

## Apiaceae (Umbelliferae)

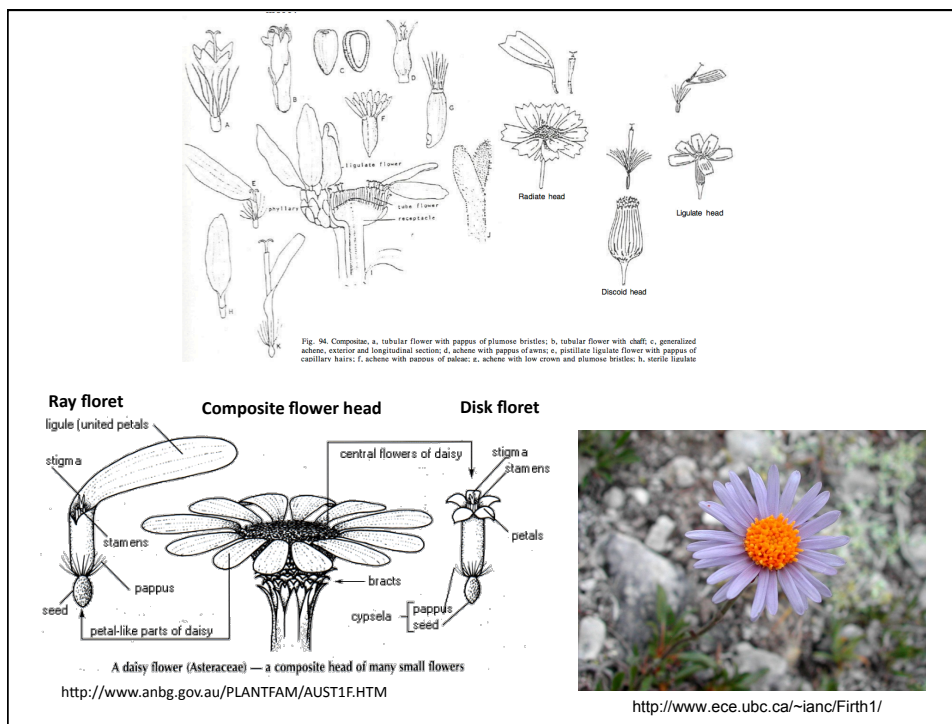
Parsley or Carrot Family

Leaves alternate, pinnately or palmately compound to simple, then often deeply dissected or lobed.

Compound umbel (umbels arranged in umbels, racemes, spikes, or panicles).

5-part flowers, 5-stamens with distinct curved filaments, between 5 petals, sometimes more.

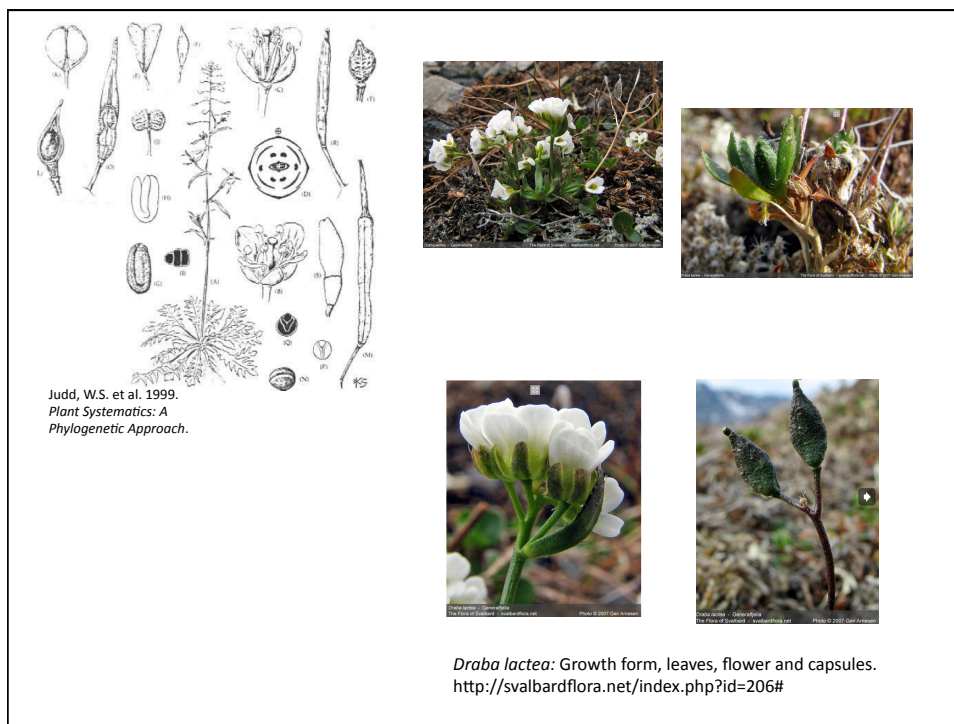
Fruit a drupe with 2-5 pits, or a schizocarp, the 2 dry segments (mericarps).



