

# DEPARTMENT OF BOTANY

## Annual Report 2023-24

Department of Botany is One of the Major Dept.in participating conducting variouscurricular andCo- curricular activities and contributein College Progress.

### Departmental Activity

Academicactivities like Quiz, Projects,Group discussion& Seminars,Class Test were conducted for B. Sc. I Yr., II Yr.& III Yr. as well as M. Sc. I & Ilyr.Students

Remedial coaching classes were conducted for B. Sc.I year on 3/11/2023.

1<sup>st</sup>july 2023“**Krush Divas**” was celebrated by collaboration with Environment cell, in presence of Principal Dr. V. D. Nanoty Sir.All the staff members of Botany, Environment cell &Non-Teaching staff were present.

OnIndependance Day,15/8/2023, Dept. of Botany &Environment cell has organised Tree plantation of Medicinal plants in campus in presence of Hon. Principal Dr. V. D. Nanoty Sir.All the staff members of Botany, Environment cell &Non-Teaching staff were present.

### Students Achivements:

Our student MS. Vaishnavi V. Rathod(UG) secured IInd Prize& MS. Poonam Bais (PG) secured IInd Prize in Seminar Competition Organised by Botany Dept.Shri Shivaji Arts, Comm.& Sci. Coll. Akola, on the occasion of Wetland Day dated 2 Feb 2024.

Simillarly, MS. Sakshi Jalamkar (PG) was felicitated by SGBAU. Amravati.as she has Secured 8 th Position In Botany Merit List In M. SC.

The Achievment of Staff Members are listed below.

#### 1). Mrs. V. N. Badgular:

1.She has appointed on Placement committee by SGB Amravati University, Amravati as V.C. Nominee /Subject Expert .

2. Workshop attended: Three Day workshop on the popularizing the Science of DNA Bar-coding MSFDA Pune.

3. Participated in Onlines Short Term course organised by UGC- HRDC, RTM University Nagpur  
Paper Presentations and Publications:

Sr. No.	Name of Conference/Seminar	Title of Research Paper	Year/date
1	International conference on fuctional materials ( Innovations in chemical, physical and Biological science)Nabira College,katol	A comprehensive review of on Ethnobotany of <i>Cucurbita moschata</i> ( pumpkin) and its Peel's role in Advance Dermatology	15-16 March, 2024
2	Interdisiciplinary E-conference jointly organise by SMIBS College, Khamgoan & Shri R.L.T. Coll. of Science, Akola.	A Review on study of some phytochemical in the aqueous extract of the endocarp, seeds and exocarp of Watermelon ( <i>Citrullas lanatus</i> ) fruit	22/04/2024

3	A Comprehensive review on Ethno medicinal uses of <i>Spondias mombin</i> Linn. (hog- plum)	VidyaBharatiMahavidhyalaya, Amravati	10.02.24
---	--	--------------------------------------	----------

Dr. P.M. Khadse:

- 1) Worked as Co- ordinator for PG admissions (M.Sc.I. Botany) in the session 2023-24
- 1) He has appointed on Placement committee by SGB Amravati University, Amravati as V.C. Nominee /Subject Expert
- 2) He has published one research paper in the International multidisciplinary research journal

Dr. A.A.Sangole:

1. Conference attended: International ,National 1
2. Paper Presented :International 3
3. Paper published : 2 International,1 National
4. Workshop attended: Three Day workshop on the popularizing the Science of DNA Bar coding MSFDA Pune
5. Short Term course Organised by UGC -HRDC RTM University Nagpur
6. Invited as a subject expert for Biotechnology and Herbal Science Department Shri Shivaji Science, college Akola.

Dr.Shailendra V.Madavi:-

1. Acquired Degree

Sr. No.	Name of Degree	University	Date of Notification
1	Ph. D. Degree	Gondwana University, Gadchiroli.	30.05.2024

2. Paper Publication

Sr. No.	Titele of Research Paper	Name of Journal Volume	Impact Factor
1	Investigation of Phylloplane Mycoflora of Medicinal Plant - <i>Catharanthus roseus</i>	Ajanta International Multidisciplinary Research Journal Volume-XIII, Issue-II	7.42

3. Paper Presented in Conference/Seminar

Sr. No.	Name of Conference/Seminar	Name & Place of Conference/seminar/workshops	Year/date
1	International Geography and Botany Conference	JanataMahavidyalaya, Chandrapur	26&27/12/2023

