2.3.1: Student centric methods, such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences using ICT tools

Experiential learning

(Sample copies of each activity attached)

Sr. No.	Activity	Department	Type of document	ICT tool / resource used
1.	Field Training / visit	Zoology	Tour reports	GPS use, mobile use for mapping and identification
2.	On job training / Internship	Commerce, Botany, B.Voc.	Correspondence and report, list of students	PPT, Computer applications, mobile devises
3.	Hands on training	Botany, Chemistry	Tree census report, Hands on training	GPS
4.	Demonstration	Physics, Zoology, Botany,	Practical syllabus, journal demonstration	PPT demonstration,

Rayat Shikshan Sanstha's

DADA PATIL MAHAVIDYALAYA, KARJAT,

Dist-Ahmednagar.

DEPARTMENT OF ZOOLOGY

FIELD VISIT NOTICE

[On Field Training]

Date: 02/02/2022.

All the students of T.Y.B.Sc, M.Sc. I and M.Sc. II Zoology are hereby informed that, on the occasion of **World Wetland Day** (2nd February, 2022), our Department is going to organize a field visit to Ujani wetlands to observe wetland biodiversity on 4th February, 2022. All the registered students should present in the college campus at 7:45 am sharp.

Important Instructions:

1. All students should have college identity card and a diary with pen.
2. Students come with cap, shoes (suitable for wetland walk), water bottle, Eco-friendly dressing (preferably college Dress code) , Camera, Binocular and lunch.
3. All students should follow COVID-19 instructions.

Visit In-charge

Head
Department of Zoology,
Dada Patil Mahavidyalaya,
Karjat, Dist- Ahmednagar.

PERMISSION LETTER

Department of Zoology
Date- 03/02/2022

To,
The Principal,
Dada Patil Mahavidyalaya,
Tal. Karjat. Dist. Ahmednagar.

Subject – Permission for one day Field visit to Ujani Wetlands

Respected Sir,

As per Savitribai Phule Pune University syllabus, the field visit is compulsory for students of T.Y.B.Sc., M.Sc. I and M.Sc. II Zoology students. Therefore Department of Zoology is willing to arrange one day field visit at Diksal and Kondhar Chincholi (Ujani Wetland sites) on the occasion of World Wetland Day on 04/02/2022.

Please kindly sanction the permission.

Thanking You.

Yours Faithfully.

Tour In-charge

Head
Department of Zoology
Dada Patil Mahavidyalaya,
Karjat, Dist- Ahmednagar

Rayat Shikshan Sanstha's

DADA PATIL MAHAVIDYALAYA, KARJAT. Dist. Ahmednagar

WORLD WETLAND DAY (2ND FEBRUARY, 2022)

(Wetlands Action for People and Nature)

FIELD VISIT FOR T.Y.B.Sc./ M.Sc.I and M.Sc. II Students

STUDENT LIST (UG)

Sr. No.	Name of the Student	Class
1	Sarode Priti Sahebrao	T.Y.B.Sc.
2	Shelar Rutuja Ravindra	T.Y.B.Sc.
3	Jadhav Shraddha Dattatray	T.Y.B.Sc.
4	Tarate Dnyaneshwari Suresh	T.Y.B.Sc.
5	Gavali Vaishnavi Jyotiram	T.Y.B.Sc.
6	More Gayatri Bhimrao	T.Y.B.Sc.
7	Pandit Gauri Subhash	T.Y.B.Sc.
8	Shaikh Irphana Baba	T.Y.B.Sc.
9	Shelke Vrushali Kisan	T.Y.B.Sc.
10	Dhobe Sayali Shivaji	T.Y.B.Sc.
11	Doltade Rutuja Arjun	T.Y.B.Sc.
12	Fartade Harshada Babasaheb	T.Y.B.Sc.
13	Kale Priyanka Parshuram	T.Y.B.Sc.
14	Talekar Jyoti Bhausaheb	T.Y.B.Sc.
15	Kale Rutuja Bibhishan	T.Y.B.Sc.
16	Bagal Amrut Mohan	T.Y.B.Sc.
17	Halnawar Vinod Shivaji	T.Y.B.Sc.
18	Pimpale Sourabh Bapu	T.Y.B.Sc.
19	Dadar Pooja Ashok	T.Y.B.Sc.

STUDENT LIST (PG)

Sr. No.	Name of the Student	Class
20	Ukirde Shamal Satish	M.Sc. I
21	Karale Ankita Vinod	M.Sc. I
22	Jogdand Komal Ashok	M.Sc. I
23	Shaikh Sania Mustak	M.Sc. I
24	Chormale Shubham Balasaheb	M.Sc. I
25	Bandal Nikhil Ramchandra	M.Sc. I
26	Pawar Kiran Balasaheb	M.Sc. I
27	Thorat Harshali Chandralkant	M.Sc. I
28	Sarode Tejas Kailash	M.Sc. II
29	Jagtap Asha Laxman	M.Sc. II
30	Chavan Jyoti Vaniram	M.Sc. II
31	Kangude Sonali Sanjay	M.Sc. II
32	Ghodake Snehal Sudam	M.Sc. II

Faculties:

Sr, No.	Name of the Faculty	Designation
1	Dr. S.L.Pawar	Head
2	Mr. D.S.Kumbhar	Visit Incharge
3	Dr. P.A.Pawar	Member
4	Dr. S.S.Patil	Member
5	Ms. A.V.Bedre	Member
6	Ms. Shaikh M.I.	Member
7	Ms. T.C.Kulkarni	Member

Dr. S.L.Pawar
Head, Dept. of Zoology

WORLD WETLAND DAY (2ND FEBRUARY, 2022)

(Visit to Ujani Wetlands (Diksal & Kondhar Chincholi)
04/02/2022)

Ujani Wetlands

Observation of Wetland Birds

Staff and Students participated in Wetland Visit

WORLD WETLAND DAY (2ND FEBRUARY, 2022)

(Wetlands Action for People and Nature)

REPORT

Rayat Shikshan sanstha's Dada Patil Mahavidyalaya Karjat in collaboration with Maharaja Jiwajirao Shinde Mahavidyalaya, Shrigonda and Radhabai Kale Mahila Mahavidyalaya, Ahmednagar celebrated world wetland Day on 2 February, 2022, under Faculty and Student exchange Programme with theme 'Wetlands Action for People and Nature'. Under this Platorm three different events were organized, Online Lectures (Via. Google Meet), Online Quiz on Wetland Conservation and Visit to Ujani Wetlands.

Online Lectures were conducted on 2nd February, 2022, 12:00 noon to 02:30 pm. The Speaker for the first session was Hon. Prin. Dr. D.K.Mhaske (MJS Mahavidyalaya, Shrigonda), was talked on Wetlands: The Kidneys of Landscape. He explained importance of wetlands to achieve sustainable development. In the second session, Dr. Gopal Raut (Radhabai Kale Mahila Mahavidyalaya, Ahmednagar) talked about Biodiversity, threats and conservation.In the third session Co-ordinator of the programme Mr. Digvijay Kumbhar deliverd nice information regarding Ujani wetlands and Avifaunal diversity. Dr. Mavia Shaikh conducted Question-Answers (Discussion) session, Dr. Swapna Patil proposed vote of thanks while Dr. Pratima Pawar anchored the session. (**Google Meet Link**: meet.google.com/ahm-qgjm-gbc).

On 2nd and 3rd February, Online Quiz on Wetland Conservation was conducted containing 20 MCQs for 100 Marks and certificates were distributed to participants on their registered E.mail, who scored more than 40% marks. More than 200 Students and Faculties from three colleges were participated in the online quiz. (**Quiz Link**: https://forms.gle/F3ntmFE4PapD8rei6)

On 4th February, a field visit to Ujani wetlands (Diksal and Kondhar Chincholi) was organized. 32 students were participated in the same. During field visit, wetland biodiversity was observed and Students understand the concept of 'Ecotone' on site. About 20 species of waterbirds were observed and Students enjoyed the eco-friendly Wetland visit.

Mr. Digvijay S.Kumbhar	**Dr. Suman L. Pawar**	**Dr. Sanjay P. Nagarkar**
Co-ordinator	Head, Dept. of Zoology	I/C Principal

Rudy Shelduck and Northeremn Showeler

Painted Storks

Rayat Shikshan Sanstha's

DADA PATIL MAHAVIDYALAYA, KARJAT DIST-AHMEDNAGAR.

DEPARTMENT OF ZOOLOGY

Visit to Ujani Wetlands (04/02/2022) Attendance

Sr.No	Name of student	Class	Sign
1	Gavali Vaishnavi Jyotiram	T.Y.BSC	Gavali
2	Shaikh Irphana Baba	T.Y.BSC.	Shaikh
3	pandit Gauri Subhash	T.Y.BSC	Pgauri
4	kale Rutuja Bibhishan	TyBsc	Kale
5	Ukirade Shamal	MSCI	Ukirade
6	Kangude Sonali Sanjay	M.Sc.II	Kangude
7	Jagtap Asha Laxman	M.Sc.II	Jagtap
8	Chavan Jyoti Vaniram	M.Sc.II	Chavan
9	Sasode Tejas Kailash	M.Sc.II	Tejas
10	Ukirade shamal Satish	M.Sc.I	Shamal
11	Tarate Dnyaneshwari Suresh	T.Y BSc	Dnyt
12	Jadhav Shraddha Dattatey	T.Y.BSC	Shraddha
13	Dekae Dipali Rajendra	T.Y.BSC	Dekae
14	Pawar Kiran Balasaheb	MSC.I	Kiran
15	Kashale Chandrakant Bharat	MSCI	Kashale
16	Bagal Amrut Mohan	TY.bsc	Bagal
17	Chormale Shubham Balasaheb	M.S.C-I.	Chormale
18	Pimple Saurabh Bapu	TY.BSC	Saurabh
19	Bandal Nikhil Ramchandra.	M.Sc.I	Nikhil
20			
21			
22			
23			
24			

Sr.No	Name of student	Class	Sign
25	More Gayatri bhimarav	T.Y.B.Sc	
26	Dadar pooja Ashok	T.y.B.Sc	D.A.
27	Dhobe Sayali Shivaji	T.y. BSc	Dhobe.S.S
28	sarode Priti Sahebrao	T.Y. BSC	P.S.sarode.
29	Fartade Harshada Babasaheb	T.Y.Bsc	FartadeHB.
30	shelke Vrushali Kisan	Ty.BSc	
31	kale. Priyanka parashuram	Ty.Bsc.	
32	Talekar Jyoti Bhausaheb	TYBSC	TalekarJB.
33	Shelar Rutuja Ravindra	T.Y.B.Sc	
34	Pardeshi Pratibha Ankush	T.Y.B.Sc	Pardeshi P.A.
35	Jogdanda Komal Ashok	MSC I	
36	Saniya Shaikh	MSC I	
37	Ankita Korale	MSC I	Korale.
38			
39	* Staff		
40	Dr. S.L. Pawar		
17	Mr. D.S. Kumbhar		
18			
19			
20			
21			
22			

Tour In-charge

D.P. MAHAVIDYALAYA KARJAT Dist. Ahmednagar

Head
Department of Zoology

Total students = 32 + 02 (staff) = 34

लोकमत

जागतिक पाणथळ दिन

कर्जत : येथील दादा पाटील महाविद्यालय प्राणिशास्त्र विभाग आणि महाराजा जिवाजीराव शिंदे महाविद्यालय श्रीगोंदा व राधाबाई काळे महिला महाविद्यालय अहमदनगर यांच्या संयुक्त विद्यमाने फॅकल्टी अँण्ड स्टुडंट्स एक्स्चेंज प्रोग्राम अंतर्गत जागतिक पाणथळ दिनानिमित्त विविध कार्यक्रमांचे आयोजन करण्यात आले.

श्रीगोंदा येथील प्राचार्य डॉ. ज्ञानदेव म्हस्के यांनी ऑनलाईन व्याख्यानाद्वारे पाणथळ जागांचा विकास करून त्यांचे संवर्धन करणे मानवाच्या शाश्वत विकासासाठी किती महत्त्वाचे आहे, याविषयी मार्गदर्शन केले. राधाबाई काळे महिला महाविद्यालयातील प्रा. डॉ. गोपाल राऊत यांनी 'जैवविविधता : महत्त्व आणि संवर्धन' यावर विषयावर मार्गदर्शन केले. कार्यक्रम समन्वयक प्रा. दिग्विजय कुंभार यांनी 'उजनी जलाशयाची पाणथळ जागा व तेथील पक्षीविविधता' या विषयावर मार्गदर्शन केले. 'पाणथळ जागा संवर्धन' या विषयावर ऑनलाईन प्रश्नमंजूषा घेण्यात आली. कार्यक्रम यशस्वितेसाठी प्राचार्य डॉ. संजय नगरकर, डॉ. संदीप पै, डॉ. सुमन पवार, प्रा. रिजवान खान, डॉ. अनुराधा ताटे, प्रतिमा पवार, स्वप्ना पाटील, अश्विनी बेद्रे, मावीया शेख, तृप्ती कुलकर्णी यांनी परिश्रम घेतले.

Hello Ahmednagar
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Founder : Padmabhushan Dr. Karmaveer Bhaurao Patil
Rayat Shikshan Sanstha's
Estd. - 1964

DADA PATIL MAHAVIDYALAYA

(Arts, Commerce and Science)

Karjat, Dist. Ahmednagar - 414 402 (M.S.)

Principal
DR. BAL KAMBLE
M.A., M.Phil., Ph.D.

☎ (02489) (O) 222534 (R) 222518 (F) 223923 Email : dpcollege@yahoo.co.in Website : www.dpcollege.in

NAAC Accreditation (3rd Cycle) 'A' Grade (CGPA 3.07)

Jr. College HSC Board - 12.003.001 Code No. SPPU / AN / ASC / 06 / 1964

• Savitribai Phule Pune University Best College Award (2004-2005) • Rayat Mauli Puraskar (2005-2006)

05/10/2018

To,
The Range Forest Officer,
Rehekuri Blackbuck Sanctuary,
Rehekuri, Tal- Karjat, Ahmednagar.

Subject: Permission for one day study tour.

Respected Sir/Madam,

As per the syllabus of Savitribai Phule Pune University, study tour is compulsory for T.Y.B.Sc students. Therefore Department of Zoology of our college is willing to arrange one day study tour for T.Y.B.Sc Zoology students at ***Rehekuri Blackbuck Sanctuary***, Rehekuri on the occasion of ***Wildlife week (1st October to 7th October)***, on dated 06/10/2018, So please kindly allow and assist them for the Biodiversity study of the sanctuary.

Thanking You.

Yours Faithfully,

Principal,
Dada Patil Mahavidyalaya,
Karjat, Dist-Ahmednagar.

Date- 24/09/2018

To,
The Principal,
Dada Patil Mahavidyalaya,
Tal. Karjat. Dist. Ahmednagar.

Subject – Permission for one day study tour.

Respected Sir,

As per the Savitribai Phule Pune University syllabus, the study tour is compulsory for students of T.Y.B.Sc. Therefore Department of Zoology is willing to arrange one day study tour for T.Y.B.Sc. Students at ***Rehekuri Blackbuck sanctuary*** on the occasion of ***Wildlife week (1st October to 7th October)***, on 06/10/2018, so please kindly sanction us the permission.

Thanking You.

Yours Faithfully.

Tour In-charge

Head
Department of Zoology
Dada Patil Mahavidyalaya,
Karjat, Dist- Ahmednagar

Rayat Shikshan Sanstha's

DADA PATIL MAHAVIDYALAYA,

KARJAT, DIST-AHMEDNAGAR.

DEPARTMENT OF ZOOLOGY

TOUR NOTICE

Date: 24/09/2018.

All the students of T.Y.B.Sc Zoology are hereby informed that on the occasion of ***Wildlife Week (1st October to 7th October),*** a study tour to ***Blackbuck Rehekuri Sanctuary*** is arranged on 6th October, 2018 with the objective of studying biodiversity of the Sanctuary. All the students should remain present for the same.

Important Instructions for the students:

a) All students should remain present at 9:00 am in college campus.
b) All students should carry college identity card and tour diary with them.
c) Students come with cap, shoes, water and lunch.
d) Students should take permission from the parents.

Tour In-charge

Head
Department of Zoology,
Dada Patil Mahavidyalaya,
Karjat, Dist- Ahmednagar.

Rayat Shikshan Sanstha's
DADA PATIL MAHAVIDYALAYA,
KARJAT DIST-AHMEDNAGAR.

DEPARTMENT OF ZOOLOGY

Study Tour (06/10/2018)

On the Occasion of Wild Life Week 1st to 7th October, 2018

Attendance Report

Sr.No	Roll No.	Name of student	Sign
1	222	Phazande Madhurei Madhukar	Phazande
2	210	Giri. A. D.	Giri
3	230	Shinde. P. S.	Shinde
4	200	Bandge M. N.	Bandge.
5	223	Raut J. A.	Raut J
6	197	Gore S. A.	Gore.
7	207	Gawade U. S	Gawade U. S
8	202	Dalvi M. R	Dalvi
9	206	Gawade. P. S	Gawade.
10	232	Thorat P. B.	Thorat
11	228	Sayyed. K. Z	Sayyed
12	198	Badge. R. V.	Badge
13	209	Phapkale S. S.	Phapkale S. S.
14	229	Shinde A. M.	Shinde
15	234	Tryambake P. S	Tryambake P. S
16	227	Saykar. K. B	Saykar
17	235	Uiede V. S	Uiede
18	201	Chavan P. A	Chavan
19	220	Pawar. A. A	Pawar
20	224	Samuded. S. e.	Samuded
21	208	Ghalme vidya B	Ghalme V B
22	236	Yadav Tejasvee. D.	Tejasvee
23	213	Jamdade Rohini Baliram	Jamdade
24	199	Bhosale Anjum Sambhaji	Bhosale
25	225	Sutha Krushna Pandurang	Sutha

26	215	Kharade Santosh Vitthal	Scheduled
27			
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34			
35			
36			
37			
38			

Head
Department of Zoology
Dada Patil Mahavidyalaya,
Karjat, Dist- Ahmednagar

Tour In-charge
Shinde R.J
Bedre A.V
Shaikh S.A
Kumbhar D.S
Dr. Mrs. Patil I M

Rayat Shikshan Sanstha's

DADA PATIL MAHAVIDYALAYA, KARJAT

DIST.AHMEDNAGAR

(NAAC Reaccredited 'A' Grade: 3rd Cycle)

DEPARTMENT OF ZOOLOGY

STUDY TOUR/ EXCURSION REPORT

VISIT TO REHEKURI BLACKBUCK SANCTUARY

(6th October 2018)

CLASS: T.Y.B.Sc.

Teacher In-Charge

Dr. I.M.Patil

Mr. M.R.Khan

Mr. D.S.Kumbhar

Mr. S.A.Shiakh

Miss. R.J.Shinde

Miss. A.V.Bedre

ACADEMIC YEAR (2018-2019)

As per the syllabus of Savitribai Phule Pune University, the study tour is compulsory for T.Y.B.Sc. Students. This academic year 2018-2019, Department of Zoology has organized one day study tour to Rehekuri Blackbuck Sanctuary on 6th October 2018.

