



Know Your Plants: Native plant identification for common grasses, forbs & wildflowers

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What we're going to cover:

- Resources for plant identification
- Common and important grasses
- A sample of wildflower families with examples

Classification & Identification

- Ordering of organisms into groups on basis of their relationships
- Determining the correct group to which an individual organism belongs

Kingdom

→ Phylum

→ Class

→ Order

→ **Family**

→ Genus

→ Species

Methods of plant identification

Ask someone

- Consultants
- University plant systematist
- Botanical garden staff
- Master Naturalists
- Friends & family

Comparison methods

- Compare unknown with pics, illustrations, descriptions, or specimens
- Take Photos!
- iNaturalist

Taxonomic keys

- Quick and accurate identification
- Requires practice

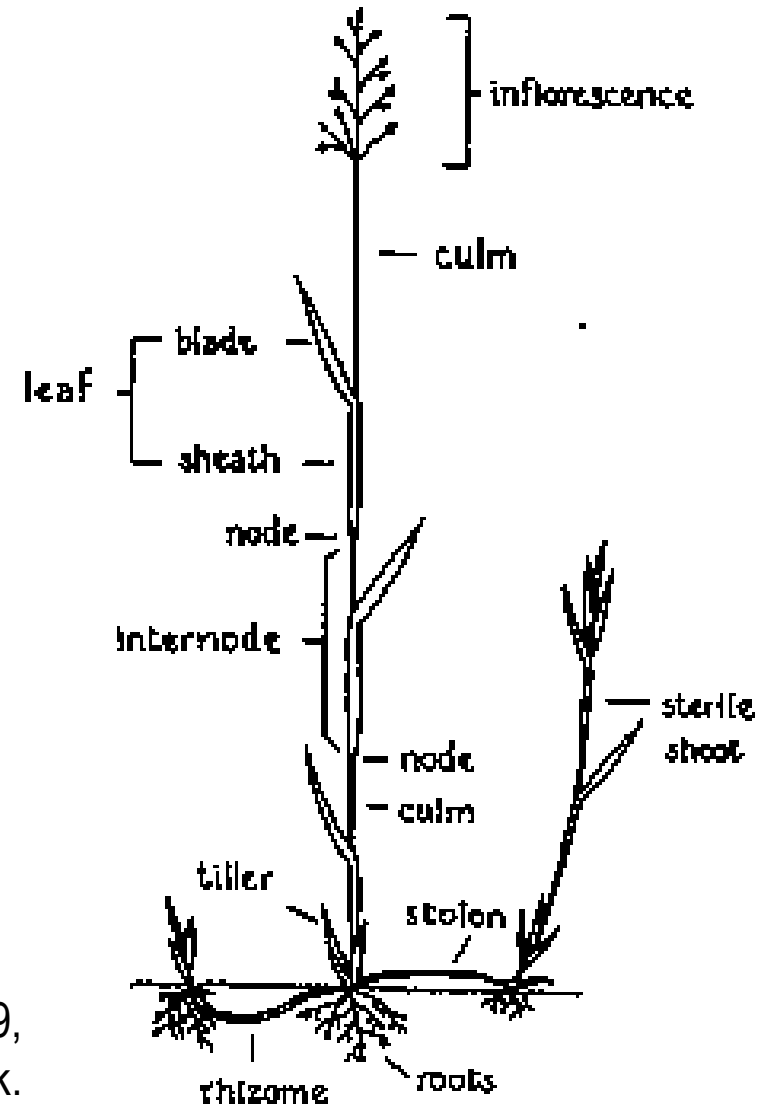
Plant Families (end in –aceae) –A.C.E.

- Poaceae
- Asteraceae
- Asclepiadaceae
- Commelinaceae
- Euphorbiaceae
- Fabaceae
- Gentianaceae
- Lamiaceae
- Liliaceae
- Malvaceae
- Solanaceae
- Verbenaceae

Poaceae

Defining characteristics:

- Culm – the usually hollow grass stem
- Inflorescence – flowering part
- Spikelet – basic unit of grass inflorescence



Brown, Lauren, Grasses an Identification Guide.1979,
Houghton Mifflin Company, New York.

Central Texas Grasses

- **Big bluestem ***
- **Little bluestem ***
- **Switchgrass***
- **Indiangrass***
- Sideoats grama
- Hairy grama
- Common curlymesquite
- Buffalograss
- Fall witchgrass
- Plains lovegrass
- Wildrye
- Texas wintergrass
- Silver bluestem
- Seep muhly
- Johnsongrass
- Bushy bluestem
- Lindheimer's Muhly
- King Ranch bluestem**
- Bermudagrass**

***Big Four native grass species that characterize tallgrass prairies of central North America**

**** Reduce grassland bird diversity by reducing insect diversity-create monotypic habitat**

Big bluestem, *Andropogon gerardii*

- 4-8' tall and strongly rhizomatous with colonies stretching 10' across
- “Turkey feet”
- Blue-green stems
- “Ice cream” for cattle and decent wildlife forage
- Great cover for grassland birds
- Attracts butterflies
- Cannot take dense grazing pressures therefore patches left in undisturbed areas –evolved with seasonal bison grazing



Indiangrass (*Sorghastrum nutans*)

- Stiff and erect culms in moist soils
- Bluish green growing turning tan winter
- Distinct rough, hairy nodes
- Flat leaf blades spreading 45 degrees from stem
- Dense inflorescence 6-12" and golden at maturity
- Very good livestock grazing
- Turkeys eat seeds
- Nesting cover for turkey and quail and cover for fawns





Switchgrass (*Panicum virgatum*)

- Robust, single clump
- Distinct bluish green new growth
- Reddish orange in winter
- Seed head greenish yellow, open and about half as wide as tall
- Good forage for livestock
- Good cover for wildlife
- High-quality stabilizer in riparian areas
- Helps reduce water and wind erosion
- Often mistaken for non-native Johnsongrass (white vein down center of leaves, with reddish brown seedhead)



Little Bluestem (*Schizachyrium scoparium*)

