



**ASTERACEAE**

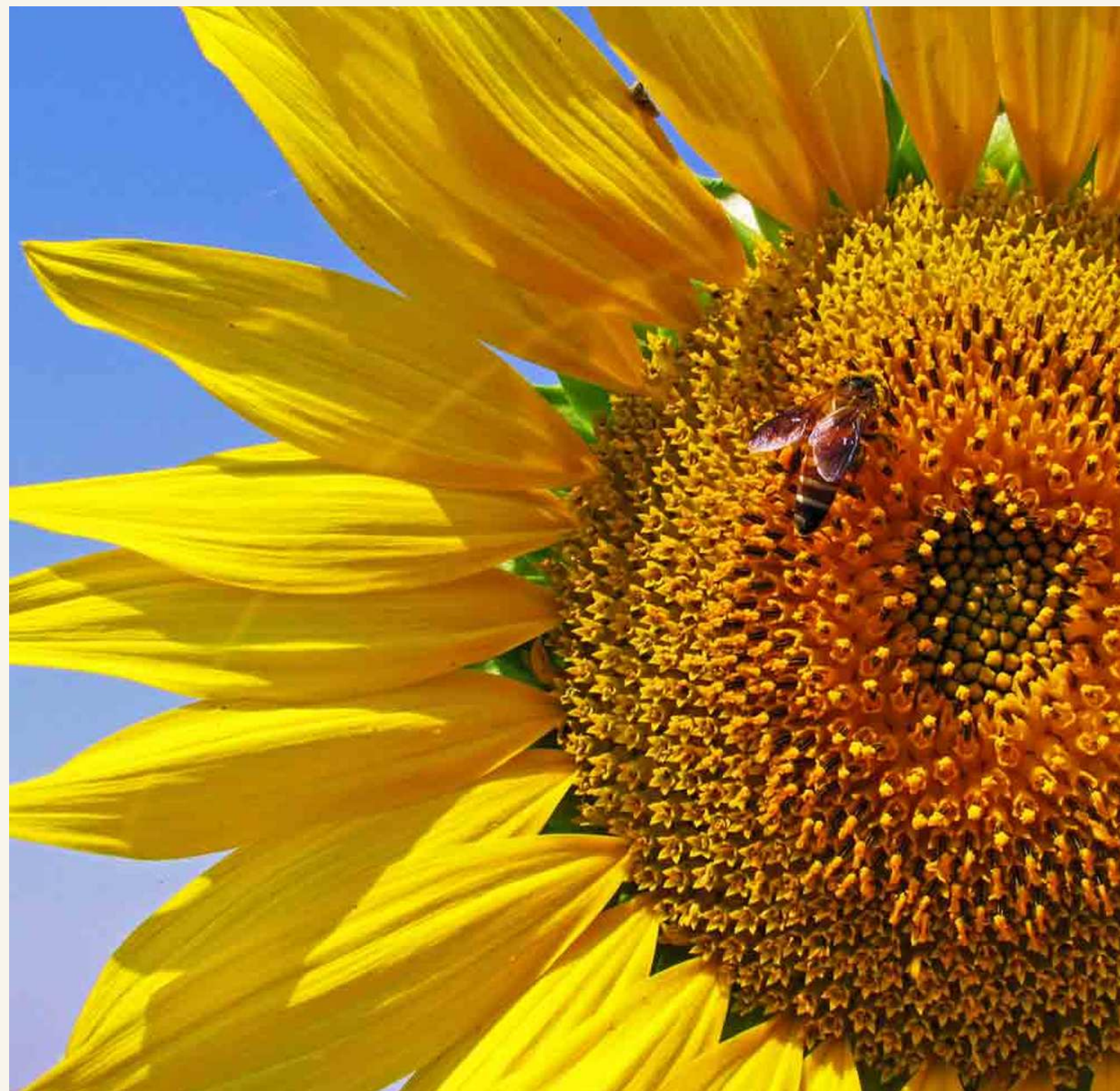
**Family**

**Helianthus annuus**

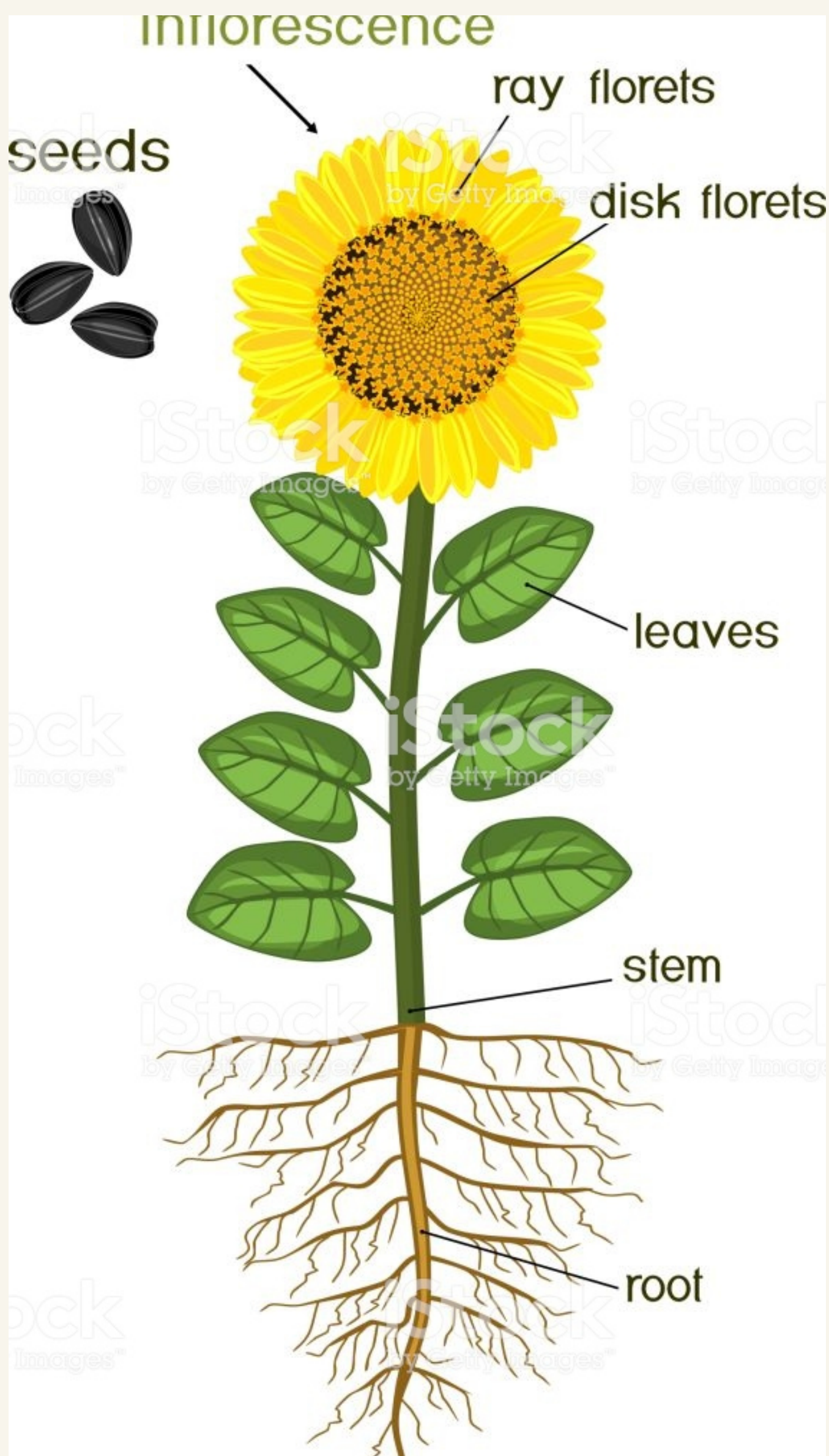
**The common sunflower**

**Not a single flower,  
but a cluster of  
