Assigned Readings for Plant List 10

Read the pages in your textbook associated with the family descriptions and individual taxa covered on Plant List 10 that was distributed in lab. These plant lists are also available on the course website.

http://aggie-horticulture.tamu.edu/syllabi/308/home/frameset.htm

Herbaceous Perennials

- Technically those plants with multiple year lives that do not form woody above ground tissues, but which may remain evergreen or more commonly die back to the ground and enter dormancy for a portion of each year
  - Dormancy is not always in response to cold temperatures
  - Drought and/or heat avoiders are common in the tropical & xeric environments
  - Dormancy versus quiescence

- More broadly defined to also include those plants which form above ground woody tissues, but which die back to the ground each year, usually in response to cold temperatures
  - Many tropical or subtropical plants will function as herbaceous perennials on the northern fringes of their ranges
    - Shoots die back, but roots are insulated from cold
      - Example = Lantana spp.
  - Similar response at extreme high latitude fringe of temperate wooly plants’ ranges
    - Example = Abelia × grandiflora
**Herbaceous Perennials**

- Offer flower & foliage forms not seen in annuals
- ↑Upfront installation costs, ↓Change out costs, ↑maintenance costs
- Site preparation is critical
- Crop rotation not possible
- Design challenge to provide blended seasonal interests
- Thugs and wimps can be issues
- Perennial palette is very region specific

**Herbaceous Garden Designs**

- Mixed (A&P) Design
- Monochromatic Design
- Warm Temperate Design
- Cold Temperate Design

**Traditional Perennial Border**

**Cottage Garden / Kitchen Garden**
Achillea spp. Yarrow

- Long cultivated herbaceous perennials
- Hardiness varies among taxa, USDA zones 4 (3) – 8 (9)
- Basal rosette of deeply pinnately lobed pubescent foliage, green to silver gray in color
- Dense compound corymbs of tiny composite flowers on erect stalks, variable from 8” to 4’
  - Yellow, white, pinks, nearly reds

- Tendency to floppiness when in flower
- Best here with afternoon shade, full sun in north; well drained soils; avoid excess fertility
- Perennial borders, mixed plantings, cottage & historical gardens, good for cut & dried flowers
**Echinacea purpurea**  
**Purple Coneflower**

- Native U.S. herbaceous perennial wildflower; z. 4 - 8 (9) with proper provenance or cultivar
- Basal rosettes of coarse foliage with flower stalks 2' - 3'(4') tall
- Classic cone-shaped flower with central dark cone of disk flowers surrounded by drooping purple to white ray flowers; deadheading prolongs bloom; often short-lived in South Texas

**Leucanthemum × superbum**  
**Shasta Daisy**

- Enduring popular herbaceous perennial with clumps of rosettes 6” to 9” tall dark green foliage, flower stalks 1’ to 3’ tall
- White “loves-me-loves-me-not” daisies from Luther Burbank
- Classic American perennial gardens, mixed borders, cut flowers

**Echinacea purpurea**  
**Purple Coneflower**

- Full sun to part shade; may tolerate drought, heat, high pH soils
- Problems = leaf spots, Japanese beetles, aphids & sooty mold
- Perennial borders, cottage gardens, naturalizing, wildflower mixes, cut / dried flowers (?), medicinal, educational and historic gardens

**Leucanthemum × superbum**  
**Shasta Daisy**

- May lodge on fertile soils; tends to be short-lived in the southern half of our region; useful in USDA z. 5 – 8 (9)
- Suffers in mid-summer heat; white fly; rots in wet soils
- *Chrysanthemum leucanthemum*, Ox-Eye Daisy, is similar but more heat tolerant, better plant for z. 8 & 9
**Digitalis purpurea**  
**Foxglove**