The aims of the study tour are as follows:

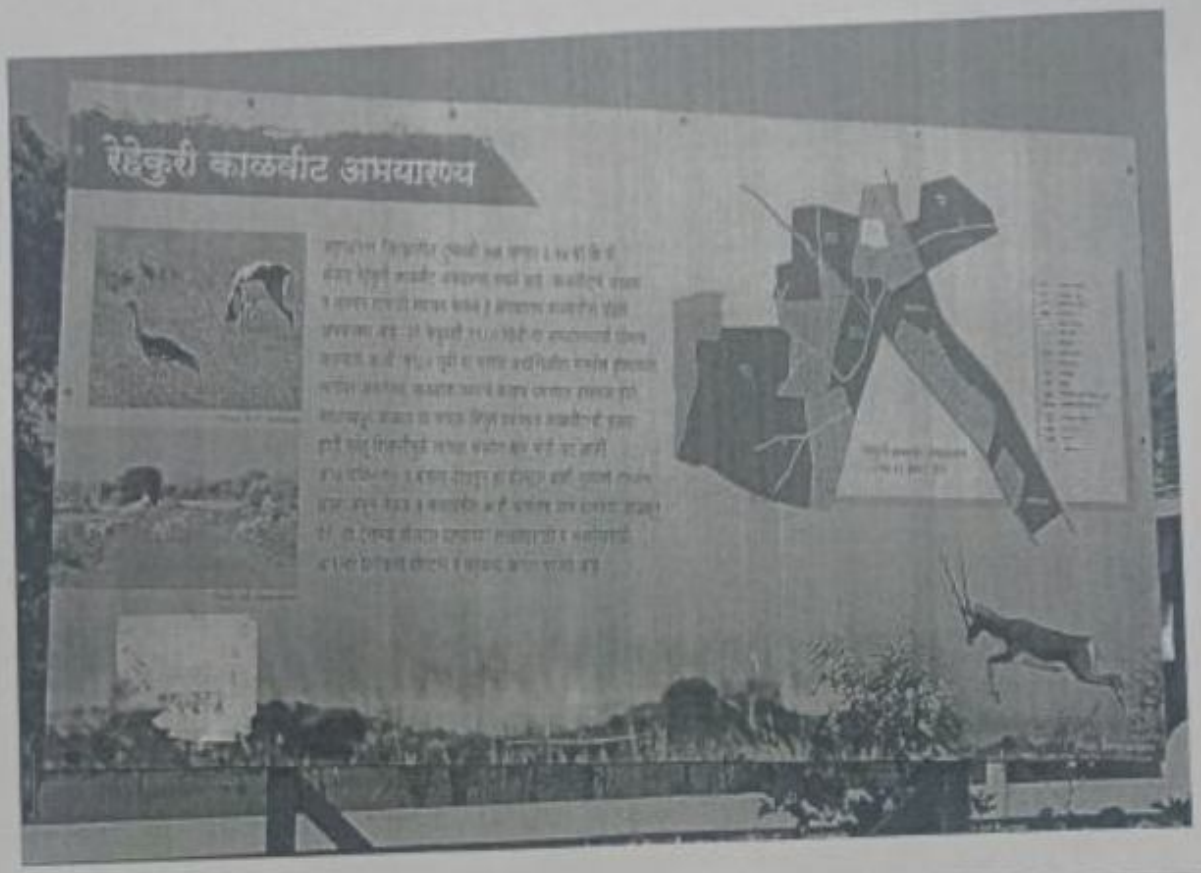
1) Survey and observation of Grassland faunal diversity.
2) To understand the conservative plan of the Great Indian Bustard.
3) To Understand the aims and objectives of the sanctuary.

❖ ABOUT REHEKURI BLACKBUCK SANCTUARY:

Rehekuri Blackbuck Sanctuary is situated in drought prone Karjat tehsil of Ahmednagar district. The area of the sanctuary is 2.17 Sq. Kms. Best time to visit: August to January.

This Sanctuary was come into existence for the purpose of protection and conservation of Blackbucks. The Rehekuri Blackbuck Sanctuary was established in 29th Feb. 1980. As per the British Gazette, in the pre- independence era there was the record of Great Indian Bustard, which is involved in critically endangered species. The number of Blackbucks was also in large number at the time of establishment of this sanctuary, but now a days the number of blackbucks is reduced due to anthropogenic disturbances and hunting.

The area is rich in grassland fauna. The main species are Antilope cervicapra Linn (Blackbuck), Gazelia bennetti (Chinkara), Canis lupus (Wolf), Vulpes bengalensis (Indian Fox). We have to walk in sanctuary to find blackbuks. Vehicles are not allowed in sanctuary area.



Location map of Rehekuri Blackbuck Sanctuary

About 30 students of T.Y.B.Sc. Zoology were participated in the study tour. We have started our journey on 6th October 2018 at 9:00 am from college campus by S.T. bus. The Rehekuri Blackbuck Sanctuary is located 6 km. away from College. When we reached sanctuary, we welcomed by Mr. S.V.Patil Saheb (RFO- Rehekuri Blackbuck Sanctuary) at the Gate alog with the staff of sanctuary.

After entering the gate, our Students observed and study the **museum** containing the important information of the flora and fauna of Rehekuri along with big sized cut-outs of blackbuck.

After the museum visit, we have started the **tracking in the sanctuary** and observed different types of birds with other fauna.

The list of Faunal Diversity observed at the Rehekuri Blackbuck Sanctuary.

Sr. No.	Phylum / Class	Common Name	Zoological Name
01	Phylum: Arthropoda Class: Insecta	Mud Wasp	*Sceliphron caementarium*
02		Grasshopper	*Schistocerca Americana*
03		Locust	*Acanthacris ruficornis*
04		Fire Ants	*Formica rufa*
05		Six spotted ground Beetle	*Anthia sexguttata*
06		Wolf Spider	*Hogna lenta*
07		Signature Spider	*Argiope anusuja*
08		Preying Mantis	*Mantidea*
09		Crickets	*Gryllus campestris*
10	Phylum : Chordata Class: Reptilia	Calotes	*Calotes versicolor*
11		Chameleon	*Chameleo zeylanicus*
12	Phylum : Chordata Class: Aves	Common rock pigeon	*Columba livia*
13		Indian Jungle crow	*Corvus culminates*
14		Asian Koel	*Eudynamys scolopacea*
15		Black Drongo	*Dicrurus macrocercus*
16		Brahminy Kite	*Haliastur Indus*
17		Huose Sparrow	*Passer domesticus*
18		Green Bee Eater	*Merops orientalis*

19		Laughing Dove	*Strptopelia senegalensis*
20		Weaver Bird (Baya)	*Ploceus cucullatus bohndorffi*
21		Indian Common Myna	*Acridotheres tristis*
22		White Throated Kingfisher	*Halcyon smyrnensis*
23		Baradwaj (Greater Coucal)	*Centropus sinensis*
24		Cattle Egret	*Bubulcus ibis*
25	Phylum: Chordata Class - Mammalia	Blackbuck	*Antilope cervicapra*

After the tracking, we gather at the guest house, we enjoyed the lunch and finally we return back to our college at 01:00 pm.

PHOTO GALLERY

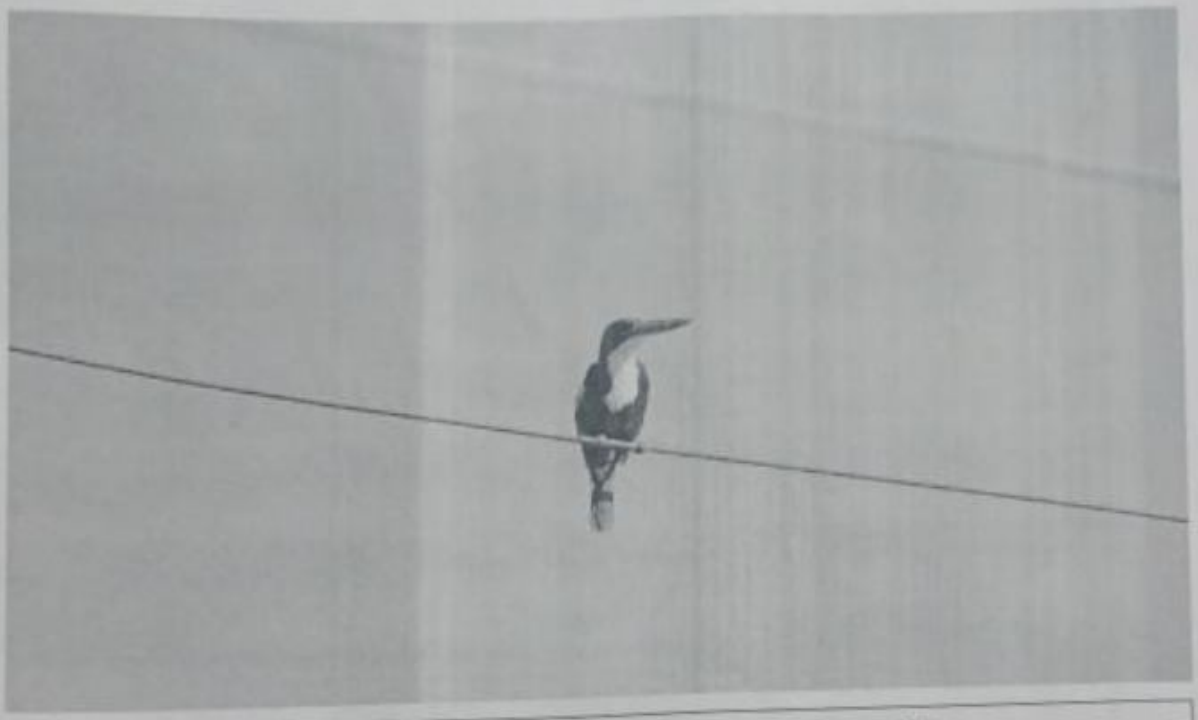
Zoology Staff with T.Y.B.Sc.Students at the Entrance Gate of Rehekuri Blackbuck Sanctuary

Observation of Artificial Water Reservoir

Tracking in Grasslands

Rest Time after Tracking

Please Don't Shoot us by GUN – Shoot us by CAMERA



White Throated Kingfisher (*Halcyon smyrnensis*)

Black Drongo (*Dicrurus macrocercus*)

Jungle Crow (*Corvus culminates*)

Sparrow (*Passer domesticus*)

ROLL NO. 232

EXAM SEAT NO 330828

Rayat Shikshan Sanstha's

DADA PATIL MAHAVIDYALAYA, KARJAT

DIST.AHMEDNAGAR

(NAAC Reaccredited 'A' Grade: 3rd Cycle)

DEPARTMENT OF ZOOLOGY

CERTIFICATE

Date: 14/3/2019

This is to certify that,

Mr./Miss. Thorat puja Balu

Class: T.Y.B.Sc. attended the visit arranged at Rehekuri Blackbuck Sanctuary organized by Department of Zoology on 6th October 2018. This report represents his/ her bonafide work during the academic year 2018-2019.

14/3/19
Teacher In-charge

15.2.19
Examiner

14.3.19
Head
Department of Zoology
Dada Patil Mahavidyalaya, Karjat


निसर्ग परिचय केंद्र

Study Tour Objective :

- This field trip report is based on wildlife attractions of Rehekuri Blackbuck Sanctuary, which was conducted during my degree of B.Sc. Zoology.
  It has been a true that "You gain more knowledge by travelling 100 steps than by reading 1000 pages."

- Being practical is the best way to learn and gain knowledge. Theoretical knowledge can give guidelines, but the practical knowledge is must and best way of learning things.

- The aim of the tour was to observed living wildlife fauna as well as Flora and their movement at specific habitat.

Participants :

As per the syllabus of Savitribai phule Pune University, the study tour is compulsory for T.Y.B.Sc. students.

- This academic year 2018 - 2019 Department of Zoology has organized one day study tour to Rehekuri Blackbuck Sanctury on 6th October 2018
- About 30 student of T.Y. BSc Zoology were participated in the study tour.


रेहेकुरी काळवीट अभयारण्य

Main Information on Rehekuri Blackbuck Sanctuary ..... [1974]

"In India, only four picturesque wildlife sanctuaries were made to preserve the number of blackbucks and the most beautiful amongst them with the highest chances of spotting them (blackbuck) is Rehekuri Blackbuck Sanctuary..."

In Maharashtra, blackbucks are seen only in Rehekuri wildlife sanctuary. Initially, when the wildlife sanctuary was formed, the population of the blackbuck was hardly 15. And to one's astonishment, the current no. of blackbucks are 400. Blackbuck in maharashtra are referred as 'kalvit' and the male blackbuck easily stands out from among a group of antelopes for it's long spiral horns roaming in the grasslands.

The tradition of protecting the blackbucks has been going on in full swing since the rule of Bishnois of Rajasthan. Though the park is small in size as compared others, hardly 2.17 square kilometers, but it provides interesting exploration trails.

- Aim or purpose of sanctuary is protection and conservation of blackbuck.

About Study Tour -

The department of zoology organised a study tour at Rehekuri Blackbuck sanctuary, karjat. Ahmednagar district of Maharashtra, on 6th october 2018. 30 students accompanied by Dr. patil, Prof. Kumbhar, prof. shaikh and other teaching staff. The tour team left at 8 A.M. sharp from the Dada patil college, karjat campus & proceeded towards Rehekuri.

Rehekuri is 7 km away from the karjat famous for blackbuck, Indian bustard.

We have started journey with curious mind. we have taken some binocular digital camera notebook for note down information & lunch box etc.

We observed lots of birds, insects and Reptiles in early morning. The team had their lunch at the site of forest & observing the tadpole and other aquatic & terrestrial animals.

At the Sanctuary students observed grass land, ecosystem & animal biodiversity.

We welcomed by Mr. S.V. Patil (RFO - Rehekuri blackbuck Sanctuary) at the site & warm & informative interaction with them become more helpful.

We have discussed some facts about Biodiversity and its conservation with teachers. We have visited & proceeded towards the museum conserved & maintained by Sanctuary. We enjoyed the entire day in the field & gathered important information. We spend our time in watching birds, animals, butterfly. after the beautiful & adventures experience, team proceed back towards the college, Karjat.

Despite the hectic schedule the students enjoy a lot they had very good time observing the live specimen, enquiring their unresolved queries about the mother nature & various wild fauna & flora. The team reach at 1 A.M. on 6th oct. at college campus.

Safari timing :

To the sanctuary, toyrist can either take a jeep safari or can trek through the long strenches of the flimsy yet narrow road with their guide. Since the topography keeps on changing, it would be better to take a jeep safari. But the best part about the trekking in the jungle is that the forest is very thick and by walking, one can eqsily spot very eqsily.

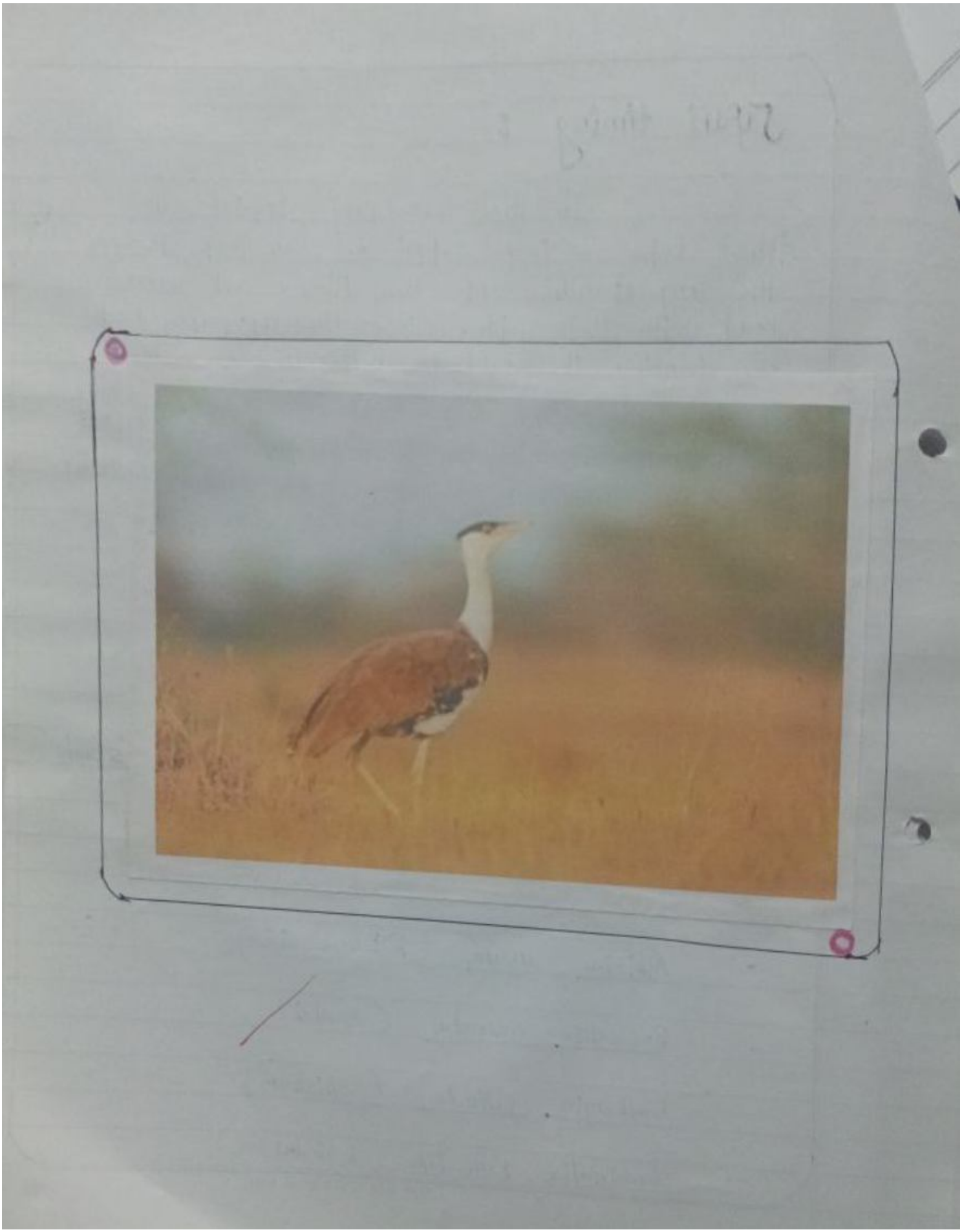
Best Time to visit :

August to January

Flora and Fawna :

Pehekuri Sanctuary is Dry decidyous scrub Forest.

- Acacia catechy (खैर (khair. tree)
- Albizia amara (krishna siris)
- Boswellia serrata (Saalai)
- Dalbergia latifolia (Shisham)
- Terminalia Periculata (Kindal tree)



Wildlife

The main species → Indian Antelope (Blackbuck) [Cervicapra Linn]

1) Gazella bennetti (chinkara)
2) Canis lupus (Wolf)
3) Vulpes bengalensis (Indian fox)
4) Monkey
5) Herpestidae (Mongoose)
6) phythons
7) Cobra
8) Lizzard (calotes)

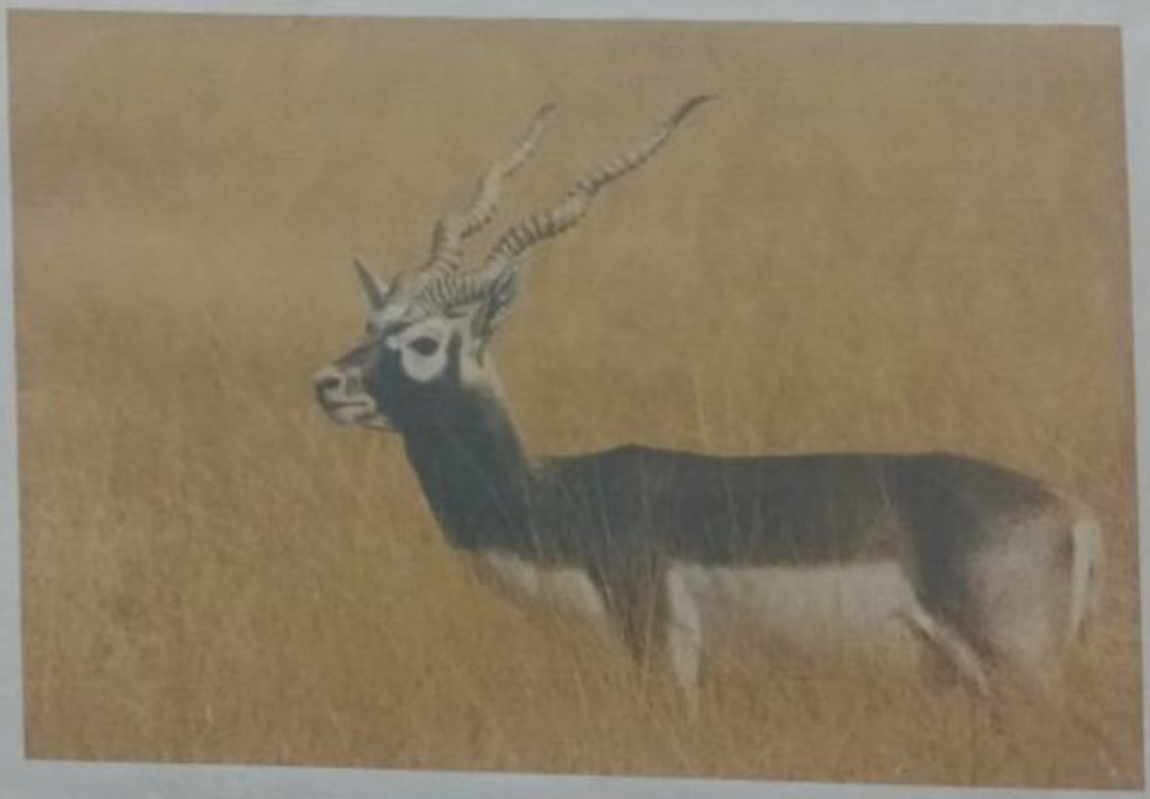
(Reptiles)

9) Great Indian Bustard
10) pea-cock
11) Jungle crow
12) kite

(Birds)

o The list of faunal diversity observed at the Rehekuri Blackbuck Sanctuary -

Phylum/ class	Comman name	Zoological name
	Mud Wasp	Sceliphron caementarium
	Grasshopper	Schistocera americana.
Arthropoda	Fire ants	Solenopsis geminata
	Locust	Acanthacris ruficornis
	Beetle	Lamprima aurata
Insecta	Wolf spider	Lycosa tarantula.
	crickets	Gryllus campestris
class Reptilia	Calotes chameleon	Calotes versicolor.
phylum chordata	Black drongo	Dicrurus macrocercus
	Brahminy kite	Haliastur indus
	Asian koel	Eudynamys scolopacea
class	weaver bird	ploceus cucullatus
Aves	Indian comman myna	Acridotheres tristis
	Cattle Egret	Bubulcus ibis.
class mammalia	Blackbuck	A. Cervicapra



Blackbuck

Kingdom : Animalia
phylum : Chordata
class : Mammalia
order : Artiodactyla
family : Bovidae
genus : Antilope (Pallas, 1766)
species : A. cervicapra

The blackbuck, also known as the Indian antelope, is an antelope found in India, Nepal, Pakistan. The blackbuck is the sole extant member of the genus antilope.

