

Gayatri Pandey

● Class - B.Sc.II year,

Paper - I

Unit - II

And

● Class - M.Sc.(Botany) II Sem.

Paper - Paper-I

Unit - III

Topic - Magnoliaceae

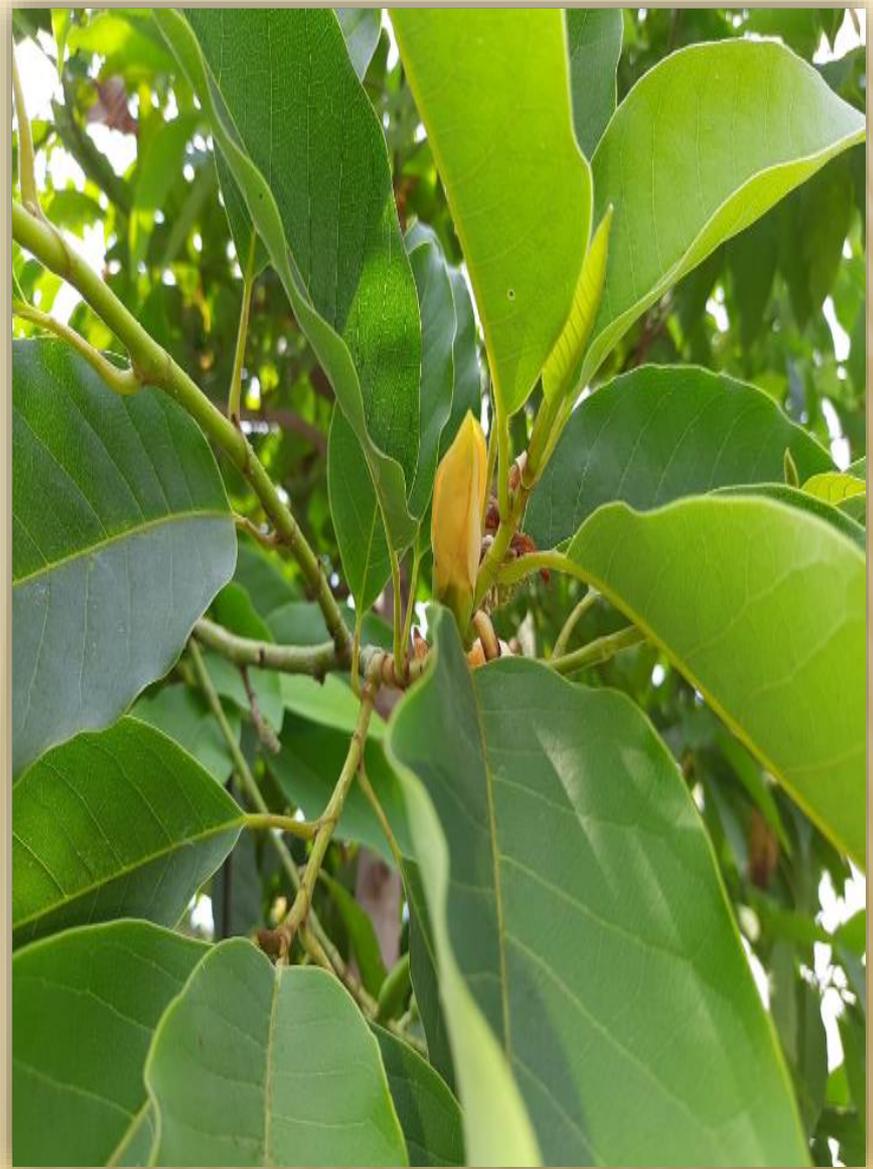
FAMILY - MAGNOLIACEAE

Classification:-

Division	-	Angiospermae
Sub- division	-	Dicotyledonae
Class	-	Polypetalae
Order	-	Ranales
Family	-	Magnoliaceae

Character of Magnoliaceae:-

- ✓ Fragrant flower of large size, perianth usually trimerous.
- ✓ Stamens and carpels numerous.
- ✓ Fruit an etaerio of follicles or berries sometime samara.
- ✓ seeds endospermic



***Magnolia champaca* (Swarn champa)**



Distribution:-

Magnoliaceae named after Pierre Magnol a French Botanist of 17th century. In this family 10 genera of about 100 species. Mostly trees, shrubs distributed tropical but mostly temperate part. Family is distribution in north east and south east India in green climax forest. *Magnolia* grow in the temperate Himalaya.

