TOUR REPORT

of

B.Sc. Botany

IV Semester

2023-24

Department of Botany



Kamla Nehru Institute of Physical
E Social Sciences
Sultanpur 228118 U.P.
An autonomous NAAC A grade institute

Reported & edited by

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KNIPSS, Sultanpur

BOTANICAL EXCURSION OF FATEHPUR SIKRI & AGRA

08th to 11th March 2024

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INTRODUCTION

"Read and read widely, that you may know what has already been accomplished; and read critically. But, no one can read critically whose knowledge comes entirely, or even principally, from reading. You must have a first-hand knowledge of the material, must study it in the field and in the laboratory."

- C. J. Chaimberlain

Without filed study, botany is artefact, that is why botanical excursion is a compulsory part of curriculum of the M.Sc. Botany. The botanical excursion is successfully organized every year. During the excursion students study the plants in their habitats. They become acquainted with the role of abiotic climate in the determining the range of vegetation types.

OBJECTIVES

The botanical excursion was organized with the following objectives.

- To make the students familiar with the diverse habitat across the Indian subcontinent.
- To study the different types of geoclimatic, topographic, edaphic factor in determining the floristic diversity across the country.
- To collect the plants of different parts of the country for documentation and preparation of herbarium, so that, these could be utilized as a reference.
- To develop the skill of team work in organization of a program outside the institution.

OUTCOMES

Here are the major outcomes of the botanical excursion.

- > Students have studies about the nature of rock formation of Fatehpur Sikri Fort.
- Students became familiar with climate of Fatehpur Sikri and Agra.
- > Students became familiar with health of the Yamuna River flowing to the north side of Taj Mahal and Agra Fort.
- Students studied about the Mughal Garden and Formal Garden of Taj Mahal.
- Students documented the trees planted in the premises of Taj Mahal.

PROCEEDINGS OF THE BOTANICAL EXCURSION



कमला मेहरू मीतिक एवं सामाजिक विज्ञान संस्थान, सुलतानपुर-22618

Kamla Nehru Institute of Physical & Social Sciences, Sultanpur-228118 (विश्वविद्यालय अनुसन अध्योग की स्वामत संस्था नेक (NAAC) प्राप्त 'त' केणी में पूज्यक्तिल) (Accredited by NAAC with A' grade)

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Department of Botany

दिनॉक 29.11.2023

आवश्यक सूचना

आप लोगों का एजूकेशनल दूर आगरा के लिए मार्च के दूसरे हफ्ते में प्रस्तावित है। जिन छात्र / छात्राओं ने दूर का पैसा जमा किया है, और वे दूर में जाने के लिए इच्छुक है वे अपनी सहमति नीचे दिये गये गूगल फार्म के माध्यम से आज रात तक अवश्य दें। जिससे आपका रिर्जवेशन कराया जा सके।

विभागाध्यक्ष

29/01/2023

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Physical at Times



कमला नेहरू गीतिक एवं सामाजिक विज्ञान संस्थान, सुलतानपुर-राक्षा Kamla Nehru Institute of Physical & Social Sciences, Sultanpur 228118 (विश्वविद्यालय अन्यान आधान की स्वाचन संख्या मैक (NAAC) हाना 'A' बोली में शुन्यातिका) Olecredited by NAAC with M grade)

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Department of Botany

To.

Date- 05.12.2023

The Principal KNIPSS, Sultanpur

Subject- Seeking permission for conducting Botanical excursion for B.Sc. III Sem during academic session 2023-24 as per NLP 2020.

Respected Sir.

This is to bring into your kind information that, Department of Botany is going to organize a botanical excursion of B.Sc. III Sem students according to following schedule-

Class	Date of excursion	Sites to Visit	Reference of excursion in syllabus
B.Sc. III Sem	8-11 th March 2024	Agra, Bharatpur Bird Sanctuary	Syllabus NLP Botany-UG- 2020 Page- 28

Department & Betany

Department of Botany Kamla Nebro Institute of Physical & Social Sciences SULTANPUR

Encl.

Detailed schedule of Botanical Excursion B.Sc. Sem III Botany

		Dep:	ertment of Botany		
	lb lb	ong Botar	ical Excuersion 2023	-24	
		В.	Sc. III sem 2024		
	Proposed school	le			
8-Mar-24	Departure	From	Seltanpor Jrs.	Train No: 14863	20:35
	Arrival	fo.	Ages Fort station		
9-Mar-24	Hotal	Breakfast			
- 1110	Departure	to.	Faterpur Sikri		
	by road		Sharitpur Bird Sanctury		
		Lunch			
	Return to Hotel				
		Dinner		Night stay	
10 Mar 24	Hoitel	Breikfaut			
-	Checkout	to.	Tajmarial		
		Lunch			
			Fort		
	Return	to	Agra Fort station		
	Departure	from	Agra Fort station	Train No: 14864	18:20
		to	Sultanpur		

\$172/23

Department of Head
Department of Head
Department of Botany
Kamia Nebru Institute of
Physical & Social Sciences
SULTANPUR

Date: 07/03/2024

The Principal, KNIPSS, Sultanpur

Subject: Regarding the OD to staff members escorting the Botanical excursion.

