

A Short Synopsis of Cronquist's System

1 Division - Magnoliophyta

2 Classes - Magnoliopsida (Dicots) and Liliopsida (Monocots)

Subclasses

Orders

Families

Dicots - 6 subclasses, 64 orders, 318 families, 170,000 species

Monocots - 5 subclasses, 19 orders, 65 families, 50,000 species

Magnoliidae

Ranunculales (Ranunculaceae)

RANUNCULACEAE - Buttercup or Crowfoot's Family



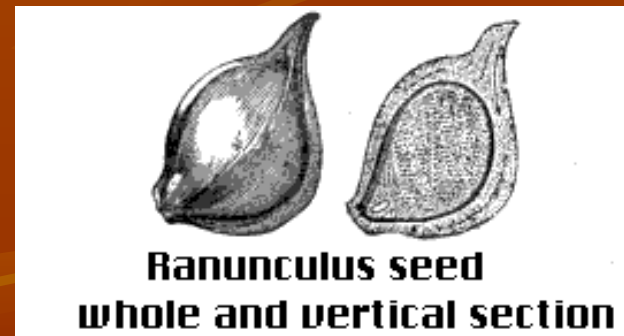
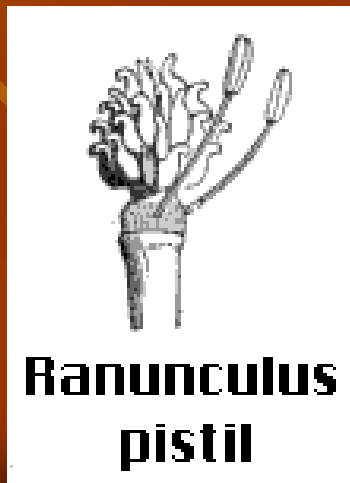
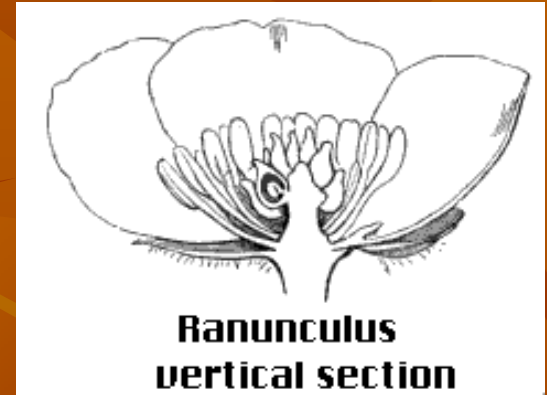
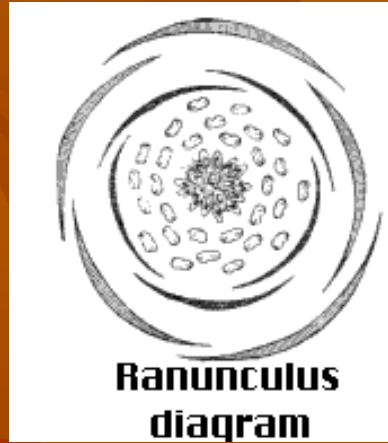
Annual or perennial herbs, few shrubs and vines

Leaves alternate and palmately divided, petioles sheathing stem at base, no stipules

Flowers bisexual, actinomorphic or zygomorphic, in a variety of inflorescences

$CA^{3-\infty} CO(Z)^{5-\infty} A_{\infty} \underline{G}^{3-\infty} (1-3)$

RANUNCULACEAE



RANUNCULACEAE

Insect pollinated

Placentation marginal

Fruit a follicle, achene or berry

Seed with minute embryo

62 genera, 2450 species

The Ranunculaceae is divided into five subfamilies based on the number of gynoecia, presence/absence of the corolla, and the number of ovules/carpel.

RANUNCULACEAE

Economic importance: ornamentals

Medicinal uses - There are a wide range of drugs and poisons found in the Ranunculaceae. Many compounds serve both purposes, some can cure disease at one dosage and kill at a higher one. These compounds are alkaloids, which are a general class of nitrogen-containing compounds, many of which are derived from amino acids.

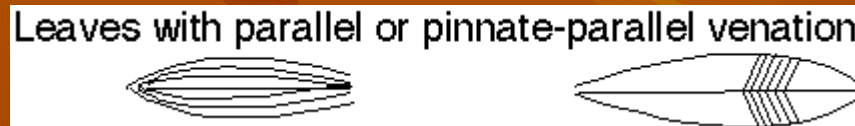
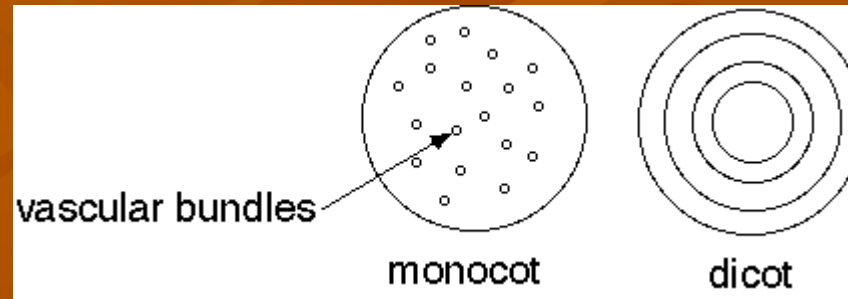
RANUNCULACEAE

Diagnostic characteristics

Herbaceous, leaves palmately divided, flowers with many stamens, gynoecium of many simple pistils, fruit an aggregate of achenes or follicles.