The coat of males shows two-tone colouration : While the upper parts and outsides of the legs are dark brown to black. on the other hands, females and juveniles are yellowish fawn to tan

During the 20th century, blackbuck numbers declined sharply due to excessive hunting, deforestation and habitat degradation. Some blackbucks are killed illegally especially where the species is sympatric

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya, Karjat

Dist. Ahmednagar.

Department of Commerce

2021-22

D-7

Students Centric Teaching and Learning Methods by the faculty members

On the Job Training

Internship Programme

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya, Karjat

Dist. Ahmednagar

Department of Commerce

T.Y.B.Com. Sem – VI (CBCS)

Internship Programme 2021-22

Subject- Marketing Management

Participated Students List

Roll No.	Student Name
1	Abhang Namrata Rajendra
3	Adhav Payal Dipak
4	Anbhule Komal Anil
7	Belekar Kiran Balasaheb
10	Bhitade Priyanka Dattatray
11	Bhoj Aishwarya Kishor
15	Chavan Shivam Balu
17	Dhande Ganesh Valmik
19	Dhanke Shubhangi Ganesh
22	Gaikwad Megha Natha
23	Gaikwad Shalini Bapurao
24	Galande Pooja Devidas
26	Gangarde Vishwas Dattatraya
29	Ghodake Manish Sadashiv
30	Gorakhe Aniket Sharad
31	Hundade Raviraj Nagesh
33	Jagtap Kajal Ashok
35	Kale Amol Rajendra
42	Katrajkar Pratiksha Balasaheb
43	Kaygude Shrikant Gulab
44	Kharade Shital Raju
47	Kokane Gouri Mahesh
53	Marale Digvija Kisan
55	Mhetre Tushar Vijay
58	Nagmal Uma Rajendra

D.P. MAHAVIDYALAYA KARJAT NAGAR

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya, Karjat

Dist. Ahmednagar

Department of Commerce

2021-2022

On the Job Training

Internship

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya, Karjat

Dist – Ahmednagar

DEPARTMENT OF COMMERCE

Roll No. 17

CERTIFICATE

Date-

This is to certify that,Shri/Kum. Dhande Ganesh Valmik of T.Y.B.Com. has satisfactorily completed Internship Programme in the Subject Marketing Management II and III as liad down by the Savitribai Phule Pune University, Pune for the academic year 2021-22

Teacher Incharge

Head
Department of Commerce

Internal Examiner

29/5/2022
External Examiner

KARJAT NAGAR

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya, Karjat

Dist – Ahmednagar

DEPARTMENT OF COMMERCE

Roll No. 85

CERTIFICATE

Date-

This is to certify that, Shri/Kum. vitakar monika mahadev of T.Y.B.Com. has satisfactorily completed Internship Programme in the Subject Marketing Management II and III as liad down by the Savitribai Phule Pune University, Pune for the academic year 2021-22

Teacher Incharge

Head
Department of Commerce

Internal Examiner

29/5/2022
External Examiner

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya, Karjat

Dist – Ahmednagar

DEPARTMENT OF COMMERCE

Roll No. 80

CERTIFICATE

Date-

This is to certify that,Shri/Kum. Sutar Bhairavi Dnyaneshwar of T.Y.B.Com. has satisfactorily completed Internship Programme in the Subject Marketing Management II and III as liad down by the Savitribai Phule Pune University, Pune for the academic year 2021-22

Teacher Incharge

Head
Department of Commerce

29/5/2022

Internal Examiner

External Examiner

MAHAVIDYALAYA KARJAT

RayatShikshan Sanstha's

DADA PATIL MAHAVIDYLAYA KARJAT

DIST- AHMEDNAGAR

DEPARTMENT OF BOTANY

M.Sc-II

SUMMER TRAINING REPORT

YEAR- 2019-2020

Name of Student :Mr. BAṄSODE MAḤESH ĄPPA

Exam Seat No.: .....

Agricultural Development Trust's
KRISHI VIGYAN KENDRA, BARAMATI
A/p. Malegaon Khurd, Tal. Baramati, Dist. Pune – 413115.

To,
Dr. Bal Kamble,
Principal,
Dada Patil Mahavidyalay,
Karjat, Dist. Ahmednagar.

Sub : Summer Traning of your students to KVK, Baramati reg...

Dear Sir,

With reference to the above cited subject, this is to certify that, following students of your college has Summer Traning to KVK, Baramati today, 12th September, 2019.

1. Mr. Bansode Mahesh Appa

They have Summer Traning to different demonstration units of KVK, Baramati. They have also taken information from Soil Laboratory & Bio-Control Laboratory.

I hope, this information will be helpful for the students in their coming future.

This is for your information please.

Thanking you.

Yours truly,

12/09/19

Head & Senior Scientist,
Krishi Vigyan Kendra, Baramati

Head and Senior Scientist
Krishi Vigyan Kendra,Baramati
Malegaon Khurd,Tal:Baramati,
Dist:Pune(M.S),India-413115

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya Karjat, Dist-Ahmednagar

Department of Botany-2018-19

Annexure - D- 7

- On-the -Job Training – **B. Voc. (Medicinal Plants Growers)**
- Field Work & Visits / Study Tours:-

Sr. No.	Class	No of Students Participated	Place	Date	Teacher Incharge
01	T. Y. B. Sc	45	Seed Market Karjat	12/02/2019	Mr. Suthar S. B.
02	M.Sc I & II	16	Rehakuri Sanctury, Polyhouse, Netake Vasti Karjat	06/02/2019	Mrs. Shendage V.S.
03	F.Y.B.Voc	07	Chondi - Jamkhed	22/03/2019	Miss. Salve S.D

D P MAHAVIDYALAYA KARJAT Dist. Ahmednagar

Head
Department of Botany
Dada Patil Mahavidyalaya, Karjat

Date - 27/02/2019

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya, Karjat

B.Voc- Medicinal plants Grower

Training of Artificial Propagation of Plants

A. Artificial Vegetative Propagation Techniques

1. Grafting
2. Budding
3. Layering
4. Cutting

I. Leaf cutting

II. Stem cutting

III. Softwood cutting

IV. Hardwood cutting

B. Plant tissue culture Techniques

1. Sterilization
2. Media preparation
3. Inoculation
4. Incubation

Teacher Incharge

D.P. MAHAVIDYALAYA KARJAT Dist.Ahmednagar

Head

Department of Botany

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya, Karjat

Bachelor of Vocation (B. Voc.) Course

(Medicinal Plants Grower)

First Year B. Voc. - 2018-19

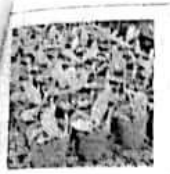
Sr. No.	Name of the student	Sig.
1.	Mr. Kumbhar Sunil Dada	
2.	Mr. Shaikh Moin Javed	
3.	Mr. Walunjkar Yogesh Navnath	
4.	Mr. Shete Sagar Laxman	
5.	Mr. Dhodad Tejas Dipak	
6.	Mr. Sayyad Najish Abdulrajjak	
7.	Mr. Sawant Shrikant Laxman	
8.	Miss. Hirave Shubhangi Mahendra	
9.	Mr. Gangarde Rushikesh Sanjay	
10.	Mr. Kangude Bibhishan Navnath	
11.	Mr. Hulge Pavan Vitthal	
12.	Mr. Kadam Vaibhav Harishchandra	
13.	Mr. Jaybhay Amol Dattatray	
14.	Miss. Kashid Bharti Santosh	
15.	Mr. Garad Vitthal Sitaram	
16.	Mr. Barkade Santosh Balu	
17.	Mr. Shelake Karan Ashok	
18.	Mr. Pawar Vaibhav Jalinder	

Teacher Incharge

D.P. MAHAVIDYALAYA KARJAT Dist.Ahmednagar

Head

Department of Botany



PLANT PROPAGATION

An Overview of Plant Propagation Methods

Two Techniques of Stem Cutting Propagation

Types of Propagation

Sexual Propagation:

- Seed

Asexual Propagation:

- Division & Separation
- Cuttings
- Grafting & Budding
- Layering
- Tissue Culture

Sexual Propagation: Seed

- The result of combining characteristics from two parents, plants grown from seed are never an identical replica of either parent.
- Plants grown from seed are often highly variable. Although some plants are more reliable from seed and a few plants are "true" from seed, these are exceptions to the rule.
- When grown from seed, plants must grow through a juvenile stage and become mature enough to reproduce. This generally takes from 3-15 years for most fruiting plants
- Seed propagation is generally used by plant breeders when trying to develop new plants with characteristics different from plants that are already in cultvation.

Asexual Propagation: Division

- Propagation by division is the simplest form of propagation.
- Plants with more than one rooted crown may be divided and the crowns planted separately.
- If the stems are not joined, gently pull the plants apart. If the crowns are united by horizontal stems, cut the stems and roots with a sharp knife or pruners to minimize injury to the plant.
- Divisions of some outdoor plants should be dusted with a fungicide before they are replanted.
- Examples: snake plant, iris, prayer plant, day lilies

Asexual Propagation

Separation

Separation is a term applied to a form of propagation by which plants that produce bulbs or corms multiply.

Bulbs

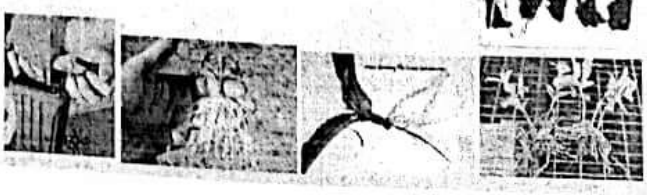
- New bulbs form beside the originally planted bulb. Separate these bulb clumps every 3 to 5 years for largest blooms and to increase bulb population.
- Dig up the clump after the leaves have withered. Gently pull the bulbs apart and replant them immediately so their roots can begin to develop. Small, new bulbs may not flower for 2 or 3 years, but large ones should bloom the first year.
- Examples: onion, tulip, narcissus.

Corms

- A large new corm forms on top of the old corm, and tiny cormels form around the large corm.
- After the leaves wither, dig up the corms and allow them to dry in indirect light for 2 or 3 weeks. Remove the cormels, then gently separate the new corm from the old corm.
- Dust all new corms with a fungicide and store in a cool place until planting time.
- Examples: crocus, gladiolus.

Asexual Propagation: Cuttings

- Cutting propagation can use root cuttings or leaf cuttings as well as hardwood, semi-hardwood or softwood stem cuttings.
- Many cuttings can be taken from a small number of stock plants.
- New plants produces are fairly small and it requires time for the new plants to grow and become large.
- Not all plants can be propagated by cuttings.

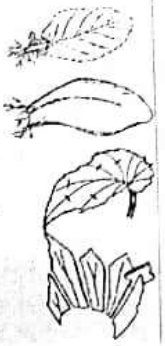


Root Cuttings, Rhizomes & Tubers

- Root cuttings are usually taken from 2- to 3-year-old plants during their dormant season when they have a large carbohydrate supply.
- Root cuttings of some species produce new shoots, which then form their own root systems, while root cuttings of other plants develop root systems before producing new shoots.
- A rhizome is a horizontal, usually underground stem that often sends out roots and shoots from its nodes.
- A tuber is a swollen, fleshy, usually underground stem of a plant, such as the potato, bearing buds from which new plant shoots arise.
- (Examples: horse radish, bearded iris, canna lily, potato, dahlia, ginger).

Asexual Propagation: Leaf Cuttings

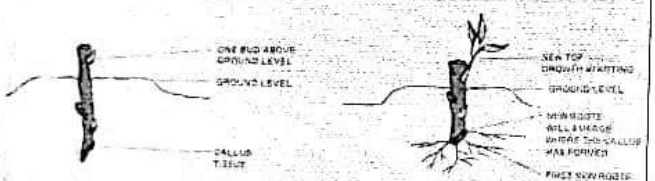
- **Leaf Cuttings**
  Leaf cuttings are used almost exclusively for a few indoor plants. Leaves of most plants will either produce a few roots but no plant, or just decay.
- **Whole Leaf with Petiole**
  Detach the leaf and up to 1 1/2 inches of petiole. Insert the lower end of the petiole into the medium. One or more new plants will form at the base of the petiole.
- **Whole Leaf without Petiole**
  This is used for plants with sessile leaves. Insert the cutting vertically into the medium. A new plant will form from the axillary bud.
- **Split Vein**
  Detach a leaf from the stock plant. Slit its veins on the lower leaf surface. Lay the cutting, lower side down, on the medium. New plants will form at each cut.
- **Leaf Section**
  This method is frequently used with snake plant and fibrous rooted begonias. Cut begonia leaves into wedges with at least one vein. Lay leaves flat on the medium. A new plant will arise at the vein. Cut snake plant leaves into 2-inch sections. Consistently make the lower cut slanted and the upper cut straight so you can tell which is the top. Insert the cutting vertically.



Asexual Propagation: Cuttings

Types of Stem Cuttings

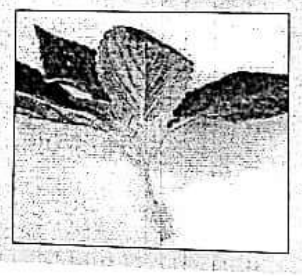
- The four main types of stem cuttings are herbaceous, softwood, semi-hardwood, and hardwood. These terms reflect the growth stage of the stock plant, which is one of the most important factors influencing whether or not cuttings will root.



Asexual Propagation: Cuttings

Herbaceous cuttings are made from non-woody, herbaceous plants such as coleus, chrysanthemums, and dahlia.

- A 3- to 5-inch piece of stem is cut from the parent plant. The leaves on the lower one-third to one-half of the stem are removed. A high percentage of the cuttings root, and they do so quickly.



Asexual Propagation: Cuttings

Softwood cuttings are prepared from soft, succulent, new growth of woody plants, just as it begins to harden (mature)

- Shoots are suitable for making softwood cuttings when they can be snapped easily when bent and when they still have a gradation of leaf size (oldest leaves are mature while newest leaves are still small). For most woody plants, this stage occurs in May, June, or July.
- The soft shoots are quite tender, and extra care must be taken to keep them from drying out. The extra effort pays off, because they root quickly.

Semi-hardwood cuttings are usually prepared from partially mature wood of the current season's growth, just after a flush of growth. This type of cutting normally is made from mid-July to early fall.

- The wood is reasonably firm and the leaves of mature size. Many broadleaf evergreen shrubs and some conifers are propagated by this method.

Asexual Propagation: Cuttings

Hardwood cuttings are taken from dormant, mature stems in late fall, winter, or early spring.

- Plants generally are fully dormant with no obvious signs of active growth. The wood is firm and does not bend easily.
- Hardwood cuttings are used most often for deciduous shrubs but can be used for many evergreens.
- The three types of hardwood cuttings are straight, mallet, and heel. A straight cutting is the most commonly used stem cutting.

- Mallet and heel cuttings are used for plants that might otherwise be more difficult to root. For the heel cutting, a small section of older wood is included at the base of the cutting.

- For the mallet cutting, an entire section of older stem wood is included.

Propagation by Hardwood Cuttings

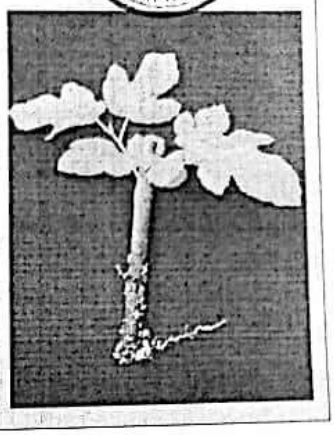
Eventually the cuttings will develop roots. Each cutting may develop at a different rate.

An important principle to remember is that roots and leaves have no relationship to each other.

Under identical conditions, some cuttings will grow roots, some will grow leaves, and some will grow both.

Propagation by Hardwood Cuttings

- You cannot presume root development from observing leaf development. This is why clear cups are beneficial; they allow me to actually see whether roots are developing.
- Here is a cutting that looked strong and healthy but there was little root development. This is not a good candidate for transplanting and should be kept in a very high humidity environment.



Propagation by Hardwood Cuttings

- This cutting has very vigorous root development seen through the cup as well as good leaf development.
- It is now removed from the cup and ready for repotting into a 1 gallon pot.

Propagation by Hardwood Cuttings

- An advantage of vermiculite and perlite as a rooting medium is the ease of removing the rooted cutting for repotting. Mixes that contain organic materials tend to stick to the sides of the cups, which leads to root damage.

- If the roots stick to the sides of the cup, squeeze and flex the cup. The sides of the cup can bend at sharp angles, and the roots will not. The cup may crack, but even cracked cups can be reused because they don't need to hold water.

Propagation by Hardwood Cuttings

- Transfer the cuttings to 1-gallon pots containing a potting mix of 60% Perlite and 40% potting soil.
- Acclimate them to the outdoors, usually putting them in shade with augmented humidity for a few days, and gradually introducing them to more sunlight over a period of weeks.
- At this stage, potting mix moisture control is still critical. Too much moisture will still cause root rot and plant failure.
- When I see roots in the drain holes, I transfer the trees to 2-gallon pots while reversing the mix to 40% perlite and 60% potting soil.

PLANT PROPAGATION

An Overview of Plant Propagation Methods

Two Techniques of Stem Cutting Propagation

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya, Karjat

DEPARTMENT OF BOTANY
in Collabration with

KARJAT PANCHAYAT SAMITI , KARJAT
Participated In

"MAZHI VASUNDHARA ABHIYAN 2022- II"

REPORT

Date : 27.3.2022

The Science faculty and the Department of Botany had undertaken another **outreach activity** in collabration with the team of Karjat Panchayat Samiti (BDO) , Karjat for two days **dt. 22nd and 23rd March 2022.** It included the **"Tree Census Activity of villages around karjat tehsil, Dist Ahmednagar"** under the **"Mazhi Vasundhara Abhiyan- 2022- II "**. The students were provided the information regrding the activity on 21st March 2022. A total of **55 undergraduate and postgraduate students** of Science Departments and **12 faculty members** of Dada Patil Mahavidyalaya, Karjat participated in the activity. The students surveyed the plants in 4-5 village areas including Malangi, Ravalgoan and Belhekar vasti around the Karjat Tehsil and collected the data. The students supported the activity and got the **hands on training** of Tree census activity from the given areas. It will benefit the students to create a sense of social responsibilities and also develop their skills regarding study of plant sciences.

The activity was fruitful due to the support and efforts of the BDO and team of Panchayat samiti, Karjat and the faculty of Science departments. .

The constant motivation of the IQAC and the Principal, Dada Patil Mahavidyalaya, Karjat helped to make the activity succesful.