Magnolia champaca(Joy perfume tree)

❖ Habit :-

A tall graceful, evergreen tree with dark grey bark cultivated. Flowering April – June.

Vegetative characters:-

✓ Root:-

Tap root, branched.

✓ Stem:-

Aerial, erect, branched woody, solid, oil sacs present in the stem and leaves .

✓ Leaf:-

Ramal, alternate , simple, stipulate. Stipules large in *Magnolia* & covering young leaves. Petiolate ovate or oblong lanceolate, entire, apex acute, coriaceous, glabrous, dark green , venation, unicostate, reticulate.

Floral characters:-

✓ Inflorescence:-

Solitary , terminal or axillary



✓ **Flower:-**

Bracteate or ebracteate , pedicellate, pedicel short, ebracteolate, complete, regular, actinomorphic, bisexual, hypogynous, pale yellow, very fragrant, large, aromatic, floral axis (torus) long.

✓ **Perianth:-**

Nine to many, free all alike or three outer green, arranged in whorls of three imbricats and cyclic inner whorl narrow yellow, fragrant.

✓ **Androecium:-**

Stamen indefinite, polyandrous, free, spirally arranged, filaments short and anther lobe linear, dithecous, basifixed, entrose.

✓ Gynoecium:-

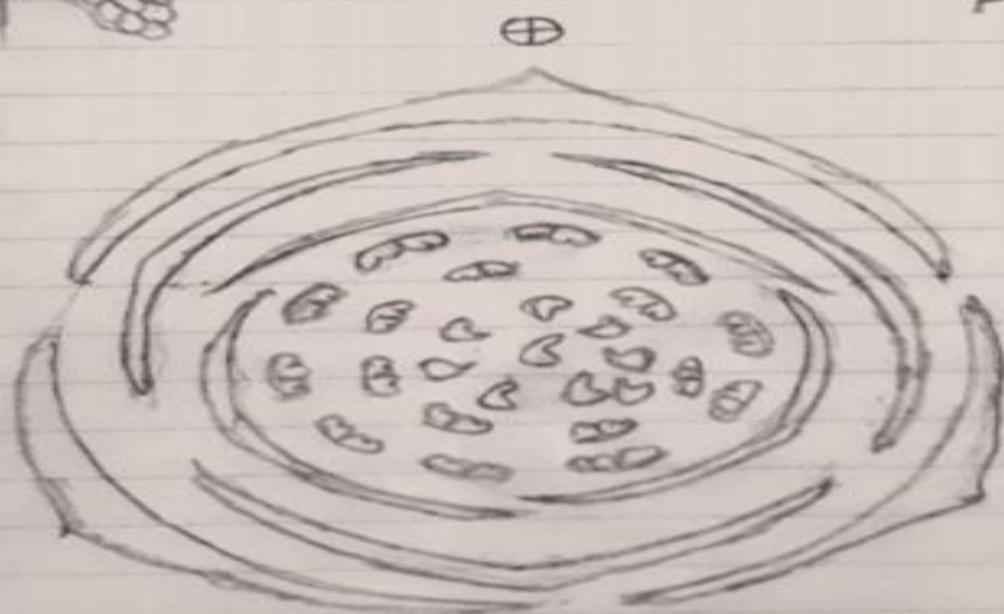
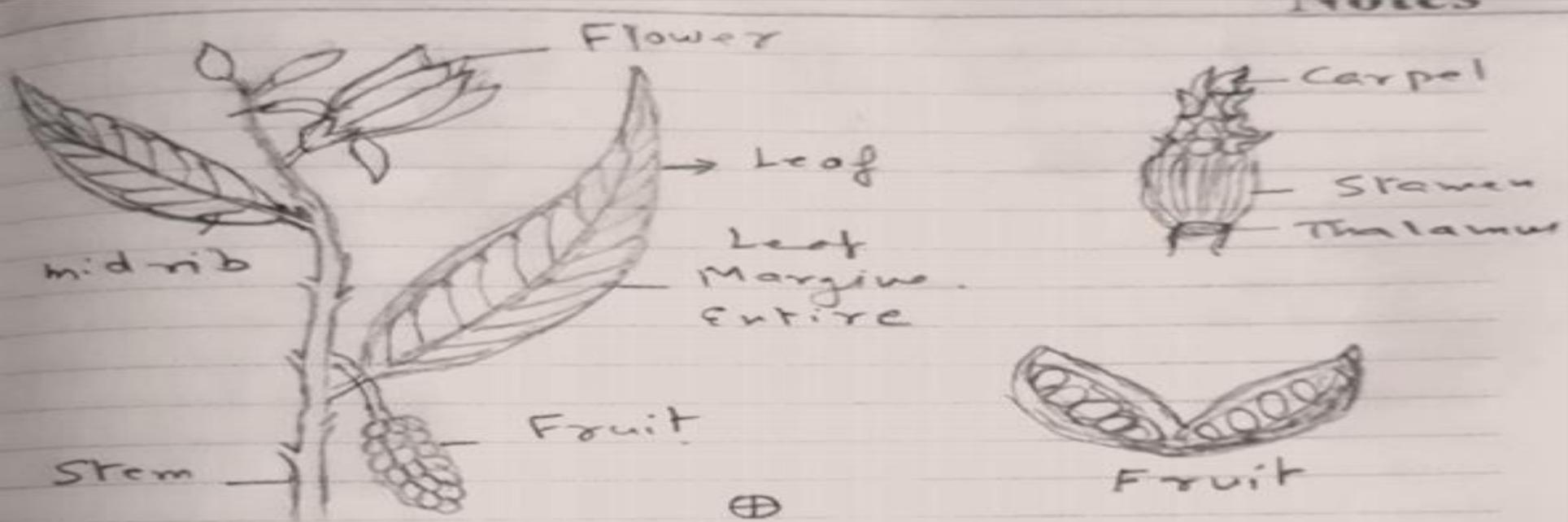