LILIOPSIDA - MONOCOTYLEDONS

Herbaceous and less often woody, never with typical secondary growth rings



Floral parts in sets of 3, seldom 4 or 2, never 5

One cotyledon

5 subclasses

19 orders

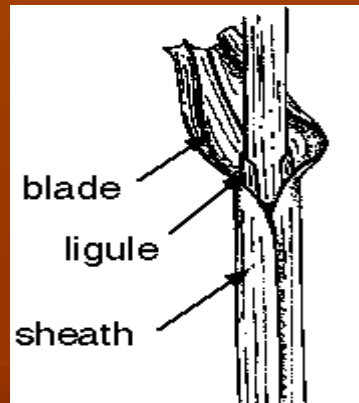
65 families

50,000 species

POACEAE (GRAMINAE) - Grass Family

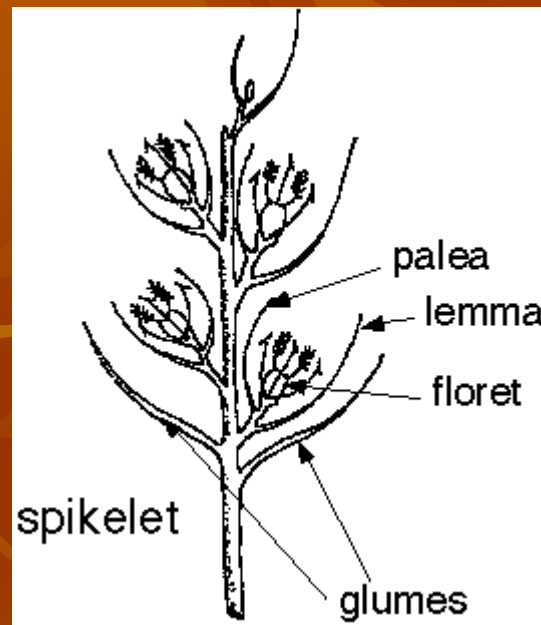
Perennial or annual herbs, stems (culms) erect, ascending, prostrate or creeping, round, hollow or solid at internodes, solid at nodes

Leaves - 2-ranked, alternate, composed of an open sheath, ligule and blade, sheath encloses the culm



Florets - usually bisexual, sometimes unisexual.
florets have 2 bracts - the outer is the lemma,
the inner is the palea. Perianth is reduced to 2 or
3 lodicules. Lodicules are not always present.

Styles feather-like



Fruit a caryopsis (grain), rarely a nut, berry

500 genera, 8000 species, found anywhere
vascular plants can survive

Systematics

Grasses have been the subject of intensive investigation which has resulted in many changes in classification, current classifications recognize three to six subfamilies and up to 25 tribes

Common genera - almost too many to list

Panicum - panic grass - largest genus in
Poaceae

Festuca - fescue

Poa - blue grass

Andropogon - big bluestem - tall prairie
grass

Digitaria - crabgrass

Aristida - 3 awn grass

Arundinaria - giant cane - bamboo tribe

ECONOMIC IMPORTANCE - MOST IMPORTANT FAMILY

Food:

Avena - oats

Triticum - wheat - more produced than any other

Secale - rye

Hordeum - barley

Saccharum - sugar cane

Oryza - rice - most important for direct human consumption

Zea - corn (maize)

Grazing and livestock feed

Festuca - fescue

Sorghum - milo, sorghum

Setaria - millet

Zea - corn

Lawn grasses

Poa - blue grass

Cynodon - Bermuda

Weeds - many, worst is probably *Sorghum halepense* (Johnson grass)

Medicinal uses - tea used as diuretic, diarrhea, sore throats, sores, poison ivy.

FOUR WAYS TO IDENTIFY PLANTS

Expert determination.

Recognition - based on past experience.

Comparison - with named specimens, photos, illustrations or descriptions.

Keys - most widely used method. Once you know the terminology you can identify a plant from anywhere.

Key to the Groups Of Vascular Plants in the Flora Saudi Arabia

1- Plants without true flowers or seeds;
reproducing by means of spores

G 1 (Ferns)

1- Plants with cones or flowers,
reproducing by means of seed

2

2-Seeds not enclosed by an ovary wall,
Plants without true flowers.

G2 (Gymnosperms)

2- Seed enclosed within an ovary wall,
Plants with true flowers.

(Angiosperms)

3

3- Leaf venation reticulate ,floral parts in 4 s' Or 5 s';
cotyledons 2,root system taproot. (Dicot Plant)

3- Leaf venation mostly parallel ,floral parts in 3 s' ;
cotyledons 1,root system fibrous. (Monocot Plants)

4- Perianth of one whorl, either sepaloid
or petaloid or absent G 3

4- Peianth of two whorls differing markedly
from each other in shape ,size and colour 5

5- Petals distinct, very rarely cohering at the base,
normally falling away individually. G4

5- Petals all connate at base into a long or
short tube, usually falling away as a whole G5