Species: *Acer campestre*
(ay'ser kam-pess'tree)
Hedge Maple

**Cultivars**

'Carnival', 'Elegant', 'Elsrijk', 'Evenley Red', 'Field Maple', 'Jade Patina', 'Louisa Red Shine', 'Metro Gold', 'Nanum', 'Postelense', 'Pulverentum', 'Queen Elizabeth', 'Royal Ruby', 'Schichtel's Upright', 'Schwerinii', 'St. Gregory', 'William Caldwell'

**Ornamental Characteristics**

- Size: Tree > 30 feet, Tree < 30 feet
- Height: 25' - 35'
- Leaves: Deciduous
- Shape: round
- Ornamental Other: Known to naturalize or become invasive in some areas.

**Environmental Characteristics**

- Light: Full sun
- Hardy To Zone: 5a
- Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- Salt Tolerance:
- Environmental Other:
- Moisture Tolerance:
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil;
  - Prolonged periods of dry soil
- See graphic below

**Insect Disease**

relatively pest free

**Additional Other**

easily transplanted in spring or fall, native to Europe, Middle East and North Africa.
May become weedy in a natural area

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct 1</td>
<td>Oct 12</td>
</tr>
<tr>
<td>12</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Occasional periods of dry soil</td>
</tr>
</tbody>
</table>

Consistently moist, well-drained soil
Occasional periods of dry soil
Prolonged periods of dry soil
Occasionally saturated or very wet soil
Consistently moist, well-drained soil
Photos

Acer campestre - Habit, Fall Interest

Acer campestre - Leaves

Acer campestre - Leaves

Acer campestre - Habit

Acer campestre - Habit

Acer campestre - Habit

Acer campestre - Fruit

Acer campestre - Leaves

Acer campestre - Buds
Species: *Acer negundo*  
(ā´sēr ne-goon´dō)  
Boxelder

### Cultivars

' Auratum ', ' Flamingo ', ' Kelly's Gold ', ' Sensation ', ' Variegatum ', ' Violaceum '

### Ornamental Characteristics

<table>
<thead>
<tr>
<th>Size:</th>
<th>Tree &gt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height:</td>
<td>30'-50'</td>
</tr>
<tr>
<td>Leaves:</td>
<td>Deciduous</td>
</tr>
<tr>
<td>Shape:</td>
<td>oval, irregular</td>
</tr>
<tr>
<td>Ornamental Other:</td>
<td></td>
</tr>
</tbody>
</table>

### Environmental Characteristics

<table>
<thead>
<tr>
<th>Light:</th>
<th>Full sun, Part shade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone:</td>
<td>3a</td>
</tr>
<tr>
<td>Soil Ph:</td>
<td>Can tolerate acid to alkaline soil (pH 5.0 to 8.0)</td>
</tr>
<tr>
<td>Salt Tolerance:</td>
<td></td>
</tr>
<tr>
<td>Environmental Other:</td>
<td></td>
</tr>
<tr>
<td>Moisture Tolerance:</td>
<td>Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil See graphic below</td>
</tr>
</tbody>
</table>

### Insect Disease

Box elder bugs

### Additional Other

seeds prolifically, weedy, weak-wooded; Native to US, Canada and northern Mexico

### Moisture Tolerance

<table>
<thead>
<tr>
<th>Moisture Tolerance</th>
<th>VERY WET</th>
<th>VERY DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Moisture Tolerance</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasional periods of dry soil</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Photos

- Acer negundo - Habit, Fungus
- Acer negundo - Bark
- Acer negundo - Habit
- Acer negundo - Leaves
- Acer negundo 'Variegatum' - Leaves
- Acer negundo - Stems
- Acer negundo - Seeds
- Acer negundo - Bark
- Acer negundo - Buds
Species: **Acer platanoides**
(ay'ser plat-an-oy'deez)
Norway Maple

**Cultivars**

There are many cultivars available for this species. Some are broad and spreading. Others are narrow.
'Cleveland', 'Columnare', 'Crimson King', 'Crimson Sentry', 'Deborah', 'Drummondii', 'Emerald Queen', 'Globosum', 'Olmsted', 'Parkway', 'Princeton Gold', 'Royal Red', 'Summershade', 'Superform'

**Ornamental Characteristics**

- **Size:** Tree > 30 feet
- **Height:** 40' - 50'
- **Leaves:** Deciduous
- **Shape:** see below
- **Ornamental Other:** Known to naturalize or become invasive throughout most of the northern U.S.

**Environmental Characteristics**

- **Light:** Full sun, Part shade
- **Hardy To Zone:** 4a
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:**
- **Environmental Other:**
- **Moisture Tolerance:**
  - Occasionally saturated or very wet soil;
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil
  - See graphic below

**Insect Disease**

- Variety Parkway tolerant of verticillium wilt; Variety Summershade tolerant of leaf hoppers

**Additional Other**

- native to Europe; easy to transplant in spring or fall. INVASIVE in US

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>Occasional periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Moisture Tolerance Table:</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Photos

- Acer platanoides - Flowers
- Acer platanoides - Leaf
- Acer platanoides - Habit
- Acer platanoides - Bark
- Acer platanoides 'Crimson King' - Habit
- Acer platanoides 'Schwedleri' - Leaves, Fall Interest
Species: **Acer rubrum**  
(ay'ser rue'brum)  
Red Maple; Scarlet Maple; Swamp Maple

**Cultivars**


**Ornamental Characteristics**

- **Size:** Tree > 30 feet  
- **Height:** 40' - 60'  
- **Leaves:** Deciduous  
- **Shape:** Shape varies widely by variety. Generally upright with a rounded crown, however many columnar varieties exist.  

**Environmental Characteristics**

- **Light:** Full sun  
- **Hardy To Zone:** 3b  
- **Soil Ph:** Can tolerate acid to neutral soil (pH 5.0 to 7.4)  
- **Salt Tolerance:**  

**Additional Other**

Native to North America (Newfoundland to Minnesota, south to Florida and Texas). Best transplanted in spring. Often seen as a wet site tolerant tree, however upland genotypes exist. Wetland genotypes are more commonly selected from in the trade as they tend to be more vigorous. Upland genotypes are more drought tolerant but tend to be slow-growing.

**Insect Disease**

No diseases listed

**Moisture Tolerance**

<table>
<thead>
<tr>
<th></th>
<th>Occasionay saturated or very wet soil</th>
<th>Consistently moist, well-drained soil</th>
<th>Occasional periods of dry soil</th>
<th>Prolonged periods of dry soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>11</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Photos

Acer rubrum - Bark
Acer rubrum - Buds
Acer rubrum - Leaves, Fall Interest

Acer rubrum - Flowers
Acer rubrum - Leaves, Fall Interest
Acer rubrum - Leaf

Acer rubrum - Flowers
Acer rubrum - Flowers, Seeds
Acer rubrum - Habit
Species: *Acer saccharinum*  
(ay'ser sak-car-eye'num)  
Silver Maple

**Cultivars**

'Beebe Cutleaf Weeping', 'Blair', 'Laciniatum Wieri', 'Silver Queen', 'Skinneri'

**Ornamental Characteristics**

- **Size:** Tree > 30 feet  
- **Height:** 50' - 70' (spread 35' - 50')  
- **Leaves:** Deciduous  
- **Shape:** oval to rounded  
- **Ornamental Other:** A particularly large, fast-growing, and as a result, weak-wooded tree. This plant was seen as a good street tree replacement for American Elms, however, due to its weak wooded nature and large size, it is known to drop limbs. This can happen with little to no warning and can cause significant property damage or injury/death. As a result these trees should be planted sparingly and with extreme caution.

**Environmental Characteristics**

- **Light:** Full sun, Part shade  
- **Hardy To Zone:** 3a  
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)  
- **Salt Tolerance:**
  Environmental Other: Medium to fine textured foliage, silvery grey underneath, turning soft yellow in fall; silvery gray bark flakes off to expose orange inner bark  
- **Moisture Tolerance:**
  Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil

**Insect Disease**

- anthracnose; leaf spot; tar spot and more; weak wood subject to storm damage

**Additional Other**

- transplants well bare root or B & B; vigorous; seeds freely; shallow roots will buckle sidewalks and clog drain tiles; good for poor soils where few other trees will survive

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>VERY WET</th>
<th>VERY DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>Occasional periods of dry soil</td>
</tr>
</tbody>
</table>
Photos

- Acer saccharinum - Habit
- Acer saccharinum - Leaves, Buds
- Acer saccharinum - Buds
- Acer saccharinum - Bark
- Acer saccharinum - Leaf
- Acer saccharinum - Bark
- Acer saccharinum - Buds
- Acer saccharinum - Leaves
- Acer saccharinum - Leaf
Species: *Acer saccharum*
(ay'ser sak-car'um)
Sugar Maple; Rock Maple; Hard Maple

**Cultivars**

Many cultivars, some <30', vary in shape, size and fall color

**Ornamental Characteristics**

- **Size:** Tree > 30 feet, Tree < 30 feet
- **Height:** 60' - 75' (spread variable), some cultivars less than 30'
- **Leaves:** Deciduous
- **Shape:** upright oval to mounded; dense foliage
- **Ornamental Other:** Intolerant of compacted soil and urban stresses. Heavy metals in water or soil can result in vessel clogs which cause die back and eventually death.

