

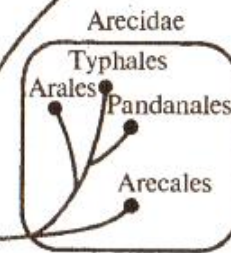
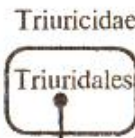
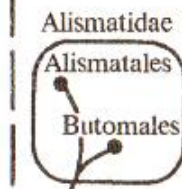
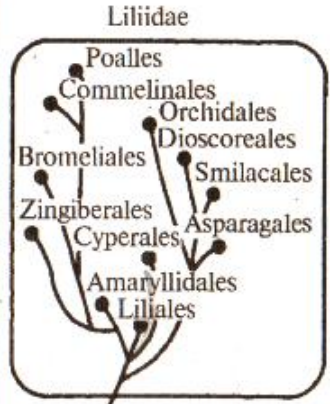
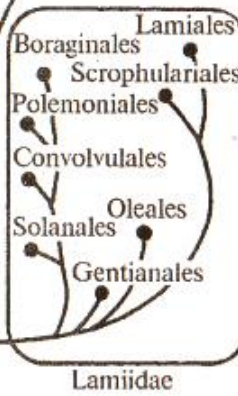
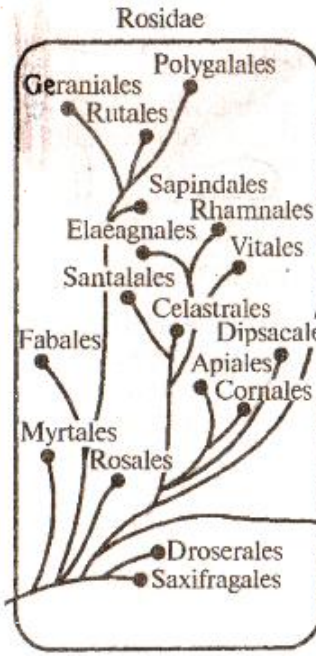
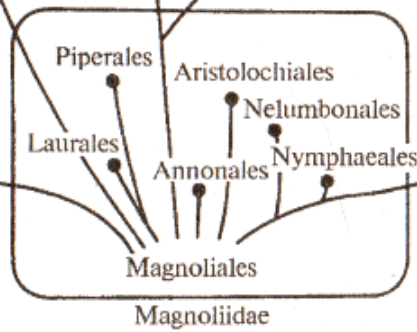
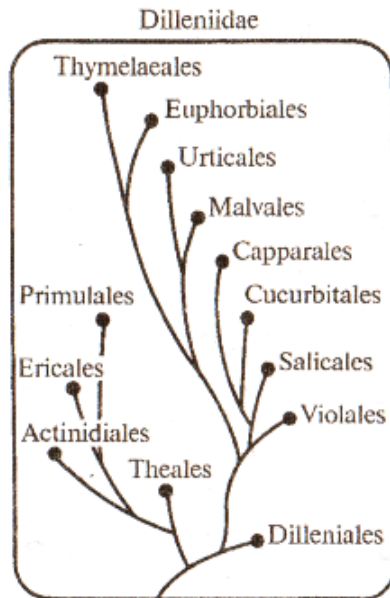
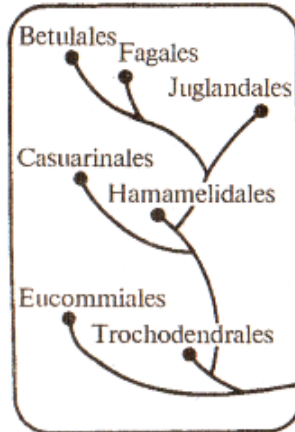
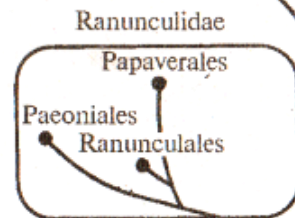
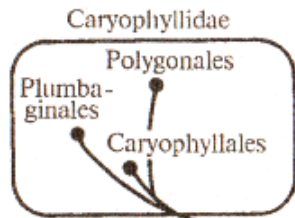
# **The Subclass Asteridae**

**Largest subclass of dicotyledonous plants**

**about 3,500 genera**

**about 65,000 species**

# MAGNOLIOPSIDA



# LILIOPSIDA

# The order *Campanulales*

## The Family *Campanulaceae*



*Campanula carpatICA* Jacq

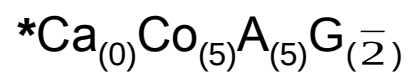




*Campanula persicifolia*



*Campanula patula*



# The order *Asterales*

## The Family *Asteraceae* (*Compositae*)



It includes more than 24,000 species united in about 1,200 genera.





*Petasites japonicus*



*Baccharis aphylla*





*Scorzonera austriaca* Willd.





*Lachnophyllum gossypinum* Bunge.





