

Quadrant II – Transcript and Related Materials

Programme: Bachelor of Science (Third Year)

Subject: Botany

Paper Code: BOC 105

Paper Title: Classical Taxonomy and Phylogeny

Unit: 1. Morphology of Angiosperms

Module Name: Flower parts- Corolla

Module No: 21

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Notes

Corolla

It is second accessory member of the floral whorl. Its constituent leaves are called petals, which are delicate and coloured or white, rarely greenish. The function of corolla is to attract insects i.e. the flag apparatus. In some cases bases of petals act as secreting of nectar owing to presence of glands. Secondary function of corolla is protection of essential members.

Types of Corolla

Petals may be free or united forming Polypetalous or Gamopetalous corolla respectively.

Corolla may be- Regular: when symmetry is actinomorphic

Irregular: when symmetry is zygomorphic

Corolla is generally variously coloured

Sometimes they are green – then they are called sepalloid

Forms of corolla

Petals may be sometimes stalked then the stalk of petal is called as claw and the expanded portion is called as limb or lobe

Cruciform — Corolla polypetalous and petals arranged like a cross e.g. in Cruciferae.

Rosaceous — Corolla polypetalous, petals in multiples of 5, spreading, unclawed

Papilionaceous — Corolla polypetalous, petals 5, irregular

One petal very large called the standard or vexillum

The two situated on the sides are called the alae or wings

The two inner ones united to form a boat like structure called keel or carina.

The corolla gives the appearance of a butterfly as in *Clitoria ternatea* of family Papilionaceae

Caryophyllaceous — Five clawed petals with long claws stand free to form a deep cup shaped structure, as in *Dianthus* of family Caryophyllaceae.

Tubular — Corolla forming a long tube

Campanulate — Corolla bell shaped as in *Campanula*.

Infundibuliform — Corolla funnel shaped.

Bilabiate or bilipped — Five petals are united to form two lips, one above the other resembling mouth of dog. e.g. *Adhathoda*

Rotate — petals united to form a small tube with upper portion of petal spreading out almost horizontally like the spokes of a wheel.

Urceolate— corolla is swollen in the middle and contracted at both ends

Ligulate or strap shaped — here the 5 petals are connate to form strap or tongue shaped structure. eg. Ray floret of Asteraceae

Perianth

Perianth is the term used for both calyx and corolla. In dicot flowers, perianth is differentiated into outer green calyx and inner non-green corolla.

If any one of the accessory floral leaves are present then also it may be called perianth

If the perianth is sepal like, it is called Sepaloid perianth

If the perianth is petal like, it is called Petaloid perianth

When calyx and corolla are alike in size, form and colour, they are called as Tepals. eg. *Magnolia*, *Michelia*
