Assigned Readings for Plant List 7

Read the pages in your textbook associated with the introduction to vines & groundcovers section, family descriptions and individual taxa covered on Plant List 8 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

**Vines**

- Woody versus herbaceous
- Evergreen versus deciduous
- Mechanical support requirements
  - Vine mass; sail of foliage

**Method of climbing**
- Leaners / sprawlers
- Twiners
- Tendrils
- Clasping petioles
- Spines / prickles
- Aerial rootlets
- Holdfasts
Many woody vines exhibit heteroblastic change (Juvenile to mature phase change)

Heteroblastic change is sometimes visible on the same plant at the same time

Vines as Design Elements & Ecosystem Service Providers
- Uniquely qualified for narrow vertical spaces
- Dual purpose – edible/ornamental
- Energy conservation & ↓ heat island
  - Direct wall attachment (deciduous versus evergreen)
  - Tellises (walls), arbors & pergolas (windows)
- Wildlife – food, shelter, nesting, pollen / nectar
- Living walls – C sequestration
- Noise / wind / pollution abatement

Vines Can Provide Quick Shade

One Year’s Difference in Growth
Limitations/Liabilities of Vines

- Frequent pruning of fast growers
- Impacts on structures
  - Masonry / stone
    - Detachment / liability
  - Wood
    - Moisture, painting/staining
    - Window frames
- Damage to trees/shrubs
- Tendencies to sucker
- Some vines can be very invasive

Reducing Potential Adverse Effects Of Vine Attachments

Specialized supports provide air space, avoids attachment remnants, and potentially reduces access issues

Antigonon leptopus  
Coral Vine
- USDA z. 9b-13 woody vine; grown as herbaceous perennial in USDA z. 8b-9a
- Showy white, pink, to red panicles from mid-summer to frost; attracts bees
- Vigorous, but looks delicate
- Excess vegetative growth in fertile soils, restrict root zone to promote flowering
- Popular on pergolas, arbors, trellis, fences; climbs via tendrils
- Bee favorite

Aristolochia elegans  
Calico Vine
- Probably best ornamental in genus
- Handsome rich green densely borne curtain of cordate leaves
- Large showy purplish flowers with unusual shape; no putrid smell
  - Interesting bud, open calico throat
- Tropical/subtropical USDA z. 9b-13 evergreen useful in z. 9a (8b) as a herbaceous perennial
**Clematis spp. Clematis**

- Variable genus, many desirable ornamentals; USDA zones 4 - 9 depending upon taxa selected
- Classic large flowering types are less adaptable, more site specific, but very showy

**Clematis spp. Clematis**

- Interesting seed heads
- Variation in smaller flower types, some very delicate, others rampant vines
- Many uses; climb by sprawling & bent petioles
- Shoots in sun, roots in shade
- Leaf spots, clematis borer, spider mites, root / stem rots

**Mandevilla × amabilis Mandevilla**

- Subtropical vine marginally hardy USDA z. 9b
- Frost intolerant, sulks in cold temperatures
- Dark glossy green leaves contrast with large pink trumpet-shaped flowers; hummingbird attractor; can get mealy bugs & root rots
- Twining or sprawling vine that is a more restrained grower than most vines for us
- Requires fertile moist well-drained soils
- Use in pot or on small trellis as summer accent

Is this a new powdered sugar-dusted cultivar of Clematis?
**Callaeum macroptera**  
(syn. *Mascagnia macroptera*)  
**Butterfly Vine**
- Rampant evergreen vine hardy in USDA z. 9 (8b) – 13; quick cover, multiple seasons of interest
- Vigorous & twining, tends to overwhelm smaller plants & structures; scale insects may infest
- Valued for bright yellow flowers, green, tan or brown butterfly-shaped fruit, & handsome dark green foliage
- Versatile vine; arbors, trellis, cut flower/dried arrangements

**Thunbergia alata**  
**Black-Eyed Susan Vine**
- A weakly woody tropical perennial grown as a summer annual twining vine
- Valued for quick cover of small structures with arrow-shaped leaves and black-centered yellow, orange, pale rose or creamy white flowers
- Reseeds prolifically, hence weedy; requires irrigation & sunny spot
- Short structures, hanging baskets, seasonal groundcover