- Glowing bluish green in early summer to reddish brown
- Up to 6' but usually 2-4'
- Spike-like seedheads in upper culm
- Great nesting cover for ground nesting birds and good cover for fawns





Eastern Gamagrass (*Tripsacum dactyloides*)

- Large clumps up to 4' in diameter
- Up to 10' but usually 5-6'
- Wide (up to 1 ¼"), long (up to 30") leaves
- Highly valuable riparian stabilizer
- Produces lots of high quality forage
- Good fawning cover





Sideoats grama, *Bouteloua curtipendula*

- State grass of Texas
 - Bluish green to reddish when mature with curling leaves
 - Zigzag seed head with 20-60 spikelets on one side of the seed head
 - Good livestock forage
 - Grows on all soil types
 - Two forms: colony-forming and bunchgrass
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- Wildlife forage poor but deer eat early spring leaves, turkeys eat seeds and large clumps can provide cover for grassland birds



Silver Bluestem, *Bothriochloa laguroides*

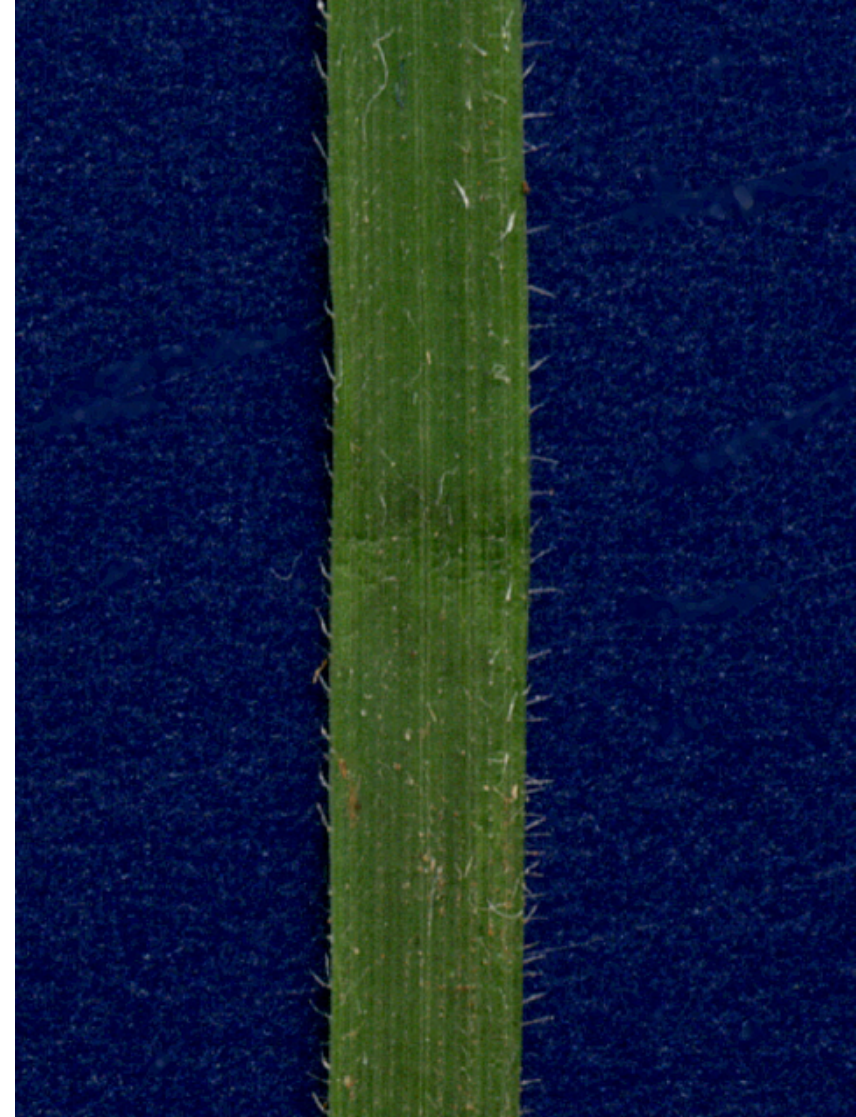
- Early successional grass
- Silver-white fuzzy seeds
- Fair grazing during early growth
- Larger clumps provide nesting cover for quail and other wildlife
- One of first grasses to appear on road to recovery





Texas Wintergrass, *Nasella leucotricha*

- “Speargrass”
- Rough leaves with fine, stiff hairs
- Deep green during growth, turning straw yellow when dried
- Fair forage for wildlife – important cool-season grass





Canada Wildrye, *Elymus canadensis*

- Cool-season grass
- Leaf rough on upper surface and clasps stem
- Canada curls, Virginia is straight
- Good livestock forage, fair for wildlife





King Ranch Bluestem & Bermudagrass (non-native)

- Light green stems, light brown at maturity
- Long silky hairs on upper leaves
- Purple, loose terminal seed head
- Bluish-green, sod grass
- Root at nodes
- Seed head has 3-6 purple spikes resemble bird's foot
- Good livestock grazing
- Poor wildlife value



