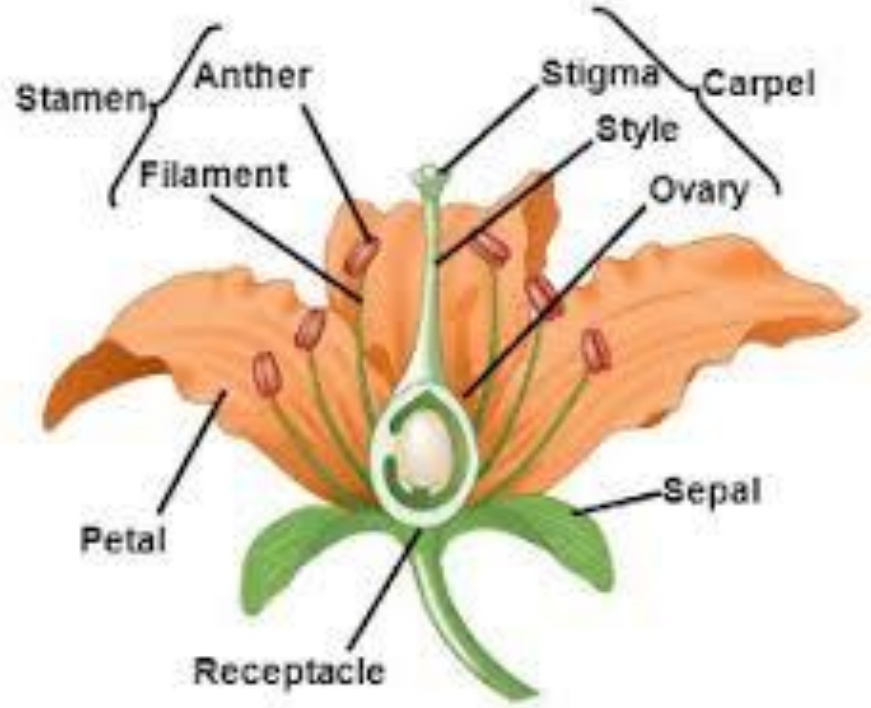
# Gynoecium

**It is the female reproductive organ of plant and is made up of carpel.**

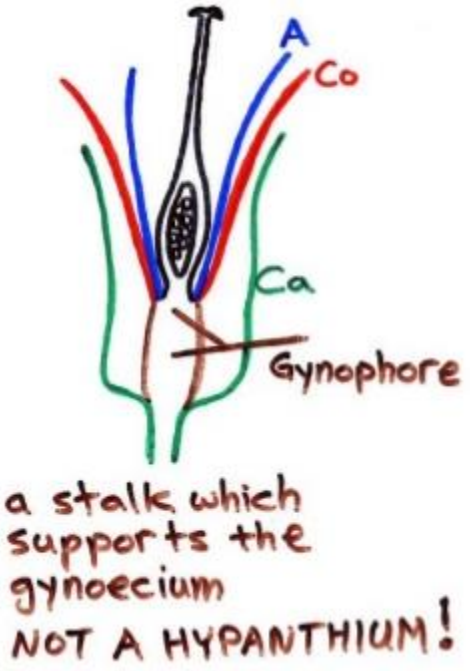
**Pistil:** **Stigma, Style and Ovary**




Images taken from Internet

# Gynophore

**It is elongated thalamus in between androecium and gynoecium