**Campsis radicans**  
**Common Trumpet creeper**
- Rampant deciduous climbing woody vine, z. 4-9
- Coarse textured, very aggressive, can be weedy
- Sunny spot with nearly any but soggy soils

**Campsis radicans**  
**Common Trumpet creeper**
- Showy orange-red to yellow summer flowers
- Unattractive persistent fruit capsules
- Foliage combines well with *Wisteria*
- Climbs vertically by aerial rootlets
**Bignonia capreolata**  
**Cross Vine**  
- Native evergreen woody vine, USDA z. 6a - 10 (11)  
- Yellow-orange to tangerine winter flowers  
- Climbs by holdfasts at end of tendrils  
- Tolerates many soils, heat, seasonal poor drainage; may overgrow a site

**Cucurbita pepo**  
**Gourds & Pumpkins**  
- Vigorous annual vine with tendrils, prickles on stems and petioles, large coarse textured leaves  
- Yellow trumpet shaped-flowers  
- Monoecious? (male, female, perfect?)  

**Value Added Marketing?**

**Cucurbita pepo var. pepo** = pumpkins, fall/winter squash  
**Cucurbita pepo var. olifera** = ornamental gourds  
- Classic fall decorator plants; great for kids / school gardens, cottage gardens  
- Fruit used for food, ornament, specialty for interior/exterior decoration, fodder  
- Squash vine borer, squash bugs, virus, and powdery mildew can be problems

**Virus infected**

**Powdery Mildew**
Cucurbitaceae  
Gourd Family

Cucumis sativus  

cucumber

Cucumis melo  

watermelon

Lagenaria siceraria  

bottle gourd

Luffa aegyptiaca

Ficus pumila

Climbing Fig

• Evergreen clinging vine in youth
• Develops more shrub / branched form with age
• Valued for contour following form in youth

Ficus pumila

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Climbing Fig

• Often pushed north of reliable cold hardiness, USDA z. 9 (8)-13, where holdfasts are a removal problem
• Can be overly vigorous in Deep South
• Often used in high light interiorscapes

Holdfasts can mar walls

Gelsemium sempervirens

Carolina Jessamine

• Evergreen / semi-evergreen twining woody vine, hardy in USDA z. 7 - 10
• Fall to spring yellow trumpet shaped flowers, peak late winter/early spring
• Wide soil tolerance, some drought & salt tolerance; sometimes site finicky, other times vigorous to a fault
• Ingestion of plant parts is poisonous
• Good arbor, trellis or fence cover
**Hedera helix**

**English Ivy**

- Evergreen climbing woody vine or groundcover
  - Becomes shrubby at reproductive maturity
- Grown for the rich green or variegated foliage
- Excellent vine for masonry walls

**Ipomoea purpurea**

**Common Morning Glory**

- Twining naturalized annual summer vine
- Large trumpet-shaped flowers
  - Wide color range, flowers tend to close in afternoon
  - Favorite of butterflies & hummingbirds
- Extremely adaptable, but can be a noxious weed

**Bacterial blight**

**Hedera helix**

**English Ivy**

- Variable cold hardiness by cultivar, z. 4b to 8, maybe 9-13
- In cool regions full sun to shade, requires shade in Texas
- Takes several years to establish as a groundcover
- Problems with fungal and bacterial blights, aphids, & scales; avoid hot humid tropics
- Invasive issues in Eastern U.S.

**Ipomoea purpurea**

**Common Morning Glory**

- Any sunny moderately well drained location
- Naturalizing, temporary cover for trellis, arbor or trash piles, pot with small trellis
- Some *I. purpurea* cultivars are actually *I. tricolor*
Passiflora spp. Passionflowers
- Herbaceous perennial to tropical woody vines, climb by tendrils
- Most with attractive dark glossy green foliage
- Indescribable flowers, wide range of colors among species, open 1 day, breath-taking
- Some with edible fruit, storied histories

Gulf fritillary moth can defoliate
- Soil adaptable, sun & heat tolerant
- Rampant growers, envelop everything in sight
- Fast trellis, arbor, fence, naturalizing