flowers or florets !!!**

**Capitulum  
Inflorescence**



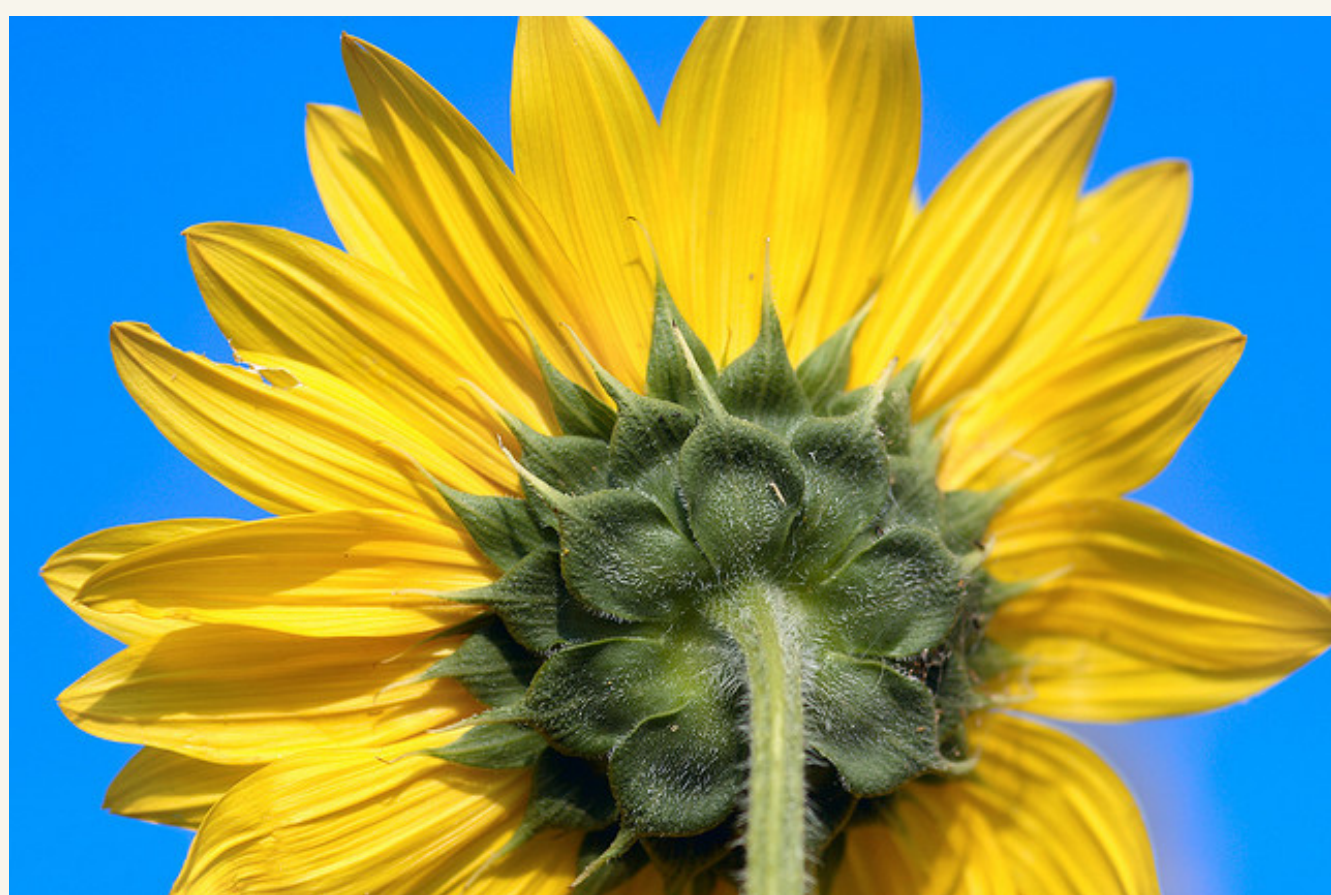
**Two kinds of florets  
- Disk and Ray are  
masses together in a  
head or capitulum with  
an involucre of bracts.**



✓ Sunflower, *Helianthus annuus*, is an herbaceous annual plant in the family Asteraceae, grown for its seeds.

✓ The plant has a thick, hairy, erect stem which gives rise to a large flower head.