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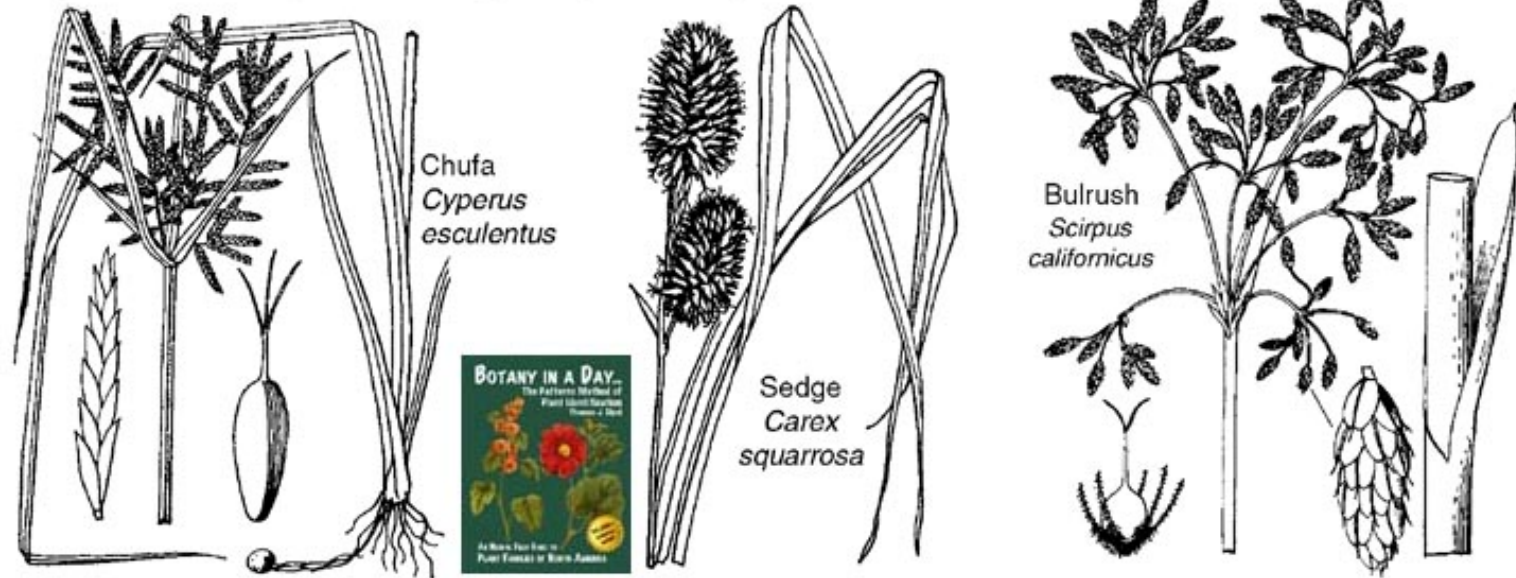
Cyperaceae, Sedges

- Look like grasses
- Sedges have edges (usually) – triangular stems
- Small flowers with absent or reduced petals and sepals
- Grow in moist areas



Patterns of the Sedge Family

Sedges look similar to grasses, but they usually have triangular flower stems.