Overtaking Juniper hedge

Pseudogynoxys chenopodioides Mexican Flame Vine
- Evergreen Mexican subtropical woody vine, USDA z. 10 (9b) – 13, herbaceous perennial 9 (8b), or annual in colder climates
- Dark green foliage is a good foil for the numerous bright yellow-orange to red-orange composite flowers
- Strong grower in most soils with a sunny exposure; heat & wind tolerate
- Nematodes, spiders, mites, scale insects, and caterpillars are occasional problems, mostly during production
- Great for trellises, fences, & rock piles
- Reported to cause a dermatitis in some individuals

Mexican Flame Vine
- Numerous native & introduced species
  - Mostly rampant deciduous woody vines climbing by tendrils
  - Vitis vinifera (European Grapes)
  - Vitis labrusca (American Grapes)
  - Vitis rotundifolia (Muscadine Grapes) are cultivated regionally
- Intimately intertwined with western civilization
  - Fruits (grapes) consumed fresh, dried (raisins), crushed to yield juice, fermented into wine, or cooked into jams & jellies
  - Attractive summer foliage, sometimes used as wrapper for cooking

Vitis spp. Grape Vines
Vitis spp.  
Grape Vines

- Tolerant of a wide range of climates & soils
- A favorite for arbors & trellises, heritage gardens
- Pierce's disease is a major problem, other insects & diseases; messy

Parthenocissus quinquefolia  
Virginia Creeper

- Vigorous deciduous woody vine, z. 4 - 9
- A primary vine of Ivy League campuses / masonry buildings
- Dark glossy green summer foliage, bright red fall color
- Durable, highly adaptable, often aggressive in cultivation
- Climbs vertical walls via holdfasts on tendrils

Parthenocissus tricuspidata  
Boston Ivy

- Another principal vine of Ivy League campuses, castles, estates and other masonry structures
- Interesting layered deciduous foliage on walls
- Dark glossy green in summer, bright red in fall
- Durable, but vigorous to a fault, may escape cultivation; useful in USDA zones 5 (4b) – 8 (9a)

Parthenocissus quinquefolia, Hedera helix, & Toxicodendron radicans
**Lablab purpureus**
* (Dolichos lablab)

**Hyacinth Bean**
- A twining woody tropical (USDA zones 10-13) vine popular for use as a summer annual
- Dark green leaves with purplish flush
- Purple, pink, or white pea-like flower spikes followed by showy purple lima bean-like pods
- Tends to begin flowering late in summer
- Growth is limited by structure and length of growing season
- Can become rampant, tends to be weedy
- Outstanding for annual trellis or fence cover

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**Pueraria montana var. lobata**

**Kudzu**
- Rampant semi-evergreen woody vine (USDA zones 8b-13) that ate the south...or at least chunks of it
- Deciduous or even herbaceous perennial in upper south, zones 6b - 8a
- Can look very rough in winter

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**Pueraria montana var. lobata**

**Kudzu**
- Originally introduced as a wonder plant to control erosion / provide fodder by USDA/SCS
- Escaped & now a classic invasive species story
- Used for various purposes in its native land
- Sometimes used as a large scale cover for structures in warm climates; salt intolerant

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**Clitoria ternatea**

**Butterfly Pea**
- Although a woody vine in tropical climates (USDA z. 10 (9b) - 13), it is grown as 6' to 10' (15') annual vine where frost occurs
- Offers unique blue (rarely white or pink) single / double conch shell-shaped flowers
- Avoid droughty sites; full sun & medium fertility for best flowering; reasonably soil pH adaptable; heat and wind tolerant
- Few diseases or pests, occasionally aphids
- Best used on small trellises or arches, perhaps sprawling color in mixed borders
- Ancient herbal “doctrine of signatures” dubbed it an aphrodisiac (but this folklore holds no basis in modern science)
**Wisteria spp.**

**Wisteria**

- Widely utilized deciduous woody vines
- Valued primarily for long grape-like clusters of blue-purple, pink, or white fragrant spring flowers
- Rampant growers, quickly overwhelm structures; only use mature clones

**Racemes of W. floribunda can be 18 inches long!**

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**Wisteria spp.**

**Wisteria**

- Require sturdy supports, avoid excess soil fertility
- Very long-lived, not particular as to site or soils, best flowering in full sun, often grows to tops of tall trees
- Boa constrictor-like twining stems can harm trees

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