UNIVERSITY OF CALCUTTA
(Under CCF)

PROJECT REPORT

SEMESTER – 1

ROLL NO. – 233044-11-0003

REGISTRATION NO. 044-1211-0244-23

SUBJECT – BOTANY

PAPER – BOT-H-CC1-1-P

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Ref. No.....

Date.....

TO WHOM IT MAY CONCERN

This is to certify that Ms. Sruti Poddar bearing Roll. No. 233044-11-0003, Registration No. 044-1211-0244-23, an examinee of B.Sc. 4-year Honours with Research in Botany (under CCF, 2022) examination, 2023 of University of Calcutta has successfully completed educational excursion at New Garia, West Bengal under my supervision. This is part of their DSC Core syllabus (Plant Diversity Practical).

The examinee submitted a field note book on different types of inflorescences, flowers and fruits taken during field study which partially completes the Practical part of paper BOTM DSCC-1.

Kinjalkini Biswas 25.4.24

Dr. Kinjalkini Biswas

Principal

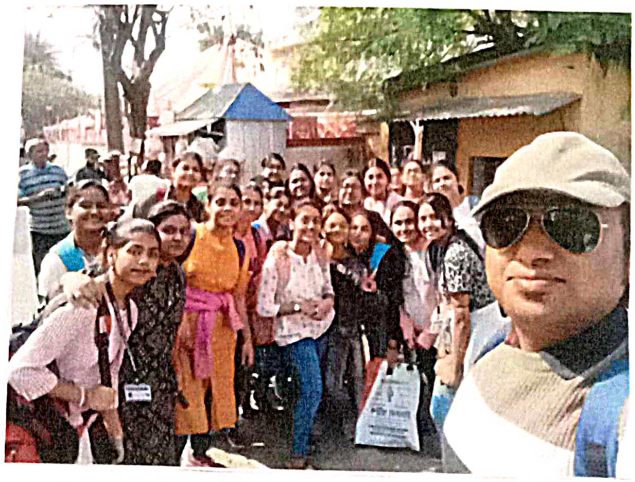
Muralidhar Girls' College

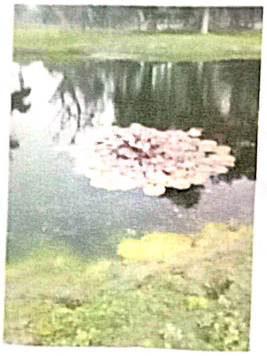
Principal
Muralidhar Girls' College

INTRODUCTION

The following inflorescence, flowers and fruits are observed during visit to AJC Bose Indian Botanic Garden and New Garia Station surrounding areas.

A few also occur in college premises and local surroundings. Date of visit to A.J.C Botanic Garden was 19th January 2024 and to New Garia Station was 16th December 2023.





Spirocyclic flower

Complete flower.

SPIROCYCLIC FLOWER

When out of four sets of floral leaves some sets are arranged in whorls, while others are in spiral, they are called spirocyclic flower. Example - water lily, Nymphaea stellata of Nymphaeaceae, Michelia grandiflora and Michelia champaca of Magnoliaceae etc.

COMPLETE FLOWER

When all the four floral whorls i.e, calyx, corolla, androecium and gynoecium are present in a flower, it is called complete flower. Example - china-rose, Hibiscus rosa-sinensis of Malvaceae; mustard, Brassica nigra of Brassicaceae etc.

Zygomorphic flower

Pentamerous flower.

ZYGOMORPHIC FLOWER

When flower can be devided into two equal and symmetrical halves after cutting it through only one vertical plane passing through the axis, it is called symmetrically zygomorphic or medianly zygomorphic or bilaterally zygmorphic flower. Example - pea, Pisum sativum of Fabaceae; Leonurus sibiricus and Leucas linifolia of Lamiaceae etc.

PENTAMEROUS FLOWER

When the number of floral members in each whorls is five or any multiple of it, it is called pentamerous flower. It is common in dicotyledons. Example - Hibiscus rosa-sinensis of Malvaceae etc.

