38)	<i>Polyalthia longifolia</i>	Ashok	T	Not Assessed
39)	<i>Psidium guajava</i>	Peru	T	Not Assessed
40)	<i>Quisqualis indica</i>	Rangoon creeper	Cl	Not Assessed
41)	<i>Rosa sp.</i>	Rose	S	

Sr. No.	Scientific Name	Common Name	Habit	RET Status
42)	<i>Samanea saman</i>	Raintree	T	Not Assessed
43)	<i>Tamarindus indica</i>	Chinch	T	Not Assessed
44)	<i>Tecoma stans</i>	Tecoma	T	Not Assessed
45)	<i>Thevetia peruviana</i>	Bitti	T	Not Assessed
46)	<i>Tridax procumbens</i>		H	Not Assessed
47)	<i>Xanthium indicum</i>		H	Not Assessed
48)		Golden Bamboo	S	

Table 4.4: List of Plants recorded in Modern English Med. School Campus

Sr. No.	Scientific Name	Common Name	Habit	IUCN RET Status
1.	<i>Acacia nilotica</i>	Babhul	T	Not Assessed
2.	<i>Aegle marmelos</i>	Bel	T	Not Assessed
3.	<i>Asparagus sp.</i>		Cl	Not Assessed
4.	<i>Azadirachta indica</i>	Kaduneem	T	Not Assessed
5.	<i>Bougainvillea sp.</i>	Boganvel	Cl	
6.	<i>Canna indica</i>	Kardal	S	Not Assessed
7.	<i>Carica papaya</i>	Papaya	T	Not Assessed
8.	<i>Caryota urens</i>	Bherli mad	T	Not Assessed
9.	<i>Cassia fistula</i>	Bahava	T	Not Assessed
10.	<i>Cassia siamea</i>	Kashid	T	Not Assessed
11.	<i>Casuarina equisetifolia</i>	Suru	T	Not Assessed
12.	<i>Costus sp.</i>		S	
13.	<i>Duranta erecta</i>		S	Not Assessed
14.	<i>Euphorbia milii</i>		S	Data Deficient ver 3.1
15.	<i>Euphorbia sp.</i>		H	Not Assessed
16.	<i>Ficus benjamina</i>		T	Not Assessed
17.	<i>Ficus religiosa</i>	Pimpal	T	Not Assessed
18.	<i>Ficus sp.</i>		T	Not Assessed

Sr. No.	Scientific Name	Common Name	Habit	IUCN RET Status
19.	<i>Gliricidia sepium</i>	Giripushpa	T	Not Assessed
20.	<i>Grevillea robusta</i>	Silver Oak	T	Not Assessed
21.	<i>Hibiscus sp.</i>	Jaswanad	S	
22.	<i>Holoptelia integrifolia</i>	Vavla	T	Not Assessed
23.	<i>Ipomoea sp.</i>		Cl	
24.	<i>Ixora coccinea</i>		S	Not Assessed
25.	<i>Jasminum sp.</i>	Mogra	S	
26.	<i>Leucaena latisiliqua</i>	Subabhul	T	Not Assessed
27.	<i>Liliaceae member</i>		H	
28.	<i>Mangifera indica</i>	Mango tree	T	Data Deficient
29.	<i>Millingtonia hortensis</i>	Buch	T	Not Assessed
30.	<i>Mimosa pudica</i>	Lajalu	H	Least Concern
31.	<i>Moringa oleifera</i>	Shevga	T	Not Assessed
32.	<i>Murraya koenigii</i>	Kadipatta	T	Not Assessed
33.	<i>Musa sp.</i>	Banana	T	
34.	<i>Musa sp.</i>	Banana	T	
35.	<i>Ocimum tenuiflorum</i>	Tulas	H	Not Assessed
36.	<i>Parthenium hysterothorus</i>	Congress grass	H	Not Assessed
37.	<i>Pennisetum glaucum</i>	Bajri	S	Not Assessed
38.	<i>Plumeria rubra</i>	Chafa	T	Not Assessed
39.	<i>Polyalthia longifolia</i>	Ashok	T	Not Assessed
40.	<i>Pongamia pinnata</i>	Karanj	T	Least Concern
41.	<i>Psidium guajava</i>	Peru	T	Not Assessed
42.	<i>Rosa sp.</i>	Rose	H	
43.	<i>Roystonea regia</i>	Bottle Palm	T	Not Assessed
44.	<i>Santalum album</i>	Chandan	T	Vulnerable A1d
45.	<i>Swietenia mahogani</i>	Mahogany	T	Not Assessed
46.	<i>Syzygium cumini</i>	Jambhul	T	Not Assessed
47.	<i>Tamarindus indica</i>	Chinch	T	Not Assessed

