**Assigned Readings for Plant List 1**

Read the pages in your textbook associated with the family descriptions and individual taxa covered on Plant List 1 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

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**Tropical Landscape Conditions**

- Lack of winter chilling ±?
- High Rainfall or Distinct Wet and Dry Seasons
- Nutrient Poor Soils (Oxisols or Ultisols)
- Highly Erodible (sands) or Thin Soils (volcanic)
- High Insect or Disease Pressure
- Poor Water Quality Near Coastlines or Arid Sites
- Hurricane or Monsoon Belt

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**Tropical Design Elements**

- **Drainage**
  - Raised beds, canals, lagoons, ponds
- **Infrastructure**
  - Strong enough to withstand tropical plant growth, winds, high rainfall, decay and rot
- **Environment**
  - Extreme heat and or humidity, air flow, insects (mosquitoes, “no see-ums”)

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*Slide courtesy of Dr. Garry V. McDonald*
Tropical Plant Characteristics
- Large amount of coarse foliage or overall texture
- Mainly hues and shades of green
- Flowers few, but often showy, may be in tops of trees or high climbing vines
- Can obtain large size in time so final spacing is critical
- Fruit can be messy or hazardous (never fall asleep under a coconut!)
- Plant parts can be acrid or toxic (NEVER stick Caryota mitis seeds in your front pocket!!)

Tropicals Make Great Summer Annuals for Hot Climates
All plants were established from 1 gallon or smaller transplants

Acalypha wilkesiana Copper Plant
- USDA z. 9 - 13 summer annual (<9), herbaceous perennial, medium size subtropical shrub
- Valued for variegated red, copper, purple, maroon, pink, white, green or yellowish mostly coarse textured foliage
- Used as summer annual or high light interiorscape plant
- Best foliage color in full sun; flowers = liability; variable foliage shape; foliage is cold intolerant; mealy bug trap
**Codiaeum variegatum**

*Croton*

- Subtropical / tropical (z. 9b-13) shrub (8'-10') grown as summer annual / container / patio plant
- Utilized for highly variegated color (green, yellow, orange, pink, red) and variously shaped stiff foliage
- Best in moist, rich, acidic soils with good drainage, needs sun for best foliage color, fades in dense shade

**Graptophyllum pictum**

*Caricature Plant*

- A 6' to 8' tall evergreen tropical shrub (z. 10-13) or herbaceous perennial (z. 9b) utilized elsewhere as a summer annual
- Valued for its large lustrous green, white, pink, or bronze variegated leaves which impart a strong tropical appearance
- Tolerates a wide range of light exposures, sun to shade
- Very heat & humidity tolerant, occasional wet soils ok
- Late season red to red-purple flowers are mildly showy
- Nematodes, spider mites, thrips and scale insects can be problems
- Extremely intolerant of cold
Manihot esculenta ‘Variegata’

Variegated Tapioca

- A truly tropical evergreen shrub, USDA hardiness z. 10 (9b) to 13, that suffers chilling damage like Poinsettias even when no frost occurs
- Planted solely for the pink, white, creamy yellow and green variegated palmately compound foliage
- Propagate from thick older stems
- Spider mites can be problematic in nurseries / greenhouses
- Good contrast for darker colored plants

Duranta erecta

Golden Dewdrop

- Irregular spreading subtropical [USDA z. 10(9b) - 13] large shrub / small tree, dieback shrub [z. 9b(9a)], herbaceous perennial [9a(8b)] or used as a summer annual [≤ z. 8]
- Arching / drooping racemes of violet, blue, to white flowers followed by attractive translucent golden yellow to yellow-orange fruit (non-variegated taxa)
- Variegated forms for golden to cream foliage effects, but have poor flower/fruit
**Philodendron bipinnatifidum**
Split-Leaf Philodendron