- Annual (USDA z. 8 - 9), biennial (z.7b - 8a), or weak herbaceous perennial (z. 4 - 7a)
- Coarse rosette of foliage ≤ 12” tall with a 2’ - 5’ tall flower stalk
- Pendulous crowded elongated bell-shaped flowers; purple, pink, white, maroon or light yellow, throat spotted; mid- to late spring

- Morning sun or afternoon shade (half day) is best
- Needs moist soil, but soil pH adaptable; often needs staking; poisonous (affects the heart)
- Tall accent or background in annual / perennial plantings; European plant naturalizing in East Texas; long grown in cottage gardens, medicinal, historical, and heritage gardens; cut flowers

**Penstemon spp.**  
**Penstemons**

- Also known as Wild Foxgloves or Beard-Tongues
- Variable group of z. 3 - 10 herbaceous perennials or small subshrubs
- Mostly upright growers
- Showy racemes or panicles of bilabiate flowers
- Mostly in white to red to purple range
- Many species are well suited to arid / semi-arid regions
- Full sun to partial shade & well drained soils
- Mixed perennial borders; accents; cut flower gardens; southwestern or xeric gardens; containers

**Glandularia × hybrida**  
**Perennial Verbena**

- Sprawling 6” to 12” tall herbaceous perennial or annual
- Variable cold hardiness for perennial forms, z. 6 to 8, short-lived
- Old-fashioned plant enjoying resurgence

- Formerly Verbena × hybrida
- Annual cultivars are not heat tolerant
**Glandularia × hybrida**

*Perennial Verbena*

- Tolerates a variety of soils if they are well drained; variable in heat & drought tolerance
- Wide range of flower colors; deadheading promotes bloom
- Variable in foliage density
- Bedding, border, containers, hanging baskets, bank / groundcover, cut flowers

**Hemeroscallis spp.**

*Daylilies*

- Clump of deciduous linear keeled 1' to 2' leaves
- Herbaceous perennial variably hardy from USDA z. 4 to 9
- Large trumpet-shaped flowers; mostly singles; some doubles
- Wide range of flower colors, mostly pastels; some edible
- Daylily rust fungus major issue

**Hemerocallis spp.**

*Daylily*

- Short flowering season, spring to summer
- Very durable, huge range of soils and sites
- Occasionally can be weedy
- Mix clones/species or use reblooming cultivars to extend flowering season

**Monarda didyma**

*Beebalm*

- Informal erect, 2' to 4' tall, sprawling herbaceous perennial; USDA z. 4 – 8 (9)
- Hooded snake’s head flowers 2” to 3” long; borne in whorls; red, pink, purple to white
- More vigorous in northeast portions of our region where it can seed to form colonies; an Eastern U.S. native
- Powdery mildew & rust fungi problems
- Historic (Oswego Tea) & cottage gardens; mixed or perennial borders; bee, butterfly & hummingbird pollinator gardens
**Paeonia spp. Peony**
- Old-fashioned rounded mound-like herbaceous perennials; hugely popular in northern USA
- Variably adapted to cold of USDA zones 2 to 4 through heat of z. 7, suffers in z. 8 & warmer
- Large 3” - 8” diameter single anemone to fully double carnation like white, pink, to red spring flowers; requires chilling in winter
- Full sun in cool climates; afternoon shade in warm climates; uniformly moist fertile soils
- May require periodic division
- Botrytis or Phytophthora blights & inadequate chilling can be problems

**Astilbe × arendsii**
- Dense upright mounded herbaceous perennial 1’-3’ tall rich ferny green to bronze foliage
  - Best in USDA z. 4 - 7, marginal in z. 8b - 9
- Dense plume-like panicles, white, lavender, pink, to red in late spring
- Requires rich well drained uniformly moist neutral to acidic soil and afternoon to day-long shade

**Astilbe**
- White flies, black vine weevil, Japanese beetles, powdery mildew & Fusarium wilt issues
- Drought intolerant; best in northeast portion of our region
- Cool shady borders; potted plant on shady patio; cut flowers; along a water feature’s edge; perennial border in north