Sr. No.	Scientific Name	Common Name	Habit	IUCN RET Status
48.	<i>Tecoma stans</i>	Tecoma	T	Not Assessed
49.	<i>Thuja sp.</i>		T	
50.	<i>Tridax procumbens</i>		H	Not Assessed
51.	<i>Wattakaka volubilis</i>	Ambri	Cl	Not Assessed
52.		Golden Bamboo	S	

**Table 4.5: List of Plants Recorded from Modern Arts, Science and Commerce College Campus**

Sr. No.	Scientific Name	Common Name	Habit	IUCN RET Status
1.	<i>Aphanamixis polystachya</i>	Raktrohida	T	Lower Risk
2.	<i>Areca catechu</i>	Supari	T	Not Assessed
3.	<i>Artabotrys hexapetalus</i>	Hirva Chafa	Shrub/ Small Tree	Not Assessed
4.	<i>Aurocaria heterophylla</i>	Christmas Tree	T	Vulnerable D2 ver 3.1
5.	<i>Azadirachta indica</i>	Kaduneem	T	Not Assessed
6.	<i>Bauhinia sp.</i>		T	
7.	<i>Bombax ceiba</i>	Katesavar	T	Not Assessed
8.	<i>Bougainvillea sp.</i>	Boganvel	Cl	
9.	<i>Caesalpinia pulcherrima</i>	Shankasur	T	Not Assessed
10.	<i>Calamus rotang</i>	Vet	Cl	Not Assessed
11.	<i>Calotropis procera</i>	Rui	S	Not Assessed
12.	<i>Caryota urens</i>	Bherli Mad	T	Least Concern
13.	<i>Cassia fistula</i>	Bahava	T	Not Assessed
14.	<i>Cassia siamea</i>	Kashid	T	Not Assessed

Sr. No.	Scientific Name	Common Name	Habit	IUCN RET Status
15.	<i>Chrysalidocarpus madagascariensis</i>		T	Least Concern
16.	<i>Citrus sp.</i>	Limbu	T	
17.	<i>Commelina sp.</i>		H	
18.	<i>Cordia sebestena</i>		T	Least Concern
19.	<i>Cycas sp.</i>			
20.	<i>Delonix regia</i>	Gulmohor	T	Least Concern
21.	<i>Drypetes roxburghii</i>		T	Not Assessed
22.	<i>Duranta erecta</i>		S	Not Assessed
23.	<i>Ficus benghalensis</i>	Vad	T	Not Assessed
24.	<i>Ficus benjamina</i>		T	Not Assessed
25.	<i>Ficus glomerata</i>	Umber	T	Not Assessed
26.	<i>Ficus religiosa</i>	Pimpal	T	Not Assessed
27.	<i>Ficus sp.</i>		T	
28.	<i>Gliricidia sepium</i>	Giripushpa	T	Not Assessed
29.	<i>Gmelina arborea</i>	Shivan	T	Not Assessed
30.	<i>Hibiscus sp.</i>	Jaswand	S	
31.	<i>Holoptelia integrifolia</i>	Vavla	T	Not Assessed
32.	<i>Ixora sp.</i>		S	
33.	<i>Lagerstroemia flos-reginae</i>	Tamhan	T	Not Assessed
34.	<i>Leucaena latisiliqua</i>	Subabhul	T	Not Assessed
35.	<i>Millingtonia hortensis</i>	Buch	T	Not Assessed
36.	<i>Mimusops elengi</i>	Bakul	T	Not Assessed
37.	<i>Morus alba</i>	Tuti	T	Not Assessed
38.	<i>Muntingia calabura</i>	Singapore Cherry	T	Not Assessed
39.	<i>Murraya paniculata</i>	Kunti	Small Tree	Not Assessed
40.	<i>Oxalis sp.</i>		H	