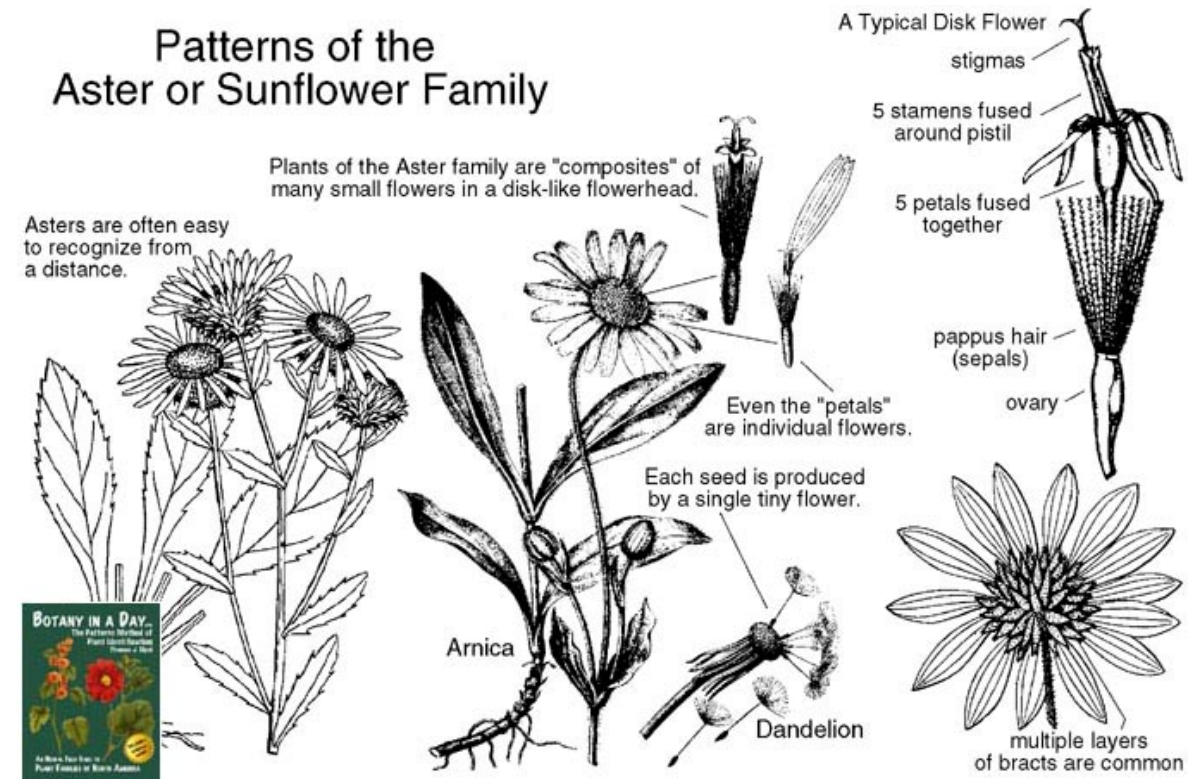


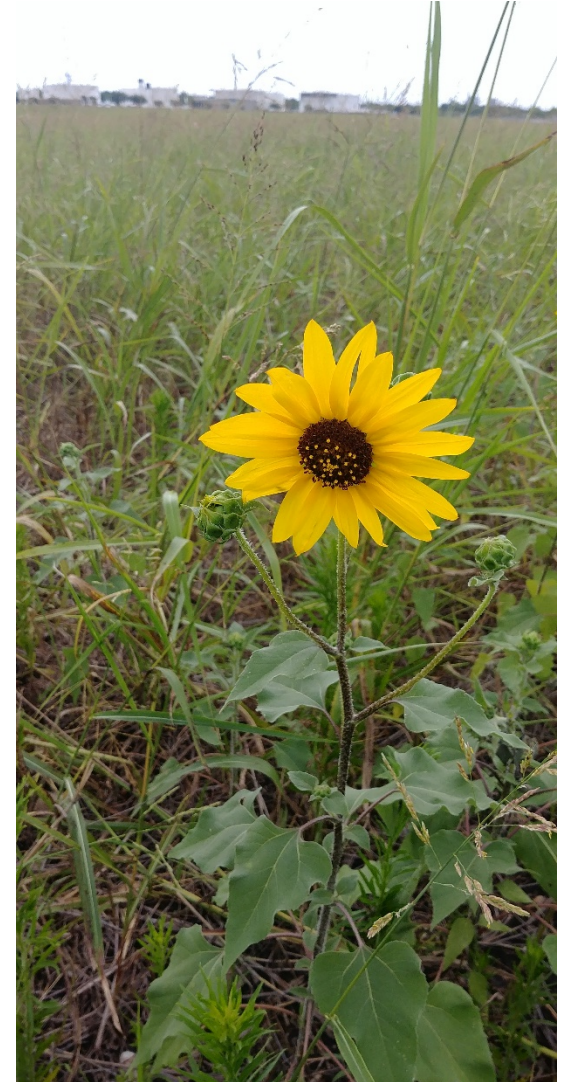
Forbs: herbaceous flowering plant other than a grass

- Smartweed
- Orange zexmenia
- Antelope Horn
- Green milkweed
- Ragweed
- Frostweed
- Black dalea
- Texas lantana
- Flame acanthus
- Queen's delight
- Chile pequin
- Turk's cap
- Beardtongue (Penstemon)
- Silverleaf Nightshade
- Lindheimers' senna
- Two-leaf senna

Asteraceae, Sunflower

- Characteristic inflorescence –composite, or many flowers that look like one single flower
- Think dandelions
- Often disk-like shape
- One of the largest families of flowering plants 23,000+ species
- Each flower has 5 tiny petals fused together within the larger “flower head”

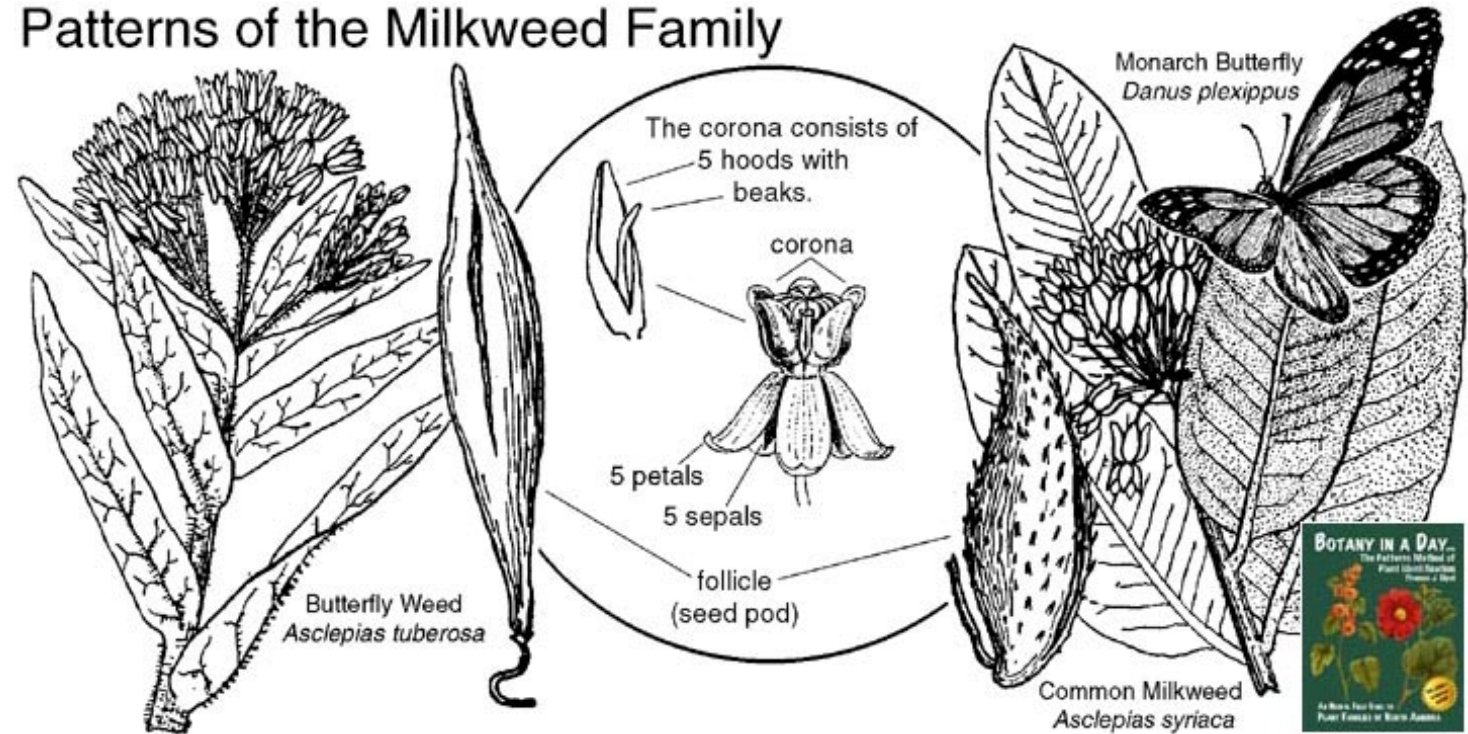




Asclepiadaceae, milkweed

- Extremely valuable to bees and other pollinators
- Milky substance within
- Usually umbrella like flower
- Mostly toxic
- Critical host plant for declining Monarch butterfly