2	International Conference on Functional Material	NabiraMahavidyalaya, Katol	15&16/03/2024
3	National Level Inter-Disciplinary E-conference on Contemporary Dynamics in Humanities, Science & Technology	SahakarMaharshi Late BhashkarraoShingne Arts College, Khamgaon, Dist. Buldhana. Shri R. L. T. College of Science, Akola, Shri SantGajananMaharaj College of Engineering, Shegaon.	22/04/2024
4	International Conference onRecent Trends in Humanities, Commerce and Science-2024	GulamNabi Azad Arts, Commerce and Science College, Barshitakli	10.03.24
5	National Conference on Recent Advancements in Science and Technology	VidhyaBharatiMahavidhyalaya, Amravati	10.02.24

#### 4. Other Activities

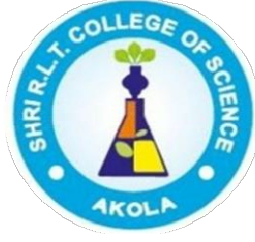
1. Organized 3 days faculty development programme (FDP) on Popularizing the Science of DNA Barcoding organized by MSFDA Pune.

2. Conducted interviews for selecting project staff for externally funded projects at CSIR- NEERI (Online)

3. Worked as subject expert in EURECA project at School of Scholars, Akola.

Besides, Our Non-Teaching Staff Member, Shri Gajanan Sharma has completed his 34 Yrs, of Service as Lab Attendant & has worked in Examination Dept. also.

**Dept of Botany , Holy Basil Club Organises various Activities during this session as below:**



The Berar General Education Society's  
Shri R.L.T. College of Science, Akola  
DEPARTMENT OF BOTANY

Report on  
Educational  
Visit of  
B. Sc. II and B. Sc. III (Botany) To



National Environmental Engineering Research  
Institute (CSIR-NEERI), Nagpur

on

22th February 2024

## INTRODUCTION

The National Environmental Engineering Research Institute (NEERI), Nagpur was established in 1958 as Central Public Health Engineering Research Institute (CPHERI), when environmental concerns were limited to human health with a focus on water supply/sewage disposal/communicable diseases and to some extent on industrial pollution and occupational diseases. The chemical and biological solutions to address these problems were simple, though challenging. However, slowly worldwide public awareness on the contamination of environment on regional to global scale started getting attention in 1970's. Shrimati Indira Gandhi, the then Prime Minister of India, rechristened the Institute as National Environmental Engineering Research Institute (NEERI) in the year 1974. National Environmental Engineering Research Institute (NEERI), Nagpur is devoted to research and innovations in environmental science and engineering besides solving a range of problems posed by industry, government and public.



## Purpose of Visit

- ❖ To discuss with the Scientists on the research ideas pertaining to environmental and industrial pollution and their remedies.
- ❖ To understand the working of state-of-the-art instruments being used to study research problems.
- ❖ To understand the opportunities available in NEERI for Under Graduate students.
- ❖ To understand overall working of CSIR Laboratory.

## Visit to CSIR-NEERI Audio Visual

The visit was started with the introduction of CSIR-NEERI at the Auditorium at 11.30 am by audio visual presentation. In that audio visual section, establishment of CSIR-NEERI, past and present research work of CSIR-NEERI was explained. CSIR-NEERI working on sewage water treatment, NEERDHUR, Green Crackers, WAYU, NEERI-ZAR'. CSIR-NEERI also helps to Government dream project such as Namami Gange, Swachh Bharat etc.

**Green Crackers**-CSIR-NEERI has been working since January 2018 for developing new and improved formulations for reducing emissions from fireworks. CSIR-NEERI developed new formulations for reduced emission light and sound emitting crackers (SWAS, SAFAL, STAR) with 30% reduction in particulate matter using Potassium Nitrate ( $KNO_3$ ) as oxidant.



## VisittoHaritSangrahalaya

Afterinformativerepresentation,wemovetoHaritSangrahalayaat12.00pm.InHaritsangrahalayamodels,chartsanddemonstrationofvariousprojectswereeseenandexplainedbyMr.MohtaseenAhmad(ResearcherScholar).Model,Charts,Demonstrationofexperimentandinstrumentspresent in Harit Sangrahalayaare

- Commoneffluenttreatmentplant
- Municipalsolidwasteplant
- Lowcostautomaticmechanicalflusher
- Phytoremediationtechnologyforsewagetreatment
- Singlepassphotocatalyticreactorforde-colorizationoftextileeffluents
- Solarelectrodefluoridation plant
- Ironremovalplant
- Hydroplume–highratessecondaryclarifier.
- NEERDHUR
- GreenCrackers
- NEERJAR

