

Woody Ornamental Plants

HORT 306

Fall 2011



Plant List 4

Trees With Significant
Landscape Liabilities

*There is no perfect tree, but every
tree has its place!*

*Some just have fewer acceptable
placements in cultivated
landscapes than others.*

Acer saccharinum Silver Maple

- Large deciduous eastern USA shade/forest tree
- Shortish stout trunk with spreading large branches
- Silver-back deeply lobed leaves
- Subject to similar limitations as *A. rubrum*, but a bit less site specific than *A. rubrum*
- Very weak wood, several insect/disease problems
- No fall color; very weedy on favorable sites; dense shade & surface roots hinder turf culture

Acer rubrum versus *Acer saccharinum* habit

A. saccharinum *A. rubrum*

Ailanthus altissima Tree-Of-Heaven

- Classic trash tree, once extremely popular, sort of tropical looking
- USDA z. 4 - 8 (9)
- Elephant hide bark, bold coarse texture
- Dioecious
 - Flowers are noticeable but not overly showy
 - Male flowers are malodorous

Ailanthus altissima Tree-Of-Heaven

- Fruit on females can be tan to red
- Extremely widely adapted, actually hard to kill once established
- The tree everyone loves to hate
- Prone to limb breakage

Albizia julibrissin
Mimosa

- Small 20' - 30' deciduous tree, vase-shaped, hardy USDA zones 7 (6b) - 10
- Stratified branching
- Light airy texture, large bipinnately compound leaves with tiny dark green leaflets
- Light to dark pink 2" powder-puff flowers
- Very adaptable, but develops chlorosis on extremely high pH soils
- Very rapid grower, can become weedy

'Summer Chocolate'



Albizia julibrissin
Mimosa

- **Verticillium wilt, mimosa webworm, and cotton root rot can all be limiting factors**
- Tree with tropical flavor, but short-lived



Celtis laevigata
Sugar Hackberry

- Medium/large native deciduous shade tree, 40'- 60+'
- Few favorable landscape traits, but adapted to very adverse sites, hardy in USDA zones 5 - 9
- Weedy species, birds spread seeds widely



Celtis laevigata
Sugar Hackberry

- **Shade tree (difficult sites), naturalizing, shelter belts, wildlife food & habitat**
- **Mistletoe, witch's broom, & nipple gall are persistent problems**



Elaeagnus angustifolia
Russian Olive

- Known as Oleaster in the Old World
- Although most frequently used for erosion control and shelter belts, the silver foliage is attractive
- Extremely cold tolerant; common plant in z. 2 - 6, less well adapted to z. 7 & 8
- Widely planted 15' to 20' tall small tree on in the Central to Northern Plains and Intermountain West
- Takes drought, salts, variable soil pH; although short-lived it can be invasive



Firmiana simplex
Chinese Parasol Tree

- A coarse textured small to medium, 25' to 30' (40'), deciduous tree with rounded to oval crown
- Useful USDA z. 7 - 9
- Large leaves easily damaged by wind
- Bright green trunks stand out
- Showy summer panicles of follicles



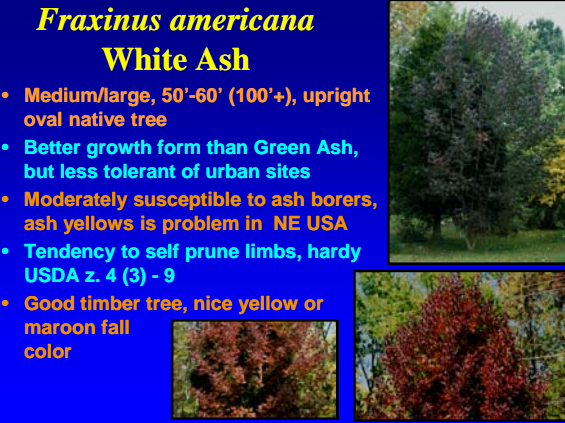
Firmiana simplex
Chinese Parasol Tree

- Tolerates wide range of well drained soils, heat and humidity, drops leaves during droughts
- Novelty, tropical accent, buffer strips, highway plantings, street tree when thin bark will not be damaged; can be invasive