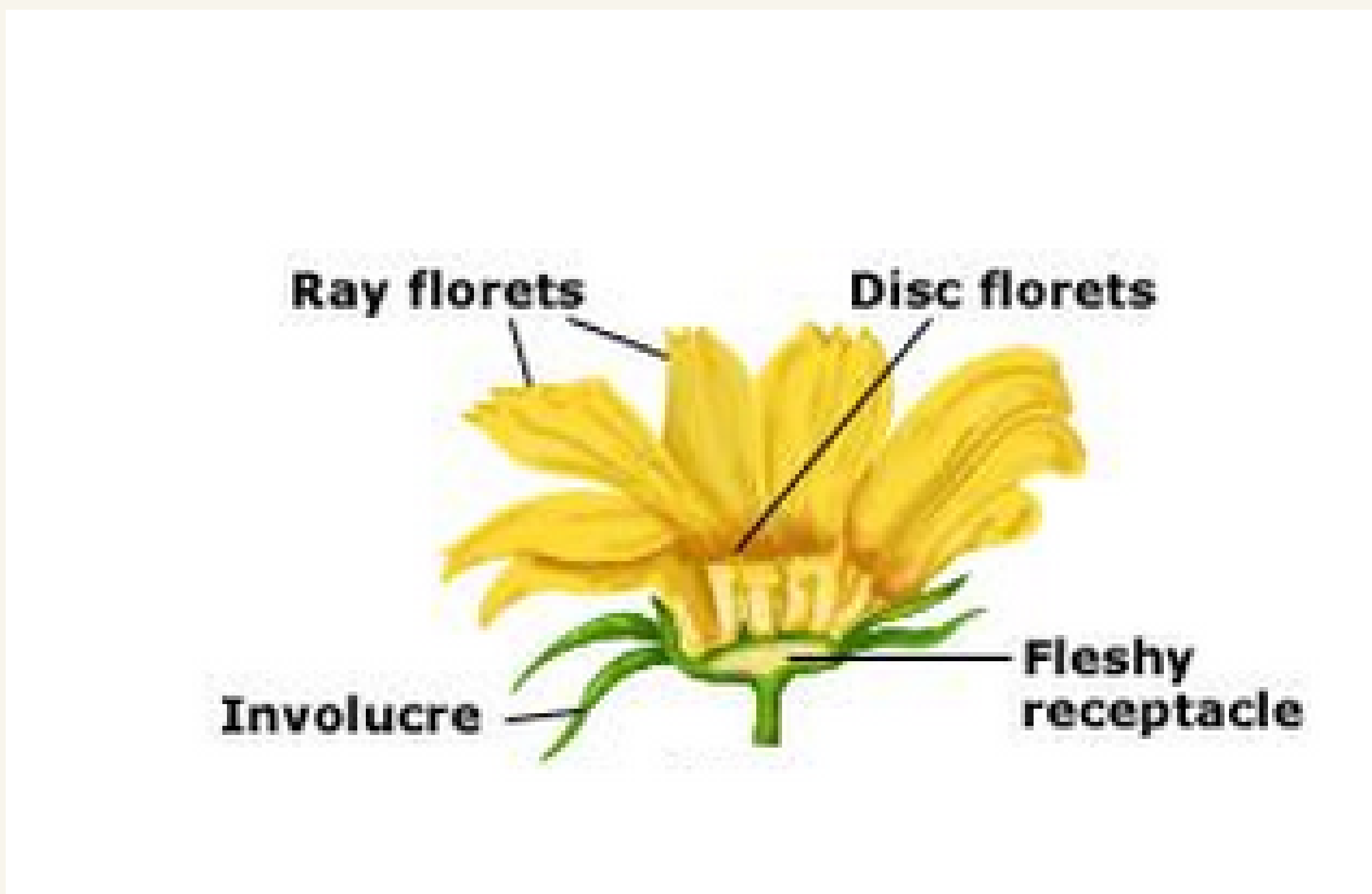
✓ The plant has large, broad lower leaves which are oval and arranged alternately on the stem and smaller, narrower upper leaves which are attached individually to the stem.