*Arctium lappa*





*Fitchia speciosa*





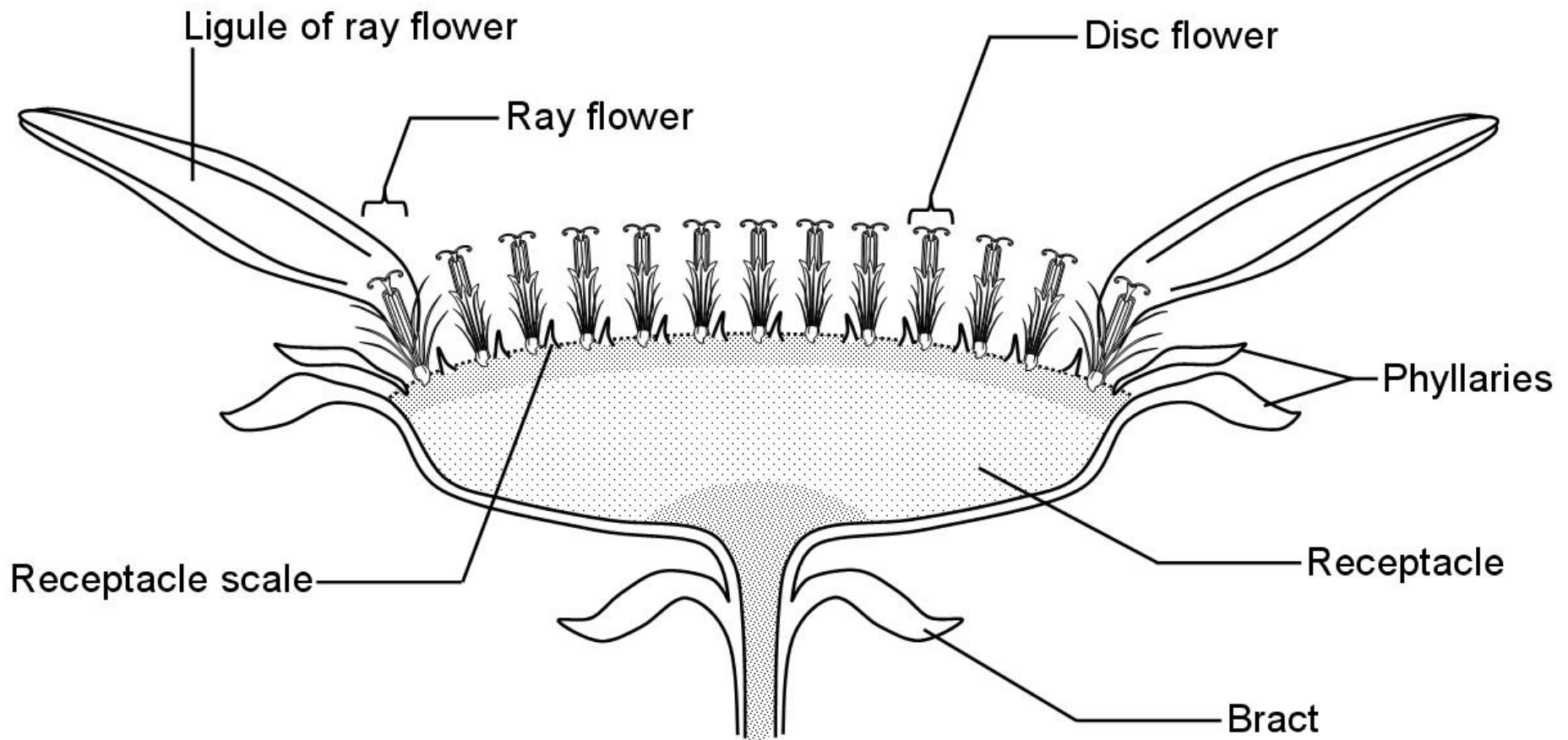
*Scalesia pedunculata*





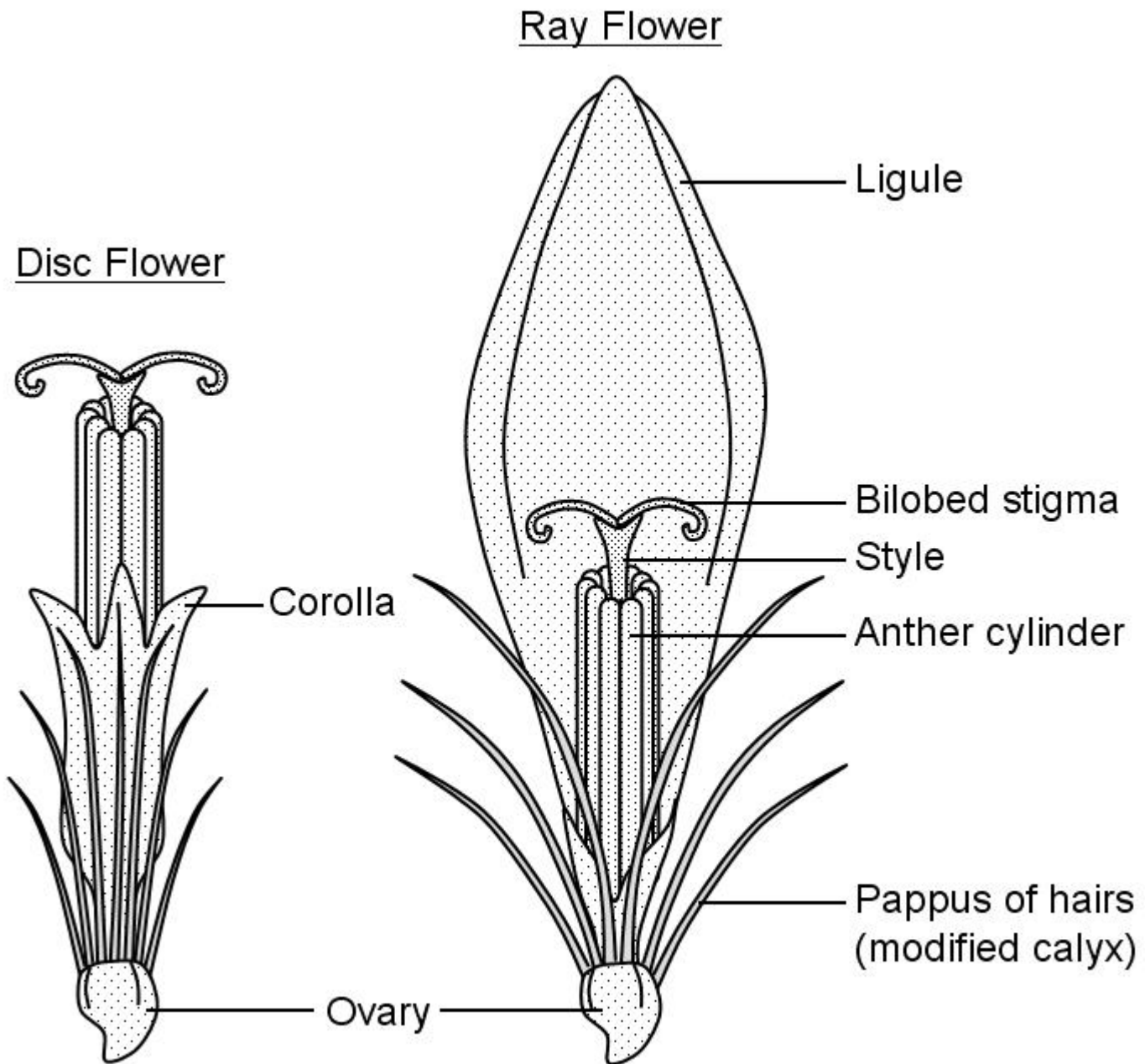