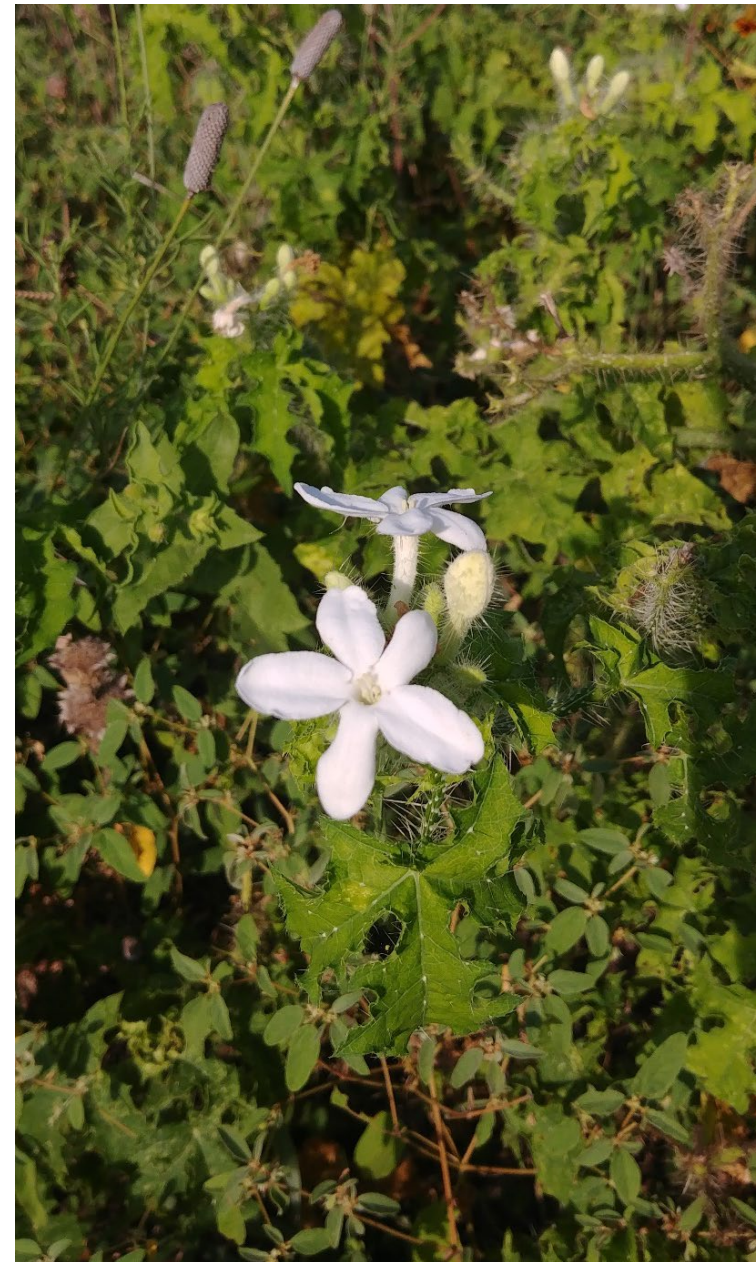
Patterns of the Milkweed Family





Euphorbiaceae, Spurge

- Trilocular (3-chambered) ovary/fruits
- Contains milky sap-like substance
- Alternate simple leaves
- Often poisonous
- Seeds valuable to birds
- e.g. Texas bullnettle, crotons



