**Asteraceae (Asters) Cheat Sheet 2022**

**General characteristics:**

* Highly complex family
* Flowers few to many in a head, their common base (receptacle)
* 3 types of flowers: **disk** with regular 4-5 lobed corolla; **bilabiate**, with 2-lipped corolla; or **ray**, with short tube passing into flattened petal-like upper part called a **ligule**
* Because **“sepals”** are actually **bracts**, phyllaries (modified leaves), which often appear in multiple layers
* Flowers are 5-petaleds
* Head said to be discoid if all its flowers are of the **disk** type; **bilabiate** if of the bilabiate type; and **ligulate** if of the ray type
* A head with disk flowers in the center and ray flowers around the margins is said to be **radiate**
* Fruit is an **achene**, is often crowned with hairs, bristles , scales , or teeth, which are collective called **pappus**
* Ovaries inferior
* The “flower” is actually a collection of disk ray or both types of flowers combined; ray flowers are often infertile
* 920 genera; 19000 species worldwide

**Subfamilies of Asters**

**Chicory Subfamily (Cichorioideae): Dandelion**

* Most distinct subfamily
* Distinguishing feature is the strap-shaped petals; ray flowers have mostly parallel edges like a strap, instead of tapered edges like most petals
* Ray flowers often overlap all the way to the center of the flower, like a dandelion
* No disk flowers
* Milky juice in stems
* Most edible, but bitter due to milky juice
* Well known examples: *Lactuca* (lettuce), *Sonchus* (sowthistle); *Taraxacum* (dandelion

**Thistle Subfamily (Carduoideae)**

* Flower head protected inside a tight wrapping of bracts
* Most have at least some prickly parts, especially the bracts around the flower heads
* Have coarse texture, and fibrous nature
* Well know examples: *Cirsium* (thistle)

**Mutisia Subfamily (Mutisioideae)**

* Disk flowers are irregu8lar ; 2-lipped flowers with 2 petal lobes up and 3 petal lobes down
* Blossoms have no outer ring of petals (ray flowers)
* Well known examples:  *Acourtia* ( desert peony)

**Aster Subfamily (Asteroideae)**

* Broken into several tribes making them more user friendly in identification

**Boneset Tribe**: distinguished from other of this family by the shape of their stigmas which are thickened at the ends like a baseball bat; flowers lack an outer ring of petals (the ray flowers) and none of the blossoms are pure yellow. Well known examples: *Eupatorium* (boneset), *Liatris* (gayfeather, blazing star)

**Ironweed Tribe:** distinguished from other tribes by the shape of their stigmas, which are long, thread-like, and hairy; there are no ray flowers and virtually none of the blossoms are pure yellow. Well known examples: *Vernonica* (ironweed)

**Everlasting Tribe:** bears grayish vegetation and papery often colored bracts surrounding a flower with disk flowers, but no ray flowers; bracts around the flowers are scarious (thin, dry ,and translucent. Well known examples: no local natives

**Elecampane Tribe:** old world plants with only a few introduced to N. America. Well known examples: rare and introduced species

**Chamomile Tribe:** highly aromatic plants; bracts surrounding the flowerhead are somewhat scarious, dry, thin, and translucent. Well known examples: Achillea (yarrow), *Artemisia* (wormwood), *Chrysanthemum*

**Groundsel Tribe:** many members grow a pappus or tuft of white hair around each little flowers inside the larger head; distinguished be the soft, silky quality of the pappus hairs; hair is usually pure white and very abundant. Well known examples: *Senecio* (groundsel)

**Marigold Tribe:** most are native to highlands of Mexico, with only a few genera found as far north as our southwestern states; some are fragrant or pungent. Well known examples: *Tagetes* (marigolds)

**Sunflower Tribe:** small bract attached at the lower base of each disk flower (often sunflower and tickseed tribes have them); most members are noticeably resinous; smell or taste any part of sunflower head and notice the pitchy quality; ragweed an oddity due to flowers being unisexual (male and female flowers on different pants). Well known examples: *Echinaceae* (purple cone flower), *Helianthus* (sunflower), *Ratibida* (Mexican Hat), R*udbeckia* (Brown-eyed Susan), *Ambrosia* (ragweed)

**Tickseed Tribe:** share overlapping characteristics with sunflower tribe; not resinous like sunflower tribe. Well known examples: Bidens (beggarstick), Coreopsis tickseed), *Cosmos*, *Thelesperma* (green thread)

**Sneezeweed tribe:** most have only one row of bracts beneath each flowerhead, and none have more than 3 rows; often have glands or dots of resin on leaves. Well known examples: *Gaillardia* (Indian Blanket)

**Aster Tribe:** typically have very slender ray flowers, which are often very numerous; have multiple layers of bracts of unequal length as seen when flower is turned over; nonresinous. Well known examples: *Aster*, *Baccharis* (poverty weeds), *Erigeron* (fleabane), *Solidago* (golden rod)