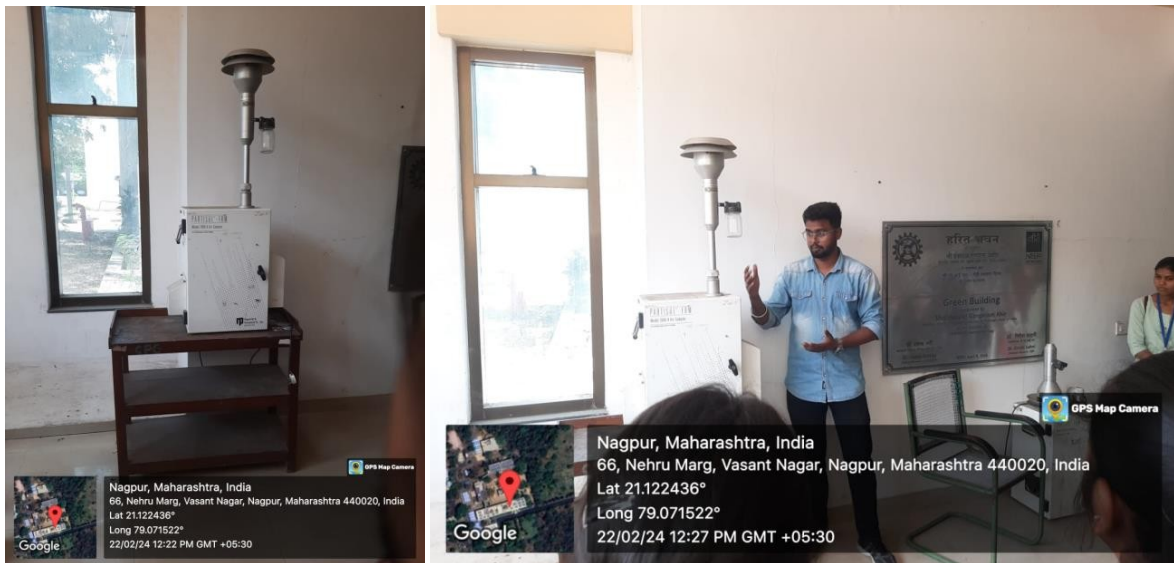


VisittoHaritSangrahalaya

## Air Pollution Control Division (APCD)

The students move towards Air Pollution Control Division (APCD). It is one of the major R&D division of CSIR-NEERI. Research in air quality management by inventory, monitoring, prediction, simulation, data analysis and control is within the domain. Emission inventory followed by dispersion modelling using state-of-the-art models like AERMOD and CALPUFF for impact identification.

Monitoring of pollutant is aimed towards regulatory compliance and receptor modelling objectives. This laboratory is well equipped with analysers for chemical specification of particulate matter. Source apportionment studies using CMB of ambient air PM has helped reveal several challenging tasks particularly for coal mine area and industrial sectors. Here are research scholars demonstrated the air sampler with its working principle and application.





### Visit to Technology Park (SHWMD)

In Technology Park, we saw solid waste i.e. garden waste converted into powdered form, process of shrinking of waste thermocol, energy from red mud waste. Various research scholars explained the demo experiment about waste management i.e. converts various waste into energy and useful products. This section of waste management motivates our students to think about conversion of various waste into useful products.



### Visit to Ecology and Biodiversity

Finally, at 01.30 pm students visited Ecology and Biodiversity Park. In this park Dr. Lalsingh, Sr. Scientist, CSIR-NEERI explained importance of plants for maintaining ecological balance. He also focused on scope of Botany for various industries and entrepreneurship etc.



After CSIR-NEERI, students also visited Maharaj Bagh Zoo and Biodiversity Park. The students observed flora and fauna conserved in captivity. Students observed many rare plants like *Couroupita guianensis*, *Guaiacum officinale*, *Adenodigitata*, *Saraca indica* etc. Students also observed various animals like tiger, leopard, bear, otter, crocodile and many birds.

In this educational visit, total 54 students from B. Sc. II and B. Sc. III (Botany) participated. This visit was undertaken by the inspiration of Dr. V. D. Nanoty, Principal, Shri R. L. T. College of Science, Akola and under the supervision of Mrs. V. N. Badgujar, Head, Department of Botany. Dr. P. M. Khadse, Associate Professor, worked as an in-charge teacher of B. Sc. III and Dr. A. A. Sangole, Assistant Professor, as an in-charge teacher of B. Sc. II. Mr. Shailendra V. Madavi, Assistant Professor, worked as Co-ordinator of this tour. Mr. R. S. Dandnaik and Satish Shirsat and various teaching, non-teaching staff took efforts for the success of this visit.