Carpels numerous, free , apocarpous, superior , spirally arranged on a cone like elongated thalamus(gynophore). Each carpel with a swollen ovary. Curved style and beak like simple stigma, unilocular, marginal placentation one to many ovule in each carpels.

✓ Pollination:-

Entomophilous.

✓ Fruit:-

An etaerio of follicles.



Floral Diagram

Floral Formula —

$$\oplus \quad \text{♀} \quad P_{50000} \quad A_{50000} \quad C_{50000}$$

Important Genera:-

- *Michelia champaca*
- *Magnolia alba*
- *Magnolia grandifolia*
- *Liriodendron*

Economic Importance:-

- ✓ Family includes large no. of important ornamental species of *Magnolia* because their white or yellow fragrant flowers & glossy leaves.
- ✓ The pale yellow flower have the sweet perfume.
- ✓ In *Michelia excelsa* used as timber known as “ White wood”.
- ✓ It use for mill work, boats, drums, furniture, musical instrument, toys etc.

- ✓ Images of Buddha or carved for the temples from the wood of Champa and tried at Bombay for ship.

Important characteristics:-

- ✓ Hutchinson treated this family as most primitive family among Dicotyledons.
- ✓ This primitive character are spirally arranged stamens and carpels .
- ✓ Which are Polyandrous and Apocarpous.