e.g. *Cleome***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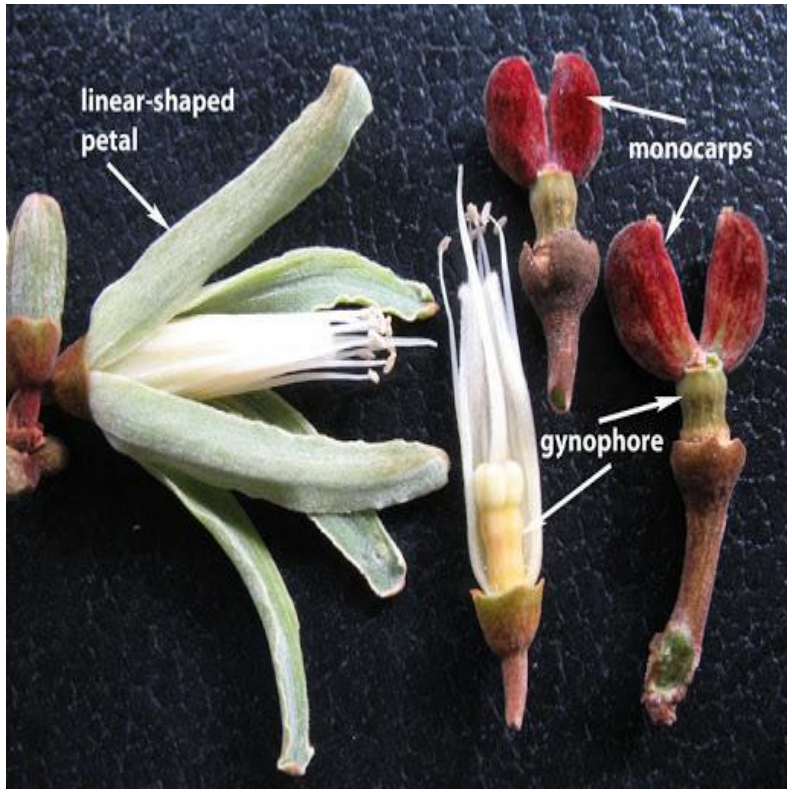
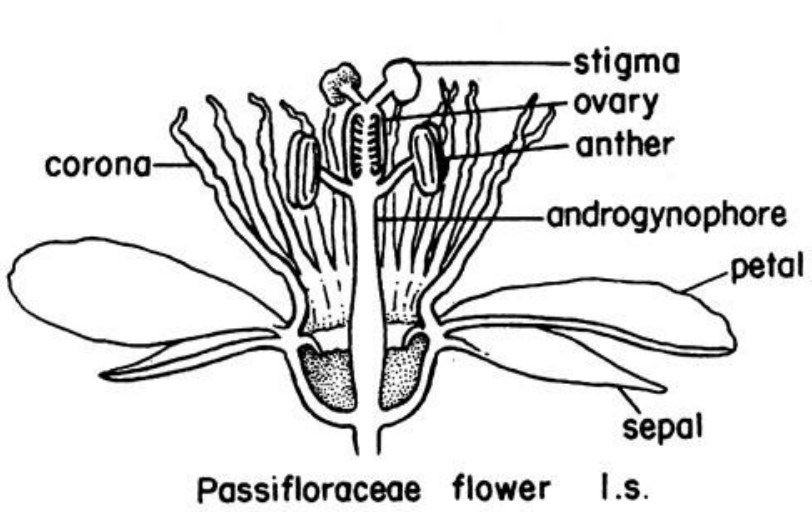


# Androgynophore

**An axis or stalk bearing both stamens and pistil above the point of corolla attachment e.g. *Cleome gynandra*.**



Passifloraceae flower l.s.