**Environmental Characteristics**

- **Light:** Full sun
- **Hardy To Zone:** 3b
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:**
- **Environmental Other:**
- **Moisture Tolerance:** Consistently moist, well-drained soil; occasional periods of dry soil
See graphic below

**Insect Disease**

- few problems unless sited too close to roads and highways; leaf scorch and verticillium wilt; dieback under stress

**Additional Other**

- native to North America (eastern Canada south to Texas); easy to transplant; sap is boiled down to make maple syrup

**Moisture Tolerance**

![Moisture Tolerance Graph](image)

*VERY WET*  
Occasionally saturated or very wet soil | Consistently moist, well-drained soil | Occasional periods of dry soil | Prolonged periods of dry soil
---|---|---|---
1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12

*VERY DRY*
Photos

- Acer saccharum - Flowers
- Acer saccharum - Habit, Fall Interest
- Acer saccharum - Bark
- Acer saccharum - Leaf
- Acer saccharum - Habit
- Acer saccharum - Habit
- Acer saccharum - Leaves, Bark
- Acer saccharum - Buds
- Acer saccharum 'Autumn Fest' - Habit
Species: *Aesculus hippocastanum*  
(ess’kue-luss hip-o-kas-tay’num)  
Common Horsechestnut; European Horsechestnut

### Cultivars

'Baumanii'

### Ornamental Characteristics

- **Size:** Tree > 30 feet
- **Height:** 50’ - 75’ (40’ - 70’+)
- **Leaves:** Deciduous
- **Shape:** upright oval to rounded
- **Ornamental Other:** full sun or light shade; avoid extremely dry situations

### Environmental Characteristics

- **Light:** Full sun
- **Hardy To Zone:** 4a
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:**
- **Environmental Other:** full sun or light shade; avoid extremely dry situations
- **Moisture Tolerance:**  
  Consistently moist, well-drained soil;  
  Occasional periods of dry soil  
  See graphic below

### Insect Disease

- more susceptible to drought injury and leaf scorch than *A. x carnea*;  
- bacterial leaf blotch; powdery mildew; and more

### Additional Other

- native to Greece and Albania; transplant B&B

### Moisture Tolerance

<table>
<thead>
<tr>
<th>Moisture Tolerance</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VERY WET</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occasionally saturated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or very wet soil</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td><strong>CONSISTENTLY WET</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistently moist, well-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>drained soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MOIST</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DROUGHT TOLERANT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prolonged periods of dry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Species: *Ailanthus altissima*

(ay-lan'thus al-tis'i-mah)

Tree-of-Heaven

### Cultivars

'Hongye', 'Metro', 'Pendulifolia', 'Thousand Leaders', 'var. erythrocarpa'

### Ornamental Characteristics

<table>
<thead>
<tr>
<th>Size: Tree &gt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height: 40' - 60' (25' - 40')</td>
</tr>
<tr>
<td>Leaves: Deciduous</td>
</tr>
<tr>
<td>Shape: upright, spreading</td>
</tr>
<tr>
<td>Ornamental Other: extremely adaptable - even in poor soil and in proximity to salt; can be a noxious weed</td>
</tr>
</tbody>
</table>

### Environmental Characteristics

<table>
<thead>
<tr>
<th>Light: Full sun, Part shade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone: 5a</td>
</tr>
<tr>
<td>Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)</td>
</tr>
<tr>
<td>Salt Tolerance: Tolerates salt spray</td>
</tr>
<tr>
<td>Environmental Other: dark green foliage gives coarse, tropical appearance; yellow to bright red ornamental fruit on female trees</td>
</tr>
<tr>
<td>Moisture Tolerance: Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil</td>
</tr>
<tr>
<td>See graphic below</td>
</tr>
</tbody>
</table>

### Insect Disease

verticillium can be a problem; short-lived; soft wood is easily damaged by snow and ice

### Additional Other

dioecious - male plant gives off disagreeable odor; fast-growth; produces considerable litter, native to China, Naturalized in Europe and N. America INVASIVE in North America

### Moisture Tolerance

```
<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prolonged periods of dry soil</td>
<td>10 11 12</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td>9</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>8</td>
</tr>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
```
Photos

- Ailanthus altissima - Leaves
- Ailanthus altissima - Habit
- Ailanthus altissima - Leaves
- Ailanthus altissima - Leaves, Fruit
- Ailanthus altissima - Habit
- Ailanthus altissima - Leaves, Fruit
- Ailanthus altissima - Habit
- Ailanthus altissima - Habit
- Ailanthus altissima - Leaves, Fruit
Species: *Amelanchier spp.*

(am-ell-lang'kee-er)

Serviceberry; Shadblow

**Cultivars**

A particularly diverse genus with many confusingly similar species. Both shrub and tree forms exist and multi-stem or single stem varieties are available. All species produce edible fruits, however some are more palatable/productive than others. *A. alnifolia* is a shrub form species with cultivars that are particularly cold hardy (generally to Zone 2 or 3).


**Ornamental Characteristics**

Size: Tree < 30 feet  
Height: 6' to 25' with spread 10'-20'  
Leaves: Deciduous  
Shape: small tree or large multi-stem shrub  
Ornamental Other: full sun to part shade

**Environmental Characteristics**

Light: Full sun, Part shade  
Hardy To Zone: 3b  
Soil Ph: Can tolerate acid to neutral soil (pH 5.0 to 7.4)  
Salt Tolerance:  
Environmental Other: white flowers in early spring; edible globular berries; good fall color  
Moisture Tolerance: Consistently moist, well-drained soil; Occasional periods of dry soil  
See graphic below

**Insect Disease**

Cedar-apple rust, fireblight, leaf spot, and mites

**Additional Other**

Native to Eastern N. America

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Consistently moist, well-drained soil</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Photos

- Amelanchier spp. - Habit, Fall Interest
- Amelanchier spp. - Flowers
- Amelanchier spp. - Habit

- Amelanchier spp. - Habit
- Amelanchier spp. - Bark
- Amelanchier spp. - Habit

- Amelanchier spp. - Immature Flowers
- Amelanchier spp. - Flowers
- Amelanchier spp. - Leaves
Species: *Betula papyrifera*
(bet‘you-lah pap-i-riff‘er-ah)
Paper Birch; Canoe Birch; White Birch

**Cultivars**

'Belle Vue', 'Chickadee', 'Prairie Dream', 'Renaissance Oasis', 'Renaissance Reflection', 'Snowy', 'St. George'

**Ornamental Characteristics**

- **Size:** Tree > 30 feet
- **Height:** 50' - 70' (spread 30' - 60')
- **Leaves:** Deciduous
- **Shape:** pyramidal to oval/rounded; single or multi-stem tree
- **Ornamental Other:** full sun

**Environmental Characteristics**

- **Light:** Full sun
- **Hardy To Zone:** 3a
- **Soil Ph:** Can tolerate acid to neutral soil (pH 5.0 to 7.4)
- **Salt Tolerance:**
- **Environmental Other:**
- **Moisture Tolerance:** Consistently moist, well-drained soil; Occasional periods of dry soil
- **Additional Other:** Native to North America, Labrador to British Columbia, and northern US; transplants easily B & B

**Insect Disease**

Susceptible to bronze birch borer and leaf miners

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Consistently moist, well-drained soil</th>
<th>Occasional periods of dry soil</th>
<th>Prolonged periods of dry soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3</td>
<td>4 5 6</td>
<td>7 8 9</td>
<td>10 11 12</td>
</tr>
</tbody>
</table>

See graphic below
## Photos

<table>
<thead>
<tr>
<th>Betula papyrifera - Bark</th>
<th>Betula papyrifera - Catkins</th>
<th>Betula papyrifera - Habit, Fall Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Betula papyrifera - Leaves, Fall Interest</td>
<td>Betula papyrifera - Habit</td>
<td>Betula papyrifera - Habit, Fall Interest</td>
</tr>
<tr>
<td>Betula papyrifera - Catkins</td>
<td>Betula papyrifera - Bark</td>
<td>Betula papyrifera - Bud</td>
</tr>
</tbody>
</table>
Species: Catalpa speciosa
(kah-tal'pah spee-see-oh'sah)
Catalpa; Indian Bean

Cultivars

Both the straight species and these cultivars are rare in the trade, this is a genus which deserves greater use and selection.
'Aurea', 'Koehnei', 'Nana', 'Pulverulenta', 'Purpurea', 'Variegata'

Ornamental Characteristics

<table>
<thead>
<tr>
<th>Size: Tree &gt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height: 40' - 60' (20' - 40' spread)</td>
</tr>
<tr>
<td>Leaves: Deciduous</td>
</tr>
<tr>
<td>Shape: open, irregular, oval crown</td>
</tr>
<tr>
<td>Ornamental Other: sun or part-shade; fast growth in moist site.</td>
</tr>
</tbody>
</table>

Environmental Characteristics

<table>
<thead>
<tr>
<th>Light: Full sun, Part shade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone: 4a</td>
</tr>
<tr>
<td>Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)</td>
</tr>
<tr>
<td>Salt Tolerance:</td>
</tr>
<tr>
<td>Environmental Other: sun or part-shade; fast growth in moist site.</td>
</tr>
<tr>
<td>Moisture Tolerance:</td>
</tr>
<tr>
<td>Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil</td>
</tr>
<tr>
<td>See graphic below</td>
</tr>
</tbody>
</table>

Insect Disease

No diseases listed

Additional Other

transplant B & B or bare root as a small tree, native to Northern and Central Midwestern US.