**Heuchera sanguinea Coral Bells**
- Low 6” to 8” ball of reniform to orbicular green, yellow, pinkish to bronze leaves with 12” to 18” tall sparse slender flower stalks
- Evergreen herbaceous perennial, USDA zones 3 - 8a (8b)
- Tiny bell-shaped pink flowers of various shades mid-spring - summer
**Heuchera sanguinea**  
*Coral Bells*

- Needs partial shade in our region and uniformly moist rich soils; high pH soils acceptable; salt & drought intolerant
- Crown rots in poorly drained sites; suffers badly in summer heat of USDA zones 8 & 9
- Edging; shade accent; cut flower garden; hummingbird plant; recently huge new range of foliage colors

**Herbaceous Perennials For Summer / Fall**

**Salvia spp.**  
*Sages*

- Important group of native or introduced herbaceous annuals and perennials
- Variable cold hardiness and site requirements ranging from z. 4 – 13
- 1 or more *Salvia* adapted to most sites

- Mostly grown for attractive terminal or axillary spikes or panicles of flowers
  - Nearly all frequented by butterflies and hummingbirds
- Bedding, massing, edging, borders, naturalizing, containers, kitchen gardens
**Ruellia brittoniana**  
**Mexican Petunia**
- Dark green foliage, USDA z. 7 - 13 herbaceous perennial spreading by rhizomes or seeds
- Small petunia-like flowers, spring to frost, purple, blue-purple, white, or pink
- Habits vary from 3’ (4’) tall to 6” dwarfs; nearly shrubby in tropics
- Extremely easy to grow, actually becomes weedy in the garden, few pest or disease problems

**Buddleja davidii**  
**Butterfly Bush**
- Herbaceous perennial (USDA z. 5 - 7a), woody subshrub 7b - 8a), or woody shrub (z. 8b - 10); variable in size from 3’ to 10’+ tall
- Valued for narrow panicles of flowers that superficially resemble those of Lilac (*Syringa spp.*), hence alternate name of Summer Lilac
- Nearly any non-soggy soil with sun to part shade

**Buddleja davidii**  
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**Chrysanthemum × morifolium**  
**Hardy Chrysanthemum**
- Mostly fall blooming perennial (USDA zones 5 - 9 depending on cultivar) often used as fall annual
- Dense upright mound, 1’- 3’ tall
- Dark green foliage, several flower types / sizes
  - “Single” flowers or tight clusters, purchase in bud
  - White, purple, pink, red, yellow, or bronze
  - Long lasting as cut flower; staple in floristry
  - Photoperiod concerns
**Chrysanthemum × morifolium**  
*Hardy Chrysanthemum*

- Also known as *Dendranthema × morifolium*
- Prone to rots in wet soils, aphids, spider mites
- Seasonal bedding, mixed borders, custom designs, cut flower gardens, a mainstay of florist trade, pompom types for fall corsages

**Aster spp.**  
*Asters*

- Mostly herbaceous perennials, USDA z. 4 – 9a (9b), sometimes annuals, occasionally subshrubs
- Rounded mounds to spreading rhizomatous colonies; 1’ to 5’ tall
- Daisy-like blue, lavender, purple, or violet flowers, rarely white, rose, or red

**Tagetes lemmonii**  
*Copper Canyon Daisy*

- One or more taxa are tolerant of almost any soil type and exposure, although full sun is best; good 2 wk in fall in Texas
- Aster yellows and powdery mildew can be issues
- Where constrained use as fall accents, too aggressive for many cultivated purposes
- Can be very weedy; definite liability when not in flower