Respected Sir, this to bring into your kind information that following staff members of the Department of Botany will escort the Botanical Excursion of B.Sc. IV sem. Botany students to the Agra and adjoining areas during 08 March to 11 March 2024.

Therefore, this is requested to kindly grant OD to the following members and oblige.

S.N.	Name/Designation	Signature
- 1	Dr.Meenakshee Pandey, Professor	aufahr
2	Mrs. Shalini Single Assistant Professor	See See
3	Dr. Ovaid Akhtar, Assistant Professor	por out
4	Mr. Subhash Chaudhary, Ph.D. Scholar	n Sabhash
	Mr. Rohit Kumar Verma, Lab Assistant	Zam
6	Mr. Jawahar Jaisa val, Peon	MIST
7	Mr. Alok Kumar, Peon	Not Kumar

Details of the itinerary are attached herewith for your kind perusal.

Thank you.

Attachments:

1. Itinerary details

2. Prior approval letter

PRINCIPAL
Kamla Nehru Institute of
Physical & Social Science
SULTANPUR

List of students:

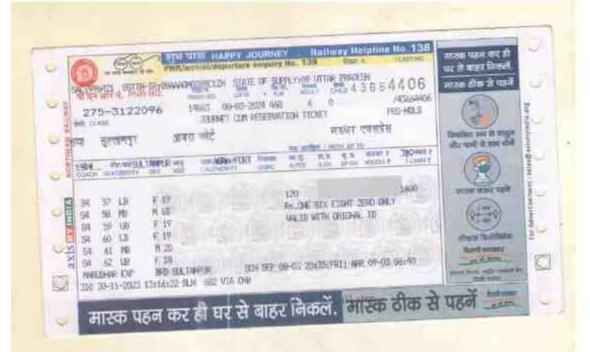
s.N.	Name	S.N.	Name
1	Rishita Singh	26	Maneesha
2	Mohd Ahmad	27	Shreya Kasaudhan
3	Priyanka kumari	28	Anshika
- 4	Aakanksha Chaturvedi	29	Sakshi
- 5	Shivansh Singh	30	Reshama
6	Anjali Yadav	31	Shubha singh
7	Shivangi yadav	32	Abdul Aseem
8	Sanju mishra	33	Nandini
9	Princee	34	AYUSH NISHAD
10	Umapati	35	Swikriti Sharma
11	Umra Israr	36	Alok Mishra
12	Shivam kumar	37	Ankit sahu
13	Md Ahsan Khan	38	Shubham Pal
-14	SADIQ Ali	39	Sakina bano
15	Mahtab khan	40	Gupta pavan
16	Alok Kumar yadav	41	Abhay Raj
17	Sarita Modanwal	42	Aditya Kumar
18	Shivam yaday	43	Shweta Baudhha
19	Harshika pandey	44	Saniya Shamsheer
20	Ashutosh	45	Rayl Verma
21	Shreya Yadav	46	Anshika Singh
22	Anchal singh	47	Khushboo yadav
23	Prince bharti	48	Divyanshu Tiwari
24	Om prakash	49.	Sameer Khan
25	Ashutosh Singh	50	Shiv Kant

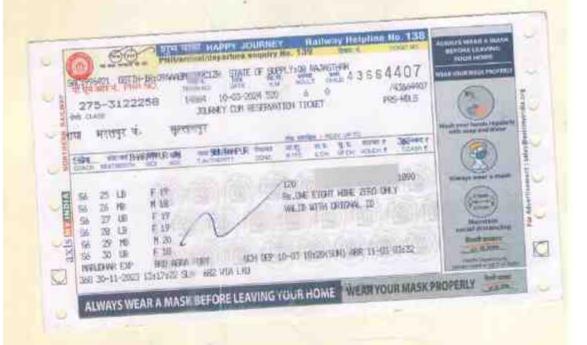
Head rement of Donath Inst.
Department of Bottom, KNIPSS, Sullarptir

Proposed plan of excursion:

			Department of Bota	iny
		Long	Botanical Excursion	2023-24
	B.Sc. IV sem. 2024			1
			Proposed schedule	
08-Mar-24	Departure	From	Sultanpur In	Train No: 14863
09-Mar-24			Visit of Tajmahai	
			Cultural program	
			Stay at hotel	
10-Mar-24			Visit to Fatehpur Sikri	
	Departure	from	Agra Fort station	Train No: 14864
11-Mar-24	Arrival		Sultanpur	

Head Head Botani
Department of Hotany
KNIPSS Saltannia NP 19





REPORT OF DAY I FATEHPUR SIKRI

Geography of Fatehpur Sikri



Fatehpur Sikri is set along the upper Vindhyan Hill Ranges. It was built as an architectural marvel and served as the capital city under Akbar but the plan was later dropped as the natural lake which was the only source of water dried up. Fatehpur Sikri has been rewarded the status of a World Heritage site for its architectural beauty dating back to the Mughal era. The place is located at a latitude of 27.09 deg North and a longitude of 77.61 deg east. The city is located 39 kms from Agra and the closest Airport is the Agra Airport.