## Asteraceae (Compositae)

### Sunflower or Aster Family

- Mostly herbaceous species.
- Leaves alternate, simple or compound, without stipules; basal rosettes are common.
- Small reduced flowers (florets) are arranged in a **composite head** that is diagnostic for the family and acts as a single functional blossom.
- The head is subtended by imbricated bracts or **phyllaries**, collectively called the **involucre**. Composite heads may be solitary or arranged in corymbs, cymes, panicles or racemes on the plant.
- **Disk florets** are tubular.
- **Ray florets** consist of a short tube and one long ray or **ligule**, and often lack stamens.
- The sepals on both floret types are reduced to **pappus**, bristles, or lacking entirely.
- Depending on the group, heads may have all ray florets (*Taraxacum*), all disk florets (*Antennaria*) or both, typically with disk florets to the inside, surrounded by ray florets (*Aster*).
- Fruit is an **achene**.



## Brassicaceae (Cruciferae)

### Mustard or Crucifer Family

- **Leaves:** usually alternate, sometimes in basal rosettes, simple, often pinnately *dissected or lobed*, or *palmately or pinnately compound*, entire to serrate.
- **Inflorescences:** *indeterminate*. Flowers: 4 *distinct sepals and petals often forming a cross* (hence the name Crucifer), often with an elongate claw and abruptly spreading limb.
- **Fruit:** a *berry* or **capsule**, frequently with 2 valves often breaking away from a central persistent septum (the fruit then a **siliqua**), these are highly variable in form and diagnostic for many species, short to elongate, globose to flattened.



*Lobelia cardinalis*. Not an Arctic plant.

Photos by Alan Heilman and Penny Stritch.

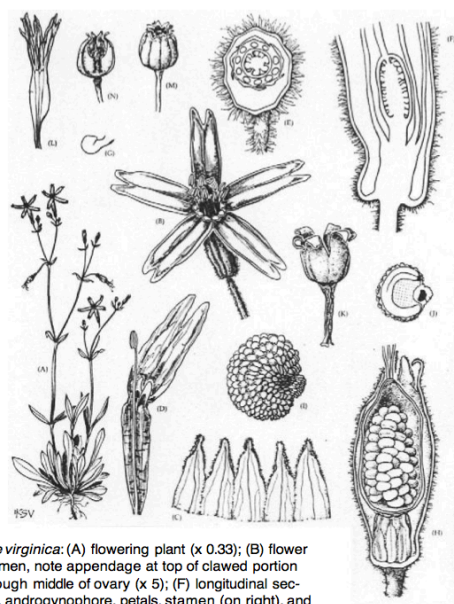
[http://www.fs.fed.us/wildflowers/plant-of-the-week/lobelia\\_cardinalis.shtml](http://www.fs.fed.us/wildflowers/plant-of-the-week/lobelia_cardinalis.shtml).

## Campanulaceae

### Bellflower Family

- **Growth form:** Mostly herbs, but sometimes secondarily woody.
- **Leaves:** Usually alternate, simple, sometimes lobed, entire to serrate, with pinnate venation; stipules absent.
- **Inflorescences** various.
- **Flowers:** Usually bisexual, radial to bilateral, with hypanthium, sometimes twisting 180° in development (resupinate). Usually 5 connate sepals and 5 connate petals *forming a tubular or bell-shaped corolla* (as in *Campanula*) or 2-lipped to 1-lipped and then with a variously developed dorsal slit, the lobes valvate (as in *Lobelia*, shown in drawings). (See Plant Family Characteristics web page for more detail.)