Head
Department of Botany
Dada Patil Mahavidyalaya, Karjat

Dada Patil Mahavidyalaya Karjat, Dist. A'Nagar

The Principal
Dada Patil Mahavidyalaya
Karjat, Dist.Ahmednagar

Rayat Shikshan Sanstha's

DADA PATIL MAHAVIDYALAYA, KARJAT, AHMEDNAGAR

DEPARTMENT OF BOTANY

In Collaboration with

KARJAT PANCHAYAT SAMITI KARJAT

Participated in

"MAZHI VASUNDHARA ABHIYAN- 2022"

March 2022

Rayat Shikshan Sanstha's

DADA PATIL MAHAVIDYALAYA, KARJAT, AHMEDNAGAR

DEPARTMENT OF BOTANY

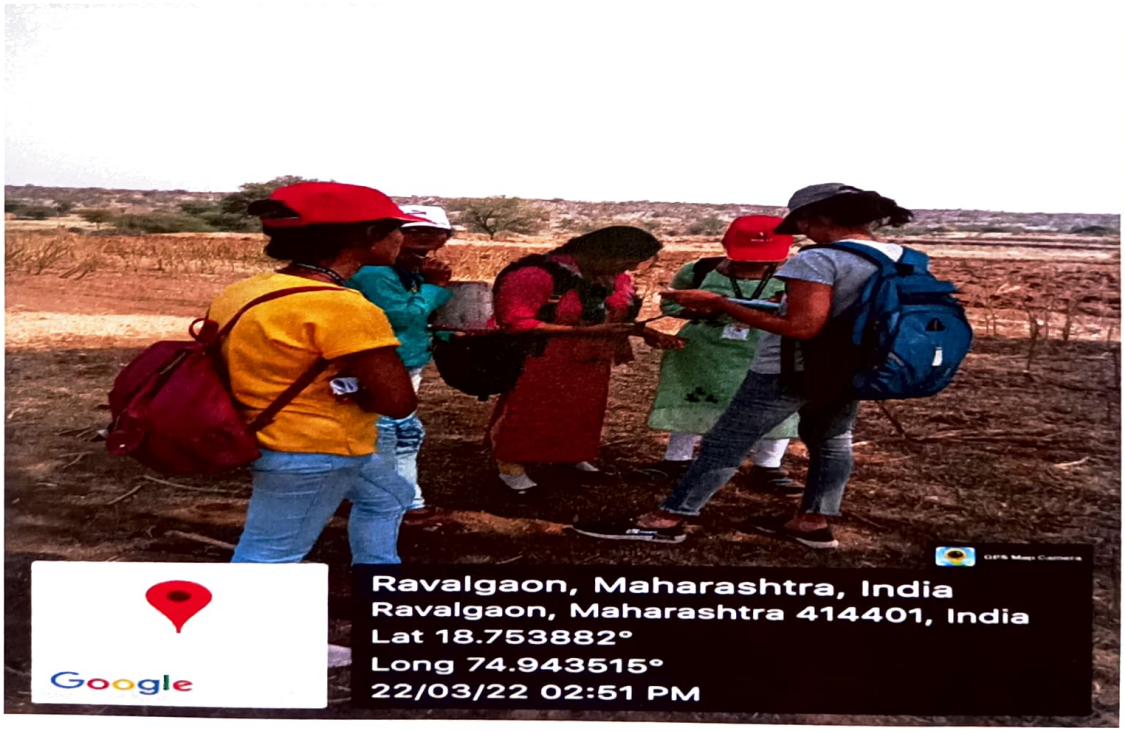
In Collaboration with

KARJAT PANCHAYAT SAMITI KARJAT

Participated in

"MAZHI VASUNDHARA ABHIYAN- 2022"

March 2022



TREE CENSUS,DEPARTMENT OF BOTANY,DADA PATIL MAHAVIDYALAYA IN COLLABORATION WITH KARJAT NAGARPANCHAYAT,KARJAT

Rayat Shikshan Sanstha's

DADA PATIL MAHAVIDYALAYA, KARJAT, AHMEDNAGAR

DEPARTMENT OF BOTANY

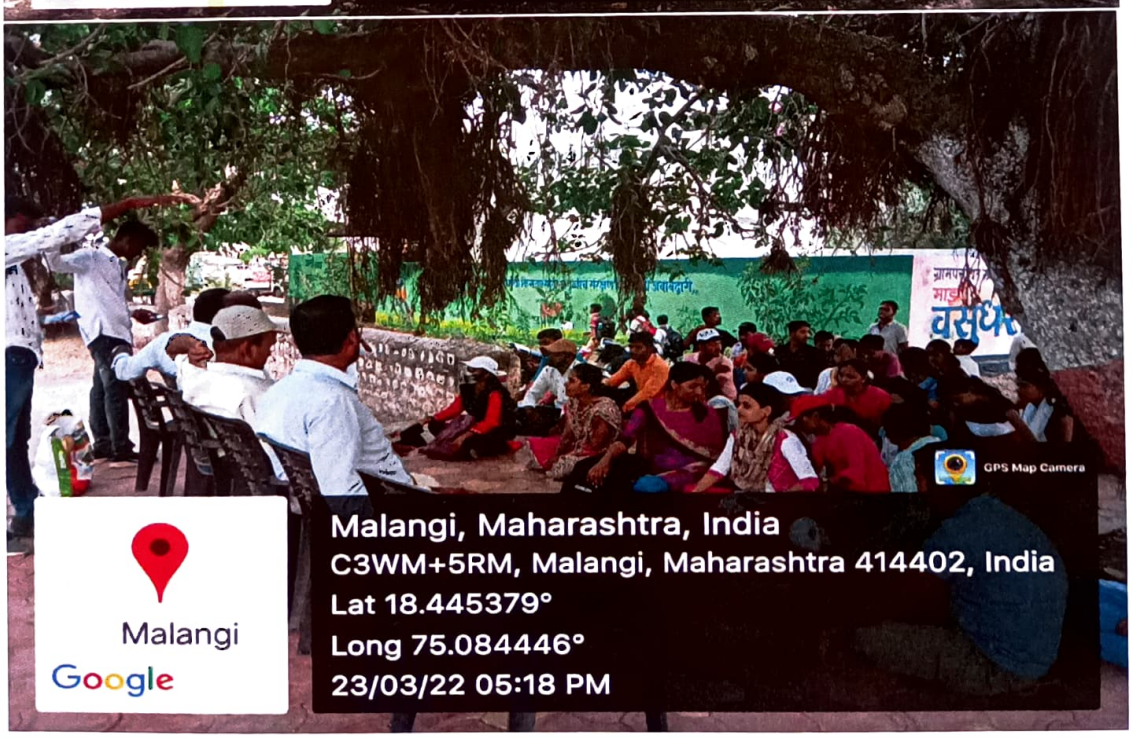
In Collaboration with

KARJAT PANCHAYAT SAMITI KARJAT

Participated in

"MAZHI VASUNDHARA ABHIYAN- 2022"

March 2022



TREE CENSUS,DEPARTMENT OF BOTANY,DADA PATIL MAHAVIDYALAYA IN COLLABORATION WITH KARJAT NAGARPANCHAYAT,KARJAT

Rayat Shikshan Sanstha's

DADA PATIL MAHAVIDYALAYA, KARJAT, AHMEDNAGAR

DEPARTMENT OF BOTANY

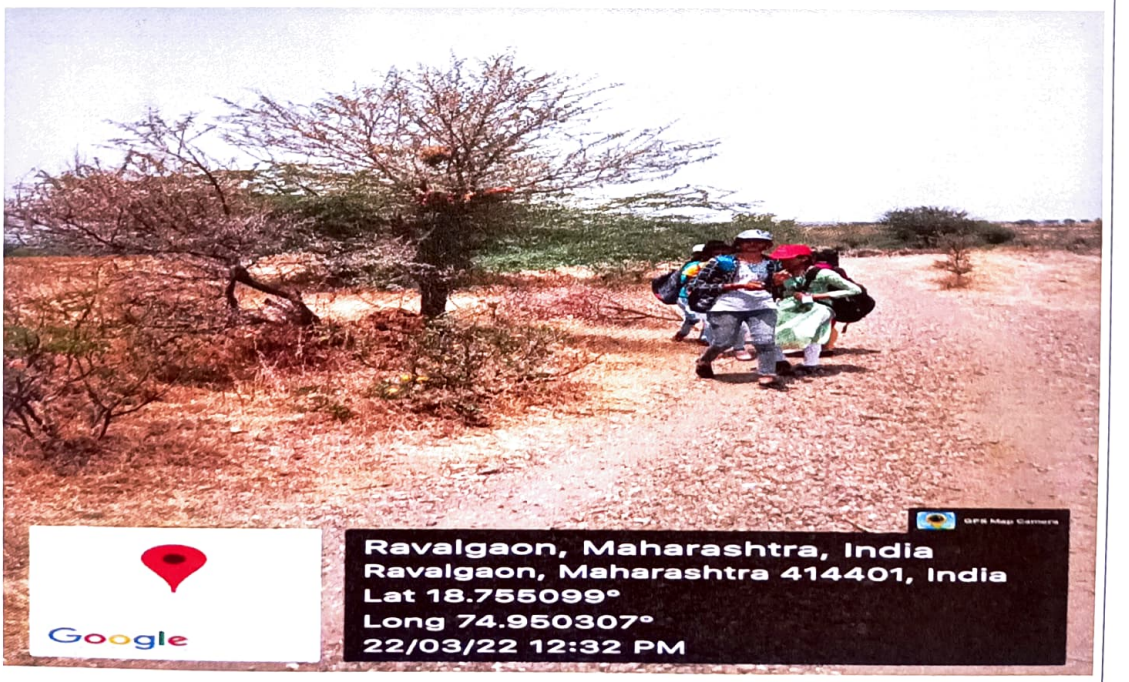
In Collaboration with

KARJAT PANCHAYAT SAMITI KARJAT

Participated in

"MAZHI VASUNDHARA ABHIYAN- 2022"

March 2022



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Rayat Shikshan Sanstha's

DADA PATIL MAHAVIDYALAYA, KARJAT, AHMEDNAGAR

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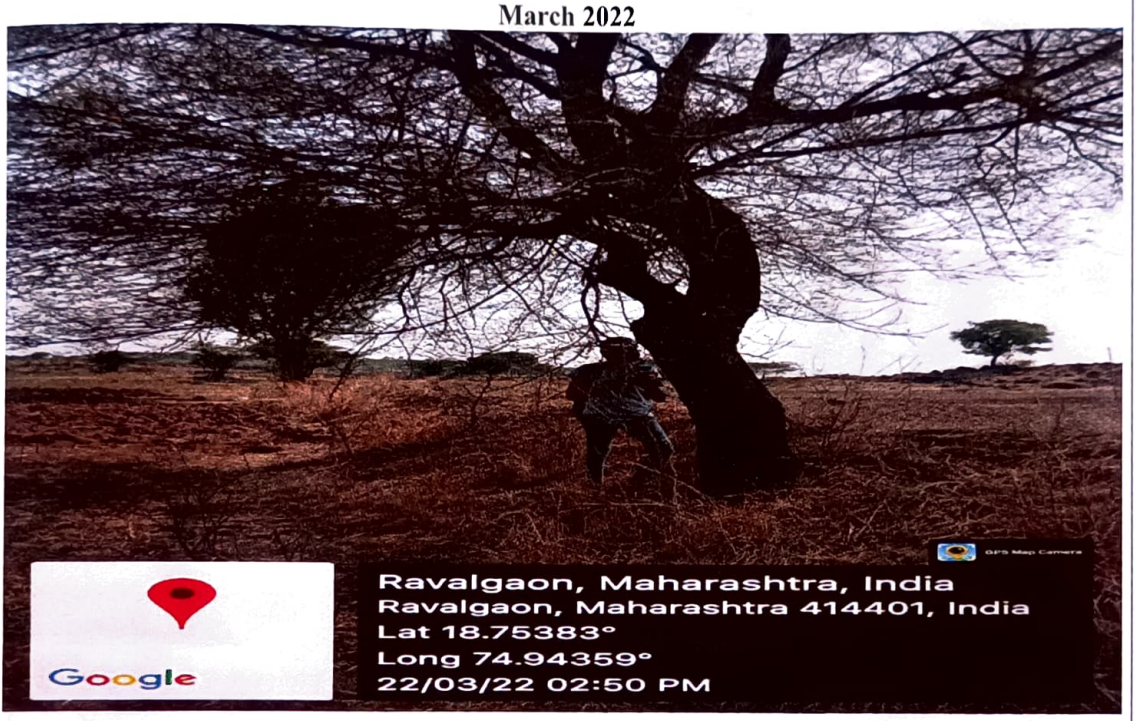
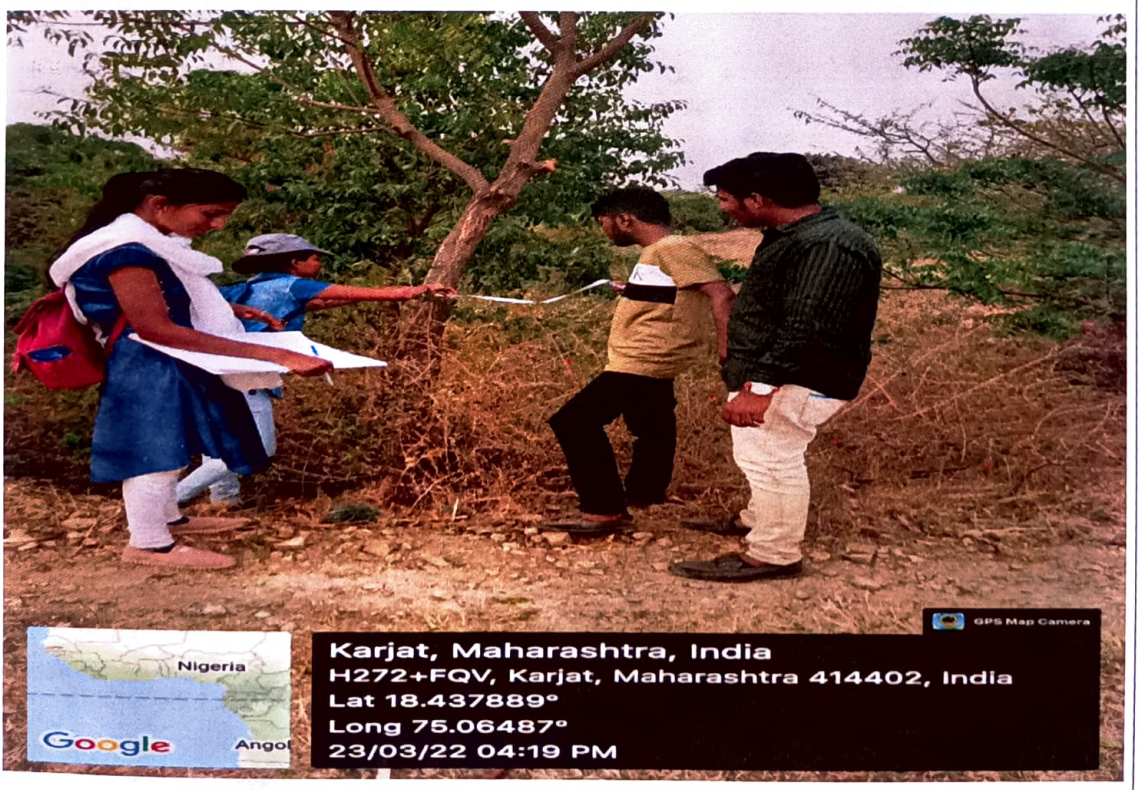
Participated in

"MAZHI VASUNDHARA ABHIYAN- 2022"

March 2022





TREE CENSUS,DEPARTMENT OF BOTANY,DADA PATIL MAHAVIDYALAYA IN COLLABORATION WITH KARJAT NAGARPANCHAYAT,KARJAT

Rayat Shikshan Sanstha's

DADA PATIL MAHAVIDYALAYA, KARJAT, AHMEDNAGAR

DEPARTMENT OF BOTANY

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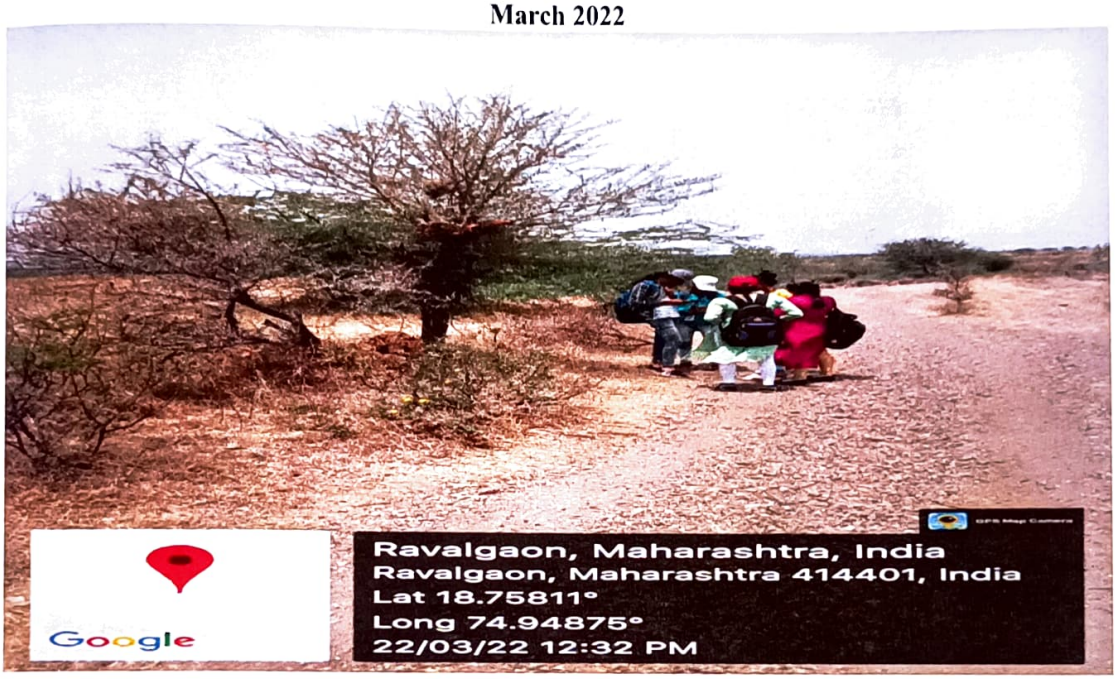

TREE CENSUS,DEPARTMENT OF BOTANY,DADA PATIL MAHAVIDYALAYA IN COLLABORATION WITH KARJAT NAGARPANCHAYAT,KARJAT

Rayat Shikshan Sanstha's
Dada Patil Mahavidyalaya, Karjat
Year 2021-22
DEPARTMENT OF BOTANY

Outreach Activity
Mazhi Vasundhara Abhiyan - 2022

Date : 21.3.2022

Attendance of students

Sr. No.	Name of the student	Class	Phone No.	Signature- 1 22.3.2022	Signature- 2 23.3.2022
1.	Dande Bhagyashri Balasaheb	MSc II	7774951746	Dande B.B.	Dande B.B.
2.	Gaikwad Pratiksha Babasaheb	MSc II	8605840168	Gaikwad.	Gaikwad
3.	Godse Megha Dhanajay	MSc II	8624082893	Megha.	Megha
4.	Kachare Sonali Sahadu	MSc II	7796751466	Kachares	
5.	Kangude Sanjivani Dagadu	MSc II	8767289565	Sanjivani	Sanjivani
6.	Khamgal Vidya Bapusaheb	MSc II	8468872776	Khamgal	Khamgal
7.	Kokane Shital Caturshing	MSc I	8799914414	Shital	Shital
8.	Masal Amruta Rajaram	MSc II	9370905209	Masal A	Amruta
9.	Pathade Prajakta Sundardas		9420248697		
10.	Pathade Rukhmini Balasaheb	MSc I	9975163930	Pathade	
11.	Survase Madhavi Mahadev		8956568508		
12.	Vhartake Pratiksha Ashok	MSc I	8799808530	Vhartake P.A	
13.	Badar Trupti Ramesh	MSc I	7057972152	Trupti	
14.					
15.					
16.					
17.					
18.					
19.					

Two day's Tree sensus Program

22/3/22 & 23/3/22

1) Botany — 1) Wadavkar sir
2) Gavde madam
3) Jagtap sir

2) Zoology — 1) Bedre madam
2) Kulkarni Trupti madam
3) Shaikh Mawiyanaz Imraan.

3) Physics — 1) Kale sir
2) Mhaske sir
3) Shinde madam

) Chemistry 1) Patil S.M sir
2) Pansare Madam

5) Geography 1) Toradmal Agasti sir

Dr. M. A Patil

Group I - All Boys

Group II - (Chemistry + Botany) Girls

Group III - (Physics + Zoology) Girls.

M.Sc. Botany

r. NO	Name of student	Mo. NO	Sign.
1.	Suravase Madhavi Mahadev	8956568508	Suravase M.M
2.	Khamgal Vidya Bapusaheb	8468872776	Khamgal
3.	Maral Amruta Rajaram	9370905209	Amruta
	Godase Megha Dhananjay	8624082893	Megha.
	Dande Bhagyashri Balasaheb	7774951746	DandeB.B.
	Kangude Sanjivani Dagadu	8767289565	Sanjivani
	Kokane Shital Chatursing.	8799914414	Shital.
	Kachare Sonali Sahadu.	7796751466	Kacharess
	Pathade Rukmini Balasaheb	9975163930	Pathade
	Pathade Prajakta Sundardas	9420248691	Pathade P.S.
	Vharkate Pratiksha Ashok	87 99 8085 30	Vharkate P.A
	Gaikwad Pratiksha Babaso	8605840168	Gaikwad.