Climate of Fatehpur Sikri

The climate of Fatehpur Sikri is very much influenced and controlled by the local steppe weather. The summer season exists from April to June and the lowest temperature might only be 25 degrees Celsius and it may go very high up to 46 degrees Celsius. The rainy season or the monsoon is experienced by the city in the months between June and September. But Fatehpur Sikri receives some minor rainfall throughout the year. The heavy rain showers 726 mm of total precipitation to the city annually. April is the driest month and August the heaviest.

Types of Soil Fatehpur Sikri

The soil of this city comes from the Indo-Gangetic plains and consists mostly of the quaternary sediments. The recent unconsolidated fluvial formations are a part of this soil and the soil contains clay, sand and silt. This soil has a very fine texture.

Fact and Figures of Fatehpur Sikri

Geographical Area: 8 sq.km

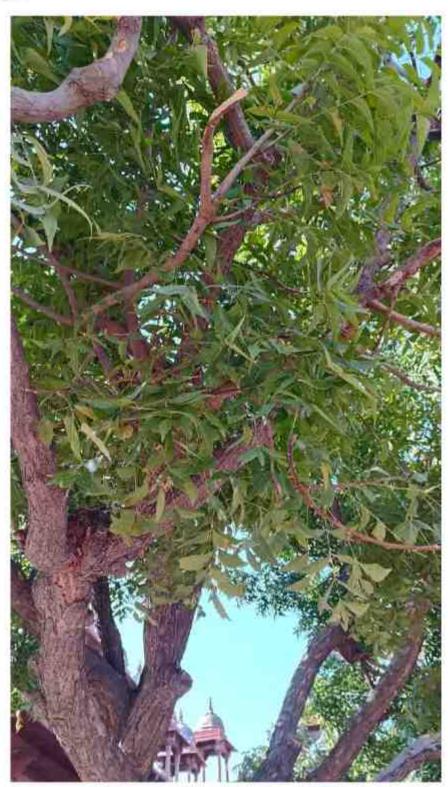
Altitude: 171 m above sea level

Latitude: 27.0910 degrees N

Longitude: 77.61 degrees E

Average Rainfall: 762 mm

Trees in the premises of Fatehpur Sikri Tomb

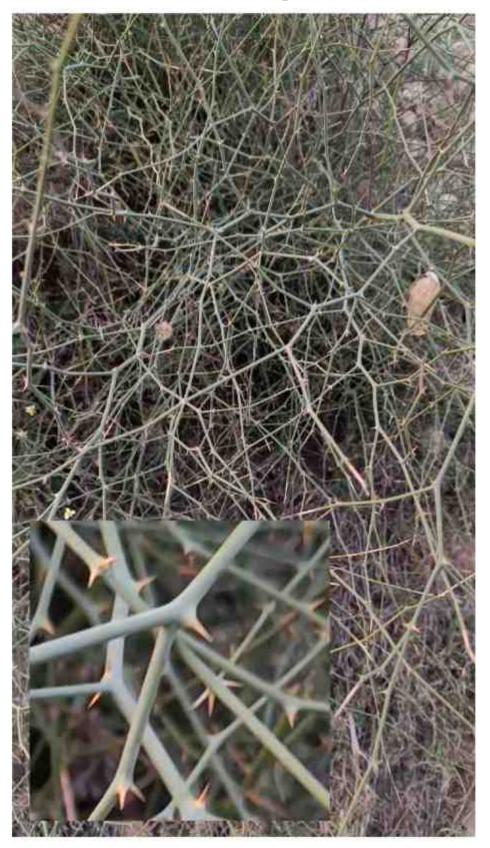


Azadirachta indica tree in the premises of Fatehpur Sikri Tomb



Mitragyna parvifolia - Kaim or Kadam in the premises of Fatehpur Sikri Tomb (fruit in inset)

Most common shrub at Fatehpur Sikri Fort



Capparis decidua - Kair; amost abundant shrub at the plateau of fort

REPORT OF DAY 2 GARDENS OF THE TAJ MAHAL

The Taj Mahal



The Taj Mahal is one of the Seven Wonders of the World. It is an ivory-white marble mausoleum on the right bank of the river Yamuna in Agra, Uttar Pradesh, India. It was built in 1631 by the fifth Mughal emperor, Shah Jahan to house the tomb of his wife, Mumtaz Mahal. It also houses the tomb of Shah Jahan himself. The tomb is the centrepiece of a 42-acre complex, which includes a mosque and a guest house, and is set in gardens bounded on three sides by a crenellated wall. The whole monument is maintained by the Archaeological Survey of India (ASI).