Moisture Tolerance

<table>
<thead>
<tr>
<th>VERY WET</th>
<th>VERY DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Photos

- Catalpa speciosa - Bark
- Catalpa speciosa - Leaves, Flowers
- Catalpa speciosa - Flowers
- Catalpa speciosa - Leaves
- Catalpa speciosa - Habit
- Catalpa speciosa - Habit
- Catalpa speciosa - Habit
- Catalpa speciosa - Fruit
- Catalpa speciosa - Buds
Species: *Fraxinus americana*  
(frak'si-nus ah-mer-i-kay'nah)  
White Ash

Cultivars

'Autumn Applause', 'Autumn Blaze', 'Autumn Purple', 'Champaign County', 'Empire', 'Greenspire', 'Northern Blaze', 'Rose Hill', 'Skyline', 'Sparzam'

Ornamental Characteristics

<table>
<thead>
<tr>
<th>Size: Tree &gt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height: 50' - 70'</td>
</tr>
<tr>
<td>Leaves: Deciduous</td>
</tr>
<tr>
<td>Shape: oval</td>
</tr>
<tr>
<td>Ornamental Other: needs full sun</td>
</tr>
</tbody>
</table>

Environmental Characteristics

<table>
<thead>
<tr>
<th>Light: Full sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone: 4a</td>
</tr>
<tr>
<td>Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)</td>
</tr>
<tr>
<td>Salt Tolerance:</td>
</tr>
<tr>
<td>Environmental Other: attractive yellow to reddish/purple fall color</td>
</tr>
<tr>
<td>Moisture Tolerance:</td>
</tr>
<tr>
<td>Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil</td>
</tr>
<tr>
<td>See graphic below</td>
</tr>
</tbody>
</table>

Insect Disease

in some areas ash yellows and insect problems may be a hazard. Susceptible to Emerald Ash Borer.

Additional Other

transplant in spring or fall, native to Eastern and Midwestern N. America.

Moisture Tolerance

<table>
<thead>
<tr>
<th><strong>VERY WET</strong></th>
<th><strong>VERY DRY</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>10</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>
Photos

Fraxinus americana - Bark
Fraxinus americana - Habit, Fall Interest
Fraxinus americana - Leaves

Fraxinus americana - Habit
Fraxinus americana - Habit
Fraxinus americana - Habit

Fraxinus americana - Bud
Fraxinus americana - Leaves, Fall Interest
Fraxinus americana - Fall Interest
Species: *Fraxinus excelsior*
(frak'si-nus ek-sel'si-or)
European Ash

Cultivars

There are several cultivars, many readily available in Europe, fewer in the US.
'Aurea', 'Aurea Pendula', 'Globosa', 'Gold Cloud', 'Hessei'

Ornamental Characteristics

<table>
<thead>
<tr>
<th>Size: Tree &gt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height: 70' - 80' (60' - 90' spread)</td>
</tr>
<tr>
<td>Leaves: Deciduous</td>
</tr>
<tr>
<td>Shape: rounded; lower branches upcurving</td>
</tr>
</tbody>
</table>

Ornamental Other:

Environmental Characteristics

<table>
<thead>
<tr>
<th>Light: Full sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone: 4b</td>
</tr>
<tr>
<td>Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)</td>
</tr>
<tr>
<td>Salt Tolerance:</td>
</tr>
<tr>
<td>Environmental Other: dark green foliage does not change color in fall</td>
</tr>
<tr>
<td>Moisture Tolerance:</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil; Occasional periods of dry soil</td>
</tr>
<tr>
<td>See graphic below</td>
</tr>
</tbody>
</table>

Insect Disease

susceptible to borer, scale and Emerald Ash Borer

Additional Other

Native to Europe

Moisture Tolerance

<table>
<thead>
<tr>
<th>VERY WET</th>
<th>VERY DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Consistently moist, well-drained soil</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Photos

- Fraxinus excelsior - Bark
- Fraxinus excelsior - Buds
- Fraxinus excelsior - Habit

- Fraxinus excelsior - Buds
- Fraxinus excelsior - Habit
- Fraxinus excelsior - Bark

- Fraxinus excelsior - Buds
- Fraxinus excelsior - Leaf
- Fraxinus excelsior - Habit
Species: Fraxinus pennsylvanica
(frak'si-nus pen-sil-van'ni-kah)
Green Ash; Red Ash

Cultivars

Ornamental Characteristics
Size: Tree > 30 feet
Height: 50' - 60'
Leaves: Deciduous
Shape: oval, pyramidal

Environmental Characteristics
Light: Full sun
Hardy To Zone: 3a
Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
Salt Tolerance:

Insect Disease
resistant to anthracnose; ash borers can be a problem in hot, dry environments; fairly resistant to ash yellows; Emerald ash borer may limit their use.

Additional Other
native to eastern North America (from Nova Scotia to Florida and Texas); transplant in spring or fall

Moisture Tolerance

<table>
<thead>
<tr>
<th>Occasionlly saturated or very wet soil</th>
<th>Consistently moist, well-drained soil</th>
<th>Occasional periods of dry soil</th>
<th>Prolonged periods of dry soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Photos

Fraxinus pennsylvanica - Habit, Fall Interest

Fraxinus pennsylvanica - Leaves, Bark

Fraxinus pennsylvanica - Bark

Fraxinus pennsylvanica - Bark

Fraxinus pennsylvanica - Seeds

Fraxinus pennsylvanica - Habit

Fraxinus pennsylvanica - Habit

Fraxinus pennsylvanica - Buds

Fraxinus pennsylvanica - Bud
Species: **Ginkgo biloba**
(gingk'go bye-lo'bah)
Ginkgo; Maidenhair Tree

**Cultivars**

There are many rare cultivars (particularly dwarf varieties) of this plant, below are a few of the more readily available varieties.


**Ornamental Characteristics**

- **Size:** Tree > 30 feet
- **Height:** 60' - 100'
- **Leaves:** Deciduous
- **Shape:** irregular when young; pyramidal with age
- **Ornamental Other:**

**Environmental Characteristics**

- **Light:** Full sun
- **Hardy To Zone:** 4b
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:**
- **Environmental Other:**
- **Moisture Tolerance:** Consistently moist, well-drained soil; Occasional periods of dry soil; Prolonged periods of dry soil
- **See graphic below**

**Insect Disease**

pest free

**Additional Other**

Specify male trees only because of noxious fruit smell (all cultivars are male); transplant in spring or fall; native to China.

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Occasionallly saturated or very wet soil</th>
<th>Consistently moist, well-drained soil</th>
<th>Occasional periods of dry soil</th>
<th>Prolonged periods of dry soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>
Photos

- Ginkgo biloba - Bark
- Ginkgo biloba - Habit, Fall Interest
- Ginkgo biloba - Seeds, Leaves
- Ginkgo biloba - Spur
- Ginkgo biloba - Habit
- Ginkgo biloba - Leaves, Bark
- Ginkgo biloba - Habit
- Ginkgo biloba - Leaf
- Ginkgo biloba - Leaves
**Species: Gleditsia triacanthos**
(geh-dit'si-ah tri-a-kan'thos)
Common Honeylocust; Honey Locust

**Cultivars**
The straight species of this tree possesses large thorns. Most of the cultivars of selected from the var. inermis variety. Some cultivars <30'
'Christie', 'Imperial', 'Moraine', 'Rubylace', 'Shademaster', 'Skyline', 'Spectrum', 'Sunburst', 'var. inermis'

**Ornamental Characteristics**
- Size: Tree > 30 feet, Tree < 30 feet
- Height: 30' - 70' (variable spread), some cultivars <30'
- Leaves: Deciduous
- Shape: ovate; fine texture; graceful habit
- Ornamental Other: full sun; drought tolerant

**Environmental Characteristics**
- Light: Full sun
- Hardy To Zone: 4b
- Soil pH: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- Salt Tolerance: Tolerates salty soil
- Environmental Other:
- Moisture Tolerance:
  - Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil; Prolonged periods of dry soil
  - See graphic below

**Insect Disease**
Overuse has created many insect problems; honeylocust plant bug, honeylocust borer, midge pod gall, webworm and spider mites

