

Topic: Gnetum; Reproduction
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Reproduction of *Gnetum*:

- *Gnetum* is dioecious.
- The reproductive organs are organised into well-developed cones or strobili.
- These cones are organised into inflorescences, generally of panicle type. Sometimes the cones are terminal in position.
- A cone consists of a cone axis, at the base of which are present two opposite and connate bracts.
- Nodes and internodes are present in the cone axis.
- Whorls of circular bracts are present on the nodes. These are arranged one above the other to form cupulas or collars.
- Flowers are present in these collars.
- Upper few collars may be reduced and are sterile in nature in *G. gnemon*.

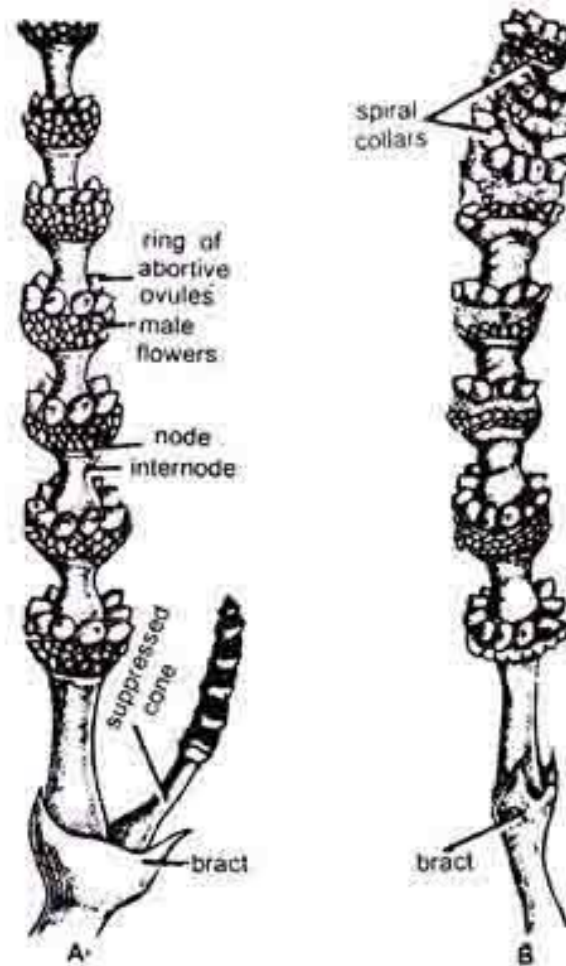


Fig. *Gnetum* A, A branch bearing a panicle of a well-developed male cone and a suppressed cone in *G. ula*; B, An old cone of *G. gnemon* showing spiral collars at the apical end (Modified after Madhulata, 1960)

Male Cone or Male Flower:

- The male flowers are arranged in definite rings above each collar on the nodes of the axis of male cone.
- The number of rings varies between 3-6.
- The male flowers in the rings are arranged alternately.
- There is a ring of abortive ovules or imperfect female flowers above the rings of male flowers.
- Each male flower contains two coherent bracts which form the perianth.
- Two unilocular anthers remain attached on a short stalk enclosed within the perianth.
- At maturity, when the anthers are ready for dehiscence, the stalk elongates and the anthers come out of the perianth sheath. In *Gnetum gnemon* a few (2-3) flowers are sometimes seen fusing each other.