Census
Tree ~~Sense~~ Survey, Mahalangi Tal-karjat A. Nagar.

Staff

1) Dr. D. S. Wadavkar. - Assistant professor (Botany) - [signature]
2) Mr. B. S. Mahavnavre - — 2 — (Physics) [signature]
3) Mr. N. A. Kale - — " — (Physics) [signature]
4) Mr. Mhaske. S. d — " — physics [signature]
5) Miss. Pansare M. S. — " — (chemistry) [signature]
6) Miss. Kaldate N. V — " — (chemistry) [signature: Kaldate]
7) Miss. Shinde A. G. Ass. Prof. (physics) [signature]
8] Miss. Gawade S. R. Ass. prof. (Botany) [signature]
9] Mr. C. L Jagtap Assit. prof (Botany) [signature: Jagtap]

[signature]
ग्रामसेवक
ग्रामपंचायत माळंगी
ता. कर्जत, जि.अ.नगर

[signature]
सरपंच
ग्रामपंचायत माळंगी
ता.कर्जत,जि.अ.नगर

Students Attendence.

Tree ~~Sense~~ Survey, Mahalangi tal. karjat A.Nagar

Gawade Prashant Ra	M.Sc II	Physics	Gawade
Kangude Sahadev H.	M.sc-I	physics	Kangude.
kasare sudhir chhagan	M.sc II	physics	Kasare
Gaste Rushikesh. B	M.sc II	physics	Gaste.RB
Kakade Rushikesh Ashok	M.Sc II	chemistry	Kakade
Bagade onkar Rajendra	M.Sc II	chemistry	Bagade
kumbhar sagar Laxman	M.sc II	physics	kumbhar.sl
shinde Akshay Mahadev	M.sc-II	Chemistry	ShindeAm
Kangude sonali sanjay	M.Sc-II	Zoology	Kangude
chavan Jyoti Vaniram	M.sc-II	Zoology	ChavanJ.V.
Jagtap Asha Laxman	M.sc II	Zoology	JagtapA
Gaikwad Pratiksha Babaso	M.Sc	Botany	Gaikwad.
Kharade Sonali Sanjay	F.Y. B.Sc		Kharade Sonali
Gangarde Saurabh Ramchandra		chemistry	SGangarde

ग्रामपंचायत
ता.कर्जत,जि.अ.नगर

सरपंच
ग्रामपंचायत माळंगी
ता.कर्जत,जि.अ.नगर

Name	class	subject	sign.
Khamgal Vidya Bapusaheb	MSc II	Botany	Khamgal
Godase Megha Dhananjay	MSc II	Botany	Megha.
Dande Bhagyashri Balasaheb	MSc III	Botany	Dande B.B
Angude Sanjivani Dangadu	Msc. II	Botany	Sanjivani.
Pardeshi Sonali Anandsing	MSc. II	Botany	Pardeshi. S.A
Babar Vaishali Bhaskar	Msc-II	chemistry	V.B.Babar
Sarode Balika Subhash	MSc-II	Chemistry	Balika
Gaikwad Pratiksha Babaso	MSc -II	Botany	Gaikwad
Kharade Sonali Sanjay	FY. Bsc		Kharade Sonali
Kokane Shital chaturshing	FY MSc I		Shital.
Mayal Amruta Rajaram	Botany		Amruta
Kangude Sonali Sanjay	Zoology		Kangude
Chavan Jyoti Vaniram	Zoology		Chavan J.V.
Jagtap Asha Laxman	Zoology		Jagtap

ग्रामसेवक
ग्रामपंचायत माळंगी
ता.कर्जत, जि.अ.नगर

सरपंच
ग्रामपंचायत माळंगी
ता.कर्जत, जि.अ.नगर

Rayat Shikshan Sanstha's
Dada Patil Mahavidyalaya, Karjat

DEPARTMENT OF BOTANY
in Collabration with

KARJAT NAGAR PANCHAYAT, KARJAT
participated in

"MAZHI VASUNDHARA ABHIYAN- 2022"

REPORT

Date : 23.3.2022

The Department of Botany organized an **outreach activity** in collabration with the team of Karjat Nagar Panchayat, Karjat in March 2022. It included the **"Tree Census Activity of karjat tehsil, Dist Ahmednagar"** along with the team of S.V. Haribhai Desai College, Pune from **8th March to 17th March 2022** under the **"Mazhi Vasundhara Abhiyan- 2022"**. A total of **40 undergraduate and postgraduate students** of Department of Botany, Dada Patil Mahavidyalaya, Karjat participated in the activity. The students were provided **hands on training** of Tree census in and around Karjat , which will help to develop their skills regarding study of plant sciences.

The activity was successful due to the efforts taken by the entire faculty of department of Botany, the IQAC and the Principal, Dada Patil Mahavidyalaya, Karjat for motivation and participation in this outreach activity.

Head
Department of Botany
Dada Patil Mahavidyalaya, Karjat

D.P. MAHAVIDYALAYA KARJAT NAGAR

I/C PRINCIPAL
Dada Patil Mahavidyalaya
Karjat, Dist.Ahmednagar

कर्जत नगरपंचायत कार्यालय कर्जत

ता.कर्जत,जि.अहमदनगर

फोन नं०२४८९ --२२२०१२ टोल फ्री क्र -.१८००-२५८-६०८० Email Id-cokarjat55@gmail.com

जा. क्र. / कनप / /२०२२ दि.२३/०३/२०२२

APPRECIATION LETTER

We appreciate the active participation of **Undergraduate and Postgraduate students of Department of Botany, Dada Patil Mahavidyalaya, Karjat** in the "**Tree census activity of Karjat NagarPanchayat, Karjat, Dist.Ahmednagar"** along with the team of S.V. Haribhai Desai College, Pune from **8th March to 17th March 2022** under the **"Majhi Vasundhara Abhiyan-2". Hands on training** to the students have been provided and this will help them to develop their skills in plant sciences.

We also appreciate the sincere efforts taken by the entire faculty of Department of Botany, the IQAC and The Principal, Dada Patil Mahavidyalaya, Karjat for motivation and participation in this Outreach activity.

Hope for their cooperation in future also.

Thanking You,

Yours Sincerely,

Chief Officer
Karjat NagarPanchayat,
Tal.Karjat,Dist.Ahmednagar

D.P.MAHAVIDYALAYA
Inward No..618
Date....23/3/2022

कर्जत नगरपंचायत कार्यालय कर्जत

ता.कर्जत,जि.अहमदनगर

फोन नं०२४८९ --२२२०१२ टोल फ्री क्र -.१८००-२५८-६०८० Email Id-cokarjat55@gmail.com

जा. क्र. / कनप / /२०२२

दि.२३/०३/२०२२

To,

The Head,
Department of Botany,
Dada Patil Mahavidyalaya,
Karjat, Dist.Ahmednagar.

Subject: Students for Activities under **Majhi Vasundhara Abhiyan-2.**

Respected Sir/ Madam,

The Karjat NagarPanchayat, Karjat, Dist.Ahmednagar has undertaking different Social and Environmental activities under the "**Majhi Vasundhara Abhiyan-2**" in and around the city. In order to fulfill the survey & activities like **Tree census** in Karjat NagarPanchayat, we require the team of undergraduate and postgraduate students of Botany in Ist week of March 2022. It is an opportunity for students to get hands on training regarding the plant sciences.

Please do the needful and cooperate.

Thanking You,

Yours Sincerely,

Chief Officer
Karjat Nagar Panchayat,
Tal.Karjat,Dist.Ahmednagar

D.P.MAHAVIDYALAYA
Inward No...617.....
Date...23.3.2022.....

ounder : Padmabhushan Dr. Karmaveer Bhaurao Patil

Rayat Shikshan Sanstha's

Estd. - 1964

DADA PATIL MAHAVIDYALAYA

(Arts, Commerce and Science)

Karjat, Dist. Ahmednagar - 414 402 (M.S.)

☎(02489) (O) 222534 (R) 222518 , Email : dpcollege@yahoo.co.in Website : www.dpcollege.in

NAAC Accreditation (3rd Cycle) 'A' Grade (CGPA 3.07)

Jr. College HSC Board - 12.003.001 Code No. SPPU / AN / ASC / 06 / 1964

I/c .Principal
SANJAY NAGARKAR
, M.Phil., Ph.D., SET

* Savitribai Phule Pune University Best College Award (2004-2005) * Rayat Mauli Puraskar (2005-2006)

Date : 21 March 2022.

To,

The CEO,
Nagar Panchayat,
Karjat, Dist. Ahmednagar.

Subject: Vote of thanks.

Respected Sir/ Madam,

The Department of Botany , Dada Patil Mahavidyalaya, Karjat is very much thankful to the team of Nagar Panchayat, Karjat for giving their students an opportunity to participate in **Tree census activity** undertaken for "**Mazhi Vasundhara Abhiyan - 2022"** in March 2022. It will help in creating environmental awareness and skills in Plant sciences among students.

Hope for cooperation in future also.

Thanking You,

Yours Sincerely,

D. P. MAHAVIDYALAYA KARJAT NAGAR

I/C PRINCIPAL
Dada Patil Mahavidyalaya
Karjat, Dist.Ahmednagar

Head
Department of Botany
Dada Patil Mahavidyalaya, Karjat

2021

Karjat

Founder : Padmabhushan Dr. Karmaveer Bhaurao Patil
Rayat Shikshan Sanstha's
Estd. - 1964

DADA PATIL MAHAVIDYALAYA

(Arts, Commerce and Science)
Karjat, Dist. Ahmednagar - 414 402 (M.S.)
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Date : 21 March 2022.

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Karjat, Dist. Ahmednagar.

Subject: Vote of thanks.

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Hope for cooperation in future also.

Thanking You,

Yours Sincerely,

D. P. MAHAVIDYALAYA KARJAT NAGAR.

I/C PRINCIPAL
Dada Patil Mahavidyalaya
Karjat, Dist.Ahmednagar

Head
Department of Botany
Dada Patil Mahavidyalaya, Karjat

कर्जत नगरपंचायत कार्यालय कर्जत
ता.कर्जत,जि.अहमदनगर

फोन नं- ०२४८९-२२२०१२ टोल फ्री क्र.- 1800-258-6080 Email Id-cokarjat55@gmail.com

जा.क्र./९९५ / कनप/२०२२ दिनांक :- ०१/०३/२०२२

विनंतीपत्र

प्रति,

मा.प्राचार्य,

दादा पाटील महाविद्यालय
पत्ता ---मुंपो॰ कर्जत---

विषय :- विद्यार्थ्यांच्या माध्यमातून वृक्ष गणना करणे व वृक्ष योजना करण्यासाठी सहकार्य मिळणेबाबत..

महोदय,

उपरोक्त विषयान्वये आपणास कळविण्यात येते की, कर्जत नगरपंचायत माझी वसुंधरा अभियान अंतर्गत अनेक पर्यावरण पूरक उपक्रम राबवित आहे. यामध्ये शहरातील हरित क्षेत्रां मध्ये वाढ करणे, नव्याने हरित पट्टे विकसित करणे इत्यादी कामे अंतर्भूत आहेत. तसेच नगरपंचायत हद्दीमध्ये ते ३३ टक्के पेक्षा जास्त हरित आच्छादन करण्यासाठी सविस्तर प्रकल्प अहवाल तयार करणे प्रस्तावित आहे. याकरिता नगरपंचायत हद्दीत उपलब्ध असलेल्या जागा व लागवड करावयाची वृक्षसंख्या याचे परिपूर्ण नियोजन करावयाचे आहे. वृक्ष योजना करण्यासाठी नगरपंचायतीस तज्ञ व्यक्तींची आवश्यकता आहे, या कामातील आपला अनुभव उत्तम असल्याकारणाने वृक्ष गणना व वृक्ष योजनेसाठी आपण नगरपंचायतीस सहकार्य करावे.

माझी वसुंधरा अभियान-१ मध्ये कर्जत नगरपंचायतीने द्वितीय क्रमांक मिळविला होता, या वर्षी कर्जत नगरपंचायतीस राज्यात प्रथम स्थान मिळवण्यासाठी आपले मोलाचे योगदान असू शकते.

तसेच आपल्या महाविद्यालयीन विद्यार्थी व कर्जत नगरपंचायत यांच्या संयुक्त विद्यमाने कोलॅबोरेटिव स्टडीज अंतर्गत विद्यार्थ्यांच्या माध्यमातून वृक्ष गणना करणे व वृक्ष योजना करणे हा पर्यावरणपूरक उपक्रम राबवता येईल. विद्यार्थ्यांना लागणारा अन्य खर्च जसे की प्रवास, राहणे, खाणे व इतर खर्च नगरपंचायतीमार्फत अदा करण्यात येईल.

तरी नगरपंचायत याकामी आपल्या सहकार्याच्या अपेक्षेत आहे .

कळावे.

स्थळ :- कर्जत,जि.अहमदनगर

दिनांक :- ०१/०३/२०२२

D.P.MAH... VIDYALAYA
Inward No. 567
Date 3.3.2022

मुख्याधिकारी
कर्जत नगरपंचायत कर्जत,
ता.कर्जत,जि.अहमदनगर

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya, Karjat

DEPARTMENT OF BOTANY

Year 2021-22

Activity : Mazi Vasundhara Abhiyan.- 2022.

Date : - 10/03/2022

Time : 10.00 a.m. Onwards **No. of Beneficieries -**

"Inaugural Function"

Sr. No.	Name of the student	Class	Signature
1.	Dande Bhagyashri Balasaheb	M.Sc-II	Dande B.B.
2.	Godase Megha Dhananjay	M.Sc II	Megha
3.	Bhandawalkar Pooja Hanumant	B.S.C-I	Pooja H.B
4.	Gavhane Kalyani Appasaheb	B.S.C-I	Kalyani.
5.	Jarad Snehal Subhash	B.Sc I	Jarad-S
6.	Jarad Sayali Subhash	B.Sc II	Jarad
7.	Jadhav Ruttja Raju	BSC I	Jadhav R.R
8.	Darekar Akanksha Nitin	Bsc I	Darekar.A
9.	Bhagat Anjali Tatyasaheb	BSC II	Anjy
10.	Janbhare Pooja Kundlik	Bsc II	Pooja J
11.	Mhetre Pooja Vijay	B.Sc II	Mhetre
12.	Kokane shital chatursing.	MSc I	Shital
13.	Kachare Sonali Sahadu.	MSc I	Kachares
14.	Vharkate Pratiksha Ashok	MSC I	Vharkate
15.	Pathade Rukmini Balasaheb	MSc-I	Pathade
16.	Shinde shital Baban Gadade	MSc-I	Gadade S
17.	Kale Siddheshwar Lala	B.Sc I	S.L.kale
18.	Bhitade Rahul Rajendra	B.Sc I	Rahul
19.	Patare omkar Machhindra	B.Sc I	Patare
20.	Kadam shubham Rajendra	B.Sc.I	Kadam
21.	Dhanashri J. Dalikar H.V.D Pune	MSc-I	Dalikar
22.	Dnyanesh.S.Rathod	Asst. Prof	
23.			
24.			

V.D. Pune.

Sr. No.	Name of the student	Class	Signature
25.	Balgude Ashok Mahadev	S.Y.BSC	
26.	Saste Aniket Sudam	SY. BSC	
27.	Shinde Rushikesh Balu	SY. BSC	
28.	Rote Ashish Ramesh	SY BSC	
29.	Shinde Shubham Suresh	S.Y.BSC	
30.	Doke Sumit Sunil	S.Y.BSC	
31.	Prasad Sanjay Gable	S.Y.BSC	
32.	Patil Prathviraj Hanumant	SY.BSC	
33.	Kayjude Ishwar Housrav	SY. BSC	
34.	Matane Shivaji Bhalchandra	S.Y.BSC	
35.	Kale Rushikesh Ramesh	F.Y. MSC	
36.	Nikam Ram Ravindra	F.Y. MSC	
37.	Zinjade Sujit Bhausaheb	S.Y.B.SC	
38.	Kunjir Abhishek Bapu	S.Y. BSC	
39.	Sushant Santosh Bhitarde	SY. BSC	
40.	Bezad Sanket Navneeth	S.Y. BSC	
41.	Dhawale Ajit Rewannath	Sy. B.Sc.	
42.	Malage Akash Santosh	S.Y.BSC	
43.	Dhangwade Pritesh Sundardas	S.Y.BSC	
44.	Dhekale Popat Bhanudas	S.Y. BSC	
45.	Mulay Ketan Raghunath	S.Y. BSC	
46.	Mulay Krushna Satish	S.Y. BSC	
47.	Supekar Gaurav Ramdas	F.Y.BSC	
48.	Modhale Rushikesh Prakash	S.Y.B.Sc	
49.	Valte Dnyaneshwar Sunil	S.Y.BSc	
50.	Nimble Prajakta	H.V. Desai MSC. II	
51.	Aditya Redkar	M.Sc II	
52.	Shubhangi Bandade	H.V. Desai M.Sc. II	
53.	Khushi Nadkar	H.V. Desai MSC II	
54.	Dhananjay Mukhekar	MSc II	
55.	Sayali Dhok	faculty	
56.	Dnyanesh Rathod	faculty	
57.	AQSA SHAIKH	TYBSC	
58.			
59.			

Sr. No.	Name of the student	Class	Signature
60.	Modhale pritam Dadasaheb	F.Y.B.Sc	M.P.D
61.	Gadade Tanmay siddheshwar	F.Y.B.Sc	Gadade.
62.	Bhosale sanjay Rajendra	F.y.B.sc	S.R. Bhosale
63.	Khose Datta Dnyandev	F.Y.BSc	Datta
64.	Bakhre dinesh	S.Y BSc	Dinesh
65.	Ghegde Naren Tatya	S.Y.B.Sc	[illegible]
66.	Sonawane Vaibhav Pradip	S.Y.B.Sc	Sonawane
67.	Nalavade Samadhan	Fy BSC	[illegible]
68.	shelake suraj	FyBSC	[illegible]
69.	Rokade shriram Nilas	SY BSC	Rokade S.
70.	Hole Rohit Ashok	S.Y.BSC.	Rohit
71.	Gaikwad Sachin Baban	F.Y.BSc	Sachin
72.	Madane Sahil Anil	F.Y.BSC.	Sahil
73.	khatal Aatesh Dada	S.Y.BS.C	[illegible]
74.	Madane Sourabh Anil	S.Y.B.S.C	Saurabh
75.	Jadhav Tushar Navanath	FY.B.SC	[illegible]
76.	Thorat Tejas Suresh	FY.BSC	[illegible]
77.	Gude Abhishek Dinesh	F.Y.Bsc	Agude
78.	Deshmukh Rushikesh Vitthal	S.Y.BSC	D.Rushikesh
79.	Shaikh Aihar Javed	F.Y.BSC	[illegible]
80.	Shaikh Ashapak Rahiman	F.Y.BSC	[illegible]
81.	Shinde Rutik Bharat	F.Y.BSC	ShindeRB
82.	Tushar Villash Tanpure	S.y.Bsc	[illegible]
83.	Tanpure Omkar Dipak	S.Y.Bsc	Tanpure
84.	Devkar Pravin sudam	S.Y BSC	[illegible]
85.	Toradmal Aniket Ganesh	S.Y BSC	Toradmal.A.G.
86.	Shingade Parmeshwar Dashrath	S.Y.BSC	ShingadePD
87.	Jadhav Sumit Sambhaji	S.Y.BSC	[illegible]
88.	Vangude Shubham Vilas	F.Y.BSC	Vangude
89.			
90.			
91.			
92.			
93.			
94.			

