

### Lab 04 - Asterids, part 1

#### **I. Families to Know on Sight (no keying allowed for lab quizzes or final)**

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Asteraceae or Compositae (p. 874)

- Small to large herbs (shrubs)
- Lvs alternate to opposite, entire to toothed.
- Head inflorescences
- $C_a^{\text{pappus}}$   $C_o^{[5]}$   $A^5$ , connivent anthers  $G^{[2]}$ , inferior
- “ray” flowers (ray florets), “disc flowers (disk florets)”
- Head “receptacle” flat, convex, concave; surface can be chaffy.
- Involucre bracts variously formed and often diagnostic.
- Fruits achenes in head.

Minimum Diagnostics: Small to large herbs with radiate (e.g., sunflower, aster), ligulate (e.g., chicory, dandelion), or discoid (e.g., groundsel, snakeroot) flower-like heads; infructescence a head of small achenes, often with persistent pappus as dispersal aid.

#### **II. Genera to Know (you can write your own key to genera and use on lab final)**

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|---------------------------------------|---|
| Asteraceae                            | 8) <i>Symphyotrichum</i> (formerly <i>Aster</i> ) |
| 1) <i>Ageratina</i>                   | 9) <i>Tagetes</i> (not in book)                   |
| 2) <i>Arctium</i>                     | 10) <i>Taraxacum</i>                              |
| 3) <i>Echinacea</i>                   | 11) <i>Verbesina</i>                              |
| 4) <i>Chrysanthemum</i> (not in book) |   |
| 5) <i>Cirsium</i>                     | Caprifoliaceae                                    |
| 6) <i>Helianthus</i>                  | 12) <i>Lonicera</i>                               |
| 7) <i>Solidago</i>                    |   |

#### **III. Some Economic Botany**

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Asteraceae includes many ornamentals and vegetable plants: *Helianthus* is the sunflower genus, which is the source of edible sunflowers as well as garden plants and cut flowers; *Cirsium* is an important genus because of its weeds called thistles; *Chrysanthemum* (chrysanthemums) and *Tagetes* (marigolds) are important as ornamentals; *Echinacea purpurea* is important as an herbal supplement and ornamental; *Cynara* is the artichoke genus.