*Silene virginica*: (A) flowering plant (x 0.33); (B) flower  
amen, note appendage at top of clawed portion  
rough middle of ovary (x 5); (F) longitudinal sec-  
x, androgynophore, petals, stamen (on right), and



<http://www.botany.hawaii.edu/faculty/carr/caryophyll.htm>



*Silene dioica*. [http://en.wikipedia.org/wiki/File:Red\\_campion\\_close\\_700.jpg](http://en.wikipedia.org/wiki/File:Red_campion_close_700.jpg)

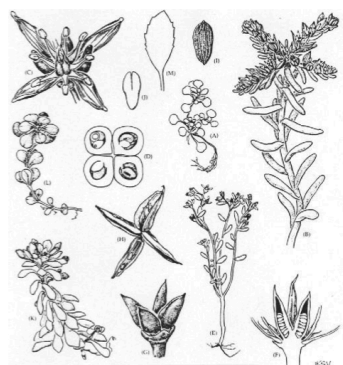
## Caryophyllaceae

### Pink or Carnation Family

**Growth form:** Usually forbs, sometimes mat or cushion forms in the Arctic.

**Leaves:** **opposite**, *simple, entire, often narrow*. **Leaf nodes usually swollen**; stipules lacking or present. **Inflorescences:** *determinate*, sometimes reduced to a single flower, *terminal*. Flowers usually bisexual, radial. True petals *lacking*, but *outer whorl of 4-5 stamens very often petal-like*, here called "**petals**" **frequently bilobed**.

**Fruit:** Capsule, *opening by valves or apical teeth*, but sometimes a utricle



<http://www.swcoloradowildflowers.com/Yellow%20Enlarged%20Photo%20Pages/amerosedum%20lanceolatum.htm>



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## Crassulaceae

### Stonecrop Family

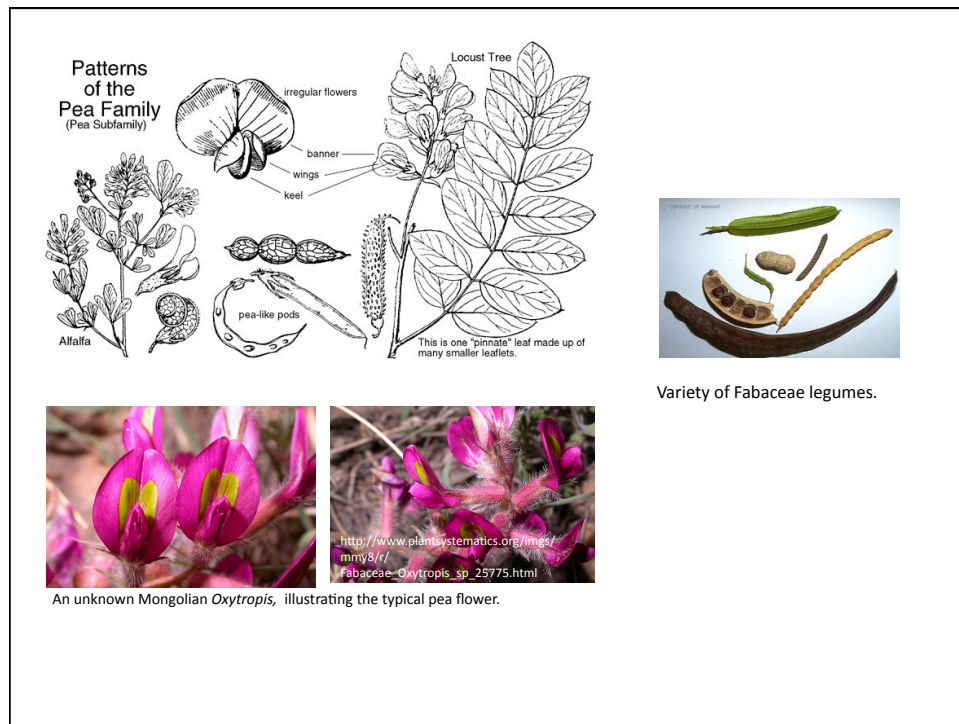
**Succulent herbs;** with leafy stems.