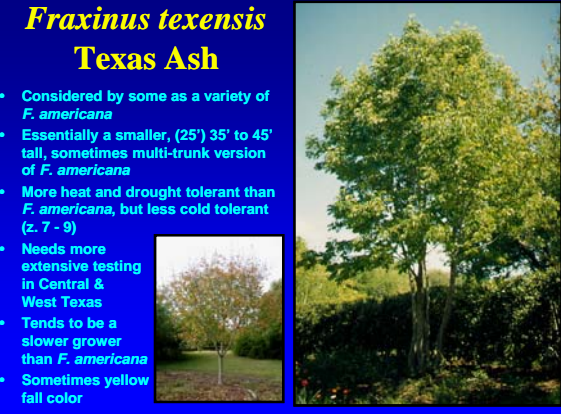
Fraxinus americana
White Ash

- Medium/large, 50'-60' (100'+), upright oval native tree
- Better growth form than Green Ash, but less tolerant of urban sites
- Moderately susceptible to ash borers, ash yellows is problem in NE USA
- Tendency to self prune limbs, hardy USDA z. 4 (3) - 9
- Good timber tree, nice yellow or maroon fall color




Fraxinus texensis
Texas Ash

- Considered by some as a variety of *F. americana*
- Essentially a smaller, (25') 35' to 45' tall, sometimes multi-trunk version of *F. americana*
- More heat and drought tolerant than *F. americana*, but less cold tolerant (z. 7 - 9)
- Needs more extensive testing in Central & West Texas
- Tends to be a slower grower than *F. americana*
- Sometimes yellow fall color



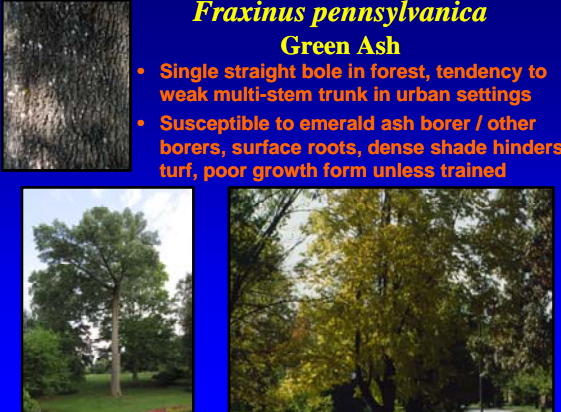
Fraxinus pennsylvanica
Green Ash

- Medium / large, 30' - 60'+, forest, shade, park or street tree
- Very cold hardy, USDA z. 2 - 9, more tolerant of compacted soils than *F. americana*, may develop a good yellow fall color




Fraxinus pennsylvanica
Green Ash

- Single straight bole in forest, tendency to weak multi-stem trunk in urban settings
- Susceptible to emerald ash borer / other borers, surface roots, dense shade hinders turf, poor growth form unless trained



Fraxinus velutina
Arizona Ash

- Rapid growing small / medium, 20'- 40' tall, shade tree
- Round lollipop crown, moderately fine textured
- Short-lived, extremely ash borer susceptible, grows in USDA zones 7 (6b) - 9 (10a)
- Fruit set can be maintenance liability on female trees, also weedy, "trash tree", performs better in South & West Texas



***Fraxinus velutina* Arizona Ash**



- Fairly drought tolerant, more tolerant of high pH soils than most *Fraxinus* spp.
- Rapid growth makes it favorite of developers and nurserymen, if not over the long run for the homeowner



***Gleditsia triacanthos*
Common Honeylocust**



- Species type is medium to large deciduous native tree
- Open filtered shade, but nasty thorns on twigs, branches and main trunk
- Interesting, but messy fruit
- Used only in specialty situations or naturalizing



***Gleditsia triacanthos* var. *inermis*
Thornless Common Honeylocust**



- Similar to *G. triacanthos* but lacking thorns
- All commercially available trees and cultivars are from this variety, southern adapted clones are lacking in the trade
- Fine textured foliage, layered branches, filtered shade, early season yellow fall color

***Gymnocladus dioica*
Kentucky Coffeetree**



- A large, 40' - 60' (90') deciduous coarse textured shade tree for USDA zones 4 - 8
- Trees have huge bipinnately compound leaves, brown to yellow fall color

***Gymnocladus dioica*
Kentucky Coffeetree**

- Flowers not showy, but fruit in pods with large hard seeds, at one time ground to make a coffee substitute
- Tolerant of a wide range of soil pH, soil salts, drought, & cold
- Poor vigor in zone 8



***Maclura pomifera*
Osage Orange**



- A deciduous small to medium size tree, 25' to 30' (50') tall, indigenous to Texas and Oklahoma
- Growth habit reminiscent of Mesquite
- Grape-fruit size syncarp of drupes produced on female trees, hence names Hedge Apple or Horse Apple
 - Biological curiosity in evolution
- Thorny forms used as living fences / barrier plant



Maclura pomifera
Osage Orange

- Once used by native Americans for bow manufacture, hence names Bodark, Bois d'Arc, or Bow Wood
- Initially a rapid grower that slows with age, adapted to a wide range of soil and site conditions in USDA zones 5 - 9
- San Jose scale and cotton root rot can be problems
- Thorns, fruit, and dense canopy cause maintenance issues

Melia azedarach **Chinaberry**

Melia azedarach f. *umbraculiformis*

- Medium, 30' - 40', deciduous tree, z. 7 - 10
 - Irregular upright oval to umbrella-shaded crown
 - Pleasantly coarse in leaf, not so in winter character
- Clusters of half inch yellow drupes resembling tiny crabapples, fall/winter, mildly effective but **poisonous** & messy, naturalized southern USA

Melia azedarach
Chinaberry

- Fragrant purple flowers in spring, hidden by foliage
- Good yellow fall color, winter fruit effect can be good
- Will tolerate extreme sites, but weedy and prone to wind, ice and snow load damage
- Similar class of trash tree as *Ailanthus altissima*, *Ulmus pumila*, & *Sapium sebiferum*; use only in dire circumstances

Morus alba
Common Mulberry

- Medium, 30' - 40', deciduous tree, short stout trunk
 - Irregular rounded crown, lots of dead twiggy growth
 - Dark glossy green foliage, no fall color
 - Edible raspberry-like fruit; fruit messy & leaves stains

Morus alba
Common Mulberry




- Extremely tough adaptable tree, tolerates reflected heat, drought, cold (z. 4), soil salts, heavy clays, various pH soils
 - Tends to be short-lived, cotton root rot, webworms, bacterial blight, other minor pests/diseases
- Use only where better trees will not grow
- Weeping forms are painfully coarse textured in winter

Parkinsonia aculeata
Retama

- Small, 15' - 20', deciduous or semi-evergreen tree
- South Texas tree naturalized further north
- Several interesting features; bright green trunk, fine textured leaf, filtered shade, yellow flowers
- Relatively short-lived, cold hardy only to z. 8b (8a) - 11






Parkinsonia aculeata
Retama

- Thorns maintenance liability, can be weedy
- Very site adaptable, cold & excessively wet soils are limiting, drought, heat, salt & alkaline soils OK








Paulownia tomentosa
Royal Paulownia

- Controversial member of *Scrophulariaceae* or *Bignoniaceae*, but is functionally very similar to *C. bignonioides* in landscapes
- An irregular rounded tree, 30' to 40' tall, in our region, important timber tree in its native land
- Large cordate leaves lend a bold tropical effect
- Light purple foxglove-like flowers in spring
- Can be weak wooded and trashy
- Extensively naturalized in some locales, tolerant of a wide range of soils/sites
- Protect from high winds, flower buds [z. 7 (6) - 9] less cold hardy than vegetative tissues [z. 6 (5) - 9]











***Populus nigra* 'Italica'** Lombardy Poplar

- Extremely narrow columnar medium size tree
- Often used to line drives, USDA z. 3 - 8 (9)
- Very short-lived, highly susceptible to cankers
- Spreads profusely by root suckers
- A better plant in low humidity environments

Prosopis glandulosa
Honey Mesquite

- Irregular spreading deciduous rounded crown
- One of most widely distributed trees in Texas
- Several desirable ornamental features;
 - Ferny fine textured foliage, filtered shade, fruit and can be attractive, adapted to almost any site



Prosopis glandulosa
Honey Mesquite



- Problems:
 - Thorns can rival those of *Gleditsia triacanthos*
 - Takes over pasture land
 - Difficult to transplant
 - Allergenic pollen
 - Looks rough in winter




Prunus serotina
Black Cherry




- Medium to large deciduous tree, dark glossy green foliage, preserved if *in situ*, but seldom planted
- Small nearly inedible cherries, but valued by wildlife; grows z. 4 - 9
- Wilted foliage is toxic to wildlife and stock
- Source of cherry lumber / veneer
- Several native regional varieties in West Texas