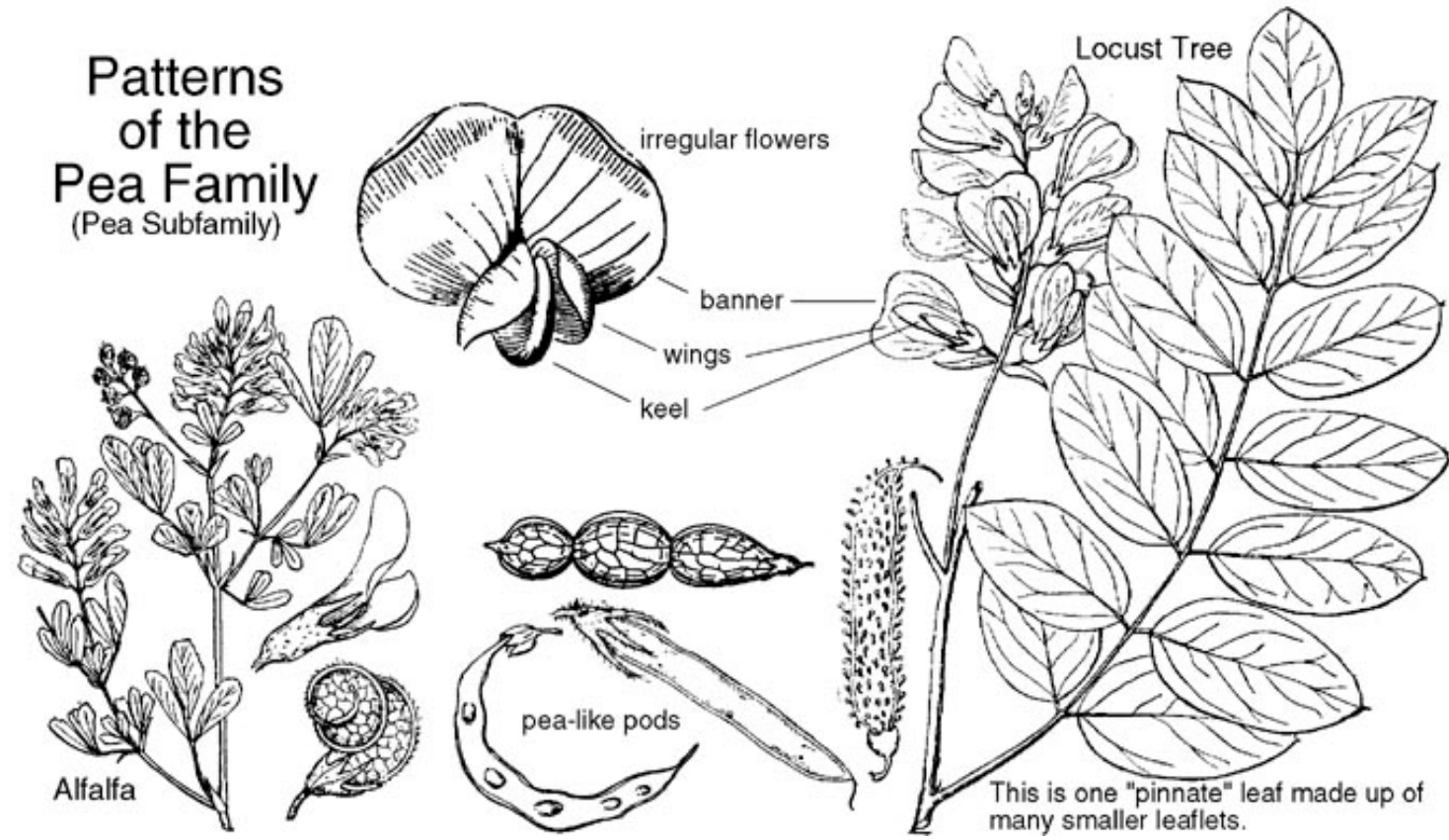


*Agri***LIFE EXTENSION**

Texas A&M System

Fabaceae, Legume

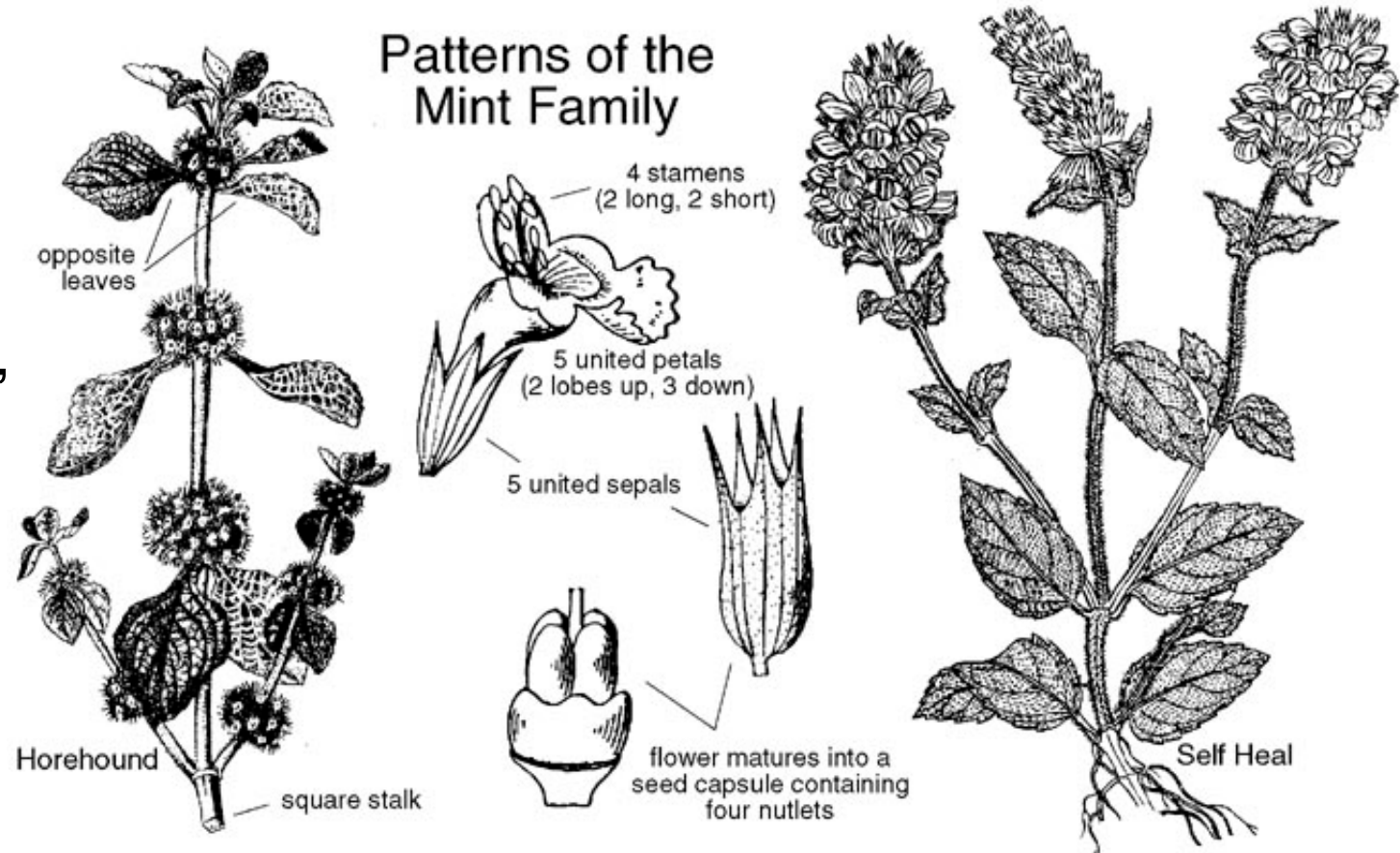
- Pea-like flowers
- Legumes
- Compound leaves
- Irregular flowers (Bluebonnets)
- Acacia seeds eaten by game and songbirds
- Flowers good for pollinators
- Leaves good forage for deer