Gardens of the Taj Mahal

The complex is a Charbagh or Mughal Garden. The garden uses raised pathways that divide each of the four-quarters of the garden into 16 sunken parteres or flowerbeds. Halfway between the tomb and gateway in the centre of the garden is a raised marble water tank with a reflecting pool. The elevated marble water tank is called al Hawd al-Kawthar in reference to the "Tank of Abundance".

The charbagh garden, a design inspired by Persian gardens, was introduced to India by Babur, the first

Mughal emperor. It symbolises the four flowing rivers of Jannah (Paradise). In Islamic texts of the Mughal period, Paradise is described as an ideal garden of abundance with four rivers flowing from a central spring or mountain, separating the garden into north, west, south and east.

Most Mughal Charbaghs are rectangular with a tomb or pavilion in the centre. The Taj Mahal Garden is unusual in that the main element, the tomb, is located at the end of the garden. With the discovery of Mahtab Bagh or "Moonlight Garden" on the other side of the Yamuna, the interpretation of the ASI is that the Yamuna River itself was incorporated into the garden's design and was meant to be seen as one of the rivers of Paradise. Similarities in layout and architectural features with the Shalimar Gardens suggests both gardens may have been designed by the same architect, Ali Mardan.

The garden is laid out with avenues of trees labelled according to scientific names with their common names. Early accounts of the garden describe its profusion of vegetation, including abundant roses, daffodils, and fruit trees. As the Mughal Empire declined, the Taj Mahal and its gardens also declined. By the 19th century, the British Empire controlled more than three-fifths of India, and assumed management of the Taj Mahal. They changed the landscaping to their liking which more closely resembled the Formal lawns of London. Which was the only source of water dried up. Fatehpur Sikri has been rewarded the status of a World Heritage site for its architectural beauty dating back to the Mughal era. The place is located at a latitude of 27.09 deg North and a longitude of 77.61 deg east. The city is located 39 kms from Agra and the closest Airport is the Agra Airport.



Typical Mughal Garden of the Taj Mahal Showing a central elevated water tank and channels flowing into four directions

Plants of the Taj Mahal

Some of the notable plant species of Taj Mahal as recorded in during March 2024 is listed here.

1. Morinda pubescens (Noni)



Morinda pubescens (Noni)

2. Schleichera oleosa (Kusum)



Schleichera oleosa (Kusum)



3. Swietenia mahagoni (Mahogani)



Swietenia mahagoni (Mahogani)

4. Pterospermum acerifolium (Kanak Champa)



Pterospermum acerifolium (Kanak Champa)

5. Santalum album (Chandan)





Santalum album (Chandan)

6. Crateva religiosa (sacred garlic pear or temple plant)



Crateva religiosa (sacred garlic pear or temple plant)

7. Ceiba speciosa (Wilayati Semal)



Ceiba speciosa (Wilayati Semal)

8. Cupressus sempervirens (Cypress)



Cupressus sempervirens (Cypress)

9. Kigelia africana (Balam Kheera)





Kigelia africana (Balam Kheera)

10. Casuarina equisetifolia (Horsetail she-oak)



Casuarina equisetifolia (Horsetail she-oak)

11. Mimusops elengi (Maulshiri)





Mimusops elengi (Maulshiri)

12. Thespesia populnea (Indian tulip tree)



Thespesia populnea (Indian tulip tree)

13. Plumeria rubra (Gulachi)



Plumeria rubra (Gulachi)

14. Azadirachta indica (Neem)



Azadirachta indica (Neem)

15. Ficus microcarpa (Chinese banyan)



Ficus microcarpa (Chinese banyan)

16. Ficus benghalensis (Bargad)



Ficus benghalensis (Bargad)

GLIMPSES OF THE BOTANICAL EXCURSION



Group photograph at Agra Fort railway station



Studetns of B.Sc. IV sem with escorting team



Front view of hotel at Agra, where students stayed



A photograph while going to Fatehpur Sikri



Taking lunch in the way



Group photograph of students



A guide narrating about the Fatehpur Sikri



Group photograph at Fatehpur Sikri Tomb



Group photographs of students at the exit of Fatehpur Sikri tomb



Students eating dinner at hotel



At metro station



Group photograph of students at the taj Mahal



Teachers waiting for the students underneath Banyan tree



Group photograph underneath the banyan tree in the premises of the Taj Mahal