*Haastia pulvinaris*

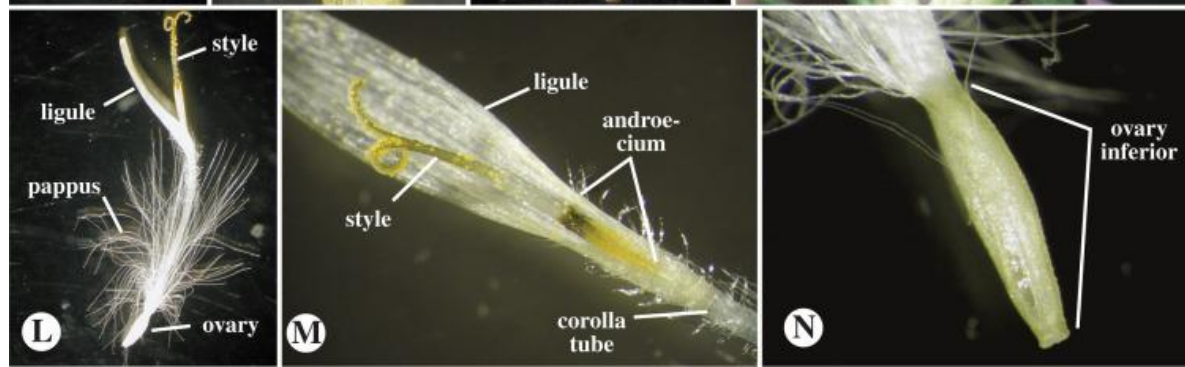
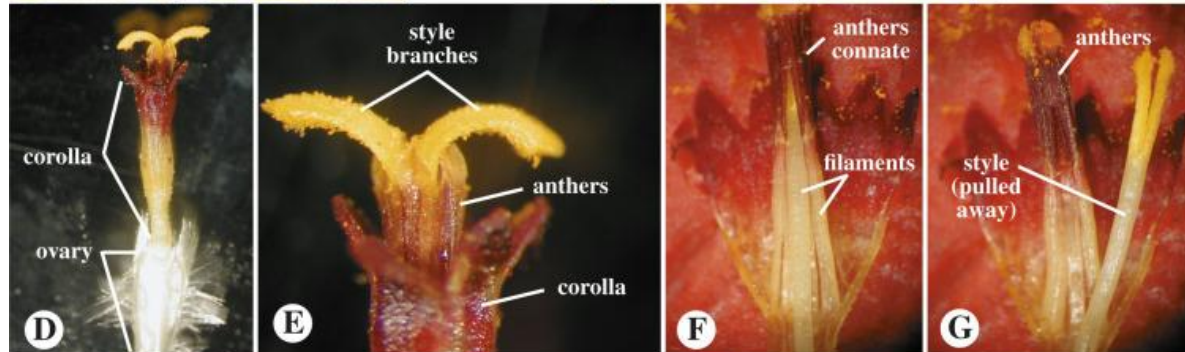
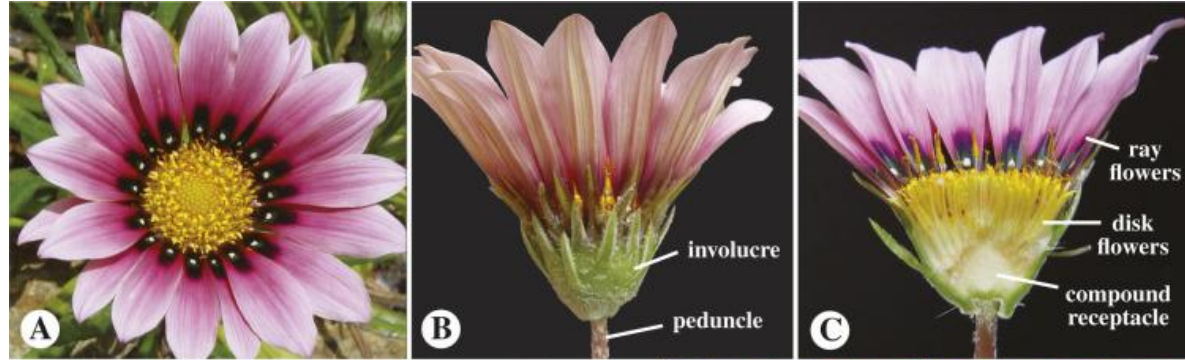




