**Week 5 – Asteraceae**

**Family Asteraceae** – one of the largest families of angiosperms, diverse and complex. The unifying feature is the inflorescence. It is head (a composite of many small flowers), subtended by an involucre (a series of bracts). The heads are composed of small flowers that can be tubular or strap shaped (see diagram). The calyx (the outmost whorl of a flower, composed of sepals) is reduced to a pappas (composed of hairs, bristles, awns or scales). Seed a small achene.

Flowers in the Asteraceae: The “flower that you see is actually a capitulum or head of individual very reduced flowers. There are two types of flowers – disc and ray. Disc flowers are small and tubular and generally not showy. Ray flowers have a single long strap like petal, and is often very showy). 4a shows a capitulum with disc flowers in the center and ray flowers toward the edge; 4b and individual ray flower; 1b an individual disc flower; 2a a capitulum of disc flowers.
1. Ageratina altissima (*Eupatorium rugosum*) *(white snakeroot)* – Stem up to 1.5 m tall; leaves opposite, ovate, usually sharply serrate; inflorescence dense and flat-topped; ray flowers bright white. Woods.
2. *Eutrochium purpureum* (*Eupatorium purpureum*) (*joe-pye weed*) – Stem up to 2 meters tall; leaves in whorls of 3-4, lanceolate to elliptic, with purple nodes; inflorescence less dense than above; ray flowers very pale pink to purplish. Thickets and open woods.
3. *Helianthus strumosus* (woodland sunflower) – Stem up to 2 meters tall; leaves opposite (or uppermost alternate), thick and firm with shallow teeth, very rough (scabrous), usually lanceolate; 1-2 few flowers terminating the stem; ray flowers large, bright yellow. Open woods, woodland edges, woods.
4. *Lactuca floridana* (woodland lettuce) – Stem up to 2 meters tall; leaves alternate, large, triangular with large lobes, margins tooth widely toothed; inflorescence branched; flowers bluish. Thickets, woods and moist open places.
5. *Silphium perfoliatum* (cup plant) – Stem up to 2.5 meters tall, square; leaves opposite, bases of opposite leaves fused around stem (forming a cup); inflorescence open; flower heads large, with long prominent yellow ray flowers. Woodland edges.
6. *Solidago flexicaulis* (zig zag goldenrod) – Stem up to 1.2 meters tall; stem tending to be zig zag; leaves alternate, mostly ovate and abruptly contracted above the winged petiole; inflorescence in short clusters, emerging from leaf axils lower or directly attached to stem above; ray flowers yellow. Woods.

7. *Solidago ulmifolia* (elm-leaved goldenrod) – Stem up to 1.2 meter tall; leaves alternate, numerous, thin, sharply serrate, usually elliptic; inflorescence prominent with curved branches; ray flowers yellow. Woods, woodland edges.
8. *Symphyotrichum cordifolium*, was *Aster cordifolias* (blue heart-leaved aster) – Stem up to 1.2 m tall; leaves alternate, thin, sharply toothed, heart-shaped with an acuminate tip; widely branched inflorescence; ray flowers purple. Woods and clearings.
9. *Symphyotrichum lateriflorum*, was *Aster lateriflorus* (side-flowered aster) – Stem up to 1.2 m tall; leaves alternate, linear to lanceolate, tapering from the middle to both ends, underside of leaf with pubescent mid-rib, otherwise glabrous; inflorescence widely branched; ray flowers white or slightly purplish. Dry open woods.