Sr. No.	Scientific Name	Common Name	Habit	IUCN RET Status
41.	<i>Parthenium hysterophorus</i>	Congress grass	H	Not Assessed
42.	<i>Plumbago sp.</i>		T	
43.	<i>Plumeria rubra</i>	Chafa	T	Not Assessed
44.	<i>Polyalthia longifolia</i>	Ashok	T	Not Assessed
45.	<i>Pongamia pinnata</i>	Karanj	T	Least Concern
46.	<i>Psidium guajava</i>	Peru	T	Not Assessed
47.	<i>Quisqualis indica</i>	Rangoon creeper	Cl	Not Assessed
48.	<i>Ravenala madagascariensis</i>	Travellers Palm	T	Not Assessed
49.	<i>Roystonea regia</i>	Bottle Palm	T	Not Assessed
50.	<i>Samanea saman</i>	Raintree	T	Not Assessed
51.	<i>Santalum album</i>	Chandan	T	Vulnerable A1d
52.	<i>Swietenia mahogani</i>	Mahogany	T	Not Assessed
53.	<i>Syzygium cumini</i>	Jambhul	T	Not Assessed
54.	<i>Terminalia catappa</i>	Jangli-badam	T	Not Assessed
55.	<i>Thespesia lampas</i>	Ranbhendi	T	Not Assessed
56.	<i>Thevetia peruviana</i>	Bitti	T	Not Assessed
57.	<i>Tridax procumbens</i>		H	Not Assessed

**Table 4.6: List of Birds observed in Modern College and School Campus**

Sr. No.	Common name	Scientific Name	IUCN status
1.	Common myna	<i>Acridotheres tristis</i>	Least Concern ver 3.1
2.	Brahminy starling	<i>Sturnia pagodarum</i>	Not assessed
3.	Purple sunbird	<i>Cinnyris asiaticus</i>	Not assessed
4.	Black kite	<i>Milvus migrans</i>	Least Concern ver 3.1
5.	Plum-headed parakeet	<i>Psittacula cyanocephala</i>	Least Concern ver 3.1
6.	Ashy-crowned sparrow lark	<i>Eremopterix griseus</i>	Least Concern ver 3.1
7.	House crow	<i>Corvus splendens</i>	Least Concern ver 3.1
8.	Indian grey hornbill	<i>Ocyroceros birostris</i>	Least Concern ver 3.1
9.	Rose-ringed parakeet	<i>Psittacula krameri</i>	Least Concern ver 3.1
10.	Red-vented bulbul	<i>Pycnonotus cafer</i>	Least Concern ver 3.1
11.	Ashy prinia	<i>Prinia socialis</i>	Least Concern ver 3.1
12.	Oriental Magpie robin	<i>Copsychus saularis</i>	Least Concern ver 3.1
13.	Asian Koel	<i>Eudynamis scolopaceus</i>	Least Concern ver 3.1

**Table 4.7: List of Butterflies observed in Modern College and School Campus**

Sr. No.	Common name	Scientific Name	IUCN status
1	Lemon pansy	<i>Junonia lemonias</i>	Not assessed
2	Common grass yellow	<i>Eurema hecabe</i>	Not assessed
3	Common gull	<i>Cepora nerissa</i>	Not assessed
4	Plain tiger	<i>Danaus chrysippus</i>	Not assessed
5	Lime	<i>Papilio demoleus</i>	Not assessed
6	Tiny grass blue	<i>Zizula hylax</i>	Not assessed
7	Pioneer	<i>Belenois aurota</i>	Not assessed
8	Common jay	<i>Graphium doson</i>	Not assessed
9	Common emigrant	<i>Catopsilia pomona</i>	Not assessed
10	Blue pansy	<i>Junonia orithya</i>	Not assessed