Lamiaceae, Mint / Deadnettle

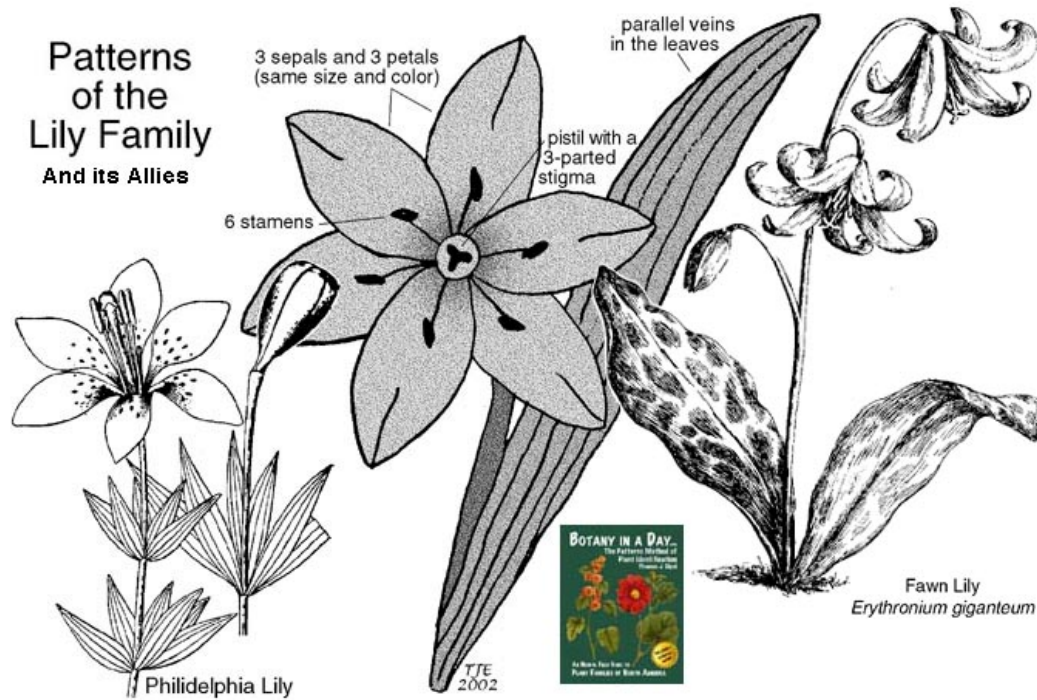
- Aromatic, attractive flowers
- Square stems
- Bi-labiate flowers
- Pubescent stamens
- Poor forage, attracts some pollinators
- Many herbs such as basil, mint, thyme, lavender





Liliaceae, Lily

- Basal forming leaves long and narrow
- Six segmented flowers (3 petals, 3 sepals)
- Three-chambered capsular fruits (often berries)
- Excellent deer forage

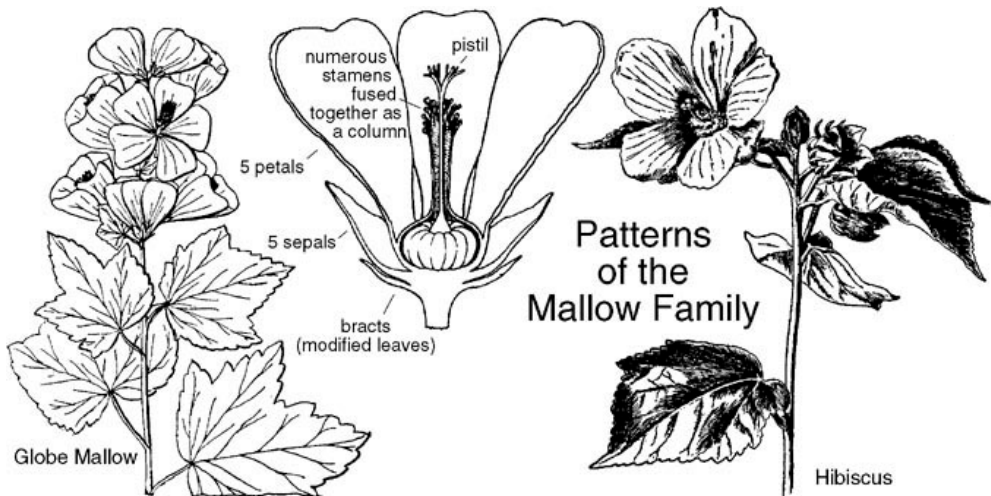


Lady Bird Johnson Wildflower Center



Malvaceae, Mallow

- Showy five petal flowers; funnel shaped
- Fused below sepals
- Mucilaginous inner texture (okra)
- Think hibiscus
- Good deer forage
- Great for pollinators
- Seeds eaten by many birds



Solanaceae, nightshade/ potato

- Five united sepals, petals, and stamens
- Solitary leaves at axillary
- Simple, alternate leaves
- Some poisonous to livestock
- Also -potato, tomato, and tobacco
- Silver leaf nightshade:
 - Excellent for wildlife –deer eat berries and new leaves, quail eat seeds and turkeys eat entire berries
 - Popular pollinator plant