✓ The flower head is a large disc reaching 10–30 cm (4–12 in) in diameter which is made up of 16–30 individual florets which are yellow-gold in color.

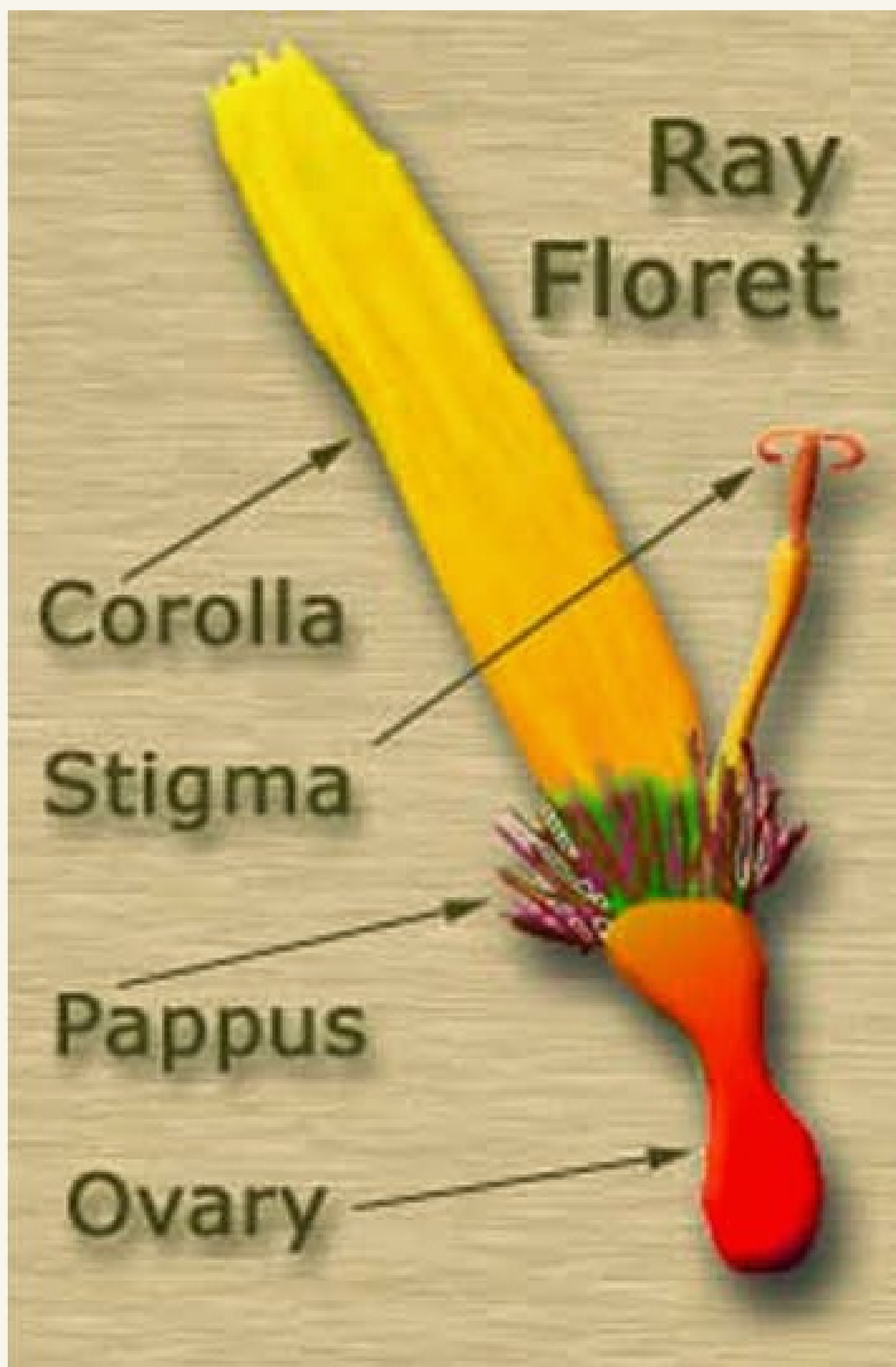


✓ Sunflowers are annual plants, harvested after one growing season and can reach 1–3.5 m (3.3–11.5 ft) in height.