**Table 4.8: List of Mammals observed in Modern College and School Campus**

Sr. No.	Mammal Common name	Scientific Name	IUCN status
1	Common Mongoose / Indian Grey Mongoose	<i>Herpestes edwardsii</i>	Least Concern ver 3.1
2	Three striped Palm Squirrel / Common Palm squirrel	<i>Funambulus palmarum</i>	Least Concern ver 3.1

**Table 4.9: Amphibian observed in Modern College and School Campus**

Sr. No.	Common name	Scientific name	IUCN status
1	Black-spectacled Toad	<i>Duttaphrynus melanostictus</i>	Least Concern ver 3.1

**Table 4.10: Mollusc observed in Modern College and School Campus**

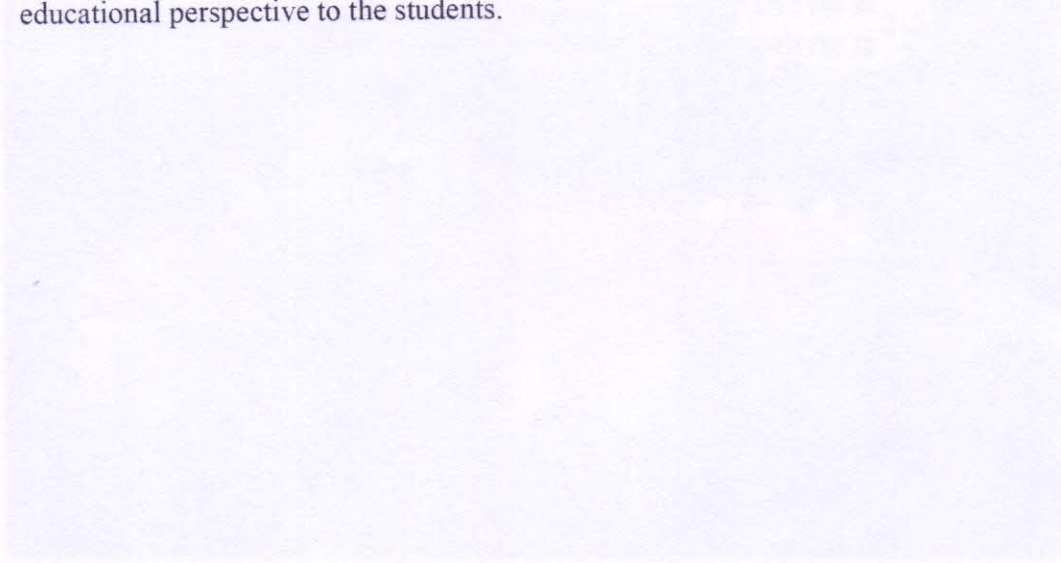
Sr.No.	Common name	Scientific name
1	Giant african snail	<i>Achatina fulica</i>