**Additional Other**
- native to central United States; overused

**Moisture Tolerance**

```
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

Photos

- Gleditsia triacanthos - Leaves, Thorns
- Gleditsia triacanthos - Bark
- Gleditsia triacanthos - Fruit

- Gleditsia triacanthos - Habit, Fall Interest
- Gleditsia triacanthos - Bud
- Gleditsia triacanthos - Leaves

- Gleditsia triacanthos - Habit
- Gleditsia triacanthos - Fruit
- Gleditsia triacanthos - Leaves
Species: *Juglans nigra*
(jug'lanz nye'grah)
Black Walnut

Cultivars
Some rare varieties exist for nut production, few selections have been made for horticultural purposes.
'Laciniata'

Ornamental Characteristics
- **Size:** Tree > 30 feet
- **Height:** 50' - 75' (equal spread)
- **Leaves:** Deciduous
- **Shape:** massive, upright spreading; oval/rounded crown

Environmental Characteristics
- **Light:** Full sun
- **Hardy To Zone:** 4b
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:**

Insect Disease
- **No diseases listed**

Additional Other
- native to eastern U.S. and southern Ontario;
taproot - difficult to transplant; nuts can be a litter problem; often restricts growth of other plants near it by exuding an inhibitory chemical from its roots.

Moisture Tolerance

<table>
<thead>
<tr>
<th>Occasion</th>
<th>Consistently moist, well-drained soil</th>
<th>Occasional periods of dry soil</th>
<th>Prolonged periods of dry soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>
### Photos

<table>
<thead>
<tr>
<th>Plant</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Juglans nigra</em> - Bark</td>
<td><img src="image1.png" alt="Image" /></td>
</tr>
<tr>
<td><em>Juglans nigra</em> - Bud</td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td><em>Juglans nigra</em> - Fruit</td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
<tr>
<td><em>Juglans nigra</em> - Habit</td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td><em>Juglans nigra</em> - Bark</td>
<td><img src="image5.png" alt="Image" /></td>
</tr>
<tr>
<td><em>Juglans nigra</em> - Buds</td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
<tr>
<td><em>Juglans nigra</em> - Leaf Scar</td>
<td><img src="image7.png" alt="Image" /></td>
</tr>
<tr>
<td><em>Juglans nigra</em> - Leaves</td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
<tr>
<td><em>Juglans nigra</em> - Fruit</td>
<td><img src="image9.png" alt="Image" /></td>
</tr>
</tbody>
</table>
Species: *Malus spp.*  
(may’lus flo-ri-bun’dah)  
Flowering Crabapple

<table>
<thead>
<tr>
<th>Cultivars</th>
</tr>
</thead>
<tbody>
<tr>
<td>This is a genus with a wide variety of species, varieties, and cultivars. Plants in this genus are generally very susceptible to a wide variety of pests and diseases including but not limited to: fire blight, scab, cedar-apple rust; aphids, etc. Below are a selection of the more pest and disease resistant selections found within this genus. Keep in mind that crabapples are some of the most popular small flowering trees in the trade and new varieties and cultivars are in near constant selection.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ornamental Characteristics</th>
<th>Environmental Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size:</strong> Tree &lt; 30 feet</td>
<td><strong>Light:</strong> Full sun</td>
</tr>
<tr>
<td><strong>Height:</strong> 20'</td>
<td><strong>Hardy To Zone:</strong> 4b</td>
</tr>
<tr>
<td><strong>Leaves:</strong> Deciduous</td>
<td><strong>Soil Ph:</strong> Can tolerate acid to alkaline soil (pH 5.0 to 8.0)</td>
</tr>
<tr>
<td><strong>Shape:</strong> round</td>
<td><strong>Salt Tolerance:</strong></td>
</tr>
<tr>
<td><strong>Ornamental Other:</strong> full sun for best flower and fruit</td>
<td><strong>Environmental Other:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insect Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>cedar-apple rust; scab and mildew; fireblight; Japanese Beetles</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Moisture Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VERY WET</strong></td>
</tr>
<tr>
<td>Occasionally saturated or very wet soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
</tr>
<tr>
<td><strong>VERY DRY</strong></td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
</tr>
</tbody>
</table>
Photos

Malus spp. - Flowers
Malus spp. - Flowers
Malus spp. - Fruit

Malus spp. - Leaves
Malus spp. - Habit
Malus spp. - Habit

Malus spp. - Habit, Flowers
Malus spp. - Habit, Flowers
Malus spp. - Immature Fruit
Species: *Picea abies*  
(pye-see'ah ay'bee)  
Norway Spruce

**Cultivars**

This is a very commonly planted tree, in some areas it has a tendency to escape cultivation and naturalize or become invasive. There are hundreds of cultivars and varieties of this species. Many of the cultivars are dwarf or weeping but some are full size. A selection of some of these can be found below.  

**Ornamental Characteristics**

| Size: Tree | > 30 feet |
| Height: | 60' - 100' |
| Leaves: | Evergreen |
| Shape: | pyramidal; pendulous branches |
| Ornamental Other: | full sun |

**Environmental Characteristics**

| Light: | Full sun |
| Hardy To Zone: | 3b |
| Soil Ph: | Can tolerate acid to alkaline soil (pH 5.0 to 8.0) |
| Salt Tolerance: |  |
| Environmental Other: |  |
| Moisture Tolerance: | Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil |
| See graphic below |  |

**Insect Disease**

No diseases listed

**Additional Other**

native to northern and central Europe; transplant B & B in spring or fall

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td></td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td></td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Photos

Picea abies - Leaves

Picea abies - Leaves

Picea abies - Leaves

Picea abies - Habit

Picea abies - Habit

Picea abies - Habit

Picea abies - Habit

Picea abies - Cone, Leaves

Picea abies - Bark
**Species: Picea pungens**  
(pye-see'ah pun'jenz)  
Colorado Spruce

### Cultivars
- 'f. glauca', 'Fat Albert', 'Glauc Pendula', 'Hoopsii', 'Iseli Fastigiata', 'Iseli Foxtail', 'Koster', 'Moerheim', 'Moerheimii', 'Montgomery', 'Pendula', 'Thompsenii'

### Ornamental Characteristics
- **Size:** Tree > 30 feet  
- **Height:** 30' - 60'  
- **Leaves:** Evergreen  
- **Shape:** narrow to broadly pyramidal; densely branched  
- **Ornamental Other:** full sun

### Environmental Characteristics
- **Light:** Full sun, Part shade  
- **Hardy To Zone:** 3b  
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)  
- **Salt Tolerance:** Tolerates salt spray  
- **Environmental Other:** full sun  
- **Moisture Tolerance:** Consistently moist, well-drained soil; Occasional periods of dry soil  
- **Additional Other:** native to Rocky Mountains; transplant B & B in spring or fall

### Insect Disease
- No diseases listed

### Moisture Tolerance

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>9</td>
</tr>
</tbody>
</table>

---

**Note:**  
This table represents the tolerance of the plant to varying moisture conditions. The numbers indicate different levels of moisture stress.
Photos

- Picea pungens - Bark
- Picea pungens - Leaves
- Picea pungens - Leaves
- Picea pungens - Habit
- Picea pungens - Habit
- Picea pungens - Habit
- Picea pungens - Habit
- Picea pungens - Cones, Leaves
Species: *Pinus nigra*
(pye'nus nye'grah)
Austrian Pine

**Cultivars**

This is a historically popular species with many cultivars and tends to be salt and urban hardy. Unfortunately this species is particularly susceptible to diplodia blight and should generally be avoided as a result.


**Ornamental Characteristics**

- **Size:** Tree > 30 feet
- **Height:** 50' - 60' (spread 20' - 40')
- **Leaves:** Evergreen
- **Shape:** pyramidal; broader with age
- **Ornamental Other:** full sun required

**Environmental Characteristics**

- **Light:** Full sun
- **Hardy To Zone:** 4a
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:**
- **Environmental Other:** full sun required
- **Moisture Tolerance:**
  - Occasionally saturated or very wet soil;
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil;
  - Prolonged periods of dry soil
- See graphic below

**Insect Disease**

Plagued with diplodia tip blight when older

**Additional Other**

Transplant B & B in spring or fall

**Moisture Tolerance**

![Moisture Tolerance Chart](chart.png)

<table>
<thead>
<tr>
<th>Occasionally saturated or very wet soil</th>
<th>Consistently moist, well-drained soil</th>
<th>Occasional periods of dry soil</th>
<th>Prolonged periods of dry soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>
Photos

- Pinus nigra - Bark
- Pinus nigra - Cone
- Pinus nigra - Cones
- Pinus nigra - Leaves
- Pinus nigra - Cones
- Pinus nigra - Leaves
- Pinus nigra - Habit
- Pinus nigra - Habit
- Pinus nigra - Leaves
**Species: Pinus strobus**

(pye'nus stroh'bus)

Eastern White Pine

### Cultivars

Many cultivars are available for this popular native species. Much selection has been done to find dwarf varieties. Below are some of the more interesting/easy to find options.

'Angel Falls', 'Blue Shag', 'Compacta', 'Coney Island', 'Contorta', 'Fastigiata', 'Fastigiata', 'Fastigiata', 'Glauc', 'Globosa', 'Greg', 'Hillside Winter Gold', 'Louie', 'Macopin', 'Mini Twists', 'Nana', 'Niagara Falls', 'Pendula', 'Pendula', 'Sea Urchin', 'Stony Brook', 'UConn'

<table>
<thead>
<tr>
<th><strong>Ornamental Characteristics</strong></th>
<th><strong>Environmental Characteristics</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size:</strong> Tree &gt; 30 feet</td>
<td><strong>Light:</strong> Full sun</td>
</tr>
<tr>
<td><strong>Height:</strong> 50' - 80' (spread 20' - 40')</td>
<td><strong>Hardy To Zone:</strong> 3a</td>
</tr>
<tr>
<td><strong>Leaves:</strong> Evergreen</td>
<td><strong>Soil Ph:</strong> Requires acid (pH 5.0 to 7.0)</td>
</tr>
<tr>
<td><strong>Shape:</strong> pyramidal; open &amp; irregular with age</td>
<td><strong>Salt Tolerance:</strong></td>
</tr>
<tr>
<td><strong>Ornamental Other:</strong> full sun required; extremely sensitive to air pollution; will not tolerate alkaline soils</td>
<td><strong>Environmental Other:</strong> full sun required; extremely sensitive to air pollution; will not tolerate alkaline soils</td>
</tr>
</tbody>
</table>

### Insect Disease

No diseases listed

### Additional Other

Transplant B & B in spring or fall

### Moisture Tolerance

<table>
<thead>
<tr>
<th><strong>Very Wet</strong></th>
<th><strong>Very Dry</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td></td>
</tr>
<tr>
<td>1 2 3 4 5 6 7 8 9 10 11 12</td>
<td></td>
</tr>
</tbody>
</table>
Species: *Pinus sylvestris*
(pye'nus sil-ves'tris)
Scotch Pine

Cultivars


**Ornamental Characteristics**

- **Size:** Tree > 30 feet
- **Height:** 30' - 60' (spread 30' - 40')
- **Leaves:** Evergreen
- **Shape:** irreg. pyramidal; flat-topped or rounded with age
- **Ornamental Other:** full sun required; tolerant of sterile soils

**Environmental Characteristics**

- **Light:** Full sun
- **Hardy To Zone:** 3a
- **Soil Ph:** Requires acid (pH 5.0 to 7.0)
- **Salt Tolerance:**
- **Environmental Other:** full sun required; tolerant of sterile soils
- **Moisture Tolerance:**
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil;
  - Prolonged periods of dry soil
  - See graphic below

**Insect Disease**

No diseases listed

**Additional Other**

Transplant B & B in spring or fall

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Consistently moist, well-drained soil</th>
<th>Occasional periods of dry soil</th>
<th>Prolonged periods of dry soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>

1 2 3 4 5 6 7 8 9 10 11 12
Photos

- Pinus sylvestris - Bark
- Pinus sylvestris - Habit
- Pinus sylvestris - Cones
- Pinus sylvestris - Leaves
- Pinus sylvestris - Habit
- Pinus sylvestris - Leaves
- Pinus sylvestris - Habit
- Pinus sylvestris - Habit
- Pinus sylvestris - Bark
Species: *Platanus occidentalis*
(plat'an-us ok-sih-den-ta'lis)
American Plane Tree; Eastern Sycamore

### Cultivars

'Howard'

### Ornamental Characteristics

<table>
<thead>
<tr>
<th>Size: Tree &gt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height: 75' - 100' (equal or greater spread)</td>
</tr>
<tr>
<td>Leaves: Deciduous</td>
</tr>
<tr>
<td>Shape: irregular, wide-spreading open crown</td>
</tr>
<tr>
<td>Ornamental Other: tolerant of urban conditions; requires abundant space; prefers deep, rich soil; full sun - light shade</td>
</tr>
</tbody>
</table>

### Environmental Characteristics

<table>
<thead>
<tr>
<th>Light: Full sun, Part shade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone: 4b</td>
</tr>
<tr>
<td>Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)</td>
</tr>
<tr>
<td>Salt Tolerance: Tolerates salty soil</td>
</tr>
<tr>
<td>Environmental Other: tolerant of urban conditions; requires abundant space; prefers deep, rich soil; full sun - light shade</td>
</tr>
<tr>
<td>Moisture Tolerance:</td>
</tr>
<tr>
<td>Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil; Prolonged periods of dry soil</td>
</tr>
<tr>
<td>See graphic below</td>
</tr>
</tbody>
</table>

### Insect Disease

many diseases; anthracnose is a serious problem

### Additional Other

easily transplanted; tends to litter the ground with twigs, leaves, bark and fruit, native to Northern and Midwestern US and Canada.

### Moisture Tolerance

<table>
<thead>
<tr>
<th>Moisture Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VERY WET</strong></td>
</tr>
<tr>
<td>Occasionally saturated or very wet soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td><strong>VERY DRY</strong></td>
</tr>
</tbody>
</table>

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
Photos

- Platanus occidentalis bark
- Platanus occidentalis Skirt ED
- Platanus occidentalis Skirt ED
- PlOc B Beebe
- Platanus occidentalis Sapling ED
- Platanus occidentalis Sapling ED
- Platanus occidentalis tree2
- DSCN0953
- Platanus occidentalis Bud ED
Species: *Platanus x acerifolia*  
(plat'än-us a-ser-i-fo'lee-ah)  
London Planetree

**Cultivars**

'Bloodgood', 'Columbia', 'Liberty', 'Metroshade', 'Mirkovec', 'Morton Circle', 'Yarwood'

**Ornamental Characteristics**

- **Size:** Tree > 30 feet  
- **Height:** 70' - 100'  
- **Leaves:** Deciduous  
- **Shape:** pyramidal when young; open, spreading with age  
- **Ornamental Other:** tolerates wet and intermittently flooded sites; drought tolerant

**Environmental Characteristics**

- **Light:** Full sun  
- **Hardy To Zone:** 5b  
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)  
- **Salt Tolerance:** Tolerates salty soil  
- **Environmental Other:**  
- **Moisture Tolerance:**  
  - Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil  
  - See graphic below

**Insect Disease**

- 'Columbia' and 'Liberty' resistant to anthracnose & powdery mildew; 'Bloodgood' resistant to Anthracnose; cankerstain may be a problem

**Additional Other**

- hybrid of *P. orientalis* x *P. occidentalis*; transplant in spring or fall

**Moisture Tolerance**

![Moisture Tolerance Diagram]

<table>
<thead>
<tr>
<th>Occasion</th>
<th>Very Wet</th>
<th>Consistently Moist, Well-Drained Soil</th>
<th>Occasional Periods of Dry Soil</th>
<th>Prolonged Periods of Dry Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>
Photos

- Platanus x acerifolia - Bark
- Platanus x acerifolia - Habit
- Platanus x acerifolia - Habit
- Platanus x acerifolia - Leaves
- Platanus x acerifolia - Habit
- Platanus x acerifolia - Leaf
- Platanus x acerifolia - Seeds
- Platanus x acerifolia - Habit
- Platanus x acerifolia - Bark
Species: *Populus alba*
(pop'yoo-lus al'bah)
White Poplar; Abele

**Cultivars**

'Nivea', 'Pyramidalis'

**Ornamental Characteristics**

- **Size:** Tree > 30 feet
- **Height:** 40' - 70' (equal spread)
- **Leaves:** Deciduous
- **Shape:** wide-spreading; irregular rounded crown
- **Ornamental Other:** prefers deep loam; full sun; tolerant of air pollution

**Environmental Characteristics**

- **Light:** Full sun
- **Hardy To Zone:** 4a
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:** Tolerates salt spray, salty soil
- **Environmental Other:** dark green maple-like leaves with woolly white undersides; creamy gray-green bark
- **Moisture Tolerance:**
  - Occasionally saturated or very wet soil;
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil
  - See graphic below

**Insect Disease**

many problems; serious stem and trunk canker diseases; weak wood susceptible to breakage

**Additional Other**

spreads by suckers; weak wood easily damaged by storms causes litter problems;
native to Europe and Asia; roots can clog drain lines and buckle pavement; use of this tree is prohibited in many cities

**Moisture Tolerance**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Very Wet</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Very Dry</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Species**: *Populus deltoides*  
(pop'you-lus del-toy'deez)  
Northern Cottonwood

**Cultivars**

Some selection has been done for this native species. Due its its tendency to drop branches it is not often used in cultivation as it can pose safety hazards. Selection has been done for cotton-less forms. 'Noreaster', 'Purple Tower', 'Robusta', 'Siouxland', 'Sparks'

---

<table>
<thead>
<tr>
<th><strong>Ornamental Characteristics</strong></th>
<th><strong>Environmental Characteristics</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Size: Tree &gt; 30 feet</td>
<td>Light: Full sun</td>
</tr>
<tr>
<td>Height: 75' - 100' (50' - 75' spread)</td>
<td>Hardy To Zone: 3a</td>
</tr>
<tr>
<td>Leaves: Deciduous</td>
<td>Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)</td>
</tr>
<tr>
<td>Shape: upright, spreading, irregular vase-shape</td>
<td>Salt Tolerance: Tolerates salty soil</td>
</tr>
<tr>
<td>Ornamental Other: tolerates pollution; short-lived; fast-growing</td>
<td>Environmental Other: tolerates pollution; short-lived; fast-growing</td>
</tr>
<tr>
<td></td>
<td>Moisture Tolerance:</td>
</tr>
<tr>
<td></td>
<td>Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil</td>
</tr>
<tr>
<td></td>
<td>See graphic below</td>
</tr>
</tbody>
</table>
Insect Disease

canker is a serious problem, among many

Additional Other

many disease problems cause the tree to drop leaves, twigs and other litter; weak, soft wood susceptible to breakage in storms; easily transplanted, native to Northeastern and Midwest US and Canada.

Moisture Tolerance

<table>
<thead>
<tr>
<th></th>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or</td>
<td>Consistently moist, well-drained soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>very wet soil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 2 3 4 5 6 7 8 9 10 11 12
Photos

- Populus deltoides - Bark
- Populus deltoides - Habit
- Populus deltoides - Leaves
- Populus deltoides - Leaf
- Populus deltoides - Habit
- Populus deltoides - Habit
- Populus deltoides - Habit
- Populus deltoides - Habit
**Species: Populus tremuloides**  
(pop'you-lus trem-you-loy'deez  
Quaking Aspen)

### Cultivars

'Driefest', 'Erecta', 'Mountain Sentinel', 'Pendula', 'Prairie Gold'

### Ornamental Characteristics

- **Size:** Tree > 30 feet  
- **Height:** 40' - 50' (spread 20' - 30')  
- **Leaves:** Deciduous  
- **Shape:** pyramidal  
- **Ornamental Other:** adaptable to soil conditions; fast-growing; short-lived

### Environmental Characteristics

- **Light:** Full sun  
- **Hardy To Zone:** 3a  
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)  
- **Salt Tolerance:**  
- **Environmental Other:** adaptable to soil conditions; fast-growing; short-lived  
- **Moisture Tolerance:**  
- **Insect Disease:** weak-wooded; susceptible to disease

### Additional Other

- native to northern North America

### Moisture Tolerance

```
               V E R Y  D R Y
Occasionally saturated or very wet soil  Consistently moist, well-drained soil  Occasional periods of dry soil  Prolonged periods of dry soil
1          2          3          4          5          6          7          8          9          10         11         12
```

See graphic below
Photos

- Populus tremuloides - Catkins
- Populus tremuloides - Leaves
- Populus tremuloides - Bark
- Populus tremuloides - Habit
- Populus tremuloides - Habit
- Populus tremuloides - Habit
- Populus tremuloides - Bark
- Populus tremuloides - Buds
- Populus tremuloides - Catkins
Species: *Prunus 'Accolade'*

Accolade Flowering Cherry

### Cultivars

No cultivars listed

### Ornamental Characteristics

- **Size:** Tree < 30 feet
- **Height:** 20'-25', width 15'-25'
- **Leaves:** Deciduous
- **Shape:** rounded to vase-shaped, spreading
- **Ornamental Other:**

### Environmental Characteristics

- **Light:** Full sun
- **Hardy To Zone:** 5a
- **Soil Ph:** Can tolerate acid to neutral soil (pH 5.0 to 7.4)
- **Salt Tolerance:** Tolerates salt spray
- **Environmental Other:** Consistently moist, well-drained soil; Occasional periods of dry soil
- **Moisture Tolerance:** See graphic below

### Insect Disease

Prunus have many potential problems; 'Accolade' is reportedly more resistant than most

### Additional Other

*cross: P. sargentii x P. subhirtella*

### Moisture Tolerance

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Consistently moist, well-drained soil</th>
<th>Occasional periods of dry soil</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>

See graphic below
Photos

Prunus 'Accolade' - Flowers
Prunus 'Accolade' - Flowers
Prunus 'Accolade' - Flowers

Prunus 'Accolade' - Habit, Flowers
Prunus 'Accolade' - Flowers

Species: Prunus cerasifera
(prue'nus ser-ah-sif'urr-ah)
Cherry Plum

Cultivars


Ornamental Characteristics

Size: Tree < 30 feet

Environmental Characteristics

Light: Full sun
Height: 15' - 30' (spread 15' - 25')
Leaves: Deciduous
Shape: small shrubby tree; rounded
Ornamental Other: full sun

Hardy To Zone: 5a
Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
Salt Tolerance:
Environmental Other: full sun
Moisture Tolerance:
Consistently moist, well-drained soil;
Occasional periods of dry soil
See graphic below

Insect Disease
many, among them: aphids, borers, scale, tent caterpillars, canker, leaf spots

Additional Other
native to western Asia, Caucasus;
transplant B&B, bare root or container grown

### Moisture Tolerance

<table>
<thead>
<tr>
<th>Moisture Tolerance</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistently moist, well-drained</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Photos

- Prunus cerasifera - Flowers
- Prunus cerasifera - Flowers
- Prunus cerasifera - Habit
- Prunus cerasifera - Flowers
- Prunus cerasifera - Habit
- Prunus cerasifera - Habit, Flowers
- Prunus cerasifera - Habit, Flowers
- Prunus cerasifera - Flowers
- Prunus cerasifera - Leaves
Species: *Prunus glandulosa*
(prue'nus gland-you-low'sah)
Dwarf Flowering Almond

**Cultivars**

'Alba', 'Alba Plena', 'Lawrence', 'Rosea Plena'

**Ornamental Characteristics**

- **Size:** Shrub 4 to 8 feet
- **Height:** 4' - 5' (equal spread)
- **Leaves:** Deciduous
- **Shape:** small, wispy shrub
- **Ornamental Other:** durable and adaptable

**Environmental Characteristics**

- **Light:** Full sun
- **Hardy To Zone:** 4b
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:**
- **Environmental Other:** showy, double rose-pink flowers in April/May; leaves bright to medium green - no fall color change; only one season of interest
- **Moisture Tolerance:** Consistently moist, well-drained soil; Occasional periods of dry soil

---

**Insect Disease**

- borers, mice

**Additional Other**

- tendency to sucker

---

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>Occasional periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>Occasional periods of dry soil</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
</tbody>
</table>
Photos

Prunus glandulosa flower
Prunus glandulosa flower2

Species: *Prunus laurocerasus*
(prue'nus lor-o-ser-ray'sus)
Common Cherry laurel; English Laurel

Cultivars

There are several cultivars available for this species. Many varieties are unavailable outside of the United Kingdom/Europe.

Ornamental Characteristics

<table>
<thead>
<tr>
<th>Size:</th>
<th>Shrub &gt; 8 feet, Shrub 4 to 8 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height:</td>
<td>10' - 18' (spread 25' - 30')</td>
</tr>
<tr>
<td>Leaves:</td>
<td>Evergreen</td>
</tr>
<tr>
<td>Shape:</td>
<td>wide-spreading, dense</td>
</tr>
<tr>
<td>Ornamental Other:</td>
<td>full sun or shade (best in part- to full- shade); protect from full sun and wind in winter</td>
</tr>
</tbody>
</table>

Environmental Characteristics

<table>
<thead>
<tr>
<th>Light:</th>
<th>Part shade, Shade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone:</td>
<td>6a</td>
</tr>
<tr>
<td>Soil Ph:</td>
<td>Can tolerate acid to neutral soil (pH 5.0 to 7.4)</td>
</tr>
<tr>
<td>Salt Tolerance:</td>
<td>evergreen shrub; lustrous and leathery green leaves; green fruits ripen to purplish-black (not of significant landscape value); excessively fragrant, small, white flowers in spring</td>
</tr>
<tr>
<td>Moisture Tolerance:</td>
<td>Consistently moist, well-drained soil; Occasional periods of dry soil</td>
</tr>
<tr>
<td>Environmental Other:</td>
<td>See graphic below</td>
</tr>
</tbody>
</table>

See graphic below
### Insect Disease

adequate drainage is needed to prevent insect damage; susceptible to brown rot fungus, white flies, borers

### Additional Other

native to southeastern Europe and Asia
Minor; transplant B&B or from container; useful in hedges, screens, massing

### Moisture Tolerance

<table>
<thead>
<tr>
<th></th>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>1 2 3</td>
<td>4 5 6 7 8 9 10 11 12</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>4 5 6</td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td>7 8 9</td>
<td></td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
<td>10 11 12</td>
<td></td>
</tr>
</tbody>
</table>
Photos

Prunus laurocerasus - Leaf
Prunus laurocerasus - Leaves
Prunus laurocerasus - Habit

Prunus laurocerasus - Habit
Prunus laurocerasus - Habit, Flowers
Prunus laurocerasus - Bud

Prunus laurocerasus - Habit
Prunus laurocerasus - Bark
Prunus laurocerasus - Leaves
Species: *Prunus maackii*

Amur Chokecherry, Manchurian Chokecherry

**Cultivars**

'Amber Beauty', 'Goldrush', 'Goldspur'

**Ornamental Characteristics**

- **Size:** Tree > 30 feet  
- **Height:** 35 to 45' tall, 25 to 35' wide  
- **Leaves:** Deciduous  
- **Shape:** Young trees are pyramidal, rounded and dense at maturity  
- **Ornamental Other:** full sun

**Environmental Characteristics**

- **Light:** Full sun  
- **Hardy To Zone:** 3a  
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)  
- **Salt Tolerance:**  
- **Environmental Other:** full sun  
- **Moisture Tolerance:** Consistently moist, well-drained soil; Occasional periods of dry soil  
- **See graphic below**

**Insect Disease**

aphids, scale, borers

**Additional Other**

Native to Manchuria and Korea

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Moisture Tolerance</th>
<th>VERY WET</th>
<th>VERY DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>1 2 3</td>
<td>4 5 6</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>7 8 9</td>
<td>10 11 12</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Photos

<table>
<thead>
<tr>
<th>Prunus maackii - Bark</th>
<th>Prunus maackii - Bark</th>
<th>Prunus maackii - Bark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prunus maackii - Leaves</td>
<td>Prunus maackii - Habit</td>
<td>Prunus maackii - Leaves</td>
</tr>
<tr>
<td>Prunus maackii - Habit</td>
<td>Prunus maackii - Habit</td>
<td>Prunus maackii - Habit</td>
</tr>
</tbody>
</table>
Species: *Prunus sargentii*
(prue'nus sar-jen'tee-eye)

Sargent Cherry

Cultivars

'Accolade', 'Columnaris', 'Pink Flair', 'Princeton Snowcloud', 'Rancho'

**Ornamental Characteristics**

- **Size:** Tree > 30 feet
- **Height:** 40' - 50'
- **Leaves:** Deciduous
- **Shape:** vase; round with age
- **Ornamental Other:**

**Environmental Characteristics**

- **Light:** Full sun
- **Hardy To Zone:** 4b
- **Soil Ph:** Can tolerate acid to neutral soil (pH 5.0 to 7.4)
- **Salt Tolerance:** Tolerates salty soil
- **Environmental Other:**
- **Moisture Tolerance:**
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil
  - See graphic below

**Insect Disease**

- none serious

**Additional Other**

- native to Japan; transplant in spring

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>VERY WET</th>
<th>VERY DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or</td>
<td>Prolonged periods of dry</td>
</tr>
<tr>
<td>very wet soil</td>
<td>soil</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>9</td>
</tr>
</tbody>
</table>
Photos

- Prunus sargentii - Bark
- Prunus sargentii - Habit, Flowers
- Prunus sargentii - Bark
- Prunus sargentii - Bark
- Prunus sargentii - Habit
- Prunus sargentii - Bark
- Prunus sargentii - Leaf
- Prunus sargentii - Habit
- Prunus sargentii 'Columnaris' - Habit, Flowers
Species: *Prunus serotina*
(prue'nu's ser-ot'in-ah)
Black Cherry

**Cultivars**

'Spring Sparkle'

**Ornamental Characteristics**

<table>
<thead>
<tr>
<th>Size:</th>
<th>Tree &gt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height:</td>
<td>50' - 60' (spread 20' - 30')</td>
</tr>
<tr>
<td>Leaves:</td>
<td>Deciduous</td>
</tr>
<tr>
<td>Shape:</td>
<td>pyramidal - oval</td>
</tr>
<tr>
<td>Ornamental Other:</td>
<td>prefers deep, fertile soils</td>
</tr>
</tbody>
</table>

**Environmental Characteristics**

<table>
<thead>
<tr>
<th>Light:</th>
<th>Full sun, Part shade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone:</td>
<td>3b</td>
</tr>
<tr>
<td>Soil Ph:</td>
<td>Can tolerate acid to neutral soil (pH 5.0 to 7.4)</td>
</tr>
<tr>
<td>Salt Tolerance:</td>
<td>bronze/bright green new foliage matures to dark green, then turns yellow to red in fall; mature bark is gray-black and scaly; white flowers in May; edible berries (red - black) used in wine and jelly</td>
</tr>
<tr>
<td>Moisture Tolerance:</td>
<td>Consistently moist, well-drained soil; Occasional periods of dry soil; See graphic below</td>
</tr>
</tbody>
</table>

**Insect Disease**

not seriously affected by disease - one of the most trouble-free cherries; wood is brittle and subject to breakage

**Additional Other**

Native to E. N. America

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>VERY WET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
</table>
Photos

- Prunus serotina - Leaf
- Prunus serotina - Leaf
- Prunus serotina - Leaves

- Prunus serotina - Habit
- Prunus serotina - Leaves, Fruit
- Prunus serotina - Bark

- Prunus serotina - Bark
- Prunus serotina - Leaf Midrib
- Prunus serotina - Bark
Species: *Prunus serrulata*
(prue'nus ser-u-lay'tah)
Japanese Flowering Cherry

Cultivars


Ornamental Characteristics

<table>
<thead>
<tr>
<th>Size: Tree &gt; 30 feet, Tree &lt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height: 50' - 75' (cultivar heights 20' - 35')</td>
</tr>
<tr>
<td>Leaves: Deciduous</td>
</tr>
<tr>
<td>Shape: vase to rounded</td>
</tr>
<tr>
<td>Ornamental Other:</td>
</tr>
</tbody>
</table>

Environmental Characteristics

<table>
<thead>
<tr>
<th>Light: Full sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone: 5b</td>
</tr>
<tr>
<td>Soil Ph: Can tolerate acid to neutral soil (pH 5.0 to 7.4)</td>
</tr>
<tr>
<td>Salt Tolerance:</td>
</tr>
<tr>
<td>Environmental Other:</td>
</tr>
<tr>
<td>Moisture Tolerance:</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil; Occasional periods of dry soil</td>
</tr>
<tr>
<td>See graphic below</td>
</tr>
</tbody>
</table>

Insect Disease

Fungus and viruses are a serious problem; short-lived

Additional Other

native to Japan, Korea, China; transplant in spring

Moisture Tolerance

<table>
<thead>
<tr>
<th>Moisture Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VERY WET</strong></td>
</tr>
<tr>
<td>Occasionally saturated or very wet soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>
Photos

Prunus serrulata - Habit
Prunus serrulata - Flowers
Prunus serrulata - Leaves

Prunus serrulata - Habit, Flowers
Prunus serrulata - Bark
Prunus serrulata - Habit

Prunus serrulata - Buds
Prunus serrulata - Bark
Prunus serrulata - Leaves
Species: *Prunus subhirtella*
(prue'nu:s sub-hir-tel'ah)
Higan Cherry

**Cultivars**

'Autumnalis', 'Pendula', 'Pendula Plena Rosea', 'Pendula Rubra', 'Rosy Cloud', 'Stellata', 'Whitcomb', 'Winter Sun'

**Ornamental Characteristics**

<table>
<thead>
<tr>
<th>Size:  Tree &lt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height:  20' - 40' (equal spread)</td>
</tr>
<tr>
<td>Leaves:  Deciduous</td>
</tr>
<tr>
<td>Shape:  graceful, weeping habit</td>
</tr>
</tbody>
</table>

**Environmental Characteristics**

<table>
<thead>
<tr>
<th>Light:  Full sun, Part shade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone:  5b</td>
</tr>
<tr>
<td>Soil Ph:  Can tolerate acid to neutral soil (pH 5.0 to 7.4)</td>
</tr>
</tbody>
</table>

**Insect Disease**

not as seriously affected by disease as other Asian Cherries

**Additional Other**

native to Japan

**Moisture Tolerance**

<table>
<thead>
<tr>
<th><strong>VERY WET</strong></th>
<th><strong>VERY DRY</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Consistently moist, well-drained soil</td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
## Photos

<table>
<thead>
<tr>
<th>Image</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✗</td>
<td>Prunus subhirtella - Bark</td>
</tr>
<tr>
<td>✗</td>
<td>Prunus subhirtella - Flowers</td>
</tr>
<tr>
<td>✗</td>
<td>Prunus subhirtella - Flowers</td>
</tr>
<tr>
<td>✗</td>
<td>Prunus subhirtella - Flowers</td>
</tr>
<tr>
<td>✗</td>
<td>Prunus subhirtella - Habit, Flowers</td>
</tr>
<tr>
<td>✗</td>
<td>Prunus subhirtella - Habit, Flowers</td>
</tr>
<tr>
<td>✗</td>
<td>Prunus subhirtella - Buds</td>
</tr>
<tr>
<td>✗</td>
<td>Prunus subhirtella - Bark</td>
</tr>
<tr>
<td>✗</td>
<td>Prunus subhirtella - Habit</td>
</tr>
</tbody>
</table>
Species: Prunus tomentosa
(prue'nus to-men-toh'sah)
Manchu Cherry; Nanking Cherry

Cultivars

'Leucocarpa', 'Orient', 'Pink Candles'

Ornamental Characteristics

- Size: Shrub > 8 feet
- Height: 8' - 9' (spread 15')
- Leaves: Deciduous
- Shape: rounded
- Ornamental Other: full sun; tolerates extreme cold and wind

Environmental Characteristics

- Light: Full sun
- Hardy To Zone: 3a
- Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- Salt Tolerance: Environmental Other: full sun; tolerates extreme cold and wind
- Moisture Tolerance: Consistently moist, well-drained soil; Occasional periods of dry soil

Insect Disease

- No diseases listed

Additional Other

- Edible fruit native to China and Japan; plant in groups for best fruiting

Moisture Tolerance

<table>
<thead>
<tr>
<th>Moisture Tolerance</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>very wet soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistently moist, well-</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>drained soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prolonged periods of dry</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

See graphic below
### Photos

<table>
<thead>
<tr>
<th></th>
<th>Prunus tomentosa - Flowers</th>
<th>Prunus tomentosa - Flowers</th>
<th>Prunus tomentosa - Leaves</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prunus tomentosa - Habit</td>