Composite Inflorescence  
e.g. *Chrysanthemum*

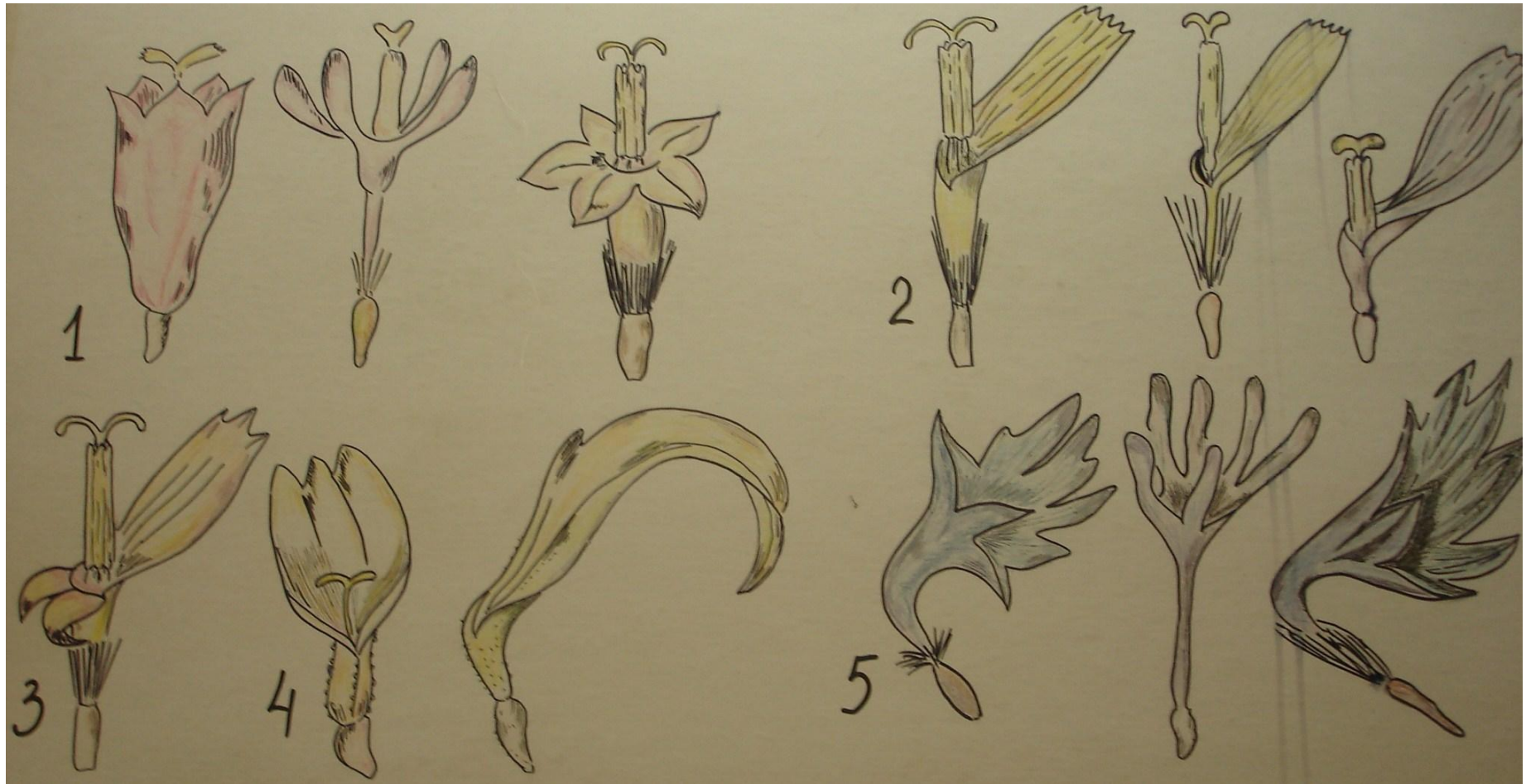








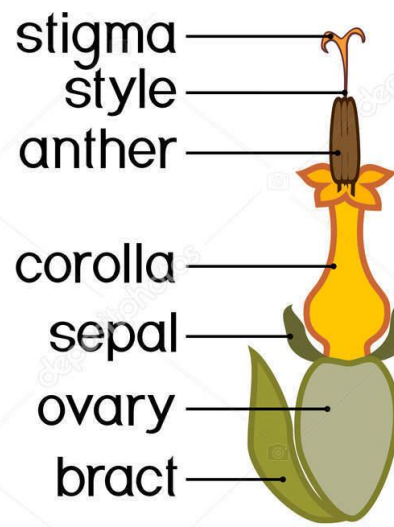
# Цветки Астровых



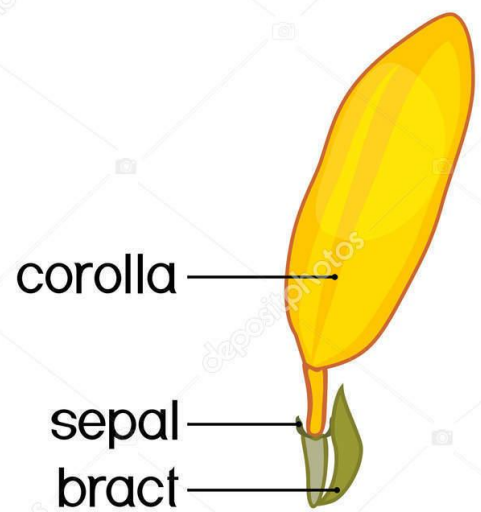
1 – tubular , 2 – lingual, 3 – bilabiate,  
4 – false-lingual , 5 - funnel-shaped

- 1. tubular  $*Ca(0)Co(5)A(5)G(\bar{2})$
- 2. lingual  $\uparrow Ca0 Co(5)A(5)G(\bar{2})$
- 3. false-lingual  $\uparrow Ca0Co(0+ 3)A0G(\bar{2})$
- 4. funnel-shaped  $\uparrow Ca0Co(5)A0G0$

