

Gynoecium:

Tricarpellary, syncarpous, ovary inferior, unilocular, parietal placentation, rarely trilocular and axile placentation (Apostasia); stigmas 3, of which 2 lateral are often fertile, the third stigma is sterile forming a small beaked outgrowth – the rostellum lying in the centre of column between the anther and fertile stigma. In *Cypripedium* and *Paphiopedium*, all the 3 stigmas are functional.

Fruits: Capsule

Seed: Non albuminous

Affinities of Orchidaceae: ⁷

Orchidaceae was included by Bentham and Hooker as the third family of Monocrosporaee at the beginning of the Monocotyledons. Hutchinson (1959), Takhtajan (1969) and Cronquist (1981) placed the family under the order Orchidales. Thorne (1983), placed Orchidaceae under the suborder Orchidineae of the order Liliales.

The Orchidaceae is related to the epigynous components of the Liliiflorae (Liliales). The Orchidaceae has been also believed to arise from the Musaceae or its ancestor.

Several taxonomists consider Orchidaceae to be the most advanced and highest evolved among monocotyledons.