- Medium to large, 3’ to 8’ (10’) tall, shrubby evergreen monocot with a short woody trunk & prop roots in USDA z. 9 (8b) to 13
- Grown for the huge lush divided leaves creating a bold coarse tropical effect
- Shade to morning sun; tends to develop chlorosis in too much sun or on very high pH soils
  - Heat but not drought tolerant
- Accent, patio, shade, or background plant
  - Also a good interiorscape plant
- Mealy bugs, scale, spider mites, root rots

**Hibiscus tiliaceus**
Mahoe

- Evergreen subtropical / tropical tree valued for its salinity tolerance, flowers, and sometimes variegated foliage
- Tree to 50’ in USDA zones 10-13, dieback shrub in 9b
- Rounded crown, coarse foliage
- Saucer-shaped flowers fade from bright yellow to orange-red and finally maroon-red over a day’s time
- Slow to flower from seed
- Most commonly represented in our region along the coast or as a summer annual in form of the variegated cultivar ‘Tricolor’; variegation is sometimes unstable
- Flowering does not occur when used as an annual
- Salinity, drought, wind, and heat tolerant, cold intolerant
- Grasshoppers & other chewing insects may be problems
Carica papaya
Papaya
- Important tropical fruit crop
- Useful as a landscape tree in USDA z. 10 - 13
- Used as a bold tropical foliage / form accent
- Annual fruit crop if transplants are large, polygamodioecious
- Tolerates heat and a wide range of soil types, but is not particularly drought tolerant

Thorn, Spine or Prickle?
- Thorns = modified branches
- Spines = modified leaves or stipules
- Prickles = modified epidermal cells

Citrus spp.
Citrus
- Source of commercial limes, lemons, oranges, grapefruits, and tangerines (most cold tolerant)
- Round headed subtropical / tropical broad-leaved evergreen large shrubs / small trees

Citrus spp.
Citrus
- Valued for foliage, fragrant flowers, edible fruit
- Variable cold tolerance, z. 10 to 8b; significant pest problems; best on well drained acid soils
- Orchard / landscape in valley; containers north

Citrus greening
**Averrhoa carambola**

*Starfruit*

- Small single or multi-stem tropical tree with pinnately compound foliage
- Small fragrant cauliflorous white to pink-magenta flowers followed by five-angled ovoid fruit; star-shaped in cross-section; sweet to acidic
- Hardy USDA z. 10 (9b) – 13; sunny site with well drained fertile soil
- Home orchards near coast; large containers

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**Carissa macrocarpa**

*Natal Plum*

- Highly versatile thorny evergreen subtropical to tropical, USDA z. 10 (9b) – 13 shrubs
- Variable habit 2’ groundcover to 10’+ rounded shrub; tolerates shearing well
- Dark glossy green thick plastic-like leaves, iridescent white flowers, red plum-like fruit
- Tolerates direct salt spray, heat, wind
- Thorns and cold are limiting attributes
- General purpose coastal shrub, barrier plantings

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**Euphorbia pulcherrima**

*Poinsettia*

- True tropical (USDA hardiness zones 10-13) upright to spreading shrub or small tree, highly cold intolerant
- Showy leaf-like bracts are classic attribute
  - Red, pink, white, pale yellow, bicolors
  - Induced by short days (actually long nights)
- Usually seen as classic Christmas holiday potted plants, in tropical landscapes as accent shrub or patio plant

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**Euphorbia pulcherrima**

*Poinsettia*

- Numerous limitations: stems are brittle, chilling damage in mid-50ºF, whiteflies can be serious problem, and plants require a high fertility regime
- Latex-like sap may cause skin irritation; controversy over toxicity of foliage / bracts
**Bougainvillea spectabilis**

- Tropical used as summer annual / conservatory / greenhouse plant; excellent tropical effect; z.10(9)-13
- Dark glossy green or variegated foliage
- Spectacular showy bracts, rainbow of color
  - Best bloom with constricted root zone