- Semi-evergreen subshrub native to the SW USA effective in z. 7 – 9 (10)
  - Loose open to sprawling form
    - Soft-textured strongly aromatic foliage, some say +, some say –
- Profusion of single yellow to yellow-orange daisy-like flowers; peak bloom is in late summer to fall, sporadically in spring to mid-summer; foliage dermal irritant?
- Full sun is best; benefits from annual winter or early spring pruning; avoid poorly drained sites and high humidity
- Southwestern style gardens; low irrigation plantings; naturalizing; parking lot islands & other tough dry spots
**Tagetes lucida**
Mexican Mint Marigold

- Erect herbaceous perennial, 2’ to 3’ tall, with anise-scented foliage
- Perennial in USDA zones 8 – 10, annual elsewhere
- Valued for late summer to fall mass bloom of small single flowers
- Requires full sun and well drained soils; soil pH adaptable
- Heat and drought tolerant
- Xeriscapes; mixed perennial borders; cut flower gardens; fall accent; butterfly gardens

**Hibiscus moscheutos**
Swamp Mallow

- Coarse herbaceous perennial hibiscus
- USDA z. 5 - 9, 2’ - 8’ tall
- Large coarse ovate to broadly lanceolate leaves
- Shallow cup-shaped to nearly disk-shaped flowers 6” to 12” wide; very bold; white, pink, to red in color

**Hibiscus moscheutos**
Swamp Mallow

- Sun to partial shade; tolerates a variety of soils if not too dry; tendency for chlorosis on high pH soils
- Japanese beetles, white fly, and aphid problems
- Tolerates wet sites; bold accent; perennial or mixed borders; low seasonal screen; naturalizing

**Herbaceous Perennials For Foliage / Textural Impacts**
**Artemisia × ‘Powis Castle’**

- Superior *Artemisia* for hot southern landscapes
- Low mound of fine textured silver-gray foliage
- Similar to pillow-type cultivars used in cooler climates, but *Powis Castle Artemisia* withstands Texas’ heat & humidity
- Useful USDA zones 7 (6) - 9
- Periodic pruning is required to maintain a dense growth form
- Good foil for dark colors

**Hosta spp.**

- USDA z. 5-8 (9a) herbaceous perennials
- Rosette growth habits
- Grown primarily for the coarse textured green to blue-green foliage
- Numerous variegated cultivars also available

**Hosta spp. Hostas**

- Flowers are neutral on some cultivars, while others offer attractive lily-like white to lavender flowers; some are fragrant
- Needs shady or mostly shady location, moist soils; not drought tolerant
- Best reserved for eastern portions of Texas, prone to foliar and soil salt exposure damage

Drought & salt damage
**Stachys byzantina**  
Lamb’s Ear  
- A popular semi-evergreen herbaceous perennial in USDA zones 5 (4b) – 8 (9a)  
- Slowly spreading rosettes of large thick floppy leaves covered in soft white hairs  
- Silver-green to silver-gray color  
- Avoid poorly drained soils and high humidity  
- Full sun to afternoon shade; tolerates low fertility soils  
- Classic for tactile (touch & feel) gardens for the sight impaired  
- Cottage or children’s gardens; mixed perennial beds; small scale groundcover; silver accent

**Mentha × piperita**  
Peppermint  
- Aggressively rhizomatous perennial herb, USDA z. 3 - 9 (10) with strongly erect 1’ to 3’ stems  
- Dark green, highly aromatic foliage; flowers unimpressive  
- Original source of commercial peppermint extracts; culinary and/or medicinal properties  
- Tolerates sun to part shade; wet to dry soils; soil pH adaptable  
- Can be overly aggressive  
- Cottage gardens; historic, educational, edible gardens; naturalizing; scent gardens; containers; small scale groundcover in confined places

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**Plant Labels Can Be No Joking Matter!**

*Poisonous plant mix-up investigated*  
Amidst the flurry of 17 improperly labeled perennial seed shipments in the United States, a nursery in the Midwestern United States has been forced to recall its entire stock of Mandevilla plants. The mistake occurred when a new employee failed to correctly label the plants, leading to confusion among customers who purchased the plants.

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