## THREATS TO BIODIVERSITY

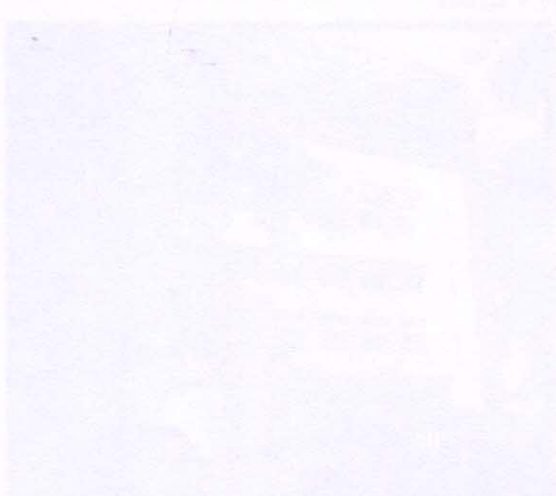
- 1) Proper waste material disposal areas need to be set up for avoiding loss of important floral and faunal species present in the campus area.
- 2) Burning of the plant waste in vermicomposting bin can be avoided. This can help in the protection of the different plant species in the vicinity, and also, lead to better conditions for nectar flora to attract the butterflies and birds. Further, air pollution due to the burning activities can also be minimized by encouraging reinstatement vermicomposting plants.
- 3) Large amount of plastic waste was seen in the campus, lying in the playgrounds, and also, near the podium area of the ground. Further, plastic was observed in the drain

systems, and was clogging the water. This clogged water can become a hazard, since it can be a breeding ground for mosquitoes and flies.

- 4) Presence of the African snails was recorded. It is necessary to control these snails, since they are voracious feeders and can cause damage to almost any plant in the campus.
- 5) Absence of identification boards on trees was observed. Having proper identification boards on all the trees increases the beauty of the campus, and also provides an educational perspective to the students.



*Modern Arts, Science and Commerce College and Engineering College Campus  
Campus View*



*Modern College of Arts, Science and  
Commerce College Area*



*Modern College of Engineering, Arts  
Campus*

**PHOTO PLATE – 1**  
**MODERN EDUCATIONAL CAMPUS OVERVIEW**



**Modern Arts, Science and Commerce College and Engineering College Campus  
Birds Eye View**



**Modern College of Arts, Science and  
Commerce Gate Area**



**Modern College of Engineering, Gate  
Area**

PHOTO PLATE – 2  
MODERN EDUCATIONAL CAMPUS OVERVIEW



Society Area of Modern Educational Campus



Modern Marathi Medium School Entrance



Modern English Medium School Entrance

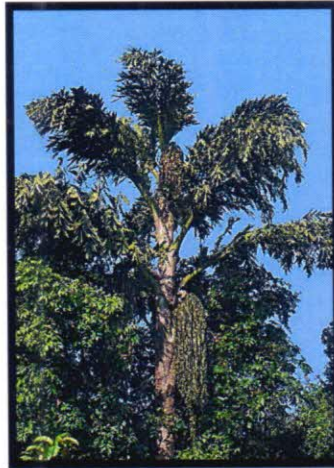


Modern English Medium School

PHOTO PLATE – 3  
NOTEWORTHY INDIGENOUS FLORA



*Azadirachta indica* (Medicinal)



*Caryota urens* (Bat host)



*Cassia fistula* (Butterfly Host)



*Gmelina arborea*



*Murraya paniculata*



*Syzygium cumini* (Edible)

PHOTO PLATE - 4  
EXOTIC FLORA



*Gliricidia sepium*



*Gliricidia sepium* Tree



*Muntingia calabura*



*Jacaranda mimosifolia*



**PHOTO PLATE – 5**  
**BUTTERFLIES**



**Lemon Pansy**



**Common Grass Yellow**



**Lime**



**Plain Tiger**



**Common Emigrant**



**Tiny Grass Blue**



**Common Jay**



**Pioneer**

**PHOTO PLATE – 6**  
**FAUNAL VARIETY**



**Oriental Magpie Robin**



**Plum Headed Parakeet**



**Black Spectacled Toad**



**Three Striped Palm Squirrel**

**PHOTO PLATE – 7**  
**THREATS TO BIODIVERSITY OF MODERN COLLEGE**



**Glass Waste**



**Plastic Waste in many areas**



**Clogging of Drains due to Plastic Waste**



**Presence of Giant African Snails, which apart from being invasive, are a major threat to Biodiversity**

**PHOTO PLATE – 8**  
**THREATS TO BIODIVERSITY**



**Improper Waste Dumping**



**Waste Burning in Vermicomposting Bin.**