**Leaves:** succulent, inflated; stipules lacking.

**Inflorescences:** determinate, sometimes reduced to a solitary flower, terminal or axillary.

**Flowers:** Sepals and petals usually 4 or 5, distinct or nearly so; stamens 4-10.

**Fruit:** an aggregate of dry dehiscent follicles.



## Fabaceae (Leguminosae)

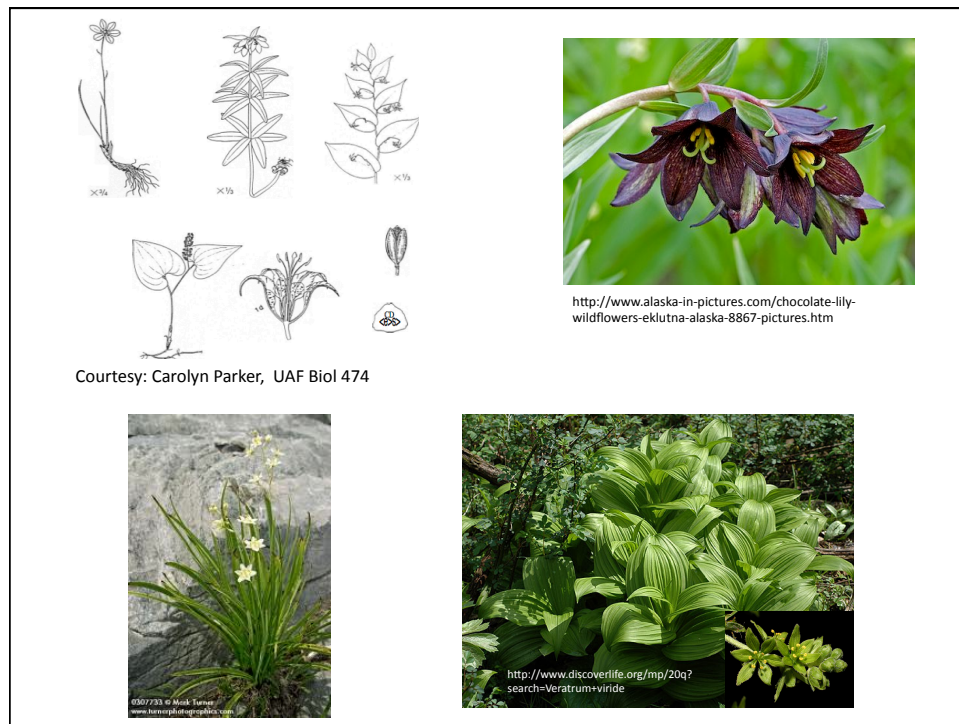
### Legume or Pea Family

**Growth form:** Perennial herbs in the Arctic but trees and shrubs in many temperate and tropical areas.

**Leaves:** Alternating, pinnately or palmately compound, stipulate.

**Flowers:** Perfect, irregular; calyx cup-shaped or tubular, usually with 5 teeth. Corolla with 5 petals, with upper median one larger (the **banner**) and two similar lateral ones (**wings**), and with two lowest petals joined to form a **keel**.

**Fruits:** various shaped legumes, often a pea-like pod.



## Liliaceae

### Lily Family

- Worldwide distribution. Includes many ornamentals as well as onion, garlic, and chives. A very diverse family which is divided into several different families by some workers.
- Herbaceous, 3-merous flowers which are distinctive and known to most. Many have bulbs, corms, or swollen rhizomes. Leaves are simple, often basal, and have parallel venation. Flowers are regular and may be showy, or small and inconspicuous, but always have that 'lily' look with 3 sepals (which may be petaloid), 3 petals, and 6 stamens.