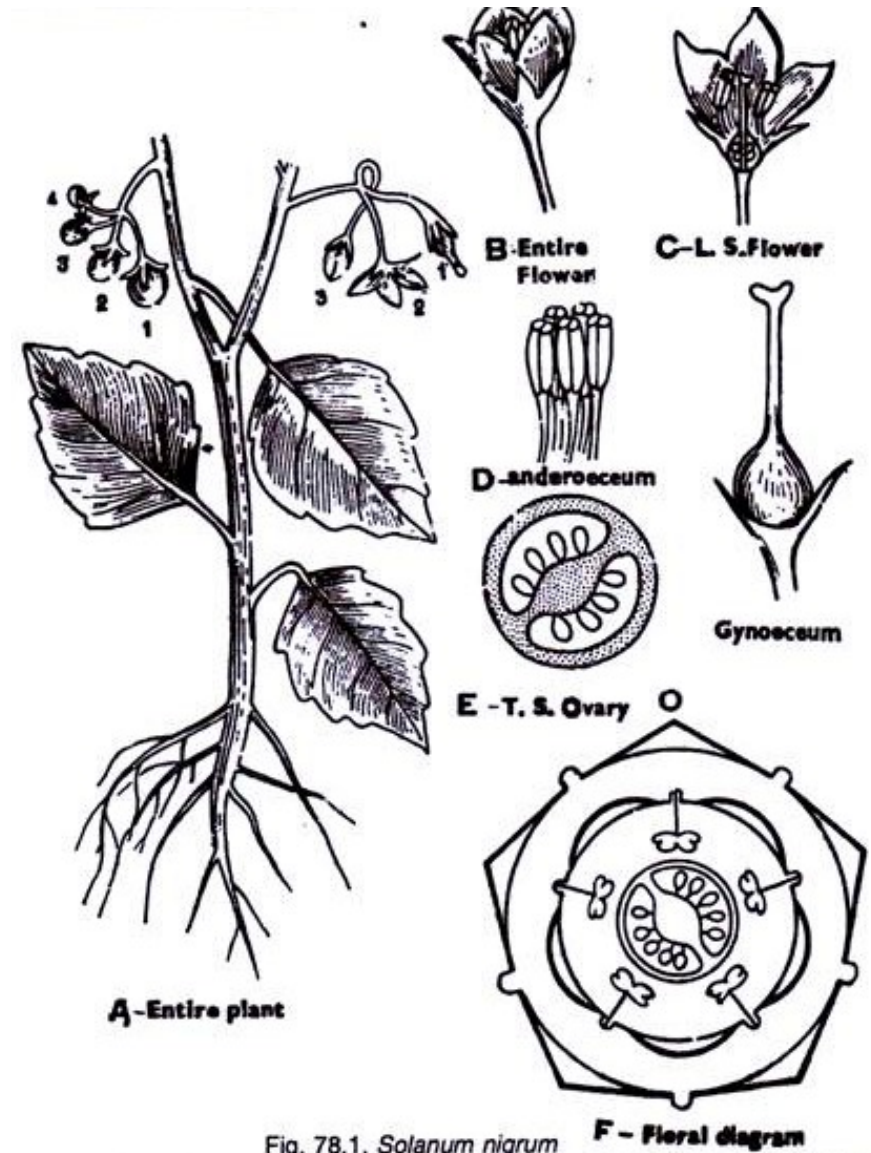
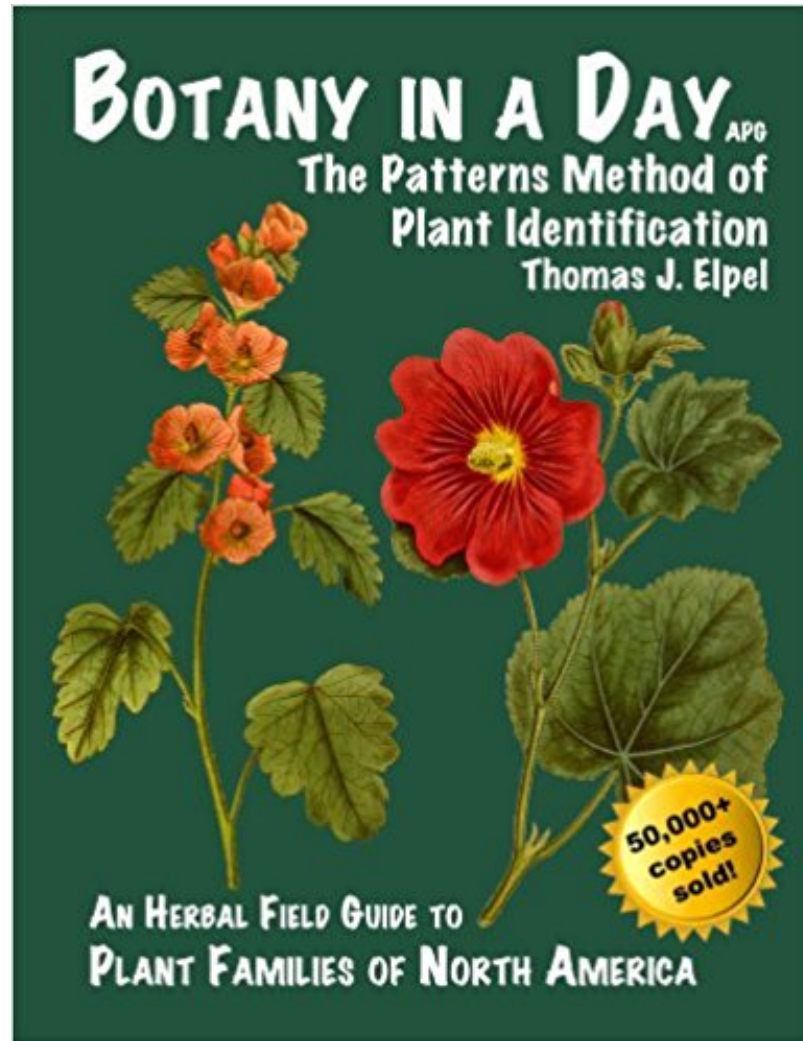


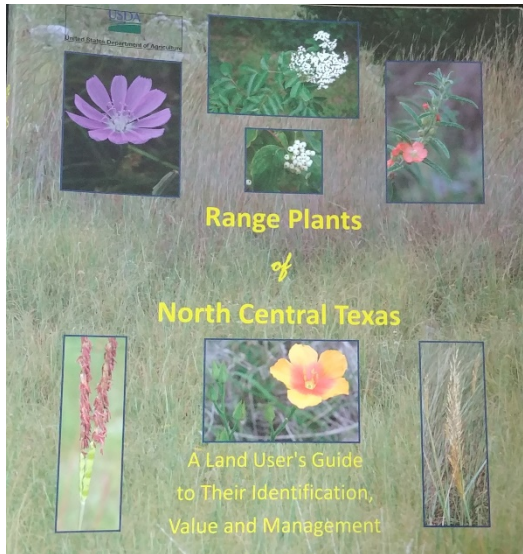
Fig. 78.1. *Solanum nigrum*



Recommended guides & resources



Texas Invasive Species Institute



Other good guides:

- National Audubon Society
- Peterson Guide
- Regional guides

Helpful websites

- <https://www.wildflower.org/plants/>
- www.inaturalist.org and iNaturalist app
- [https://www.wildflowers-and-weeds.com/Plant Families](https://www.wildflowers-and-weeds.com/Plant_Families)
- <https://plants.usda.gov/>
- <https://rangeplants.tamu.edu/help-identify-my-plant/>

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Thank you!

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