**Involucre : A whorl or rosette of bracts surrounding an inflorescence.**

**Receptacle : Vegetative tissue that encase the reproductive organs.**

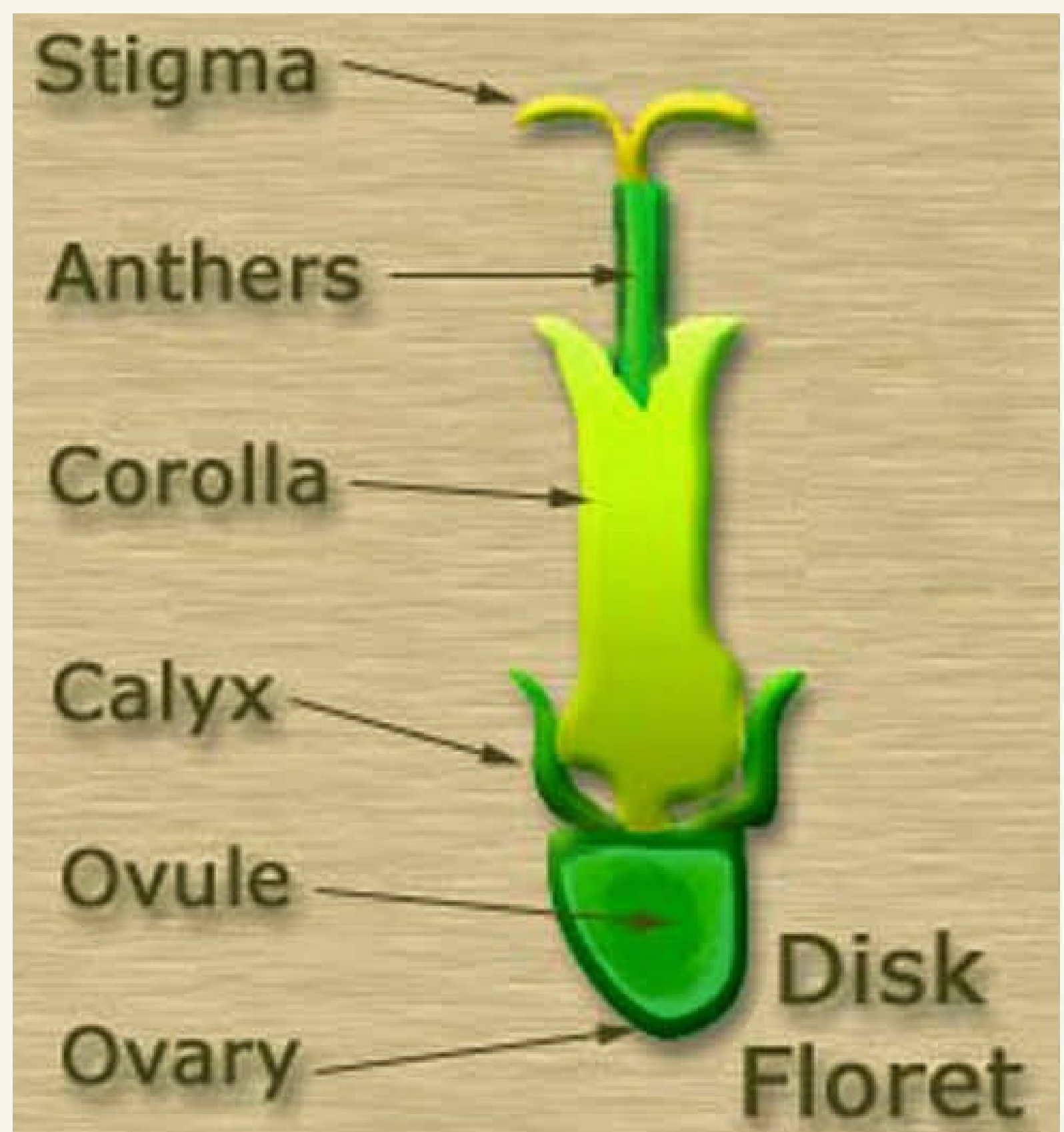


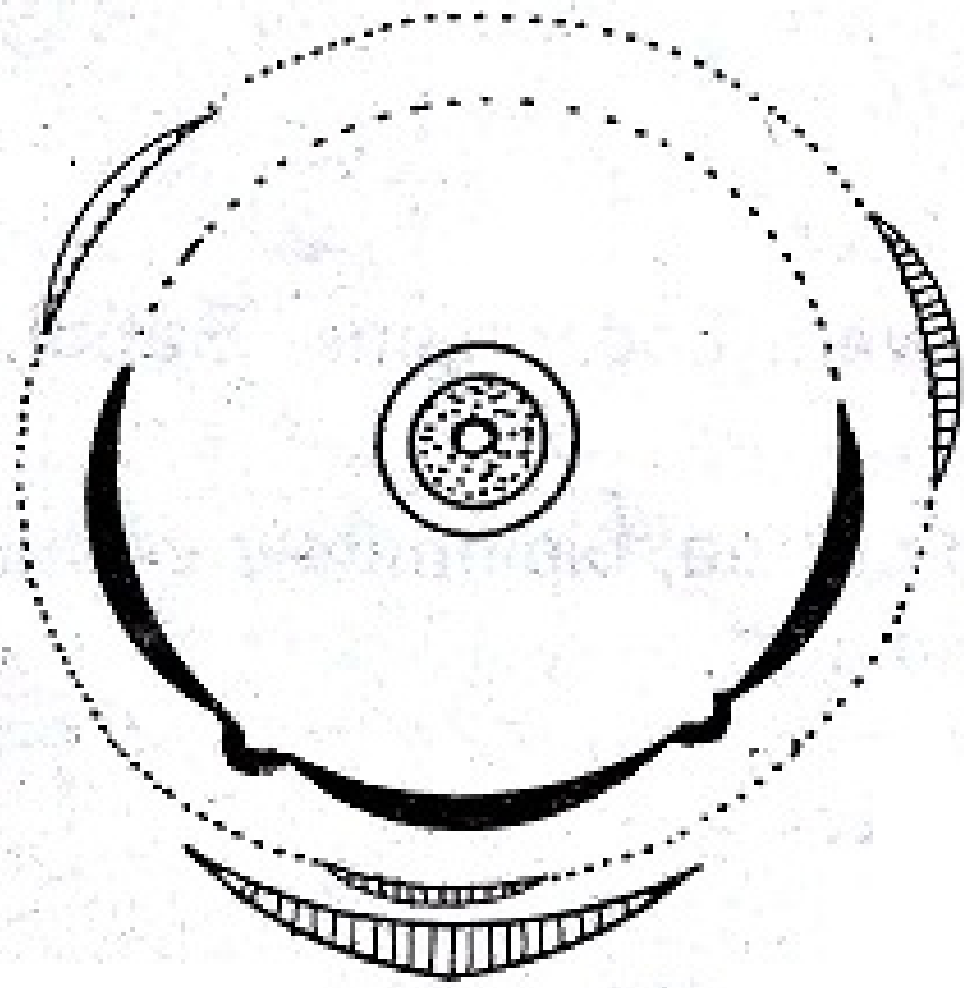
## Ray Floret

- ✓ Bracteate
- ✓ Zygomorphic
- ✓ Calyx represented by hairy Pappus
- ✓ Corolla represented by 5 petals which are fused (Gamopetalous)
- ✓ Unisexual (Female mostly)
- ✓ No Androecium
- ✓ Inferior Ovary