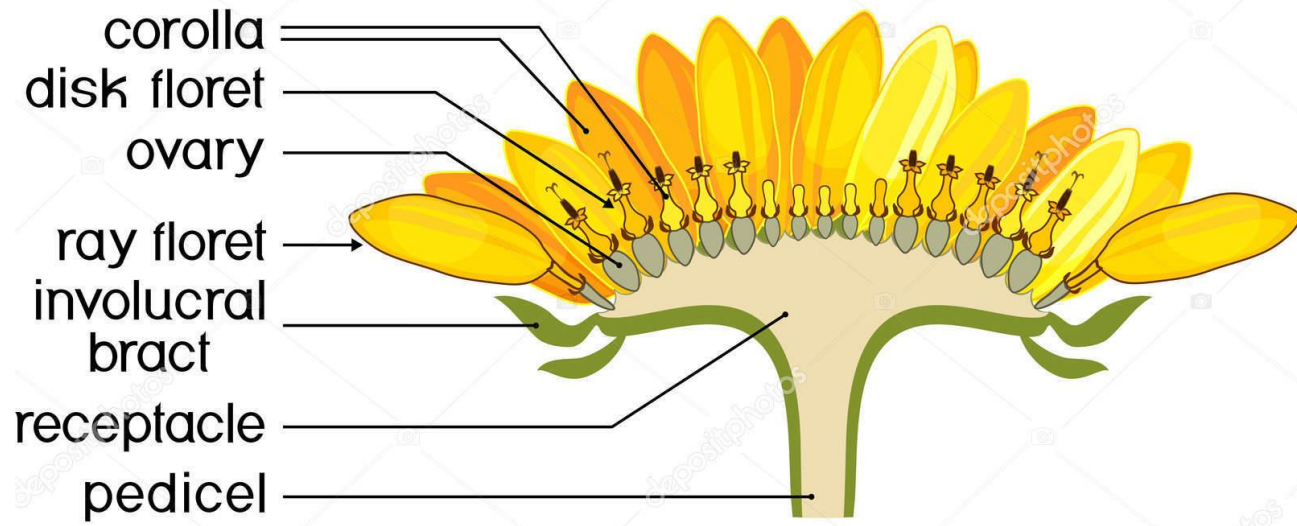




disk floret



ray floret



inflorescence



*Centaurea cyanus*





Ложноязычковые лепестки у ромашки аптечной выполняют функцию привлечения насекомых опылителей.

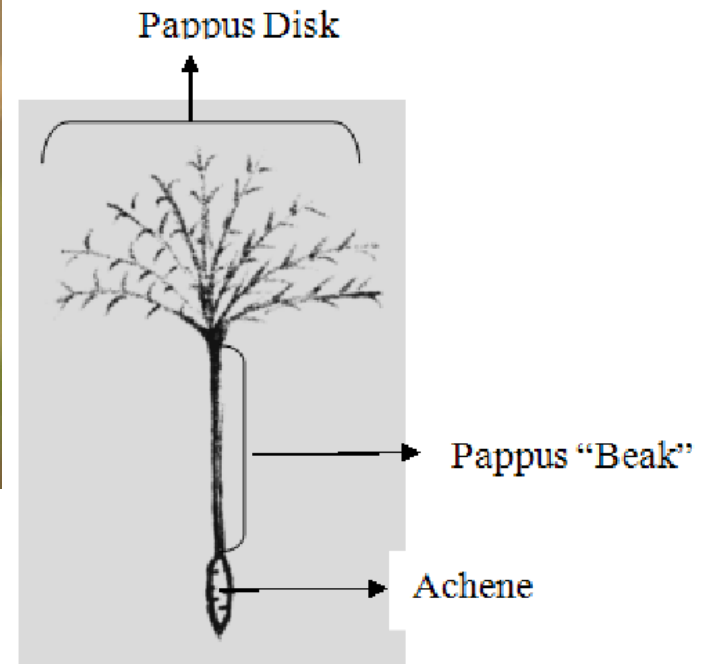
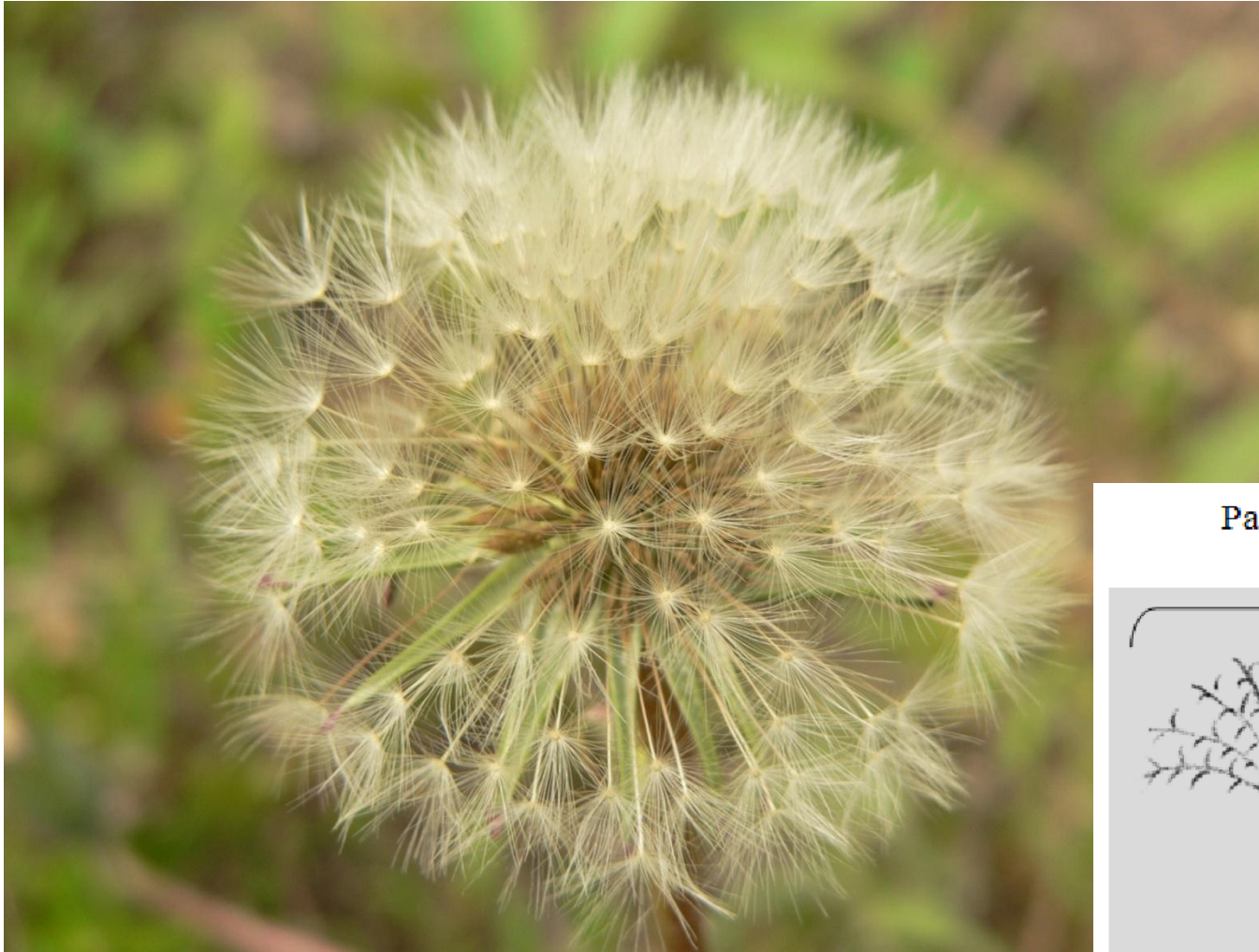




