

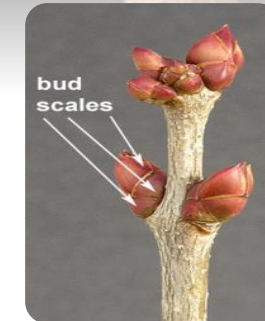
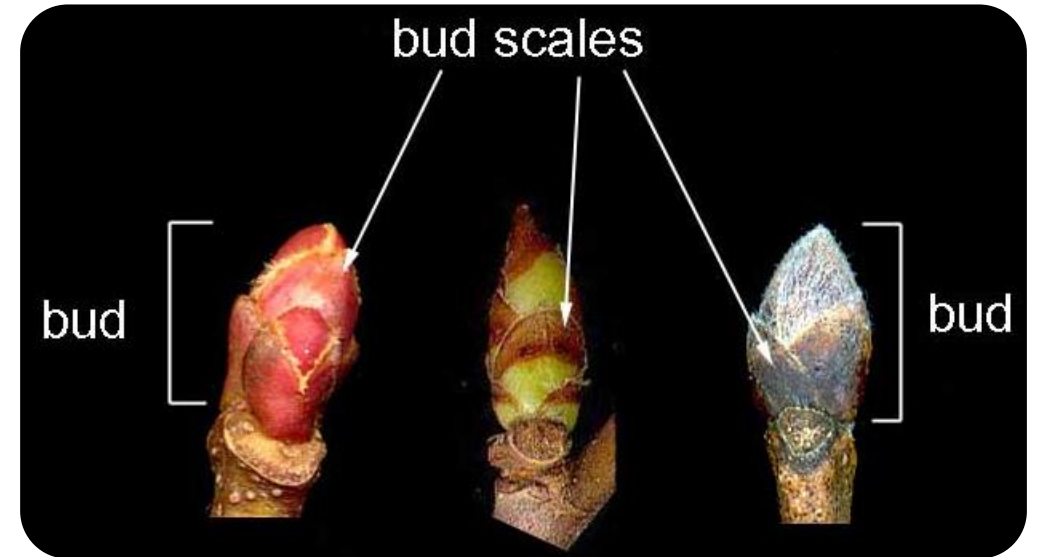
2019-2020
PLANT MORPHOLOGY LAB.

Dr. Aydan ACAR ŞAHİN
9th week

LEAF MODIFICATIONS

1. BUD SCALES

- For many species each bud has one or more protective external bud scales varying among species in size, number, shape, color, pubescence and arrangement, often resulting in a distinctive appearance.
- sp; *Aesculus hippocastanum* (At kestanesi)



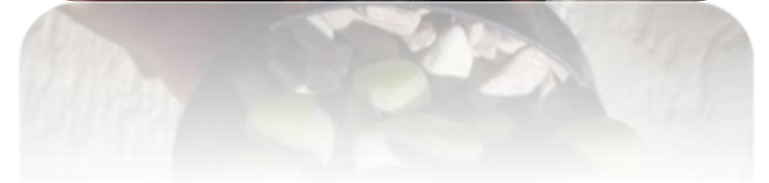
2. LEAF SPINES

- In this type the leaves become wholly or partially modified into sharp pointed structures known as spines. This modification helps the plant to cut down transpiration and also protects the plants against the attacks of grazing animals.
- sp; *Opuntia ficus-indica* / Cactus sp.



3. STORAGE, SUCCULENT, FLESHY

- They are differentiated fleshy and thick leaves to store water and nutrients.
- In the leaves of such plants that live in arid and salt regions, there is a large amount of vacuole-free, Paranchymatic cells with chlorophyll.
- sp; *Sedum* (damkоруğu), *Allium cepa* (kurusоған)

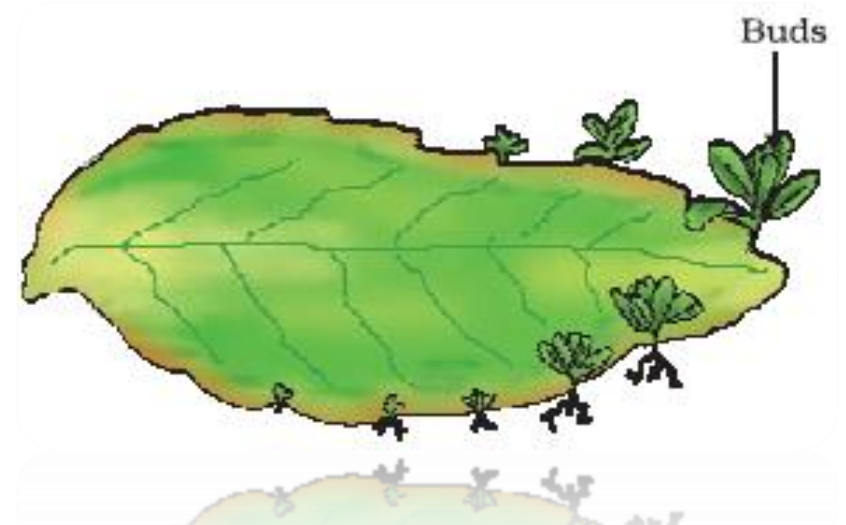


4. Insectivorous leaves



5. REPRODUCTIVE LEAF

- The leaves of plants like the bryophyllum, begonia, and African violet can produce new plants with their small leaves on the edge of the main leaf.
- Such leaves are often thick and fleshy.
- sp; *Bryophyllum* sp.



6. Floral leaves

- The metamorphose of the true leaves forms floral leaves (sepale, petale, bracte, bracteol, etc.) and male-female organs (microsporophyll, megasporophyll) that play a role in sexual reproduction.