Images taken from Internet

**Monocarpellary**
Gynoecium having only carpel e.g. *Pisum*.

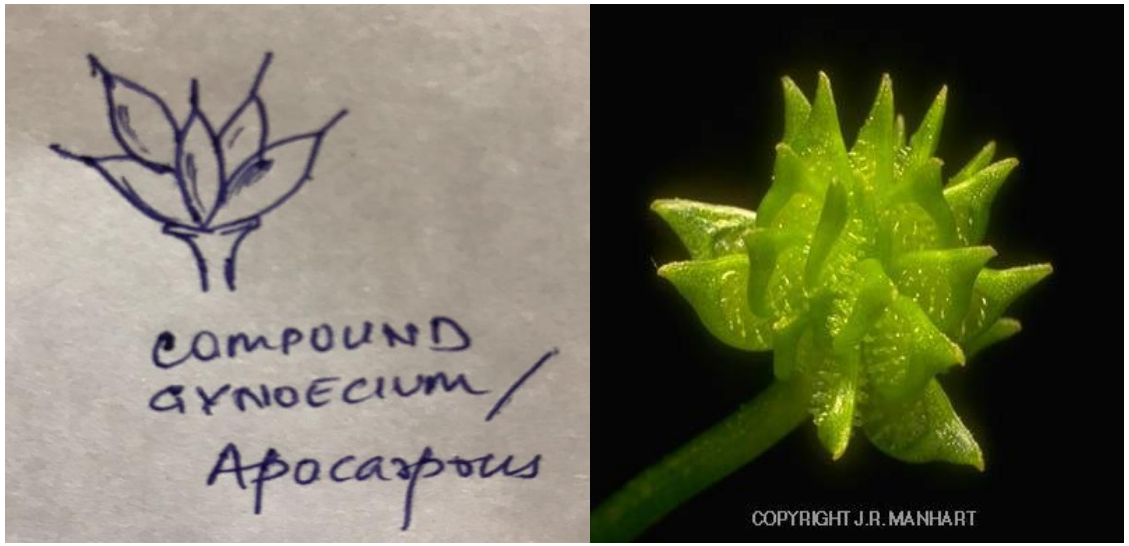
**Bicarpellary**
Gynoecium having two carpel e.g. *Brassica*.