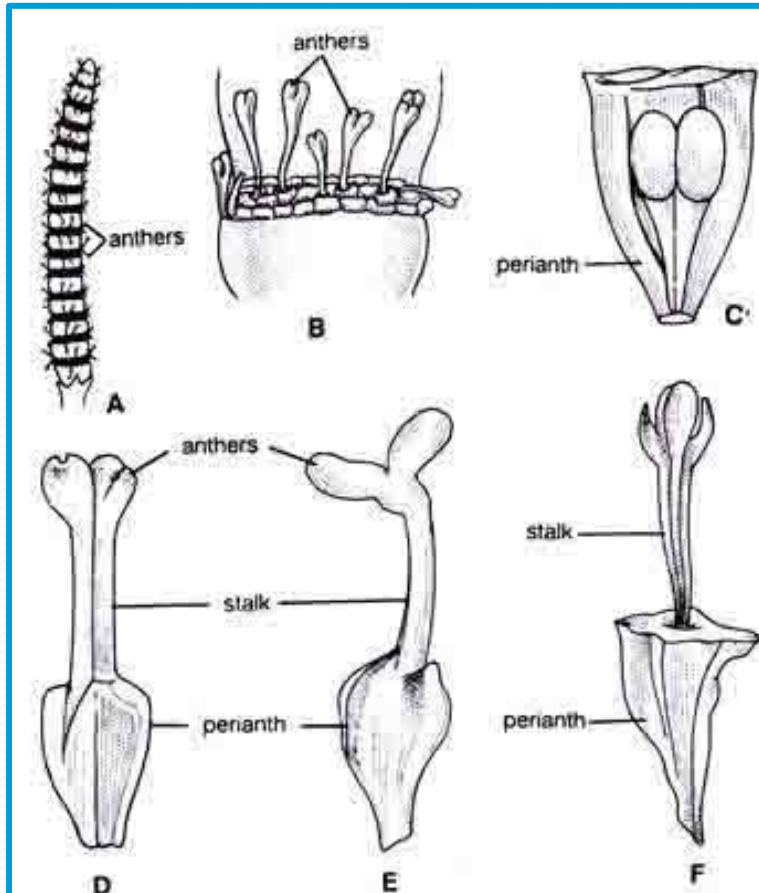


Fig. *Gnetum ula*. A, A male cone; B, A part of 'A' showing male flowers; C, L.S. male flower; D-E, Male flowers with anthers emerged out of a perianth; F, A dehisced male flower.

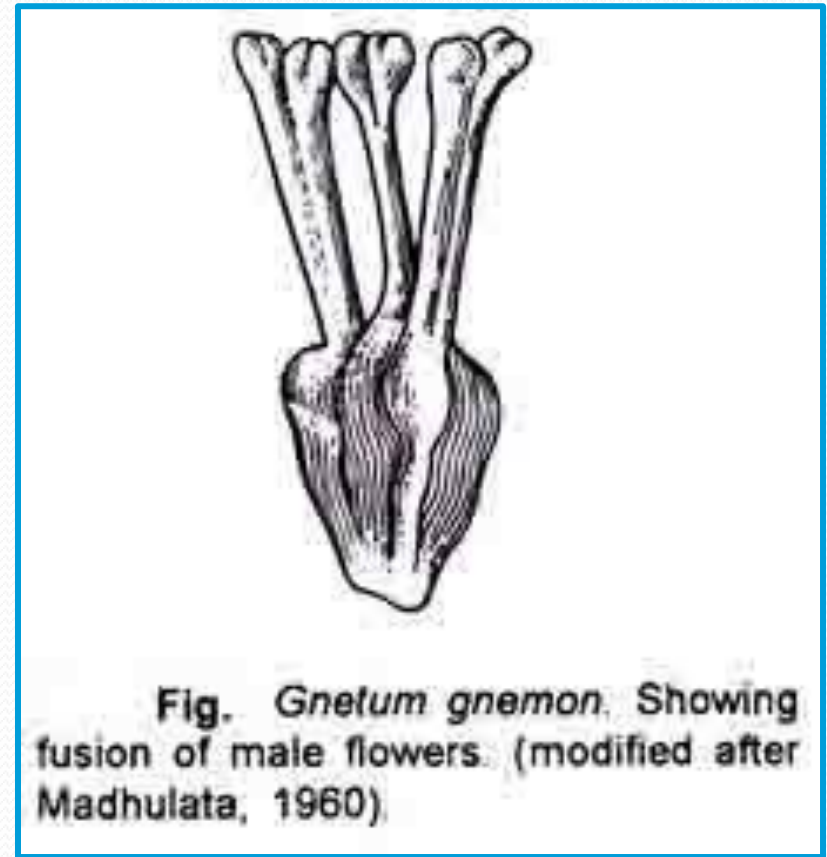


Fig. *Gnetum gnemon*. Showing fusion of male flowers. (modified after Madhulata, 1960)