**Mr. S. V. Madavi**  
Tour Co-ordinator

**Dr. A. A. Sangole**  
In-charge Teacher (B. Sc. II)

**Dr. P. M. Khadse** In-  
charge  
Teacher (B. Sc. III)

**Mrs. V. N. Badgujar**  
Head, Department of Botany

**PG Department of Botany**  
**Activity Report**  
**Session 2023-24**

PG Department of Botany in collaboration with IQAC organized Inauguration of Botanical society and guest lecture ,on dated 10/10/2023.On this occasion PG Department organises guest lecture (Offline) on the Topic- “Introduction to Paleobotany ” Guest speaker was Prof. Dr. P.S. Kokate, Head Department of Botany Shri Shivaji Arts , Comm.and Sci.Coll, Akola.

During inauguration of Botanical Society Ceremony, Hon. Principal Dr.V.D. Nanoty as chairman of the programme Hon.Dr. P.S. Kokate as a chief guest of the programme . Head Dept. of Botany Mrs. V.N. Badgujar ,Incharge of PG Department Dr. P. M. Khadse and faculties of Department Dr. A. A. Sangole , Mr. S.V. Madavi , Contract basis teachers and CHB teachers were present

During welcome ceremony the chief guest of programme Hon.Dr. P.S. Kokate. felicitated by the hands of Principal Dr. V.D. Nanoty Sir by offering shawl and sapling, and Dr. P.M. Khadse announces the name of members in Botanical society during the inauguration of Botanical society 2023-24.At the end of programme vote of thanks proposed by Mr. SugatChakreand conduction of programme by Miss.PoonamBais and After completion of Innaugural ceremony Prof. Dr. P.S. Kokate Mam delivered her lecture on the topic “Introduction to Paleobotany .” She elaborate concept of Paleobotanyfrom its basic aspect to applied aspect and what is present status and scope of research in Psaleobotany .

The following Botanical Society of Session 2023-24 were form

**President:**Ku. PoonamBais

**Vice – President :** Ku PallviThorat

**Secretary ::** Ku. MrunalPatil

**Joint Secretary:** Ku. VaishnaviKhandare

**Treasurer:** Ku. MohiniMendhe

:Ku. GauriKukdkar

**Tour Organiser:**Ku.SonalKhandare

:Ku.Neha Savant

: Mr.AmolUmale

: Mr. SugatChakre



Shot on OnePlus  
By Supriya 📷 2023.10.10 14:05

**A) Permineralization**

- This is a process of fossilization that occurs when an organism is buried. The empty spaces within an organism become filled with mineral-rich groundwater. Minerals precipitate from the groundwater, occupying the empty spaces. This process can occur in very small spaces.
- Small scale permineralization can produce very detailed fossils. For fossilisation process, the organism must be covered by sediment soon after its death.
- The preservation of details in fossils are totally depends on the degree of decayed plant remains when it is covered.
- Two types are - Silicification and Pyritization.



GPS Map Camera



Akola, Maharashtra, India  
Shop No, 1, Civil Line Rd, New Radhakisan Plots, Akola, Maharashtra 444001, India  
Lat 20.705979°  
Long 77.005996°  
10/10/23 01:14 PM GMT +05:30



In the Winter Session 2023-24 PG Department was taken another activity that is Excursion tour / Educational tour to Semadoh, Melghat Forest Chikhaldara Dist. Amravati, on dated : 26/10/2023 , both M.Sc.I and M.Sc. II students were took part in the Excursion tour . All faculty members of Department including Fix pay teachers and CHB teachers were took part in the excursion tour and observed flora including Bryophytes, Pteridophytes and Lichen



In the month of February PG department organised another activity that is Research Institutional visit to Central Institute of Cotton Research , Nagpur (CICR). On dated 29/02/2024 both M.Sc.I and M.Sc. II

students were took part in this visit . All faculty members of Department including Fix pay teachers and CHB teachers were took part in this visit, and observed their advanced biotechnology lab and studied the working principals and applications of each and every equipments in the laboratory.



Two students of M.Sc. II were took part in the Inter university best seminar competition on indigenous technology for Viksit Bharat held at Department of Botany Government Vidarbh Institute of Science and Humanities, Amravati.

In the intercollegiate Research Convention “Avishkar”- 2023-24 the student of M.Sc.II Miss. Poonam Singh Bais achieve Ist rank at district level in the category of Agricultural,Animal husbandry and her topic of research was” Preperation of insulating material from Banana waste”.

**Co-ordinator of P.G.**

**Dr. P.M. Khadse**

Botany DEPT. Of Botany

**Head**

**Mrs. V. N. Badgujar**DEPT. Of