**Calliandra eriophylla**

- Rounded semi-evergreen densely branched shrub, 2' to 3' (4') tall
- Fine textured bipinnately compound leaves and pink to red powder puff or tassel-like flowers are primary assets
- Accent, courtyards, containers, summer annual, massing, erosion control, wildlife food & cover
- Tolerates heat, drought, avoid poorly drained soils, z. 9(8) – 13; winter form is suspect where deciduous
- Rabbit and deer damage are common; wildlife food?
Hibiscus rosa-sinensis  
Tropical Hibiscus

- Tropical / subtropical, USDA z. 10 (9) - 13, shrub used as container plant or summer annual
- Planted as a shrub in immediate Gulf Coast and lower Rio Grande Valley

Vast array of vibrant flower colors, bicolors, singles & doubles, favorite of hummingbirds

Subject to numerous insect / disease problems, tendency to easily abort flowers

Hamelia patens  
Firebush

- A rounded tropical shrub [z. 10 (9b)-13], herbaceous perennial [z. 9(8b)] or summer annual [≤ z.8a]
- Valued for dense green foliage flushed red and bright red to yellow tubular season-long flowers

Needs well drained soils & hot weather

Stunts in cool nights of high elevation desert Southwest

Border, accent, containers, hedging in tropical areas
**Ixora coccinea**

**Flame-Of-The-Woods**

- A small rounded evergreen shrub in USDA z. 10 - 13, subshrub or herbaceous perennial in z. 9b(9a), used as a summer annual or interiorscape plant elsewhere
- Main attractions are 2” to 5” cymes of showy red, orange, or yellow flowers

**Jatropha integerrima**

**Firecracker**

- A subtropical, USDA z. 10 (9b) to 13, evergreen upright to rounded large shrub or small tree
- Dark lustrous green variably lobed leaves are perfect contrast to red to pink clusters of flowers
- Flowers are held above the foliage and continue nearly year-round
- Very effective as a patio container plant; tolerates light shade
- Holds its leaves & continues to bloom under considerable drought; a Texas Superstar®

**Plumbago auriculata**

**Blue Plumbago**

- Subtropical shrub used as summer annual
- Sold as herbaceous perennial or shrub, z. 9 (8b)-13
- Medium green foliage, 3” to 4” clusters of dark to pale blue or white flowers, long blooming season

- Strong tendency to develop chlorosis on low fertility or high pH soils
- Requires moist well drained fertile soils
- Popular multi-purpose shrub in subtropical / tropical landscapes, but rather temperamental
**Plumbago auriculata** Blue Plumbago
- Irregular rounded mound, 2’ to 4’ tall
- Soil and foliar salts, heat tolerant, full to part sun
- Limited cold hardiness, intolerant of poor drainage, root rots, heavy N feeder, Mn chlorosis on high pH soils
- Massing, perennial borders, bank cover, containers, shrub borders

**Plumeria rubra** Plumeria
- Coarse textured evergreen to deciduous tropical tree, 20’ to 25’ (40’) tall, suitable for tropical USDA z. 10 - 13 landscapes
- Thick clubby branches, large leathery leaves
- Highly showy terminal panicles of waxy red, pink, white, yellow, or multi-colored often highly fragrant flowers

**Plumeria rubra** Plumeria
- A signature plant of tropical islands / sunny beach smell
- Important component of leis
- General purpose shade tree in tropics, container or patio plant elsewhere
- Heat, drought, & salt tolerant
- Scale insects and spider mite problems
- Leaf / flower litter in tropics

**Delonix regia** Royal Poinciana
- Popular subtropical/tropical, USDA z. 10(9b) –13, spreading dome-shaped (semi?) evergreen tree
- Horizontal layering, flat-topped, fine textured
- Fantastic spring/summer displays in subtropics, more dependent upon wet/dry seasons in tropics
- Parks, lawns, street trees, specimens, public places
**Delonix regia**
*Royal Poinciana*
- Picturesque habit, stunning flowers
- Easily grown, good heat & drought tolerance
- Huisache girdlers can be problem in Rio Grande Valley; very aggressive roots; prone to circling roots

