

* Apocynaceae

→ The members of this family are found throughout the world, but they are more commonly met with in the tropical regions.

* Habit →

There is a great variation in the habit of the plants of this family. They may be herbs, erect or twining shrubs or trees. Vinca rosea is a perennial herb, Vallaris salanacea is a large twining shrub, Nerium indicum is a large shrub with beautiful red or white flowers, Plumeria acutifolia is a small sized tree and Alstonia scholaris is a medium size tree. In some genera the stem becomes tuber like, eg. Adenium. The species of Landolphia and Clitoria are climbing shrubs. The latex is present in most of the genera.

* Root:- Tap and branched.

* Stem:- Usually erect, branched, solid, glabrous, rarely tuber-like and thick.

* Leaves:- The leaves are simple, petiolate, usually opposite decussate. In rare cases the leaves are alternate or even whorled (eg- Nerium, Alstonia). Usually the leaves are exstipulate and very rarely they may be stipulate.

* Inflorescence :- Usually the inflorescence is of cymose type. It is very rarely solitary as in Vinca. In Carissa, the flowers are found to be arranged in corymbose cymes. In Plumeria, the flowers are arranged in terminal cymes. In Alstonia, the flowers are found to be arranged in umbellate branched pedicled cymes. In Rauvalfia, the flowers are arranged in umbellate or corymbose cymes.

* Flowers :-

The flowers are pedicellate, bracteate, bracteolate, hermaphrodite, actinomorphic, regular, sometimes slightly zygomorphic, complete, hypogynous and pentamerous. In some cases the flowers are tetramerous with reduction to two in the pistil.

* Calyx :-

Usually it consists of five sepals, gamosepalous. The calyx is generally divided almost to the base. The aestivation is quincuncial.

* Corolla :-

Usually the corolla consists of five petals, gamopetalous. It is generally salver or funnel shaped. The corolla tube like usually possesses hairy appendage or scales. The aestivation is contorted.

* Androecium :-

It consists of five stamens alternating with the petals. The stamens are situated on the tube or the throat of the corolla. The filaments are short, anthers introrse, polyandrous or connate and often adhere to the stigma. The antherlobes are sometimes empty at their base and prolonged into spines.

* Gynoecium :-

It consists of two carpels. The carpels may be free or connate; superior, sometimes partly inferior or inferior. The style is simple and the stigma is thick and often bilobed. Rarely the number of carpels exceeds 3 to 5. Usually a nectar secreting disc is situated beneath the gynoecium.

→ In syncarpous gynoecium, the ovary may be unilocular with parietal placentation or it may be bilocular with axile placentation. In the case of separate ovaries the placentation is marginal. The ovary is superior or half-inferior.

Numerous ovules are found to be situated on parietal placentas or in two chambered ovaries on marginal walls.

* Fruit :-

In the case of free ovaries, the fruit is a pair of follicles. Sometimes the fruits of separate ovaries are fleshy and indehiscent, or may be one seeded eg - Cameraria -

* Seed :-

In dry fruits the seeds are generally winged eg in Plumeria. Sometimes the seed bears a tuft of hairs at the base, in Kickxia and sometimes at both ends eg. In Strophanthus. The embryo is straight, with or without endosperm.

* Pollination :- Insects.

* Floral Formula :- $\oplus \quad \text{♂} \quad K(5), \overbrace{C(5)}^{\text{A}}, \underline{A}_{(5)}, \underline{G(2)}$

ex :- Vinca rosea - Sadabahar

- Nerium indicum

- Plumeria acutifolia

$\oplus$ Actinomorphic

♂ Bisexual

K - Calyx - ढाँडादल पुज

C - Corolla - दल पुज

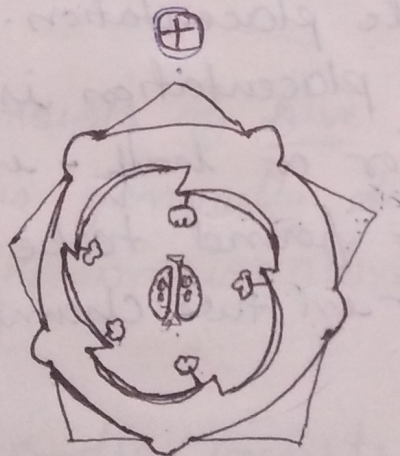
A - Androecium $\rightarrow \sigma$

G - Gynoecium - ♀

G - Superior / Hypogynous Flower

$\overbrace{C}^A \rightarrow$ Androecium
Corolla 2 attached

* Floral diagram :-



(5) gamosepalous
5 = Polysepalous