

LOCAL EXCURSION (13) : INDIAN BOTANICAL GARDEN, SHIBPUR, HOWRAH

Date of visit: 19/12/2023

Place: Indian Botanical Garden, Shibpur, Howrah

Participants: Students of Sem III (Hons.) & Sem V (Gen.) Participated.

Teachers accompanied: Dr. Sujita Datta Ghosh

Mrs. Saayela Chowdhury and

Mrs. Sutapa Gupta

Objectives of Field Study:

1. To expose the extensive collection of exotic and indigenous plants, labelled with both common and scientific names and their region of origin and habitat, an example of ex-situ conservation.
2. To understand the significance of herbaria by visiting the Central National Herbarium (CNH) in plant taxonomy and other fields of Botany.
3. To familiarize students with wide varieties of plants having medicinal importance at Charak Udyan and uses of different plants and its parts by its native people from different parts of India in the Ethnobotanical Section.

Report:

Students of Sem III (Hons.) & Sem V (Gen.) of Botany Department visited Indian Botanical Garden, Shibpur, Howrah to study different types of rich and varied flora of both known and rare plants as mentioned in the syllabus (CBCS system), as it has enormous collection of Orchid, Bamboos, Palms, Cactus, Hyacinths etc. They too learned how to prepare herbarium, its importance and its preservation.

Notice

Allowed
to conduct
excursion in
IBG on 19/12/23
Sc 06/12/23

An educational excursion will be held on 19/12/2023 at AJC Base Indian Botanical Garden. Students of 3rd Sem. Botany (4) and 5th Sem Botany (4) are requested to be present at the Botanical Garden main gate.

Time - 10 am

Teacher guide - Dr. Sujitā Datta Ghosh,
Saayela Chaudhuri
Sulāpa Gupta
Sandhya Datta

- Note - 1) Botanical Garden is no plastic zone.
2) Please keep a note book, pen, water bottle, Tiffin, Umbrella, College I. card, excursion card etc.

Nandini Chakrabarti
05/12/23

Associate Professor and Head
Department of Botany
City College, Kolkata-9

Sem - III Hons.

6. Diagnostic features, Systematic position (Bentham & Hooker and Cronquist), Economically important plants (parts used and uses) of the following families:

6.1. Monocotyledons: Alismataceae, Gramineae (Poaceae), Cyperaceae, Palmae (Arecaceae), Liliaceae, Musaceae, Zingiberaceae, Cannaceae, Orchidaceae.

6.2. Dicotyledons: Nymphaeaceae, Magnoliaceae, Leguminosae (subfamilies), Polygonaceae, Euphorbiaceae, Malvaceae, Umbelliferae (Apiaceae), Labiatae (Lamiaceae), Solanaceae, Scrophulariaceae, Acanthaceae, Rubiaceae, Cucurbitaceae, Compositae (Asteraceae).

.....12 lectures

PRACTICAL- PLANT SYSTEMATICS (BOT-A-CC-3-7-P)
(Credits 2)

1. Workout on Angiosperms
2. Spot Identification
3. Classroom performance: (Lab records)
4. Field Records (Field note book, Herbarium specimens)
5. Viva

ANGIOSPERMS

1. Work out, description, preparation of floral formula and floral diagram, identification up to genus with the help of suitable literature of wild plants and systematic position according to Bentham Hooker system of classification from the following families: Malvaceae, Fabaceae (Papilionaceae), Solanaceae, Scrophulariaceae, Acanthaceae, Labiatae (Lamiaceae), Rubiaceae.
2. Spot identification (Binomial, Family) of common wild plants from families included in the theoretical syllabus (list to be provided).

FIELD WORK

At least three excursions including one excursion to Acharya Jagadish Chandra Bose Indian Botanic Garden (Shibpur, Howrah) and Central National Herbarium (CNH).

FIELD RECORDS

1. Field Note Book (authenticated) with field notes on the plants of the area of excursion and

DSE A (Group A)
PHYTOCHEMISTRY AND MEDICINAL BOTANY (BOT-G-DSE-A-5-1-TH)
THEORETICAL
(Credit 4, Lectures 60)

- 1. Medicinal botany-** History, scope and importance of medicinal plants, a brief idea about indigenous medicinal sciences- Ayurveda, Siddha and Unani. Polyherbal formulations.
.....14 lectures
- 2. Pharmacognosy-** 2.1 Scope and its importance, 2.2 Primary metabolites, 2.3 Secondary metabolites- alkaloids, terpenoids, phenolics and their functions.
.....10 lectures
- 3. Organoleptic evaluation of crude drugs.**
.....10 lectures
- 4. Pharmacologically active constituents:** Source plants (one example), parts used and uses of: 4.1 Steroids (Diosgenin, Digitoxin), 4.2 Tannin (Catechin), 4.3 Resins (Gingerol, Curcuminoids), 4.4 Alkaloids (Strychnine, Reserpine, Vinblastine), 4.5 Phenols (Capsaicin).
.....6 lectures
- 5. Ethnobotany and folk medicine:** 5.1 Brief idea, 5.2 Applications of ethnobotany, 5.3 Application of natural product to certain diseases- Jaundice, Cardiac and Diabetics.
.....20 lectures

PRACTICAL- PHYTOCHEMISTRY AND MEDICINAL BOTANY (BOT-G-DSE-A-5-1-P)
(Credit 2)

1. Preparations of solution and buffers
2. Acquaintance with laboratory instruments- Autoclave, Incubator, Clinical centrifuge, Analytical balance, pH meter, Colorimeter, Water bath, Distillation plant, Laminar air flow.
3. Qualitative test for proteins and carbohydrates, reducing and non reducing sugar (glucose, fructose and sucrose)
4. Tests (chemical) for tannin and alkaloid
5. Identification of medicinal plants (list to be provided)
- ✓ 6. Field study (local) and listing of medicinal plants. Records to be substantiated with photographs and description.