...dents participated in ... inaugural function of ...rbi Vasundhara Abhiyan"

Head
Department of Botany
Dada Patil Mahavidyalaya, Karjat

Rayat Shikshan Sanstha's

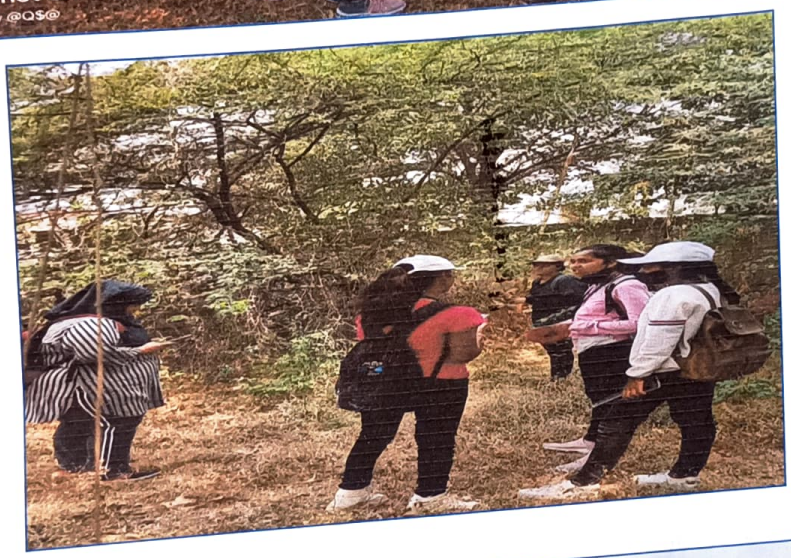
Dada Patil Mahavidyalaya, Karjat

DEPARTMENT OF BOTANY
in Collabration with
KARJAT NAGAR PANCHAYAT, KARJAT
has undertaken
TREE CENSUS activity under " MAZHI VASUNDHARA ABHIYAN- 2022"
March 2022

TREE CENSUS activity under " MAZHI VASUNDHARA ABHIYAN- 2022"

TREE CENSUS activity under " MAZHI VASUNDHARA ABHIYAN- 2022"

TREE CENSUS activity under " MAZHI VASUNDHARA ABHIYAN- 2022"



Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya, Karjat, Dist.-Ahmednagar

Department of Botany & IQAC,

Academic Year 2021-2022

Organizes

Event Name: - Tree Census – participation list (Mazhi Vasundhara Abhiyan – 2022)

Date: - 19/8/2022	Class: - F.Y/T.Y/MSc Botany
Day: - Thursday.	Time: - 10 a.m. to 2:00 p.m.

Beneficiaries

Sr. No.	Name	Sign.	~~Sign~~ Mobile No. (whats app)
1	Devmunde Vidya Sanjay	Devmunde	9657977651
2	Fartade Payal Gautam	Fartade	9309977252
3	Godase Megha Dhananjay	Megha.	8624082893.
4	Dande Bhgyashri Balasaheb	DandeB.B.	7774951746
5	Kangude sanjivani Dagadu	Sanjivani	8767289565
6)	Kumble Ashvini Dattatray		9767494853
7)	Jorwar swati Ramdas	Jorwar.S.	9356572588
8)	Pathade Rukmini Balasaheb	Pathade	9975163980
9)	Kachare Sonali Sadhu	Kachare	7796751466
10)	Gadade Shital Baban	Gadade.S.	7563939595
11)	Kokane shital chaturching	Shital	8799914414
12	Vharkate Pratiksha Ashok	VharkatePA	8799808530
13)	Khose Rutuja Ravindra	R.R.Khose	9552241178
14)	Kharade Sonali Sanjay	Kharade	8208743363
15)	Khose Pratiksha Navnath	Khose P.N	7756991164
16)	Gadade Priyanka Haridas	Gadadepri	9699891303
17)	Pawar Amruta Ashok	PawarAA	9766145356
18)	Dande Gauri Raghunath	Gauri	9022284065
19)	Toradmal Vaishnavi Girish	Vaishnavi	9373279570
20)	Rogade Vaishnavi Navnath	Vaishnavi	8446154916
21)	Ghadge Shweta Kailas	Shweta	9518748281
22)	Bhosale Pooja Gajendra	Bhosale Pooja	7028302899
23)	Nanaware Rahu Niranjay	Rahu	8237972703
24)	Bhise Gaurav Kantilal	GBhise	7741870376
25)	Aguan Pratiksha	Apratiksha	9657007095
	Bade Thakur Balasaheb	Thakur	9970803278

In charge

Head

10/3/2022

Head
Department of Botany
Dada Patil Mahavidyalaya, Karjat

All these students have actively participated in on-Job training of Tree census in Karjat taluka under "Mazhi Vasundhara Abhiyan" 2022 in College.

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya, Karjat, Dist.-Ahmednagar

Department of Botany & IQAC,

Academic Year 2021-2022

Organizes

Event Name: - Plant Census

Date: - 10/8/2022	Class: - F.Y / T.Y / MSc Botany
Day: - Thursday	Time: - 10 a.m. to 2.00 p.m.

Beneficiaries

Sr. No.	Name	Sign	Sign Mobile no. (whats app)
1	Adbal Nikhil Ramhari		9307581232.
2	Bereel Sanket Navnath		9970742791 (Samarth college)
3	Patil Ajinkya Ganesh		9403647239
4	Sayyed Amir Hasim		9503953795
5	Sautade Aniket Suresh		7058442777
6	Khajinkar Bapu Narayan		8766008612
7)	Chakhale Rohit Balasaheb		8767475158
8)	Tampure Abhishek Bhambar		9403962903
9)	Nikam Ram Ravindra		9834044419
10)	Kale Rushikesh Rannesh		8359283099
11.	Kale pratap suhas		7499798114
12)	Waghmare Pramod Mohan		9579892901
13)	Gadade Priyanka Haridas		9699891303
14)	Pawar Amruta Ashok		9766124356
15)	Dande Gauri Raghunath		9022284065
16)	Agarwal Prachi Keshav		9284788634
17)	Ghadge Shweta Kailas		9518748281
18)	Bhosale pooja Gajendra		7028302899
19)	Bhise Gautami Kantilal		7741870976
20)	Rahi Niranjay Narayan		8237912703
21)	Aguwan Pratiksha		9657007095
22	Bale Major Balasaheb		9970803278
23)	Bagwan Sabir Raju		9921690368
24)	Dr. Asha Bhausaheb Kedam		7588242050
25)	Mr. Suvana Vyankat Gaikwad		8975047616
26)	Dr. Pratishtha Nitin Magare		7756853904

In charge

Head

27.) Dhanashri Y. Parikar Fy.MSC H.V.D.Pune (Oshi..

Mo.da. 8766500554.

28) Sayali Dhole faculty 7038037630

29) Dnyanesh Rathod faculty 8149787257

30) Dhananjay S. Mukhekar Sy.MSC H.V.D Pune 9975209968

31) Gawade Dhanashrisanjay FY.BSC.9970453936

32) Rujuja Ghalme FY.BSC 8857057376

33) Gayatri Ghalme fy.BSC 8767951518

34) Aarchna Sautade fy.BSC 8669370810

35) Jamdade sonal fy.BSC 9067084003

36) Pardeshi Neha Rameshsing. fy.BSC. 8605377070/ 8766683600

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya, Karjat

DEPARTMENT OF CHEMISTRY

Notice

All students of T. Y. B. Sc. Chemistry and M. Sc. I and M.Sc. II Organic Chemistry hereby informed that Department of Chemistry will organized hands on training workshop on 01/01/2022 at 11.00 am in APJ Abdul Kalam Hall. All should remain present with in time.

Head
Department of Chemistry

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya

Karjat Dist-Ahmednagar

Department of Chemistry

Organized

Workshop on

"Hands on Training"

1st January, 2022

Report

Department of Chemistry was organized one day workshop on Hands on Training by Prin. Dr. Shashikant R. Kuchekar, Ex. Principal Woman's Home Science College, Pravaranagar Tal. Rahata Dist. Ahmednagar for T. Y. B. Sc. Chemistry and M. Sc. I and M. Sc. II Organic Chemistry students. Total 118 Students were present.

Objective of Workshop:

Hands-on training is one method educational systems and businesses alike use **to help teach people to learn a certain task**. It provides real-world experience by allowing the trainee to get her hands directly on whatever she is learning, creating a sense of empowerment.

Applications of Workshop:

Basic instrument operation:

Module for new operators, most commonly performed at customer site after tool installation. It provides the required knowledge to start operating the instrument and covers basic maintenance procedures.

Instrument maintenance:

Module for operators with a good knowledge of the instrument control, wishing to improve their analytical skills.

Applications:

Modules for advanced users wishing to improve analytical results and performance in a specific area. Fully customizable to your analytical requirements and field of application

Software:

Training of IR, UV, and Atomic Absorption Spectrophotometer instruments, covering basic and advanced features that can improve user experience, analysis throughput, data quality.

Head,
Department of Chemistry

INTRODUCTION OF GUEST BY DR. M. A. PATIL

PRIN. DR. SHASHIKANT KUCHEKAR DELIVERING HIS EXPERT LECTURE

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalya, Karjat

Department of Chemistry

Subject Based Hands on Training

Name of the Resource Person:- Prin. Dr. Shashikant R. Kuchekar

Date:- 01/01/2022 Time:- 11:00 am

Topic:- Subject Based Hands on Training

Sr. No.	Name of the Students	Signature
1	Pardeshi S.B.	Pardeshi
2.	Galande S.D	Galande.
3]	Ranadive A.M	Ranadive
4.	Shinde. S.V.	Shinde.
5]	More V.D	More
6]	Gurav C.B	Gurav.C.B
7]	Kamble T.R	T.R.Kamble
8]	Anarase.P.H	Anarase.P.H
9]	kale R.S	Kale.
10]	Hake K.B	Hake
11]	Parkhe S.T	Parkhe
12]	Galande R.2.	Galander.2.
13]	Vachkal A.R	AR
14]	Shelake M.S	Shelake
15]	Shelake A.S	Shelake
16]	Nanaware N.V	Nanaware
17]	Supekar.K.G	Supekar.K.G.
18]	More P.A	More.P.A.
19]	Thorat P.R	PRThorat
20]	Wagh R.A.	RAwagh
21	Bharane. R.S	RSB
22]	Mane R.R	M.R.R
23]	Raut. P.M	Raut
24]	Dhawle R.B	Rdhawle
25]	Kalokhe. N.R	Kalokhe
26]	Khedkar.A.D.	Khedkar A.D.
27]	Gaikwad.V.S.	
28.	Rasal A.S.	SRasal
29.	Mohite D.D	Mohite
30	Gupta.S.T	Gupta.
31	Bagal K.B	Bagal K.B

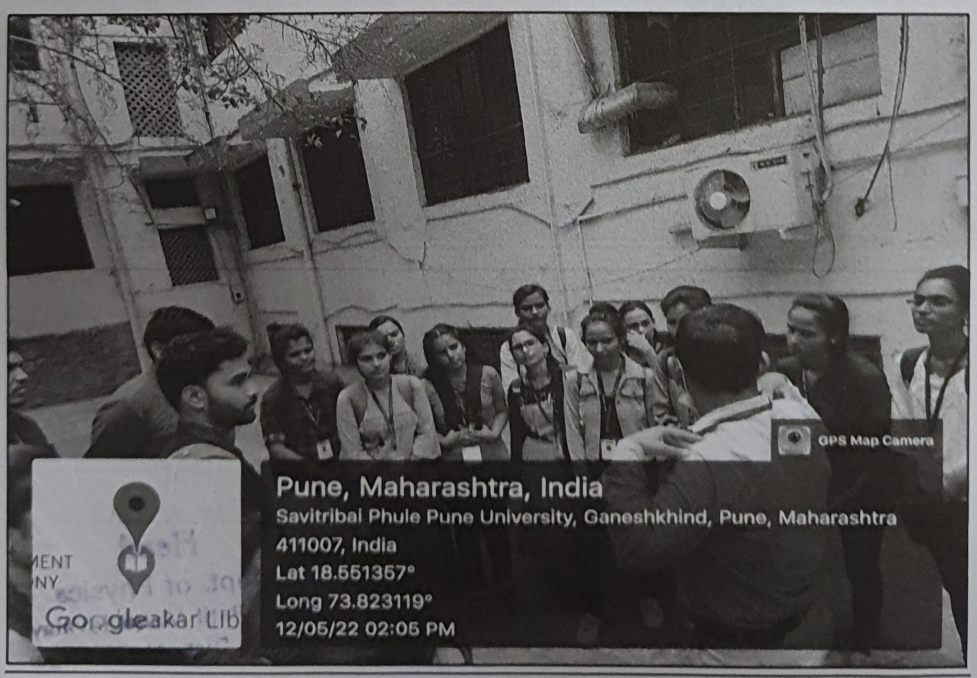
Rayat Shikshan Sanstha's

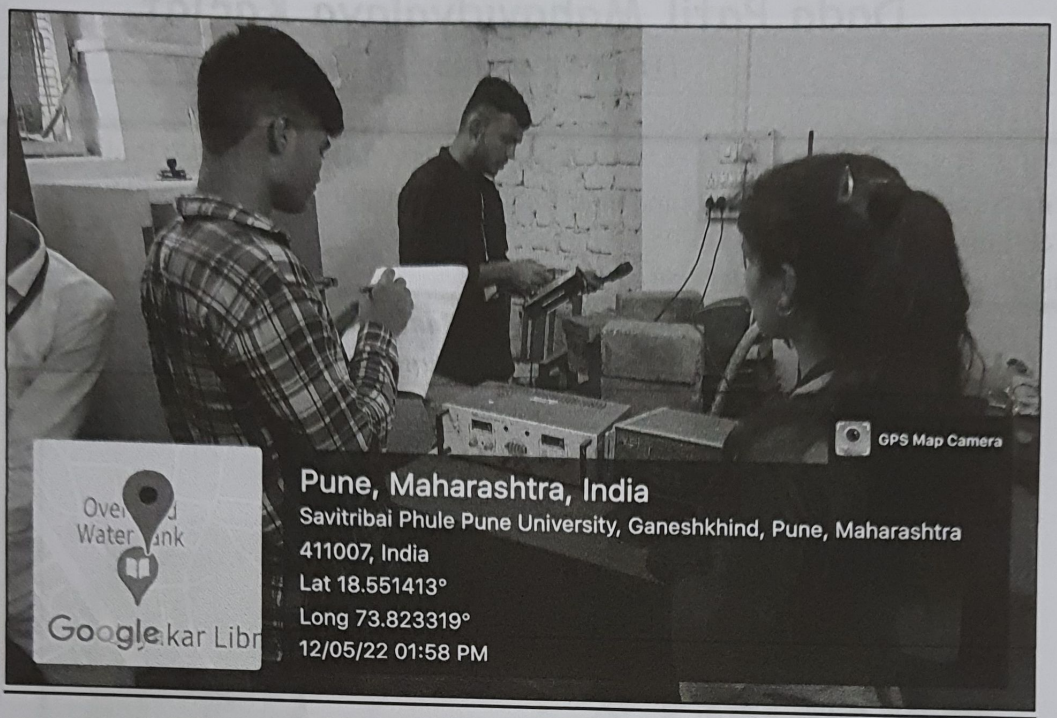
Dada Patil Mahavidyalaya Karjat

(Dist-Ahmednagar)

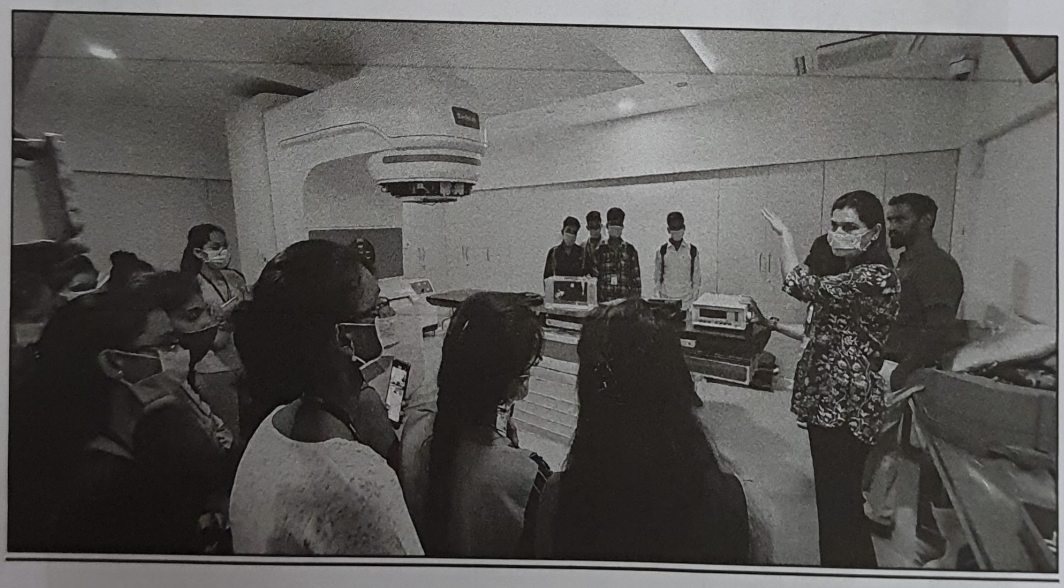
Class: T.Y.B.Sc **Subject:** PHY-3611 SEC (AA): Radiation Physics.
Activity Name: "Visit to hospitals and other such locations for measuring radiation exposure.".
Date & Time: 12.05.2022 (11.00-05.00 PM).
Venue: *Indrayani Hospital, Devachi Aalandi, Pune.*

1) Radiation Exposure measure near the Radioisotope Storage Room, Dept. of Physics, Savitribai Phule Pune University, Pune.





2) ***Radiation Exposure measure Indrayani Hospital and Cancer Institute, Alandi, Pune.***



Subject In-charge
(Dr. Mahesh S. Bhadane)

HoD
(Dr. M. A. Patil)
Head
Dept. of Physics
Dada Patil Mahavidyalaya
Karjat, Dist. Ahmednagar

MAHAVIDYALAYA KARJAT NAGAR

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya Karjat

(Dist-Ahmednagar)

Class: T.Y.B.Sc **Subject:** PHY-3611 SEC (AA): Radiation Physics.
Activity Name: "Visit to hospitals and other such locations for measuring radiation exposure.".
Date & Time: 12.05.2022 (02.00-04.00 PM).
Venue: *Indrayani Hospital, Devachi Aalandi, Pune.*

-Attendance Sheet-

Sr. No.	Students Name	Signature
1	Khatake komal Tukaram	Khatake
2	Punyawanshi Shubhangi. D.	Shubhangi
3	Gangarde Sakshi Sudhakar	Gangarde
4	Gangarde shivani Raosaheb	Gangarde
5	Ganesh Bhoge	Bhoge
6	Bhise Deepali R.	RBhise
7	Anarse Priyanka Hambirao	A. P.
8	Farande Varsha Gopindth	Farande
9	Hainawar Vithal mohan	
10	Jadhav Priya Shahaji.	Jadhav
11	Karpe sampada Devidas	Karpe
12	Jare Priti Dattatraya	Priti
13	Jagtap vaishnavi sambhaji	Jagtap
14	Sarode Aniket Rohidas	Sarode
15	Pawar mahesh Somnath	
16	Gorkhe Nikita Dnyandev	Gorkhe. N.D
17	Malave Rutuja Subhash	Malave
18	Tambe Rutuja Suresh	Tambe.RS
19	Sawant Rutuja Rajendra	Sawant.R.R
20	Waghmare Rutuja Sharad	
21	Mahajan vedika sanjay	
22	Mahamawar sahil Sharad	
23		

13/05/2022
Subject In-charge

12/5/2022
Demonstrator

Rashmi D. Puranik
Medical Physicist

Rayat Shikshan Sanstha's

Dada Patil Mahavidyalaya Karjat

(Dist-Ahmednagar)

Class: T.Y.B.Sc **Subject:** PHY-3611 SEC (AA): Radiation Physics.
Activity Name: "Visit to hospitals and other such locations for measuring radiation exposure.".
Date & Time: 12.05.2022 (02.00-04.00 PM).
Venue: *Indrayani Hospital, Devachi Aalandi, Pune.*

-Attendance Sheet-

Sr. No.	Students Name	Signature
24	Jagtap Vaishnavi Sambhaji	Jagtap
25	Tare Priti Dattatraya	Priti
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
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12/05/22
Subject In-charge

12/5/2022
Demonstrator
Rashmi D. Puranik
Medical Physicist

Rayat Shikshan Sanstha's

DADA PATIL MAHAVIDYALAYA, KARJAT

Department of Zoology

EXPERIENTIAL LEARNING

To study the blood group in Human (ABO and Rh)

Aim- Study of my own blood group.

Requirements- Clean glass slide, Dissecting microsope,toot picks, Glass marker, own blood sample, cotton,lancelet, Antisera(Anti-A,Anti-B and Anti-D).

