

TOUR REPORT

of

B.Sc. Botany

IV Semester

2023-24

Department of Botany



*Kamla Nehru Institute of Physical
& Social Sciences*

Sultanpur 228118 U.P.

An autonomous NAAC A grade institute

Reported & edited by

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Assistant Professor

Department of Botany

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. Chamberlain

Without field 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 नेहरू भौतिक एवं सामाजिक विज्ञान संस्थान, सुल्तानपुर-228118

Kamla Nehru Institute of Physical & Social Sciences, Sultanpur-228118

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☎ : 9451222271

Department of Botany

दिनांक 29.11.2023

आवश्यक सूचना

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

विभागाध्यक्ष

@Kishi

29/11/2023

Dep. Head of Botany
Kamla Nehru Institute of
Physical & Social Sciences



कमला नेहरू भौतिक एवं सामाजिक विज्ञान संस्थान, सुल्तानपुर-228118
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 ✆ : 9401232071

Department of Botany

To,
 The Principal
 KNIPSS, Sultanpur

Date- 05.12.2023

Subject- Seeking permission for conducting Botanical excursion for B.Sc. III Sem during academic session 2023-24 as per NEP 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 NEP Botany-UG-2020 Page-28

@Kishi
 Head 5/12/2023

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

Encl.

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

Department of Botany					
Long Botanical Excursion 2023-24					
B.Sc. III sem 2024					
Proposed schedule					
8-Mar-24	Departure	From	Sultanpur Jn	Train No: 14863	20:35
	Arrival	To	Agra Fort station		
9-Mar-24	Hotel	Breakfast			
	Departure	to	Fatehpur Sikri		
	by road		Shezarpur Bird Sanctuary		
		Lunch			
	Return to hotel				
		Dinner		Night stay	
10-Mar-24	Hotel	Breakfast			
	Checkout	to	Tajmahal		
		Lunch			
			Fort		
	Return	to	Agra Fort station		
	Departure	from	Agra Fort station	Train No: 14864	18:20
		to	Sultanpur		


 5/12/2023
 Head
 Department of Botany
 Kamla Nehru Institute of
 Physical & Social Sciences
 SULTANPUR


 5/12/23

To,

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	
2	Mrs. Shalini Singh, Assistant Professor	
3	Dr. Ovais Akhtar, Assistant Professor	
4	Mr. Subhash Chandhary, Ph.D. Scholar	
5	Mr. Rohit Kumar Verma, Lab Assistant	
6	Mr. Jawahar Jaiswal, Peon	
7	Mr. Alok Kumar, Peon	

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

Thank you.

Head of Department of Botany
Department of Botany
Physical & Social Sciences
KNIPSS, Sultanpur

Attachments:

1. Itinerary details
2. Prior approval letter

Allowed

07/03/24

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	Mahrab khan	40	Gupta pavan
16	Alok Kumar yadav	41	Abhay Raj
17	Sarita Modanwal	42	Aditya Kumar
18	Shivam yadav	43	Shweta Baudhha
19	Harshika pandey	44	Saniya Shamsheer
20	Ashutosh	45	Ravi 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 of Department of Botany
 Department of Botany
 K. J. Somaiya Institute of
 Technical & Management Studies
 Sion, Mumbai - 400 022
 K. J. S. I. T. S. TANPUR

Proposed plan of excursion:

Department of Botany				
Long Botanical Excursion 2023-24				
B.Sc. IV sem. 2024				
Proposed schedule				
08-Mar-24	Departure	From	Sultanpur Jn	Train No: 14863
09-Mar-24			Visit of Tajmahal	
			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 7/3/2024
 Department of Botany
 K.N.P.S.S. Sultanpur
 Head
 Department of Botany
 K.N.P.S.S. Sultanpur
 Physical & Social Sciences
 SULTANPUR

एचपी हार्पी जर्नी Railway Helpline No. 138
 PRS/Reservation/Departure Enquiry No. 138

STATE OF RAJYAS/STATE OF RAJYAS
 275-3122096 43664406
 09-03-2023 465 4 0 43664406
 JOURNEY OR RESERVATION TICKET PNR-4615

व सुल्तानपुर प्ररुत नरुत मरुत एररररर

COACH	SEAT/BERTH	CLASS	STATUS	FARE	CHG	AMOUNT	COACH
5A	37 LB	F 1Y	120			120	1460
5A	38 PB	M 1B					
5A	39 UB	F 1Y					
5A	40 LB	F 1Y					
5A	41 PB	M 20					
5A	42 UB	F 3B					

PNR-4615 EXP: 09-03-2023 (FRI) ARR: 09-03-2023 (FRI)
 360 30-11-2023 13:16:22 SLM 682 VIA ONP

मास्क पहन कर ही घर से बाहर निकलें. मास्क ठीक से पहनें

एचपी हार्पी जर्नी Railway Helpline No. 138
 PRS/Reservation/Departure Enquiry No. 138

STATE OF RAJYAS/STATE OF RAJYAS
 275-3122258 43664407
 10-03-2023 100 4 0 43664407
 JOURNEY OR RESERVATION TICKET PNR-4615

व मरुत नरुत सुल्तानपुर

COACH	SEAT/BERTH	CLASS	STATUS	FARE	CHG	AMOUNT	COACH
5A	25 LB	F 1Y	120			120	1090
5A	26 PB	M 1B					
5A	27 UB	F 1Y					
5A	28 LB	F 1Y					
5A	29 PB	M 20					
5A	30 UB	F 3B					

PNR-4615 EXP: 10-03-2023 (SUN) ARR: 11-03-2023 (SUN)
 360 30-11-2023 13:17:22 SLM 682 VIA LHO

ALWAYS WEAR A MASK BEFORE LEAVING YOUR HOME WEAR YOUR MASK PROPERLY

**REPORT
OF
DAY 1
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; almost 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 parterres 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* (Mahogany)



Swietenia mahagoni (Mahogany)

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



Students 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