*Helianthus annuus*



# Ripened achenes with pappus



# The subfamily *Asteroideae* or *Tubuliflorae*











*Calendula officinales*



# Chamomilla recutita



# Achillea millefolium





# *Tussilago farfara*



*Tussilago farfara*





*Tanacetum vulgare.*



# The Subfamily *Lactucoideae* or *Liguliflorae*





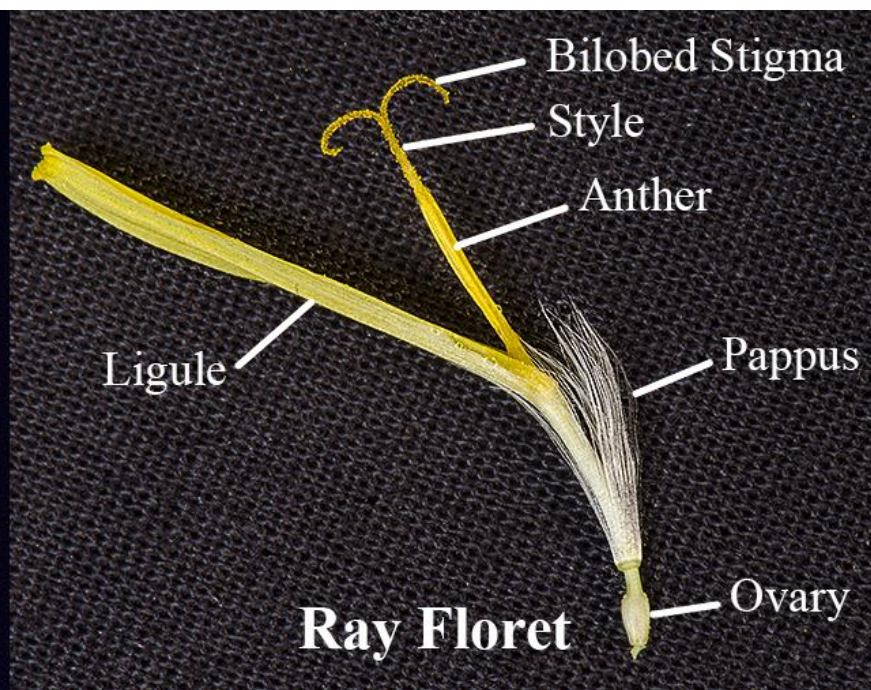
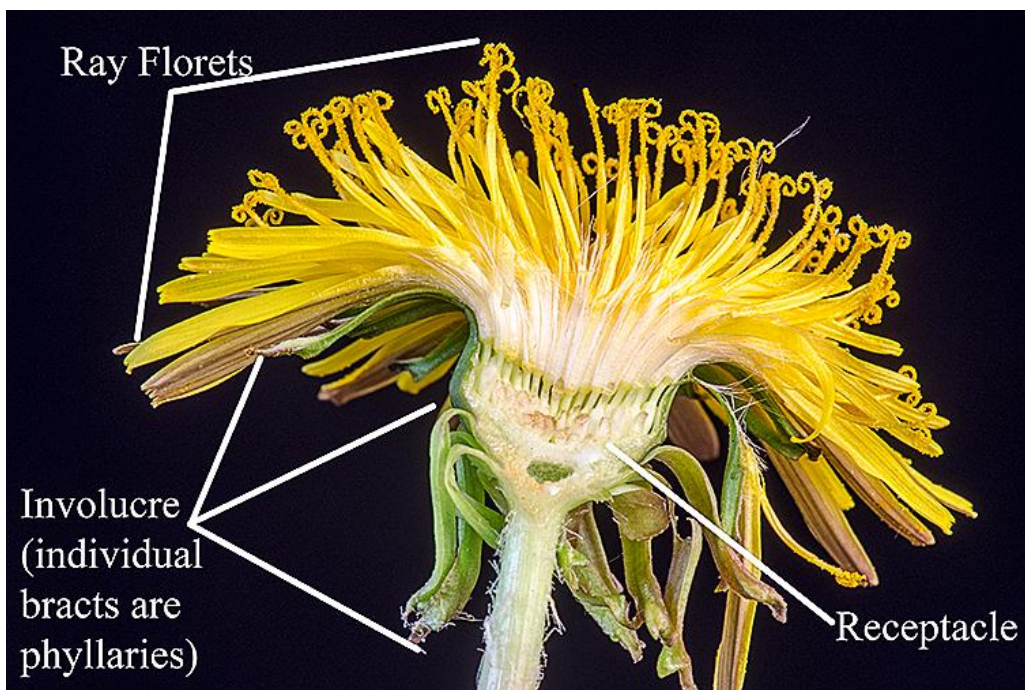