Spike

Compound spike

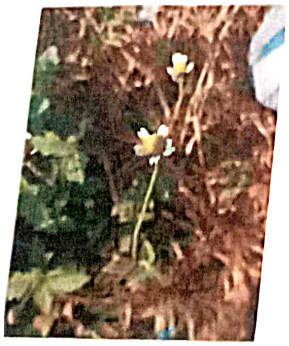
SPIKE

The main axis is of indefinite growth, whose sessile flowers are borne on it. Example - tuberose, Polianthes tuberosa of Amaryllidaceae, basak, Adhatoda vasica of Acanthaceae etc.

COMPOUND SPIKE

When branches of the main axis bear spikes, it is called compound spike. Example - Amaranthus viridis and Amaranthus spinosus of Amaranthaceae etc.

Verticillaster



Capitulam

VERTICILLASTER

It is a condensed cymose inflorescence, each occurs in the axile of opposite leaves having sessile or slightly stalked flowers. Each inflorescence is initially a dichasial cyme and the two lateral sides become reduced to two scorpioid cymes. The entire inflorescence appears like a cluster of sessile flowers forming a false whorl at the node. Example - Leucas linifolia of Lamiaceae etc.

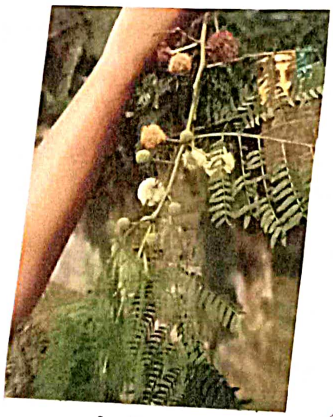
CAPITULUM

In this type the main axis is much shortened and broadened out to form a flat or more or less convex receptacle on which numerous sessile and small florets are arranged in a centripetal manner ie youngest at the centre and oldest towards the periphery. Example - sunflower, Helianthus annus, Eclipta alba etc of Asteraceae.

Polychasial cyme

POLYCHASIAL CYME

In this type, the primary axis ends in a flower and develops more than two daughter axes with apical flower bud from a single nod, a little distance behind the apex. The daughter axes, in their turn also behave like mother. Example- Calotropis procera of Asclepiadaceae etc.



capitate

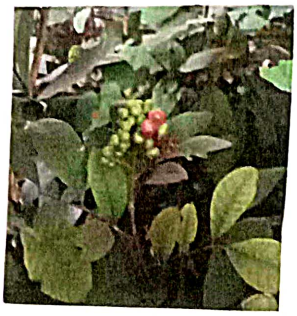
CAPITATE

In this type, a dense cluster of sessile flowers arise upon a compressed rachis thereby they give rise to a somewhat globose structure. Example- Mimosa pudica of Fabaceae etc.

Regma

REGMA

The fruits develop from multicarpellary ovary and after maturation they devide into parts — as many as carpels. Each one-seeded part is called coccus. Example - Ricinus communis of Euphorbiaceae etc.

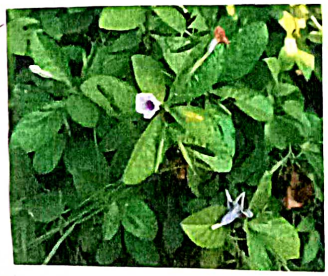


Berry

BERRY

The fruits are developed from the multicarpellary, syncarpous, superior or inferior ovary. Placentation is axile or parietal. The seeds lie embedded freely in the massive pulp developed from mesocarp and endocarp. Example — Solanum melongena of Solanaceae etc.

Solitary cymose



Terminal racemose

SOLITARY CYMOSE

It is the simplest type of cymose. Here the rachis is unbranched and always terminated by a flower. Example - Magnolia grandiflora and Michelia champaca of Magnoliaceae etc.

RACEMOSE

A racemose inflorescence is one whose rachis (simple or branched) never ends in a flower and it continues to elongate by means of a persistent growing point.
Example - Bassica nigra of Brassicaceae.

Mixed spadix

MIXED SPADIX

In this type cymose group of flowers are covered by spathe, when young. Example — Banana; Musa sapientum of Musaceae etc.

CONCLUSION

The inflorescence, flowers and fruits are identify based on their morphological characters.

S. Saravanakumar
25.04.24