## Disc Floret

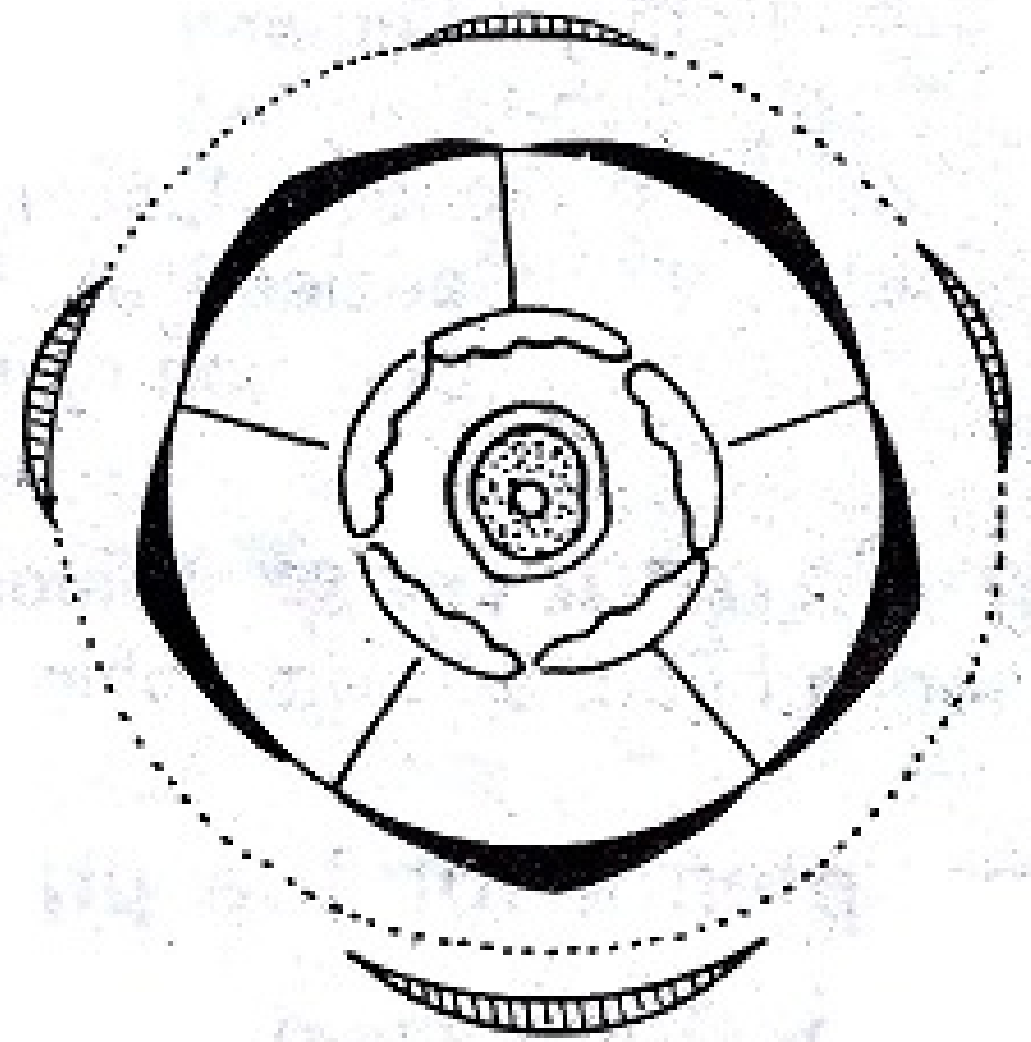
- ✓ Bracteate
- ✓ Actinomorphic
- ✓ Calyx represented by hairy Pappus
- ✓ Corolla represented by 5 petals which are fused (Gamopetalous)
- ✓ Bisexual
- ✓ Epipetalous
- ✓ Inferior Ovary





Br % ♀ K<sub>(2-3)</sub> pappus C<sub>(3-5)</sub> A<sub>0</sub>  $\overline{G}_{(2)}$

**Ray floret**



Br, ⊕ ♀ K<sub>2-3</sub> pappus  $\overbrace{C_{(5)}}^{\text{arc}}$  A<sub>5</sub>  $\overline{G}_{(2)}$

**Disc floret**

**Floral diagram with floral formula**

## Systemic Position

(Bentham and Hooker, 1862)

- **Phanerogams**
- **Dicotyledons**
- **Gamopetalae**
- **Asterales**
- **Asteraceae**