*Taraxacum officinales*

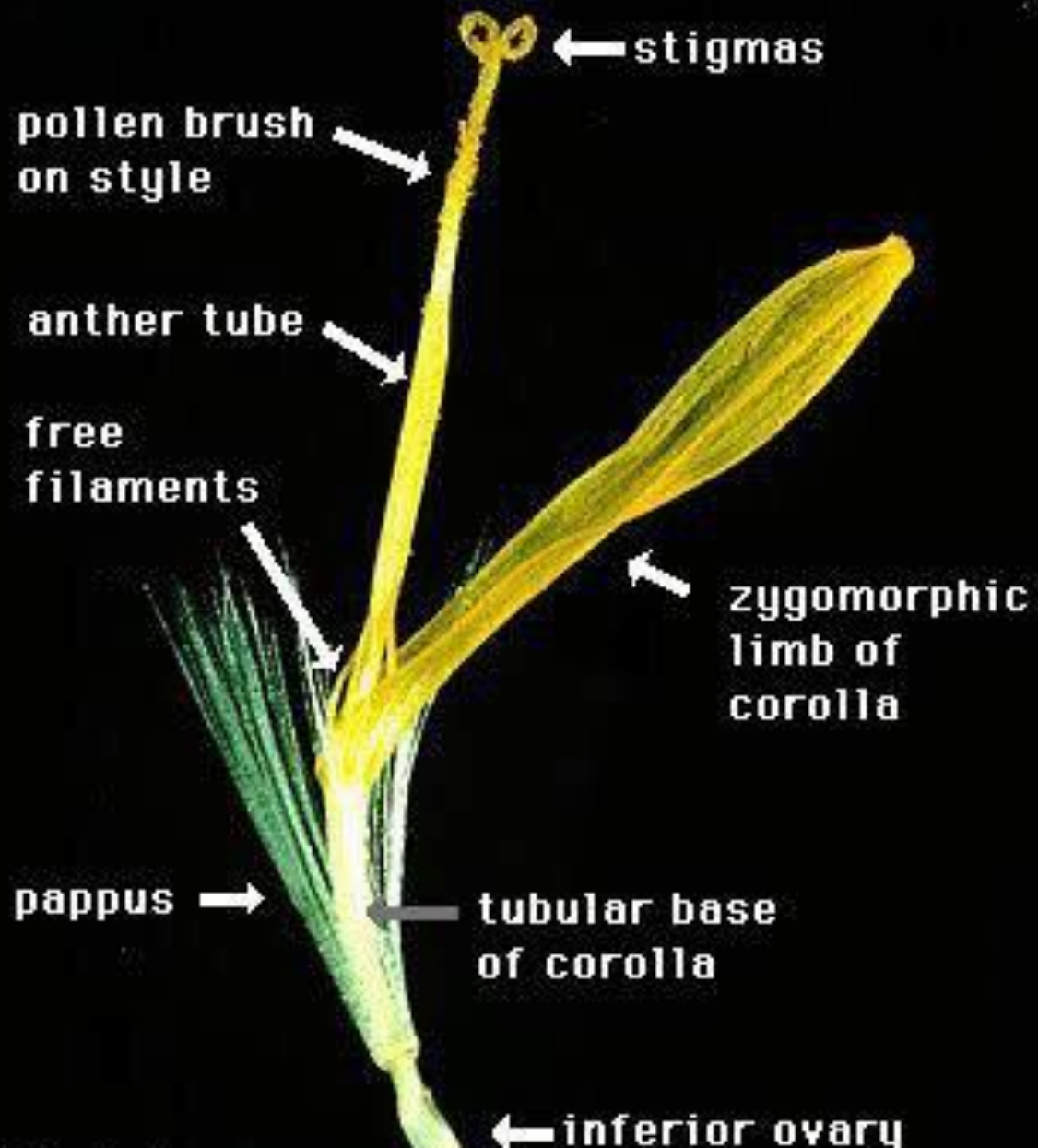




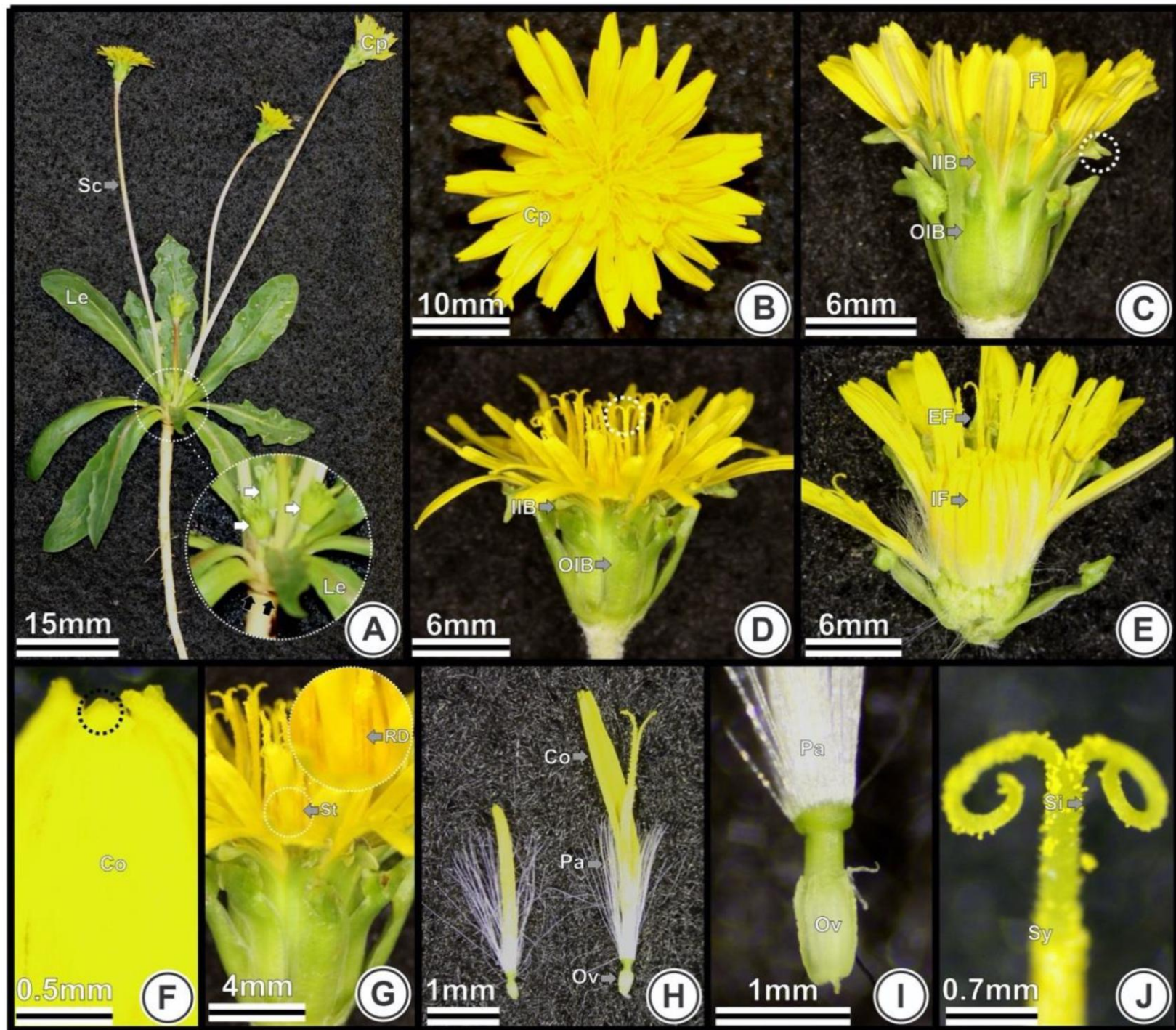