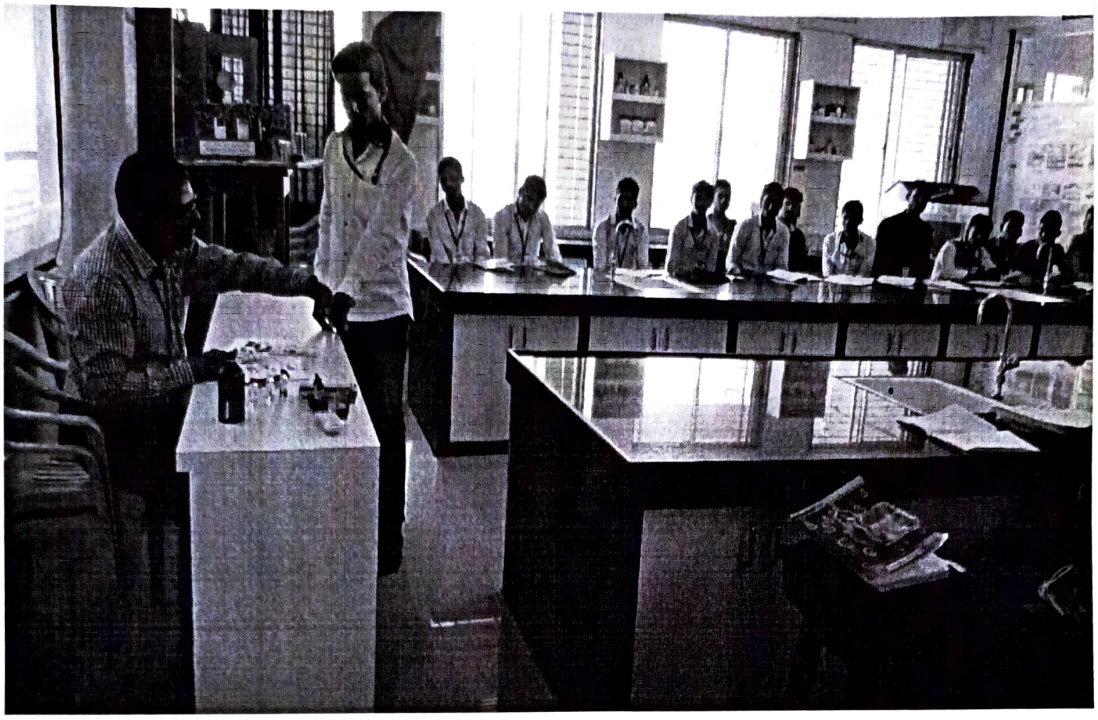
Procedure-

1) Make three circles on the clean, dry glass slide with the help of glass marker and mark them as A, B and D.
2) Sterilize your left hand's third finger with hydrogen peroxide or 70% alcohol.
3) Prick at the tip of finger with the help of lancelet.
4) Place three drops of blood within three circles on the glass slide.
5) Add a drop of antisera-A on circle A, Anticera-B on circle B and Anticera-D on circle D.
6) With the help tooth-picks, mix the antisera drop with blood drop on slide. Use separate tooth-pick for each drop.
7) Wait for 30 sec. to 1 min. and observe the agglutination on the slide. It can be easily seen by naked eyes or use lens from dissection box or observe under dissecting microscope.
8) Agglutination indicates positive test and if no agglutination, there is negative test.
9) With the help of table given, determine your own blood group.

Result – My own blood group is .....

Students were instructed to prepare the slides according to procedure. By obtaining blood samples from some students of practical batch, instructor explained the definition of blood group (reaction of Antigen & Antibody) practically. Students observed agglutination reaction and able to identify their own blood groups.

F.Y.B.Sc. Students understands the exact physiological mechanism behind Blood Group



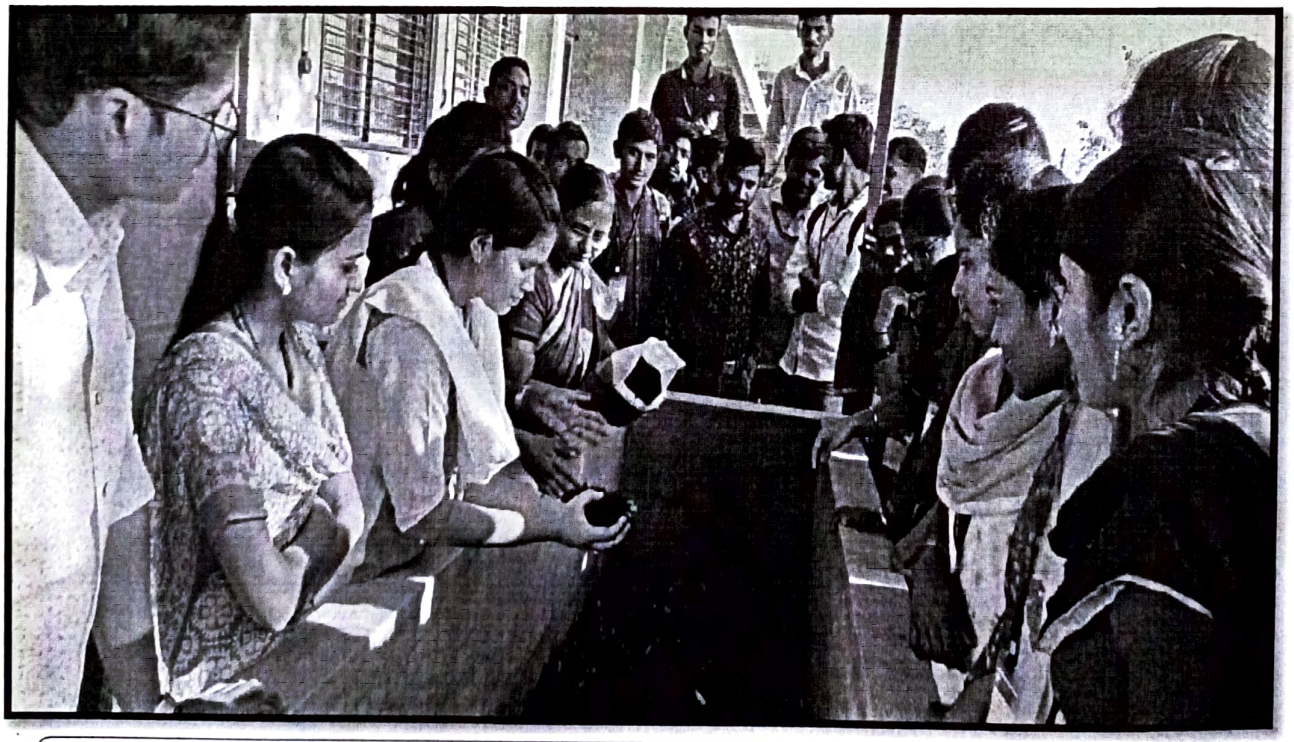
Department of Zoology (Experiential Learning)
Preparation of DNA Paper Model (Teacher In-charge: Dr. Indira Patil)

T.Y.B.Sc. Preparation of DNA Paper Model

Department of Zoology (Experiential Learning)
Biochemical Practicals (Teacher In-charge: Miss. A.V. Bedre)

Vermiculture Measur
Bed preparation ~~temp~~

Detection of pH of various water samples



Preparation of Vermicomposting Bed (S.Y. & T.Y.B.Sc. Students

Savitribai Phule Pune University

(Formerly University of Pune)

Three Year B.Sc. Degree Program in Botany

(Faculty of Science & Technology)

T.Y.B. Sc Botany

Choice Based Credit System Syllabus

To be implemented from Academic Year 2021- 2022

8. TNAU (ICAR) Principles of Seed technology (2020)

T.Y.B.Sc. Botany CBCS Pattern
Practical (Semester V Paper VII) 2020-2021
BO 367: Practical based on BO361 and BO362 (2 Credits)

Sr. No.	Title	No. of Practical
1.	Determination of osmotic potential of plant cell sap by plasmolysis method	01
2	Calculation of stomatal index and stomatal frequency of a mesophyte and a xerophyte.	01
3	Demonstrate the activity of catalase and study the effect of pH and enzyme concentration.	01
4	To study the effect of light intensity and bicarbonate concentration on O2 evolution in photosynthesis.	01
5	Comparison of the rate of respiration in any two parts of a plant.	01
6	Separation of amino acids by paper chromatography.	02
7	Demonstration experiments (any four) i). Bolting. ii). Effect of auxins on rooting. iii). Suction due to transpiration. iv). R.Q. v). Respiration in roots.	01
8	Estimation of total free amino acids by spectrophotometry	01
9	Separation of amino acids by paper chromatography.	01
10	Estimation of soluble proteins by Lowery *et. al.* method.	01
11	Demonstration of Enzyme activity: Amylase /invertase /catalase	01

12	Estimation of reducing sugars by DNSA method.	01
13	Estimation of Vitamin C (Ascorbic acid) from plants.	01
14	Qualitative tests for starch, lipids and proteins.	01
15	Determination of the iodine number of lipids using Hanus method.	01

T.Y.B.Sc. Botany CBCS Pattern
Practical (Semester V Paper VIII) 2020-2021
BO 368: Practical based on BO363 and BO364 (2 Credits)

Sr. No.	Title	No. of Practical
1.	Preparation of any one culture media for isolation of plant pathogens.	01
2	Culture technique- Streak plate methods, pour plate methods, Spread plate methods.	01
3	Study of any two of fungal (Downy mildew of Grapes, Head smut of Jowar, Tikka diseases of Groundnut) diseases	01
4	Study of any two of each bacterial and mycoplasma diseases	01
5	Study of any two of each viral and non-parasitic diseases of plants.	01
6	Preparation of 1% Bordeaux mixture and Bordeaux paste 10%.	01
7	Preparation of Jivamruta.	01
8	Study of Koch's Postulates.	01
9	Study of Fungicides and Microbial pesticides.	01
9	Study of Geological time scale	01
10	Study of types of Fossils : i) Coal ball ii) Rhynia vii) Lyginopteris iii) Pentoxylon iv) Nipaniophyllum v) Lepidodendron	01
11	Demonstration of any three evidences of Organic Evolution	01
12	Numerical Problems based on Allele frequency and Genotype frequency	01
13	Numerical Problem based on Hardy-Weinberg Equilibrium	01

14	Study of Sympatric and Allopatric speciation with suitable example	01
15	Study of Isolation mechanism : Prezygotic & Postzygotic(Any one example from each)	01
16	Submission of Report on Visit to Paleobotany Laboratory/Museum/Fossil Garden	01

T.Y.B.Sc. Botany CBCS Pattern
Practical (Semester V Paper IX) 2020-2021
BO 369: Practical based on BO365 and BO366 (2 Credits)

Sr. No.	Title	No. of Practical
1.	Preparation and sterilization of MS Medium and Callus Induction using leaf primordia	01
2	Production of secondary metabolites in any suitable plant material	01
3	Artificial seed production by Sodium Alginate method encapsulation (somatic embryogenesis)	01
4	Demonstration to equipments used in genetic engineering like gene gun, PCR, gel doc, microcentrifuge, electrophoresis, micropipettes, incubator, shaker etc. (live/videos/photographs/visit to research labs)	01
5	Study of Transgenic plants- Arabidopsis thaliana as a model plant, Bt-Brinjal, Flr-svr Tomato, and other GM crops like soybean, maize, tobacco as a pharmaceuticals, banana as a edible vaccine etc. (live/videos/photographs/visit to research labs)	01
6	Preparation of plant based nano-particles	01
7	Demonstration to Fermentation of fruit juice and wine production from grapes/pomegranate/jamun/ apple/ber (live/videos/photographs/visit to research labs)	01
8	Problems on genetic engineering (set of problems will be given on restriction enzymes, vectors etc.)	01

9	Demonstration of Hybridization Techniques (Emasculation, Hand Pollination, Bagging and Tagging) in cotton and tomato.	01
9	Effect of chemical mutagens on seed germination and seedling growth.	01
10	Study of pollen viability and floral morphology of crops	01
11	To test seed moisture by hot air oven method	01
12	To study germination methods (Paper, Sand and Soil)	01
13	Physical purity analysis of seed sample	01
14	Visual examination of dry seeds for disease symptoms	01
15	To study any one common seed insect pest w.r.t to their life cycle, way of infestation/damage, symptoms and control measures.	01
16	Visit to a Plant Breeding Research Centre/ Seed Industry and report submission	01

Note: Submission of minimum 10 seed samples along with their botanical names, family, variety etc. to the department at the time of final practical examination

Skill Enhancement course

T.Y.B.Sc. Botany CBCS Pattern
(Semester VI, Paper X) 2020-2021
BO 3610: Nursery and Gardening Management- 2 Credits (30 Lectures)

Sr. No.	Topic Details	No. of Lectures
	Credit-I Nursery Managment	**15**
1	**Nursery:** definition, objectives and scope and building up of infrastructure for nursery, planning and seasonal activities - Planting - direct seeding and transplants.	**03**
2	**Seed:** Structure and types - Seed dormancy; causes and methods of breaking dormancy - Seed storage: Seed banks, factors affecting seed viability, genetic erosion –Seed production technology - seed testing and certification.	**03**
3.	**Vegetative propagation**: air-layering, cutting, selection of cutting, collecting season, treatment of cutting, rooting medium and planting of cuttings - Hardening of plants– greenhouse - mist chamber, shed root, shade house and glass house.	**09**

Practical 7...

Demonstration Experiments

Aim:

Demonstration of Bolting.

Principle:

Gibberellins are a group of naturally occurring hormones having many physiological effects on plants. The effects are generally growth promotive. One of the most remarkable effects of gibberellins is in converting a genetically dwarf plant into a plant of normal height. The addition of gibberellins to a cabbage plant converts the 'head' or dwarf stem into a stem that is 6-8 feet tall. Rosette plants of sugarbeet is an extensive case of dwarfing. Such a stem can undergo rapid growth or 'bolting' if it is treated with gibberellins.

Bolting is the elongation of the floral axis stalk in some dwarf biennial plants to produce flowers. The plant for one season grows vegetatively and in other seasons produces floral axis and fruits subsequently. The application of gibberellins to the plant at the vegetative phase causes the plant to produce a floral axis prematurely.

Requirements:

Plant Material: Two groups of potted plants of *Launaea* (Rosette habit) of the same age (Four in each group).

Chemicals: GA3 solutions {0.1 mg/L (0.1 ppm); 1 mg/L (1 ppm); 5mg/L (5ppm) and 10 mg/L(10ppm)}.

Miscellaneous: Sprayer/ cotton swab.

Procedure:

Expose the shoot apex of the rosette plants and

1. Select 4 weeks old potted plants of *Launaea* or *Lactuca sativa* (lettuce) of roughly equal size.
2. A total of 18 plants are divided into six groups of 3 plants each to demonstrate the effect of different concentrations of GA3
3. The six groups are categorized as:
   (i) Control (no GA3) but only distilled water
   (ii) 0.01mg/L GA3)
   (iii) 0.1 mg/L GA3
   (iv) 1 mg/L GA3
   (v) 5 mg /L GA3 and
   (vi) 10 mg/ L GA3.
4. Prepare a 100ml solution for each group. Carefully shift the leaves to expose the shoot apex and apply the specific GA3 concentration with the help of a cotton swab or spray the GA solution to runoff level. Repeat the application of hormone every third day for two weeks.

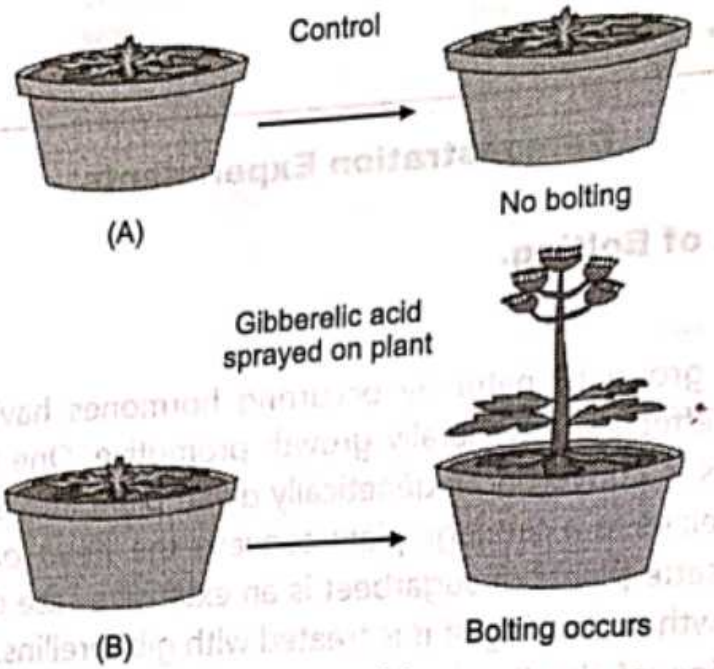


Fig. 7.1: Bolting

Result:

The control plants retained their dwarf habit whereas the plants sprayed with GA3 showed elongation of internodes and bolting.

Aim:

Demonstration of the effect of auxins on rooting.

Principle:

Auxins are one of the most important groups of plant hormones because of their many-sided roles in plants. F.W. Went succeeded in isolating these growth substances and named them auxins. Auxins are synthesized from the amino acid tryptophan. In nature root formation by a plant is possible only if there are developing buds or leaves on them. Dormant buds fail to induce rooting. Rooting is dependent on the presence of a hormone. The auxins have been found to increase the rate of formation and the final number of root initials. This property of auxins has been taken advantage of in the propagation of plants by stem cuttings in plants. Thimann and Went (1930) found that indole acetic acid (IAA) and other growth substances are essential for initiating adventitious root formation.

Requirements:

Glassware: 4 conical flasks (250 ml).

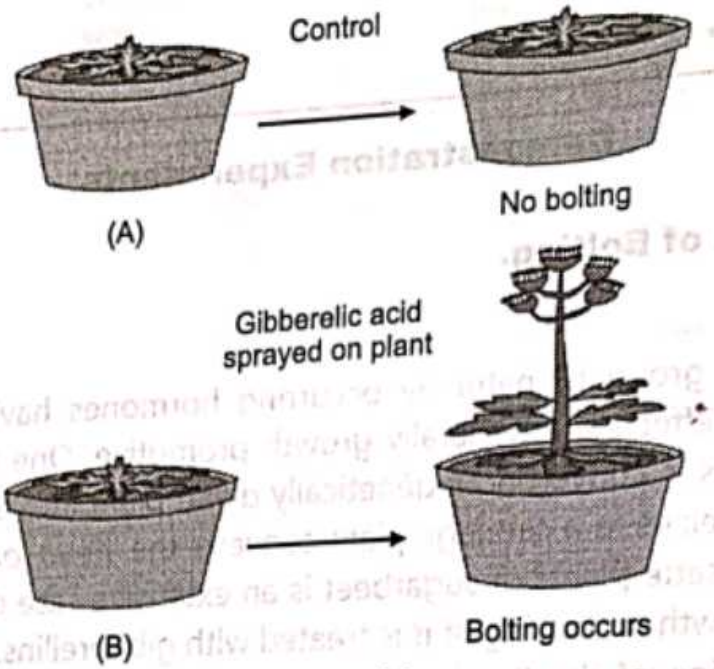
Plant Material: Stem cuttings of *Morus alba*.

Chemicals: IAA solutions (10^{-3}M, 10^{-4}M, 10^{-5}M), Distilled water.

Miscellaneous: Cork stoppers.

Procedure:

1. Firstly four conical flasks were taken and one of them was filled with distilled water (control).



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Chemicals: IAA solutions (10^{-3}M, 10^{-4}M, 10^{-5}M), Distilled water.

Miscellaneous: Cork stoppers.

Procedure:

1. Firstly four conical flasks were taken and one of them was filled with distilled water (control).

Aim:

Demonstration of suction due to transpiration.

Principle:

The plant transpires actively in nature and water is lifted upwards as a continuous column. You can see that the water column does not collapse because of the strong cohesive force among the water molecules as well as a great adhesive force between water molecules and the hydrophilic walls of the tracheary elements. The continuous water column exists between the roots and the transpiring parts of the plant which are leaves. Thus, due to transpiration, a suction force or transpiration pull develops in the leaves of the plant, which is transmitted below to the roots via the stem resulting in water uptake from the soil. The water lost by the plant during transpiration is compensated by the water absorbed by it from the capillary tube of the photometer. This results in the rising of the mercury column.

Requirements:

Plant Material: Two small rooted plants of Tagetes (Marigold).

Apparatus: A simple or H-shaped Potometer.

Chemicals: Mercury

Miscellaneous: Cork stopper with a hole.

Procedure:

This set contains a simple photometer which includes a hollow glass tube with one end submerged in a trough containing mercury, and the other end fitted with the shoot of an actively transpiring plant (such as guava, marigold, sunflower, or Geranium) under airtight conditions. Put the setup under a fan to increase transpiration.