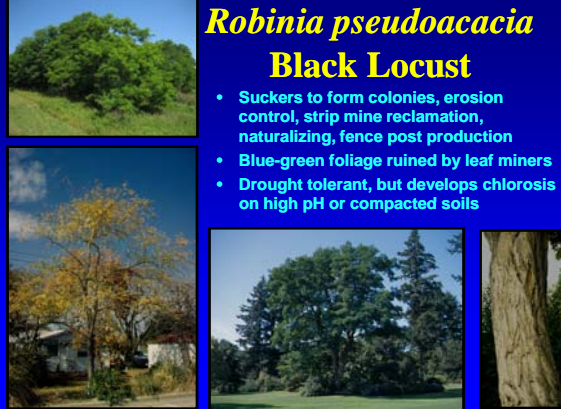






***Robinia pseudoacacia*
Black Locust**

- A 40' - 50' (100') deciduous North American tree suitable for USDA z. 5 (4) - 9, often irregular canopy
- Native NE USA, naturalized elsewhere, including Texas
- Chains of white spring flowers, yellow fall color



***Robinia pseudoacacia*
Black Locust**

- Suckers to form colonies, erosion control, strip mine reclamation, naturalizing, fence post production
- Blue-green foliage ruined by leaf miners
- Drought tolerant, but develops chlorosis on high pH or compacted soils



***Salix alba* 'Tristis'
Weeping Willow**

- Popular deciduous tree used near water features, USDA z. 3 - 8 (9a)
- Adapted to a wide geographic range and wide variety of sites as long as moisture is available
- Valued for fine-textured weeping form, bright yellow twigs, tolerance of wet sites, & cold hardiness
- Short-lived like most *Salix* spp., prone to storm damage and many pests/diseases
- Taxonomically confused with *S. babylonica*, Babylon Weeping Willow, and often sold as such



***Salix nigra*
Black Willow**

- Medium/large deciduous native tree, adapted z. 4-9
- Short stout trunk dividing to a few large upright branches, often leaning, small branches pendulous
- Valued for fine texture and tolerance to wet sites
 - Native to water courses, planted near water features
- Beautiful tree with many liabilities;
 - Short-lived, brittle wood, invasive root system, subject to borers, cankers, & cotton root rot, several other pests / diseases
 - Limit use to naturalizing near water features, stream / bank stabilization



***Sapium sebiferum*
Chinese Tallow Tree**

- Controversial small/medium (25'-35') deciduous tree
 - Major weed problem near gulf coast, extensive displacement of native vegetation in some sites
- Ecological catastrophe or good temporary tree depending on point of view, often short-lived



***Sapium sebiferum*
Chinese Tallow Tree**

- Tree of mixed merit in landscape settings
 - Fast growth, clean summer foliage, yellow, orange, red fall color, interesting flowers, fruit, trunk character
 - Major weed potential, restricted plant in Texas
 - Limited cold hardiness, z. 8 (7b)-10, tendency to break up in wind or under ice/snow load

American Horticultural Society gave it a two page spread in their book Trees That Merit Attention contrasted with Mr. Benny Simpson's advice?

Sophora japonica Japanese Pagodatree

- Small to medium size, 25' to 35' (60') tall, deciduous shade tree from Japan, USDA zones 5 (4) - 8
- Nice uniform rounded to upright oval crown
- White chains of flowers followed by translucent yellowish green legumes; messy fruit

Sophora japonica Japanese Pagodatree

- Slow to flower from seed, use grafted mature clones
- Drought tolerant, soil adaptable
- Shade, park, street, or specimen tree

Tamarix gallica Salt Cedar

- Deciduous, semi-evergreen, to evergreen multi-stem large shrub or small tree
- Soft feathery gray-green to blue-green foliage, soft textured version of *Juniperus* spp.

Tamarix gallica Salt Cedar

- Pepto-Bismol pink flower panicles summer-fall; incongruous with foliage
- Tolerant of salty soils and irrigation water, coastal dunes
- Very invasive in SW USA, displaces native species
- Adapted to USDA z. 6 (5) to 10 (11)
- Biological control vs. garden pest example

Ulmus pumila Siberian Elm

- Medium (30' - 50') tree, irregularly rounded crown, USDA z. 4 (3b) - 9
- Resistant to DED and phloem necrosis, but a lousy landscape tree where there are better species
 - Susceptible to wet wood, elm leaf beetles, and cotton root rot
 - Susceptible to wind damage, breaks up in ice / snow
 - Invasive root system, dense crown inhibits turf culture
 - Weed species, confused with superior *U. parvifolia*
- Reserve for difficult sites where other species will not grow

Questions / Comments?

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