**Ceiba speciosa**
*Floss Silktree*
- Stout trunked medium to large subtropical / tropical tree in Bombacaceae or Malvaceae (?), USDA z. 9b (9a) - 13
  - Drought deciduous, green swollen trunk for water storage & Pn
  - Large spine-like pickles on trunk are ornamental
- Valued for pink/red/white flowers; very popular in tropics
  - These mostly occur during winter here and are often damaged

**Rhizophora mangle**
*Red Mangrove*
- Pan tropical small to medium size evergreen tree which spreads to form massive colonies
- Signature complex matrix of prop roots
- Viviparous seeds germinate on the tree and spear into the mud flats or float to form new colonies; can become invasive
- Architecturally fascinating, invaluable barrier to protect shorelines from waves / storm surges; not TX native but naturally adventive
- Very cold sensitive, USDA z. 10 (9b) - 13

**Coccoloba uvifera**
*Sea-Grape*
- Medium evergreen tropical tree, 20'-30' tall, grown as a dieback medium shrub or small tree along the southern Gulf Coast
- Sea-Grape from the dense drooping racemes of white-green to purplish grape-shaped drupes; not palatable
- Handsome glossy green rounded reniform to obovate leathery coarse leaves
- Highly valued for tolerance of direct salt spray; also heat, drought, and wind tolerant; picturesque habit & bark
- Cold limited, use only USDA z. 10(9b) - 13
**Ficus benjamina**
Weeping Fig

- One of our most popular commercial and residential interiorscape plants, outdoor summer accent or in pot
- Tends to drop foliage if light level, temperature, or location changes
- Medium / large 50’+ landscape tree in tropics, z.10 (9b) - 13
- Messy fruit, weed in tropics, mealy bugs & scale insects

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**Ficus benghalensis**
Banyan Tree

- Important tropical (USDA z. 10-13) landscape / historical plant
- Prop roots from horizontal branches allow spread over large areas, an acre or more have been reported
- Along with *Ficus religiosa* (Pipal) is considered sacred by some religious groups

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**Ficus microcarpa**
Indian Laurel

- Potentially a massive 75’ by 100’ wide evergreen in the tropics, but it is the dwarf small to medium shrub forms that are used along the southern Gulf Coast
- Widely grown as a street tree in Southern California / Arizona
- Cold tolerance is very limited, USDA z. 10-13
**Coccoloba uvifera**  
Sea-Grape

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**Casuarina spp.**  
Australian Pine

- Almost ubiquitous tropical landscape tree
- Resemble pines (*Pinus*), but not related
- Very rapid growth, handsome foliage

**Schefflera spp.**  
Schefflera

- Classic interiorscapes and houseplants
- Popular evergreen trees or shrubs in tropics, used mostly z. 10(9) - 13
- Handsome lustrous green palmate foliage or showy variegated cultivars
- Some species with showy red-black to purple-black flower panicles
**Schefflera spp.**

* Schefflera actinophylla is a medium-sized tree used in large interiorscapes, while *S. arboricola* and *S. elegantissima* are more shrub-like and are popular in homes, offices, and public spaces.

- They are very adaptable in tropical climates and have become invasive in some locations.
- Scale insects, spider mites, aphids, and sooty mold can be troublesome, but mostly indoors.

**Schinus terebinthifolius**

* Brazilian Pepper Tree

- Large upright dioecious evergreen shrubs or small trees in USDA z. 9b (9a) - 13
- Handsome dark green foliage contrasts with pink-red drupes on females that mature to a dark red color in autumn/winter.
- Spread of fruit by wildlife adds to invasive tendency; restricted plant in many southern states.
- Heat, drought and salt tolerant
- Used in coastal landscaping, rapid grower

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