**Multi carpellary**
Gynoecium having more than five carpel e.g. *Sida*.

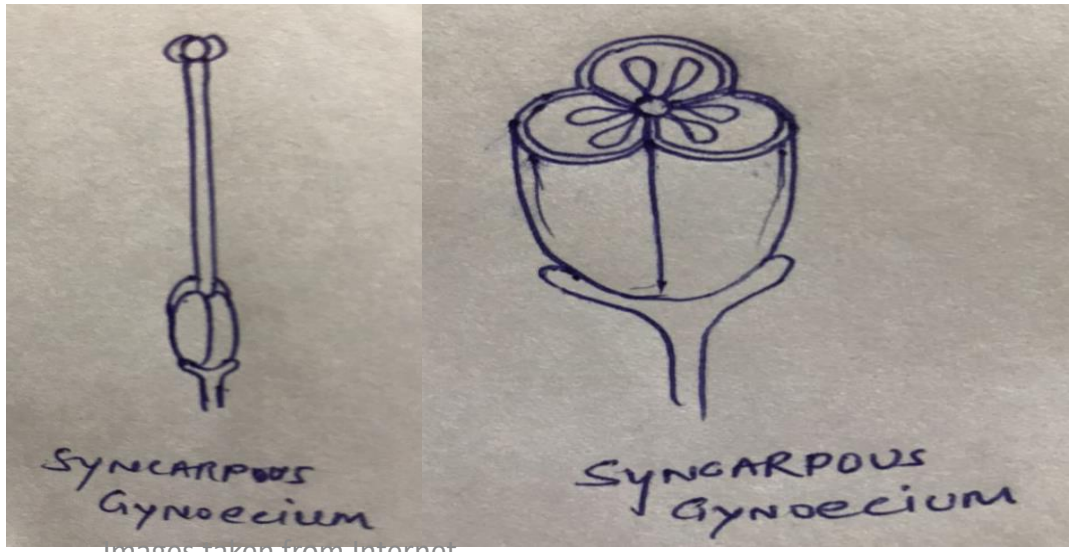
Images taken from Internet

# Gynoecial Types Based on Fusion

**Apocarpous**:
With carpels separate.



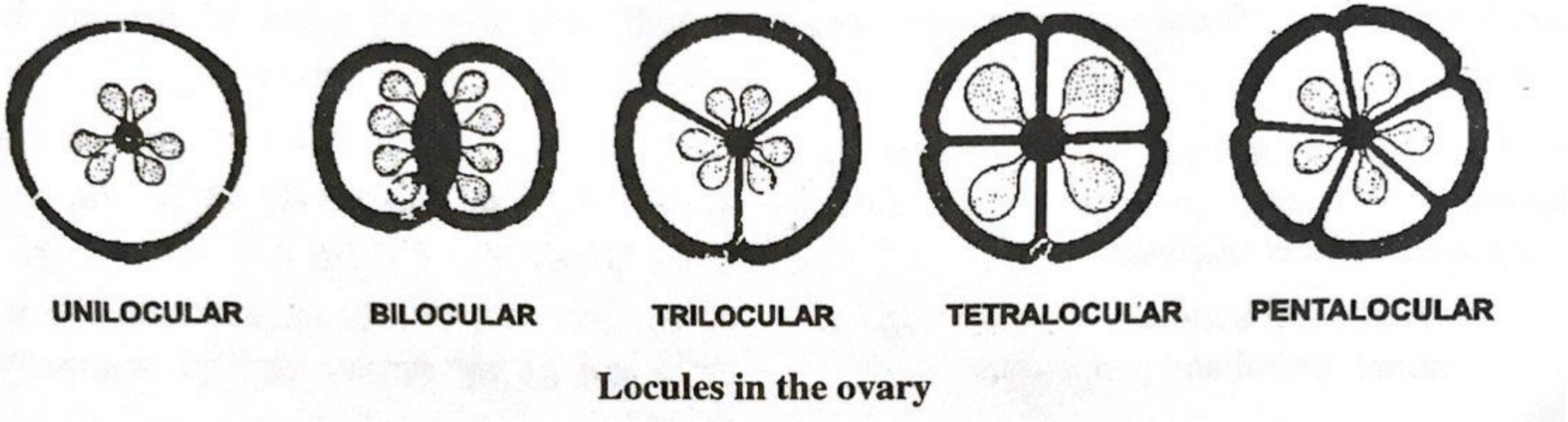

**Syncarpous**:
With stigmas, styles, and ovaries completely fused.




Images taken from internet

# Locule

**It is a chamber of ovary made by carpels. It may be uni, bi, tri, tetra, penta and multilocular depending upon number of chamber in it.**

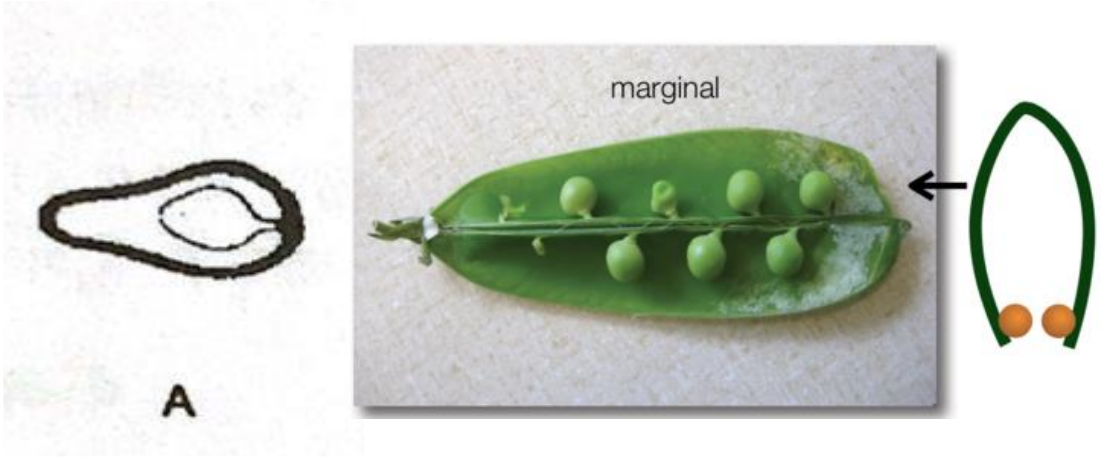



Locules in the ovary

Images taken from Internet

# Placentation types

Placentation refers to the pattern of attachment of ovules within the ovary.



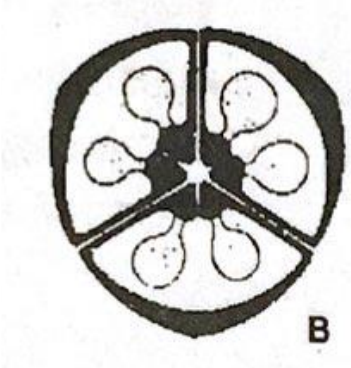

**1. Marginal**

Ovules arranged along the suture of a single, simple pistil (cross-section). In monocarpous and apocarpous gynoecia (i.e. carpels distinct), the ovules are arranged along the suture of the carpel. There is one locule per carpel, no septum (see definition on next slide). This is called marginal placentation.

**2. Axile**

A separate locule for each carpel and the ovules attached to placentae in the middle where the septa come together (cross-section). In a syncarpous gynoecium, there can be one or more locules, and various possible types of placentation. This can be observed on cross and lateral sections of the ovary.

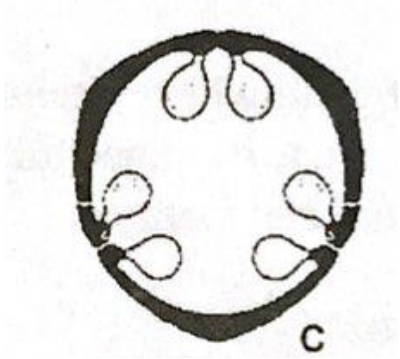
A septum ("wall") is an interior wall which separates the locules when two or more chambers occur. The presence of septa is characteristic of axile placentation.

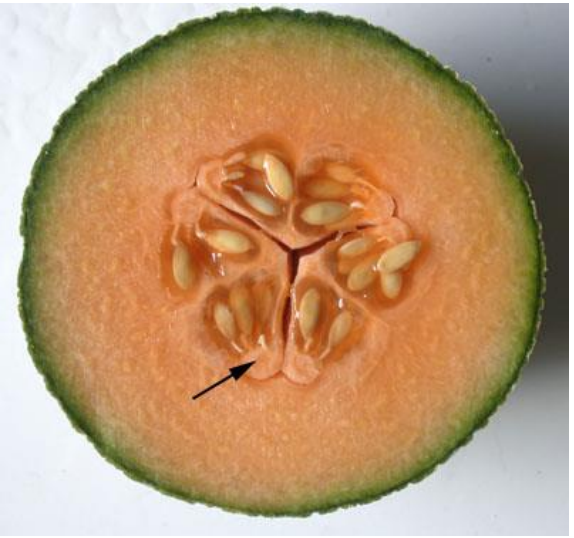



Images taken from Internet

**3. Parietal**

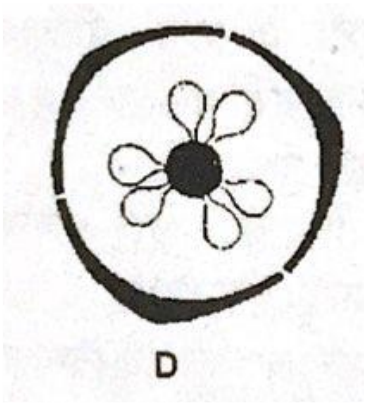
Ovules attached to the wall of a unilocular ovary (cross-section there is no septum, so that the ovary is unilocular. The ovules are borne on the inner surface of the ovary walls (or extensions of the walls).

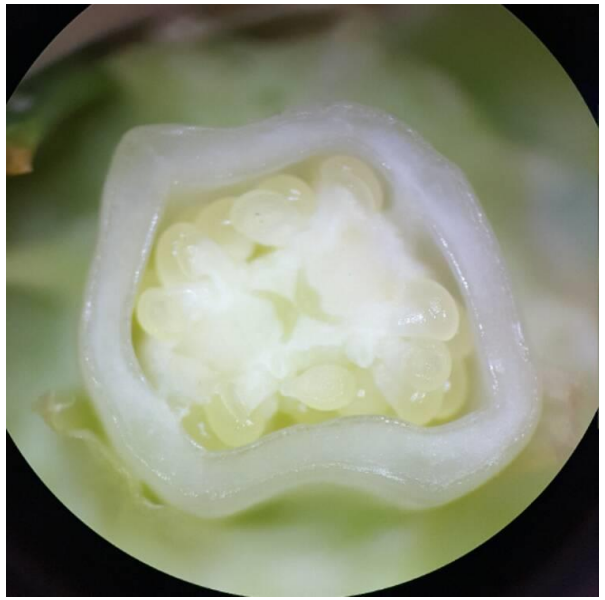


**4. Free-central**

Ovules attached to a peg or stalk that arises from the ovary floor but which does not reach the roof; ovules usually few to many (long-section)

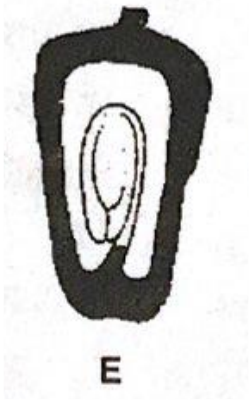


Images taken from Internet

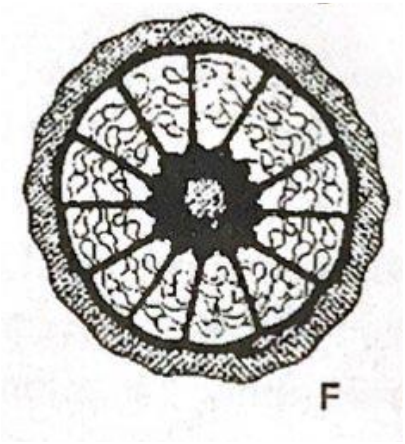
**5. Basal**

Ovules attached to the floor of the ovary (long-section)
one or more ovules are attached to the bottom of the ovary. This situation is found for example in some Portulacaceae like Portulaca (photo on the left; the yellow arrow is pointing to the ovules) or in Talinum (close up on the right; the black arrow is pointing to the placenta). The ovary is unilocular. E.g. Sunflower



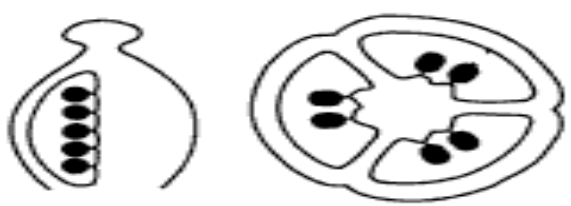

**4. Superficial**

It occurs in multicarpellary and multilocular ovary. The ovules are borne on placentae which develop all the inner surface of the partition wall e.g. Nymphaea.





Images taken from Internet



axile

free-central

parietal

marginal

basal

apical

Images taken from Internet

# *Hibiscus rosa-sinensis*

**Family malvaceae**

**Flower formula: Br Brl ⊕ ♂ $K_{(5)}$ $C_{(5)}$ $\frown A_{(\infty)}$ $\underline{G}_{(5)}$.**

https://youtu.be/KVyNwDsy640

https://youtu.be/tyU0k-UnhVo

# *Catharanthus roseus*

**Family Apocynaceae**

**Flower formula: Br Brl ⊕ ♂ $K_5$ $C_{(5)}$ $\frown A_{(5)}$ $\underline{G}_{(2)}$.**

https://youtu.be/jgpn7L9rxQE

# *Thevetia peruviana*

https://www.youtube.com/watch?v=8ChhmX9d2B0

Images taken from Internet