

Lab 06 - Asterids, part 2

**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 subtended by involucre.
- Ca<sup>pappus</sup> Co<sup>[5]</sup> A<sup>5, connivent anthers</sup> G<sup>[2], inferior</sup>
- “ray” flowers (ray florets), “disc flowers (disk florets)”
- Head “receptacle” flat, convex, concave; surface can be chaffy.
- Involucral bracts variously formed and often diagnostic.
- Fruits achenes in head.

Summary: 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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**A. Asteraceae**

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|---------------------------------------|---------------------------|
| 1) <i>Ageratina</i>                   | 8) <i>Helianthus</i>      |
| 2) <i>Ambrosia</i>                    | 9) <i>Senecio</i>         |
| 3) <i>Arctium</i>                     | 10) <i>Solidago</i>       |
| 4) <i>Chrysanthemum</i> (not in book) | 11) <i>Symphyotrichum</i> |
| 5) <i>Cichorium</i>                   | 12) <i>Taraxacum</i>      |
| 6) <i>Cirsium</i>                     | 13) <i>Verbesina</i>      |
| 7) <i>Echinacea</i>                   |                           |

**III. Some Economic Botany**

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Asteraceae (Compositae) 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; *Cichorium* contains chicory, an important weed as well as the source of roots that, when roasted, provide a substitute for or additive to French- and Louisiana-style coffee; *Lactuca* is the lettuce genus.