

Topic: Lamiaceae

B.Sc. Botany Hons. II

Paper: III Group: B

Dr. Sanjeev Kumar Vidyarthi

Department of Botany

Dr. L.K.V.D. College, Tajpur, Samastipur

L.N. Mithila University, Darbhanga

B. Floral characters:

Inflorescence: Very commonly verticillaster consisting of a pair of condensed dichasial cymes at each node; often the verticillasters are grouped together in a thyrsus form; rarely solitary (*Scutellaria*).

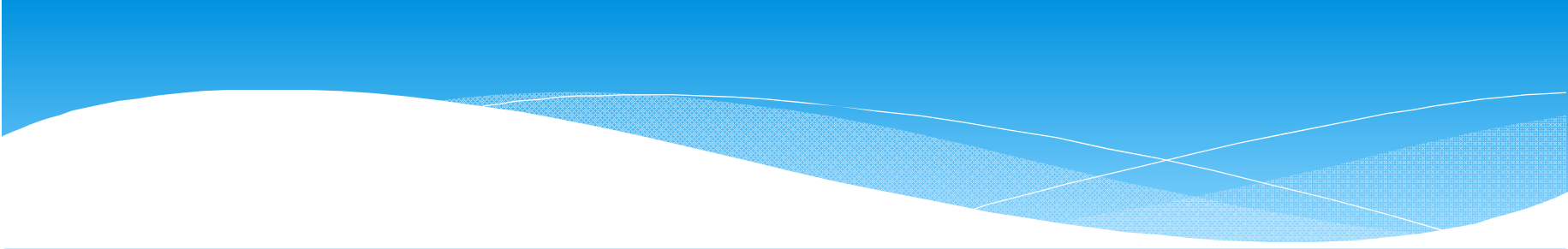
Flower: Pedicellate or sessile, bracteate, complete, zygomorphic rarely actinomorphic (*Mentha, Elsholtzia*), hermaphrodite, rarely unisexual (*Nepeta, Thymus*), pentamerous hypogynous.

Calyx: Sepals 5, gamosepalous, bilabiate (*Salvia, Thymus*) campanulate (*Teucrium*), persistent, valvate or imbricate aestivation. When a bilabiate calyx is present the arrangement of

the sepals may be (1/4) as in *Ocimum* or (2/3) as in *Calamintha*.

Corolla: The corolla possesses a tubular base which widens towards the mouth. Petals generally 5, gamopetalous and the five teeth are sub-equal and mostly bilabiate. In *Mentha* a four lobed corolla arises due to the fusion of two upper teeth. When a distinct bilabiate condition is found the arrangement of the petals may be gamopetalous 2/3 i.e. two petals in the posterior upper lip and three in the anterior lower lip (*Salvia*, *Nepeta*, *Leucas* etc.).

In *Ocimum*, *Coleus*, *Plectranthus* etc. the petals arrangement is



gamopetalous 4/1 i.e. four petals in the posterior upper lip and only one petal in the anterior lower lip. In extreme cases the arrangement may be gamopetalous 0/5 i.e. all the five petals forming the lower lip so that the corolla becomes one lipped. Aestivation in the petals is valvate or imbricate.

Androecium: Typically only 4 stamens, didynamous (2+2) and posterior stamen is reduced or represented by a staminode; in *Calamintha* only two perfect stamens are found, two are imperfect and the fifth reduced. In *Salvia* only two stamens on the anterior

side are found; they are characterized by peculiarly long connectives which help in insect pollination stamens generally introrse and dithecal.

Gynoecium:

Bicarpellary, syncarpous, superior, situated on hypogynous honey secreting disc; bilocular becomes tetralocular by the formation of false septum; axile placentation, one ovule in each loculus; style gynobasic (arising from the base of the ovary), stigma bilobed. The gynoecium character is thus uniform without any variation.

Fruit:

Usually schizocarpic carcerulus or achenes or nutlets rarely drupaceous.

Seed:

Non-endospermic.

Floral- formula:

