

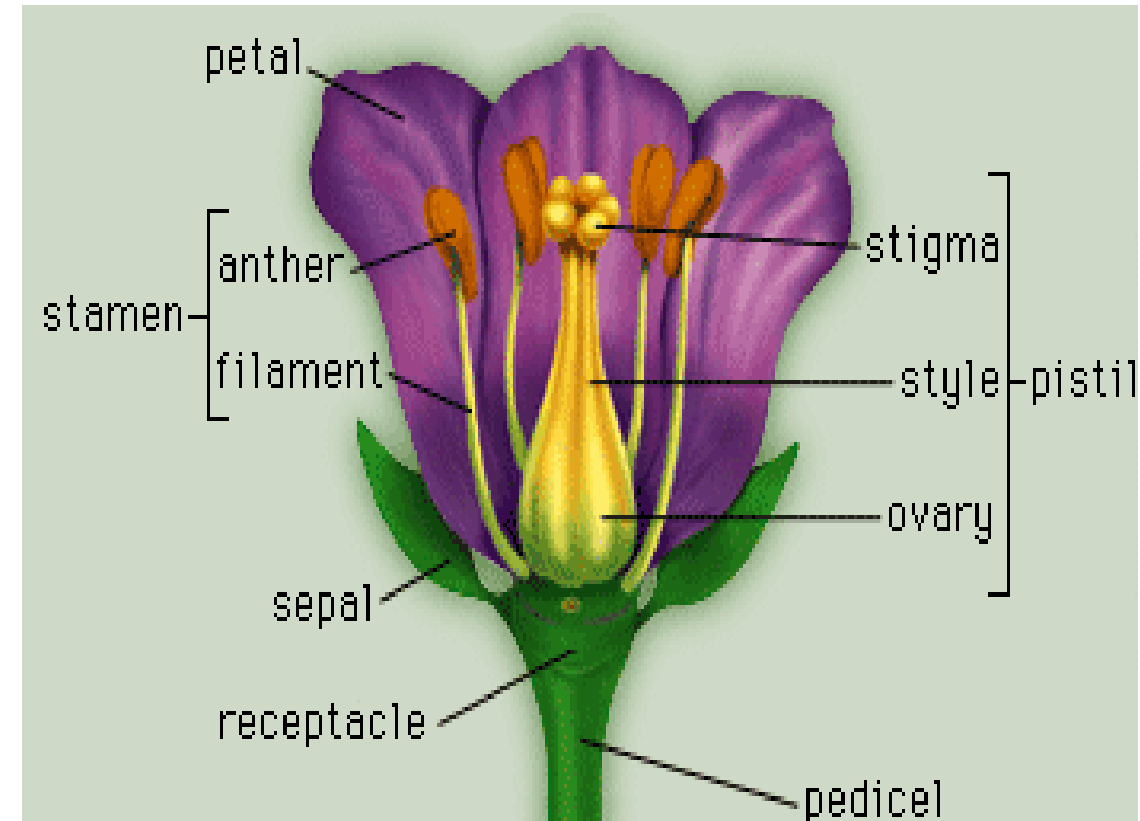
# Flower

the reproductive structures produced by plants which belong to the group Angiosperms (Flowering Plants).

**A flower is basically made up of the following structures:**

- 1- Pedicel:** the stalk of one flower.
- 2- Receptacle:** It is small part, found at the center of the base of the flower.
- 3- Calyx:** the outermost whorl of the flower.
- 4- Corolla:** the bright part of the flower.
- 5- Stamen (Androecium):** the male parts of a flower.
- 6- Pistil (Gynoecium):** the female parts of a flower.

**Calyx + Corolla = Perianth**



# Perianth states

**1-A chlamydeous Flower:** flower without perianth. (*Salix*)

**2-Chlamydeous Flower:** flower with perianth

**a. Differentiated perianth:** the perianth differentiated to calyx and corolla (*Rosa*).

**b. Undifferentiated perianth:** the perianth not differentiated to calyx and corolla:(*Allium cepa*).



**1.Achlamydeous Flower**  
*Salix*



**2. Chlamydeous Flower**  
**a. Differentiated perianth**  
*Rosa*



**2. Chlamydeous Flower**  
**b. Undifferentiated perianth**  
*Allium cepa*

## Flower Symmetry:

The arrangement of floral organs around the axis of a flower

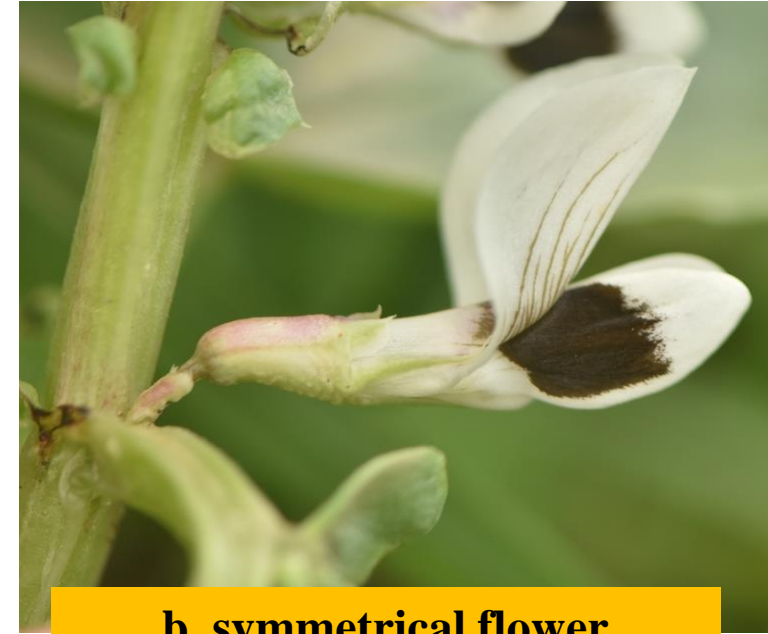
- a. **Asymmetrical flower** / Flower cannot be divided into two equal halves in any vertical plane passing through the center.  
*Canna indica*
- b. **Symmetrical flower**
  1. **Actinomorphic symmetry:** flower can be divided into two equal radial halves when cut in any radial plane passing through the center. *Convolvulus*
  2. **Zygomorphic symmetry:** Flower can be divided into two equal halves only in one vertical plane passing through its center. *Vicia faba*



a. Asymmetrical flower  
*Canna indica*



b. symmetrical flower  
1-Actinomorphic symmetry  
*Convolvulus*



b. symmetrical flower  
1- Zygomorphic symmetry  
*Vicia faba*

# Flowers types according to the perianth

**1-Complete flower:** A flower having all four floral parts: sepals, petals, stamens, and pistil. *Potentilla*

**2-Incomplete flower:** A flower missing any of its parts in its natural form ,has 3 types:

**a-Asepalous flower :** flower without sepals .*Daucus carota*

**b-Apetalous flower :** flower without petals. *Morus*

**C-Naked flower :** flower without sepal and petal. *Salix*



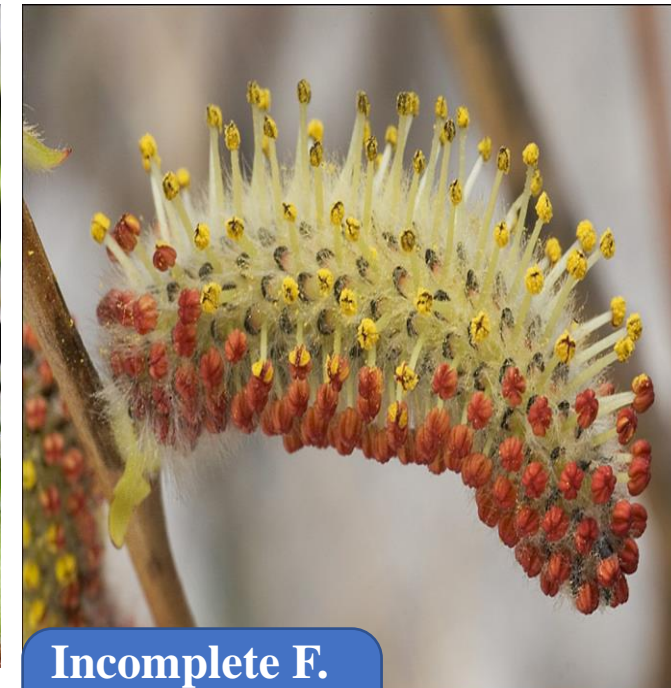
Complete F.  
*Potentilla*



Incomplete F.  
a- Asepalous F.  
*Daucus carota*



Incomplete F.  
b-Apetalous F.  
*Morus*



Incomplete F.  
c-Naked F.  
*Salix*

# Flowers types according to the Reproductive system

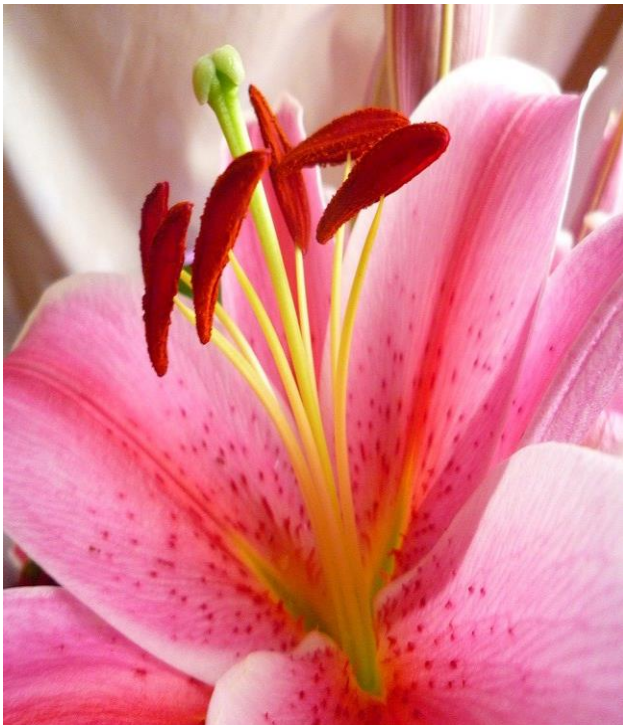
1-Perfect flower (Hermaphroditic) (Bisexual F.): both male and female reproductive structures are present. *Lilium*

2-Imperfect flower(Unisexual F.): flower with one reproductive structures ,has 3 types

a- **Staminate**: flower without pistil(only stamines found).*Begonia*

b-**Pistillate** : flower without stamen(only pistils found). *Begonia*

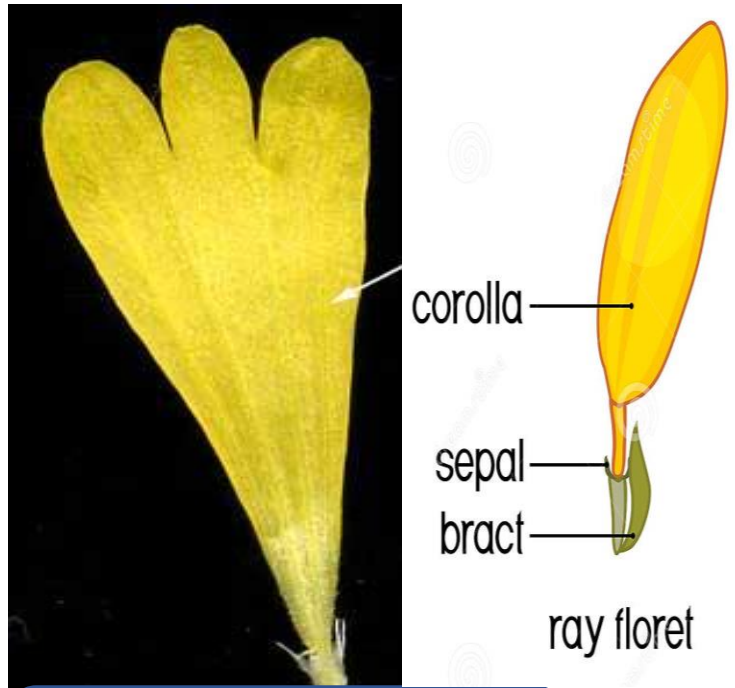
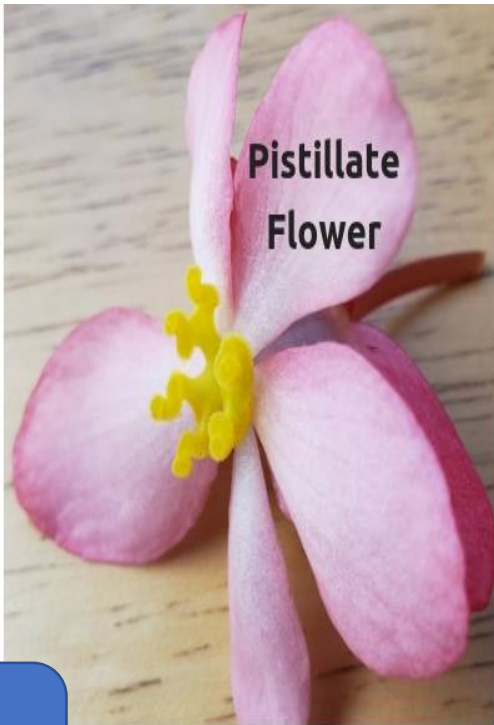
c-**Sterile flower**: flower without stamen and pistil. *Helianthus annus (Ray F.)*



Perfect F.  
*Lilium*



Imperfect F.  
Staminate and Pistillate F.  
*Begonia*



Imperfect F.  
c-Sterile F.  
*Helianthus annus (Ray F.)*

# Plant Oikos

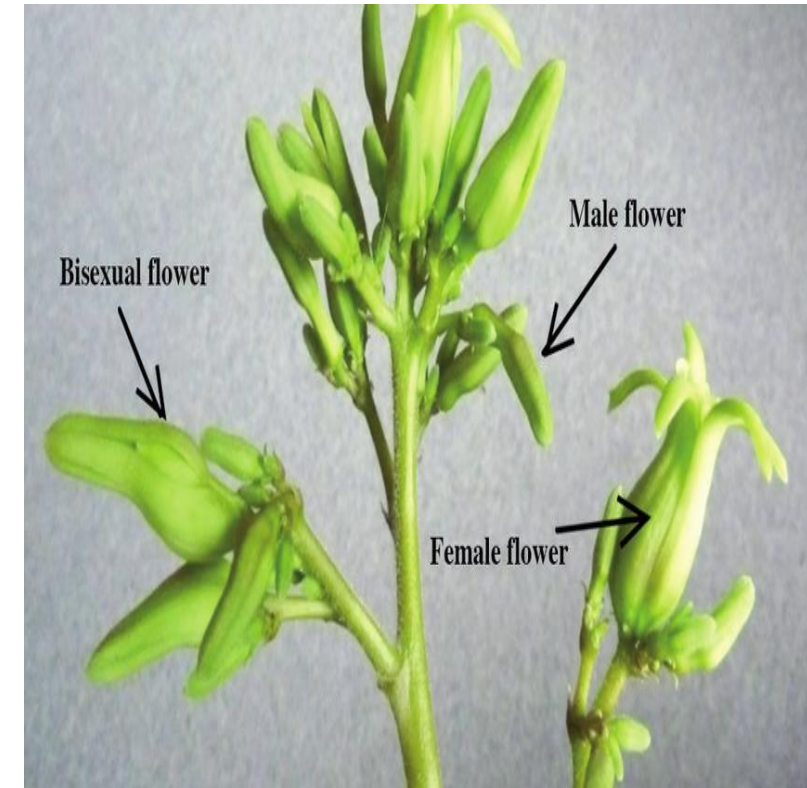
- **Monecious plant**: Both male and female reproductive structure found in one plant. *Typha*
- **Diecious plant**: The plant contain one reproductive structure. *Salix*
- **Trioecious plant (polygamous)** : Having male (staminate), female (pistillate), and bisexual flowers on the same plant . *Vasconcellea*



Monoecious P.  
*Typha*



Diecious P.  
*Salix*



Trioecious P.  
*Vasconcellea*