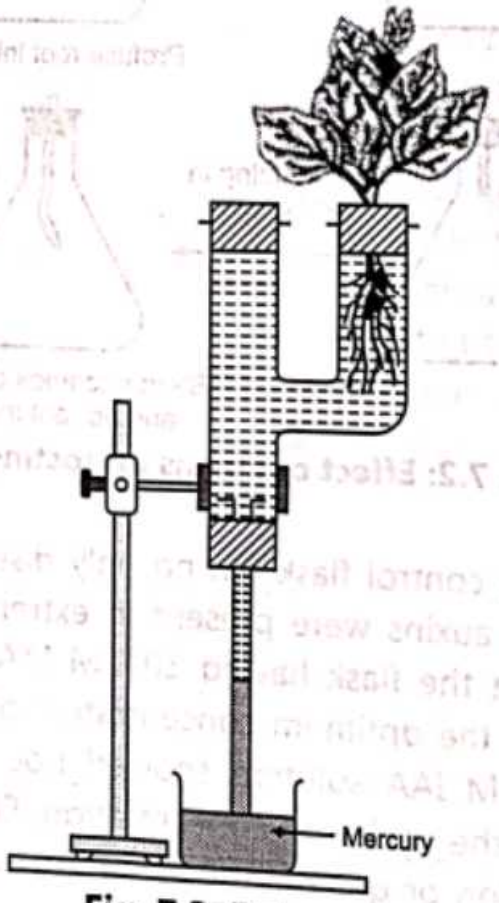

Fig. 7.3: Potometer

Result:

A rise in the level of mercury column after some time (30 minutes or so), indicates suction due to transpiration.

Aim:

Demonstration of Respiratory quotients.

Principle:

During photosynthesis, light energy is converted into chemical energy which is stored in carbohydrate molecules in form of glucose and starch. Living organisms use this energy for other activities by oxidizing these molecules into simple ones i.e., carbon dioxide and water. This reaction is known as respiration. Respiration is a process by which living cells break down complex high-energy molecules into simple low-energy molecules, CO_2 and H_2O. Cellular respiration undergoes a series of independent pathways through which carbohydrates and some other molecules are oxidized to retrieve the energy stored in photosynthetic products.

General equation for respiration:

$$C_6H_{12}O_6 + 6O_2 \longrightarrow 6CO_2 + 6H_2O + \text{Energy}$$

The ratio of volume CO_2 given and volume oxygen taken during respiration is called respiratory quotients RQ value depends upon respiratory substrates and their oxidation. RQ value indicates which type of respiration occurs in living cells, either aerobic or anaerobic. It also helps to know the type of respiratory substrates involved.

Requirements:

Plant materials: root or leaves of the plant, germinated seeds.

Chemicals: Water, KOH, brine solution.

Apparatus: Ganong's respirometer, Buchner's flasks (two sets), measuring cylinder (1000ml), beakers (250) ignition tubes, Pestle and mortar, electric balance, clamp standard black paper.

Procedure:

1. First weigh equal amounts of plant material (i.e. leaves or roots, seeds)
2. Make two set-ups consisting of Buchner's flask with a rubber cork, an ignition tube that contains a thick paste of KOH pellets, and a beaker containing water.
3. Place seeds, roots, and leaves in a separate Buchner's flask. Make the apparatus airtight, while the side tube is immersed in the measuring cylinder containing water. Cover this flask with black paper to avoid photosynthesis.
4. In both set-ups suspend the side tube in a 250 ml beaker containing water.

5. Note the initial level of water and then record the rise in levofinin in the setup at 5.10,15 min intervals respectively.
6. Repeat the procedure with the roots of the plant.

Observations:

$$RQ = \frac{\text{Volume of } CO_2 \text{ liberated}}{\text{Volume } O_2 \text{ consumed}}$$

1. The respiratory substrates are carbohydrates they will be completely oxidized in anaerobic respiration and the value of the RQ will be equal to unity 1.
2. If the respiratory substrates are carbohydrates they will be incompletely oxidized in anaerobic respiration and the value of the RQ will be infinity.
3. In succulents plants carbohydrates are partially oxidized to an organic acid (malic acid) without the release of CO_2 but consume O_2 hence the RQ will be zero.
4. When respiratory substrates are protein or fat then RQ will be less than unity.
5. When the respiratory substrate is organic acid the RQ value will be more than unity.

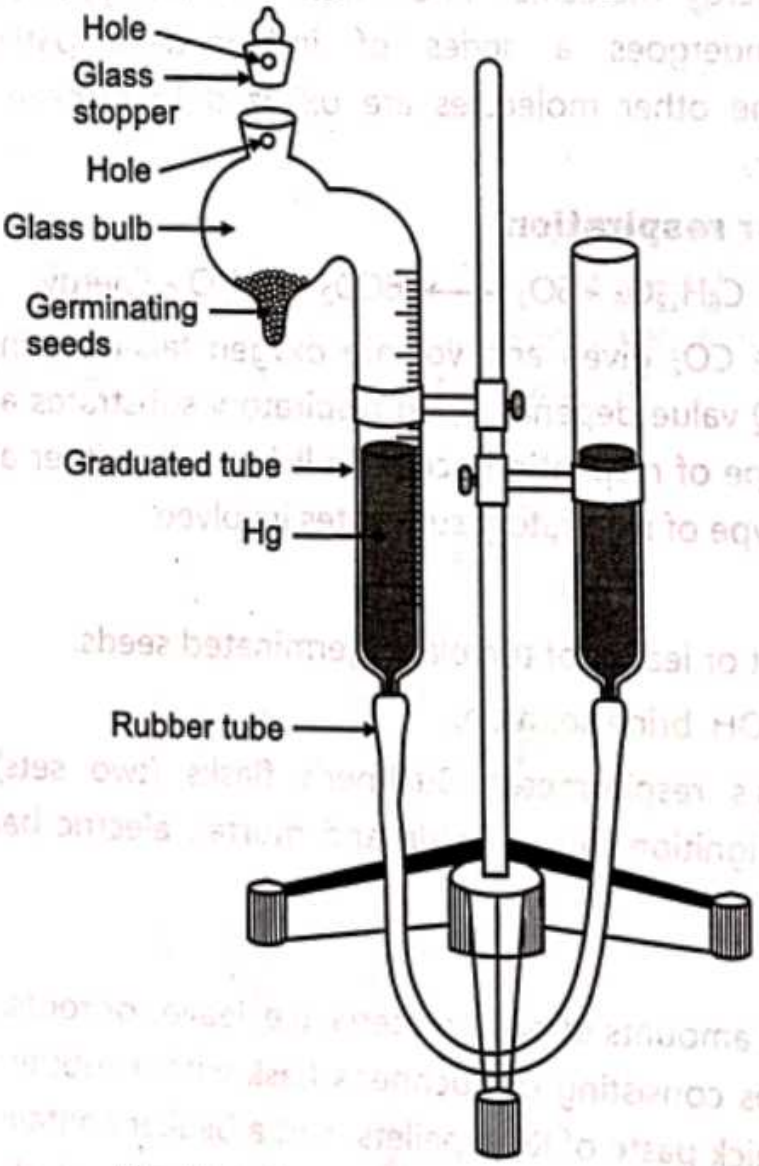

Fig. 7.4: Ganong's respirometer

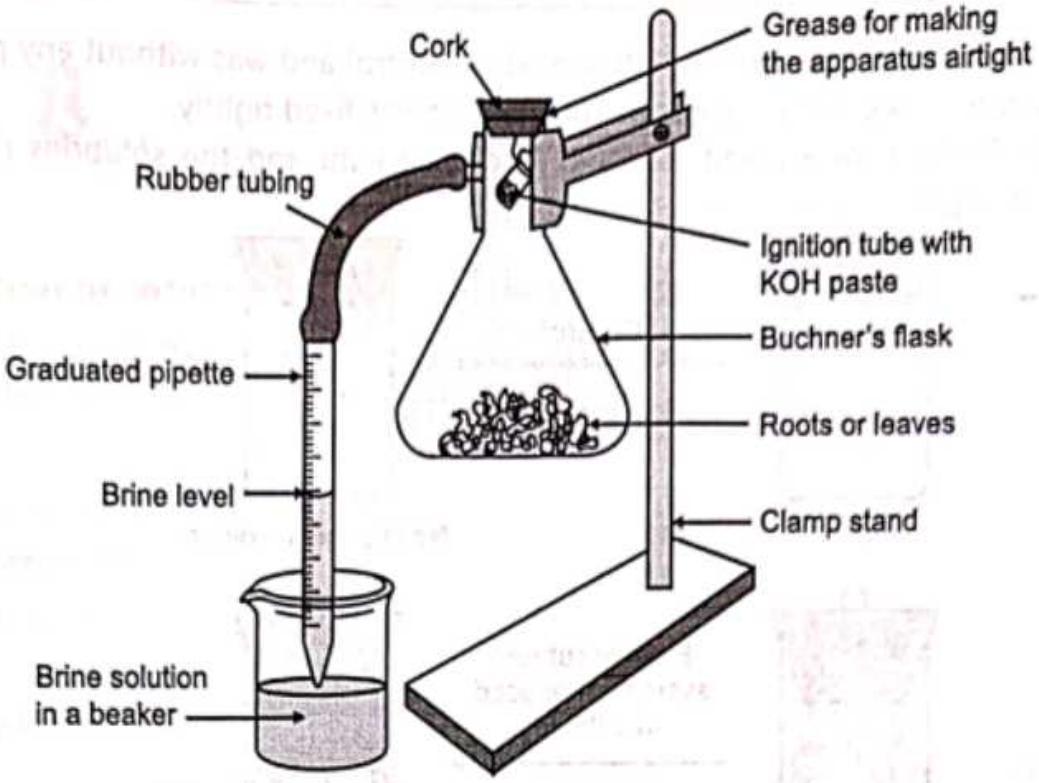

Fig. 7.5: Setup to estimate respiration in plants

Results:

The CO_2 released during the respiration of seeds, roots, and leaves is absorbed by KOH in the ignition tube and a vacuum is created in the flask causing the water level to rise. The rise in the level of water in the side tube after 5, 10 and 15 minutes can be calculated by the formula given. Compare the values obtained from leaves and roots and see which organ respires more.

Aim:

Demonstration of respiration in roots

Principle:

Cellular respiration is vital for organisms and consists of a series of pathways. The stored/reserved materials act as respiratory substrates and get oxidized to release ATP. Since all cells respire, roots are no exception. Usually, the aerial parts of a plant are used to demonstrate the rate of respiration or respiratory quotient (RQ). Roots also respire and thus, aerated soils are essential for normal plant growth. Waterlogging for a long time chokes the roots and results in the death of the plant.

Requirements:

Plant Material: Two small rooted plants of Tagetes with adventitious roots

Chemicals: Dilute NaOH solution, phenolphthalein

Miscellaneous: cork stopper with a hole.

Procedure:

1. In this demonstration experiment, a small, rooted plant (e.g., Tagetes, or wheat) with intact adventitious roots was taken and placed in a flask that had slightly alkaline water (with dilute NaOH solution) and colored red with phenolphthalein.

2. A second flask was taken which served as control and was without any plant but had only red-colored alkaline water. The stopper was fixed tightly.
3. Both flasks were allowed to stand in diffuse light and the solutions in them were examined after some time.

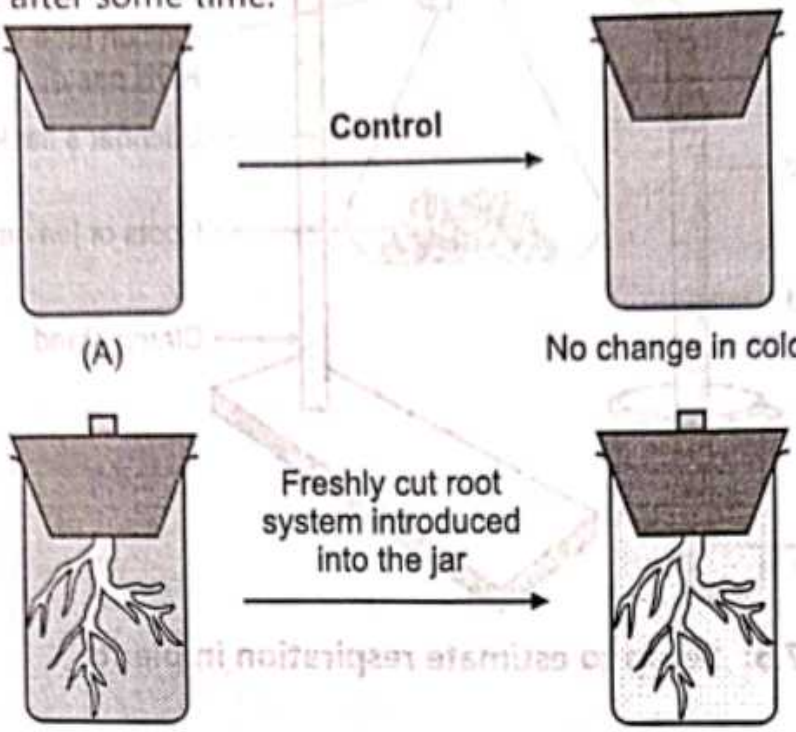

Fig. 7.6: Demonstration of respiration in roots

Result:

The control flask does not show a change in color while the one with the roots becomes colorless as the color of the solution fades. The respiring roots release CO_2, which reacts with water to form carbonic acid (H_2CO_3).

$$CO_2 + H_2O \longrightarrow H_2CO_3$$

Carbonic acid neutralizes NaOH present in the flask and the alkalinity of the solution starts decreasing, thus fading the red color (phenolphthalein is colorless in the neutral medium).

$$H_2CO_3 + 2NaOH \longrightarrow Na_2CO_3 + H_2O$$

☆☆☆

BO 369 - Botany practical III

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Aim - demostration to equipments used in genetic engineering.

Micropipettes -

micropipettes is a standard but essential instrument in the laboratory utilized to precisely & accurately transfer volume of liquid within small microliter volume. micropipettes are offered in a variety of sizes ranging from 0.1 µl to 10.0000 µl. They are utilized in laboratories which conduct research in microbiology molecular biology, cell culture, immunology, biochemistry, analytical chemistry & genetic components of a micropipette include the plunger, digital display, tip cone, tip ejector & the grippy.

Working mechanism of micropipette -

Accurate measurement of liquids is dependent on the proper micropipette use. Air displacement micropipettes operates using the principle of air displacement brought about by piston.

Things you should NOT do with micropipette

1) Do not drop your pipette as it may change the calibration of micropette.
2) Do not aspirate the contents into the pipette.
3) Do not jam pipette tip into pipette
4) make sure you treat your micropipette properly.

Gene gun -

Biolistic method of gene transfer is also called as Particle bombard method or microprojectile bombardment method or gene gun method. This is a Popular Physical method of direct DNA transfer. It was introduced by Sanford & co-workers in 1987. Commercially available Particle gun is PDS 1000 that use helium as a carrier gas. There are 5 major components of gene gun - bombardment chamber, gas acceleration tube, rupture disc, stopping screen & microcarrier launch assembly. The technique is used to Produce transformants in many Plants like rice, maize, sorghum, cotton, soyabean etc.

Microcentrifuge -

A centrifuge is a Piece of equipment used to separate heavier Particles from the lighter ones by the action of centrifugal force. There are three main types of rotors used in centrifuge, viz.

1) Fixed angle rotors - Tubes are held at an angle of 14 to 40° to the vertical. Particles move radially outwards, travel a short distance.

2) Vertical rotors - Held vertical Parallel to the rotor axis. Particles moves short distance The time of separation is shorter.

3) Swinging bucket rotors / Horizontal rotors - Sing out to horizontal position when rotor accelerates. A longer distance of travel may

Teacher's Signature

allow better separation such as in density gradient centrifugation

Orbital Shaker -

An orbital shaker is an important lab equipment that has used to blend, mix or agitate material in a vessel by shaking them. It works by generating a circular shaking motion at a slow speed of 25 - 500 rpm.

Incubator -

Incubator, in microbiology, is an insulated & enclosed device that provides an optimum condition of temp, humidity & other environmental conditions required for the growth of organisms.

The main body of incubator is the cabinet consisting of the double-walled structure. The outer wall is made up of stainless steel sheets while the inner wall is made up aluminum.

Agarose gel electrophoresis is a method of gel electrophoresis used in biochemistry, molecular biology, genetics & clinical chemistry to separate a mixed population of macromolecules, such as DNA, RNA or Protein in a matrix of agarose.

Polyacrylamide gel electrophoresis (PAGE) is a technique widely used in biochemistry, Forensic Chemistry, genetics, molecular biology & biotechnology to separate biological macromolecules.

Teacher's Signature

Conventional PCR involve 25 to 50 repetitive cycles with each cycle comprising three sequential rxn.

1) Denaturation - The reaction mixture is heated to 95°C for a short time period (about 15-30 sec) to denature the target DNA into single strands that can act as templates for DNA synthesis.

2) Primer annealing -
The mixture is rapidly cooled to a defined temp which allows the two primers to bind to the sequences on each of the two standard flanking the target DNA.

3) Extension -
The temp of the mixture is raised to 72°C & kept at this temp for a pre-set period of time to allow DNA Polymerase to elongate each primer by copying the single standard templates primer annealing to target sequence provides the necessary templates that allows the DNA polymerase to add nucleotide to the 3' terminus of each primer & extend sequence complementary to the target template.

Roll No.: Exam. Seat No.

"Education through self – help is our motto" - KARMAVEER

RAYAT SHIKSHAN SANSTHA'S

Dada Patil Mahavidyalaya,
Karjat
Dist. Ahmednagar

CERTIFICATE

Department of Botany / Seed Technology / Plant Protection

Date / / 20

This is to certify that Mr. / Mrs. Mohalkar Ashwini Uddhav.

has satisfactorily carried out required practical work, prescribed by the Savitribai Phule University, Pune for the B. Sc.- I , B. Sc.- II, B. Sc.- III

course in Botany / Seed Technology / Plant Protection

and this journal represents his / her bonafide work in the year 2021 - 2022

Teacher in Charge

Examiners 24/02/22

Head Department of 24/2/22

Botany / Seed Technology / Plant Protection

Aim: A study of vegetation of to different locality with the help of chart qudrat

principle:-

plant never go solitary but grow in groups all such groups of plants may be homogenous, heterogenous collection of different species together with mutual relationship among them selva and with their enviment The several similar groups together for plant community the plant community is biotic companion of an ecosystem natural vegetation such as plant community can be studied by mesure ecological method such as analytical synthetic method

1) List qudrates: In which listing of species in an area
2) chart qudrates: In which position of each species is occumatly indicating upon the reduced. chart are graph
3) click qudrats: In which dry weight of each species.
4) Basal dred qudrates: In which basel area occupid by every

mesured

5) permantal quadrates.

It Inveles the photography of qudract of peridic intervals the changes in vegetation over a long period.

* Requirment :- qudract of definite of size (1^2m) wooden bracket) pencil, graph,

- procedure: place a squre qudracts of $1m^2$ in a even plant communities with the help of wooden braket (qudracts A) ~~Go~~ count the different in no. of species occuring a quadrats and make a list of them like wire place anther quadrats of same size (qudrats B) and respects the proced agains on the basis of observation calculate density, frequency.

* chart qudrates:

In this type of qudrates detail account of vegetation the sampling unit area.

mesurment are from x and y axis resp. in this way peramant record of position of each and every species from qudrats are noted from graph paper.

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★ Formula:

Total no of individual of plant species

① Density:

Total no of qudrats.

② % frequency:

$$\frac{\text{Total no of qudrates in which species occouring}}{\text{Total no of qudrates studied}}$$

conclusion

qudrates is the most usefull to called information of the vegetation.

Teacher's Signature

Sr No	Name of species plant	Family	quadrates dawn		total No of quadrates studied	total No of individual species	quadrate in the speies	Densit	% frequ
			I	II					
1	Vernonia cinera	Asteraceae	5	-	2	5	1	2.5	50
2	oxalis quvonata	oxalideace	10	2	2	12	2	6	100
3	panicum prostratum	poaceae	4	-	2	4	1	2	50
4	Euphorbia hirta	Euphorbiaceae	3	1	2	4	2	2	100
5	cenedrela Nudiflora	Asteraceae	1	2	2	3	2	1.5	100
6	Euphorbia thymifolia	Eupphorbiaceae	1	-	2	1	1	0.5	50
7	Lucand leucocephala	mymaceae	4	3	2	7	2	3.5	100
8	sida accufolia	molvaceae	1	2	2	3	2	1.5	100
9	lounia species	Asteraced	2	4	2	6	2	3	100
10	Lana species		-	1	2	1	1	0.5	50
11	Alicanthera sessile	Planthea-ceae	-	3	2	3	1	1.5	50