## RAY FLOWER

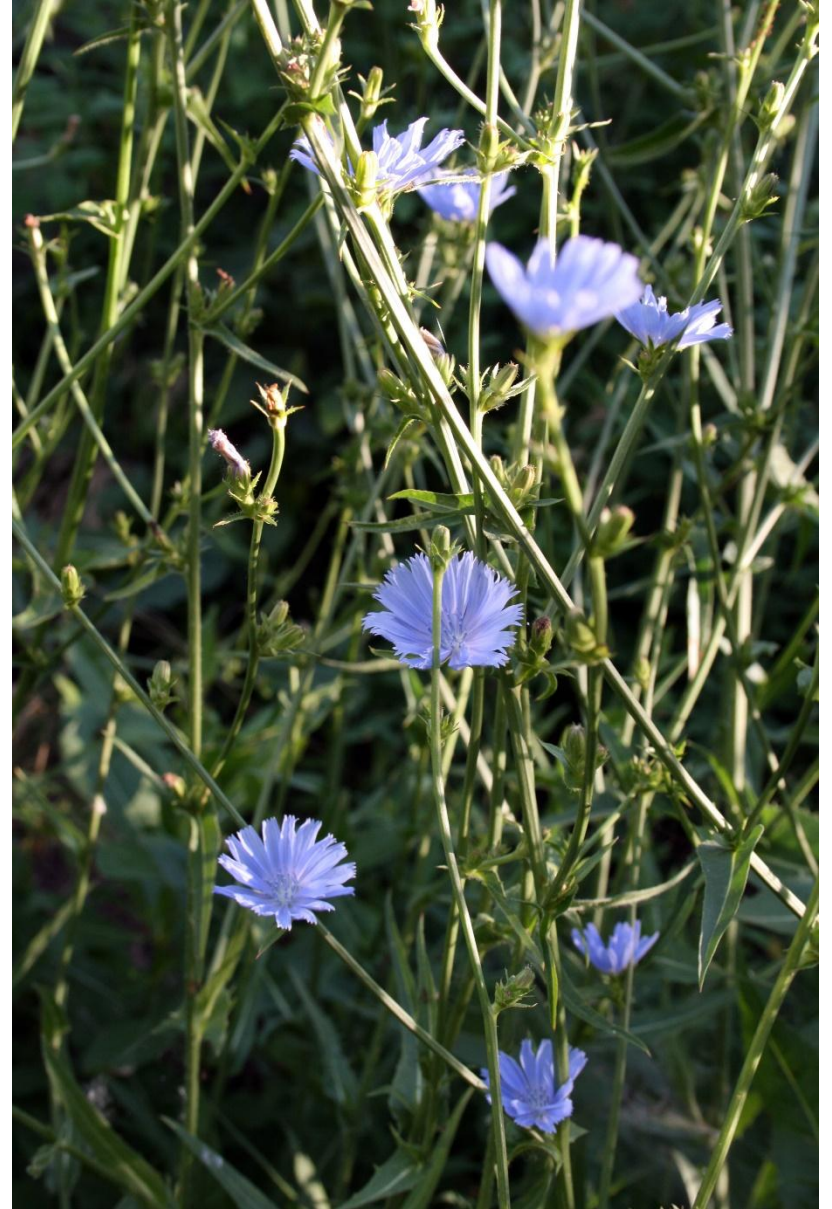








# Cichorium intybus





*Lactuca sativa*





*Cynara cardunculus*