<td>Prunus tomentosa - Habit</td>
<td>Prunus tomentosa - Habit</td>
</tr>
<tr>
<td></td>
<td>Prunus tomentosa - Flowers</td>
<td>Prunus tomentosa - Flowers</td>
<td></td>
</tr>
</tbody>
</table>

---

*Woody Plants Database [http://woodyplants.cals.cornell.edu]*
Species: *Prunus virginiana*  
(pru'e'nus ver-jin-i-ay'nah)  
Chokecherry

### Cultivars

All varieties produce fruit which is very astringent, hence the common name. Fruit may be used in sauces, jellies and preserves, however. Fruits are very attractive to wildlife.

'Bailey Select', 'Boughen's Chokeless', 'Canada Red', 'Copper Schubert', 'Mini-Schubert', 'Purple Jewel', 'Robert', 'Schubert'

### Ornamental Characteristics

<table>
<thead>
<tr>
<th>Size:</th>
<th>Tree &lt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height:</td>
<td>20' - 35' (spread 18' - 25')</td>
</tr>
<tr>
<td>Leaves:</td>
<td>Deciduous</td>
</tr>
<tr>
<td>Shape:</td>
<td>small tree or large shrub; oval-rounded crown</td>
</tr>
</tbody>
</table>

### Environmental Characteristics

<table>
<thead>
<tr>
<th>Light:</th>
<th>Full sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone:</td>
<td>3a</td>
</tr>
<tr>
<td>Soil Ph:</td>
<td>Can tolerate acid to alkaline soil (pH 5.0 to 8.0)</td>
</tr>
<tr>
<td>Salt Tolerance:</td>
<td></td>
</tr>
<tr>
<td>Environmental Other:</td>
<td></td>
</tr>
<tr>
<td>Moisture Tolerance:</td>
<td>Consistently moist, well-drained soil; Occasional periods of dry soil</td>
</tr>
<tr>
<td>Additional Other</td>
<td>native to Canada and northern U.S.; suckers heavily</td>
</tr>
</tbody>
</table>

### Insect Disease

VERY SUSCEPTIBLE to eastern tent caterpillar and black knot fungus. In areas where these are a problem, this plant shouldn't be used.

### Moisture Tolerance

<table>
<thead>
<tr>
<th>VERY WET</th>
<th>VERY DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>1</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>2</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td>3</td>
</tr>
</tbody>
</table>
Photos

Prunus virginiana 'Canada Red' - Habit

Prunus virginiana 'Canada Red' - Habit

Prunus virginiana - Leaf

Prunus virginiana - Flowers

Prunus virginiana - Habit

Prunus virginiana - Flowers

Prunus virginiana - Leaves

Prunus virginiana - Flowers

Prunus virginiana - Fruit
Species: *Prunus x yedoensis*

Yoshino Cherry

### Cultivars

'Afterglow', 'Akebono', 'Cascade Snow', 'Cascade Snow', 'Ivensii', 'Pink Shell', 'Shidare-yoshino', 'Snow Fountains', 'Washi-no-o', 'Yoshino Pink Form'

### Ornamental Characteristics

- **Size:** Tree < 30 feet
- **Height:** 15-25'
- **Leaves:** Deciduous
- **Shape:** spreading, rounded habit
- **Ornamental Other:** Famed as the tidal basin cherry of Washington DC.

### Environmental Characteristics

- **Light:** Full sun, Part shade
- **Hardy To Zone:** 5b
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:**
- **Environmental Other:** Very early beautiful pink or white flowers
- **Moisture Tolerance:** Consistently moist, well-drained soil; Occasional periods of dry soil
- **Moisture Tolerance Diagram:**

### Insect Disease

No diseases listed

### Additional Other

Native to China.
Photos

- Prunus x yedoensis - Habit
- Prunus x yedoensis - Leaves
- Prunus x yedoensis - Leaves, Bark
- Prunus x yedoensis - Bark
- Prunus x yedoensis - Bark
- Prunus x yedoensis - Leaf
- Prunus x yedoensis - Sepals
- flowers and habit
Species: *Pyrus calleryana*
(pye'rus kal-ler-ee-ay'nah)
Callery Pear

### Cultivars
Prized for its spring flower show, glossy foliage, fall color, and urban tolerance this species has a variety of cultivars. Older varieties have problems with poor branch angles, resulting in splitting. Fire blight can be a problem with some. This species has been shown to have invasive tendencies throughout most of its range (particularly in Zone 6 and warmer). No truly sterile cultivars are known at this time.

'\textit{Aristocrat}', '\textit{Autumn Blaze}', '\textit{Bradford}', '\textit{Burgundy Snow}', '\textit{Capital}', '\textit{Chanticleer}', '\textit{Dancer}', '\textit{Fauriei}', '\textit{Holmford}', '\textit{Jack}', '\textit{Javelin}', '\textit{Jill}', '\textit{Korean Sun}', '\textit{Redspire}', '\textit{Trinity}', '\textit{Whitehouse}'

<table>
<thead>
<tr>
<th><strong>Ornamental Characteristics</strong></th>
<th><strong>Environmental Characteristics</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Size: Tree &gt; 30 feet</td>
<td>Light: Full sun</td>
</tr>
<tr>
<td>Height: 30' - 50'</td>
<td>Hardy To Zone: 5a</td>
</tr>
<tr>
<td>Leaves: Deciduous</td>
<td>Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)</td>
</tr>
<tr>
<td>Shape: round, pyramidal</td>
<td>Salt Tolerance: Tolerates salty soil</td>
</tr>
<tr>
<td>Ornamental Other: tolerates heavy soils</td>
<td>Environmental Other:</td>
</tr>
<tr>
<td></td>
<td>Moisture Tolerance: Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil; Prolonged periods of dry soil</td>
</tr>
<tr>
<td></td>
<td>See graphic below</td>
</tr>
</tbody>
</table>

### Insect Disease
'\textit{Autumn Blaze}', '\textit{Cleveland Select}', '\textit{Fauriei}' and '\textit{Whitehouse}' tolerant to fireblight; '\textit{Aristocrat}' somewhat susceptible to fireblight

### Moisture Tolerance

**Very Wet**
- Occasionally saturated or very wet soil

**Consistently moist, well-drained soil**
- Consistently moist, well-drained soil

**Occasional periods of dry soil**
- Occasional periods of dry soil

**Prolonged periods of dry soil**
- Prolonged periods of dry soil

**Native to China; transplant in spring. May become invasive in zones 5 and warmer**
Photos

- Pyrus calleryana - Leaves, Fall Interest
- Pyrus calleryana - Bark
- Pyrus calleryana - Bud
- Pyrus calleryana - Flowers
- Pyrus calleryana - Habit
- Pyrus calleryana - Habit, Flowers
- Pyrus calleryana - Leaf
- Pyrus calleryana - Habit
- Pyrus calleryana 'Chanticleer' - Habit, Flowers
Species: *Quercus palustris*
(kwer'kus pah-lus'tris)
Pin Oak; Swamp Oak

Cultivars

'Crownright', 'Flaming Suzy', 'Green Dwarf', 'Green Pillar', 'Isabel', 'Sovereign', 'Swamp Pygmy'

Ornamental Characteristics

<table>
<thead>
<tr>
<th>Size: Tree &gt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height: 50' - 70'</td>
</tr>
<tr>
<td>Leaves: Deciduous</td>
</tr>
<tr>
<td>Shape: pyramidal, oval with age;</td>
</tr>
<tr>
<td>Ornamental Other: iron chlorosis on high pH soils</td>
</tr>
</tbody>
</table>

Environmental Characteristics

<table>
<thead>
<tr>
<th>Light: Full sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone: 5a</td>
</tr>
<tr>
<td>Soil Ph: Requires acid (pH 5.0 to 7.0)</td>
</tr>
<tr>
<td>Salt Tolerance:</td>
</tr>
<tr>
<td>Environmental Other:</td>
</tr>
<tr>
<td>Moisture Tolerance:</td>
</tr>
<tr>
<td>Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil</td>
</tr>
<tr>
<td>See graphic below</td>
</tr>
</tbody>
</table>

Insect Disease

overplanting has encouraged insect problems; resistant to anthracnose; preferred by orange-striped oakworm

Additional Other

Native to U.S. (Massachusetts to Wisconsin, south to Delaware and Arkansas); transplant in spring; pendulous lower branches may need to be removed for pedestrian or vehicular traffic; one of the easiest oaks to transplant

Moisture Tolerance

<table>
<thead>
<tr>
<th>VERY WET</th>
<th>VERY DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
</tbody>
</table>
Species: *Quercus rubra*  
(kwer'kus rue'brah)  
Red Oak; Northern Red Oak

**Cultivars**

'Aurea', 'Boltes Gold', 'Magic Fire', 'Splendens'

**Ornamental Characteristics**

<table>
<thead>
<tr>
<th>Size:</th>
<th>Tree &gt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height:</td>
<td>60' - 75' (equal spread)</td>
</tr>
<tr>
<td>Leaves:</td>
<td>Deciduous</td>
</tr>
<tr>
<td>Shape:</td>
<td>round habit in youth and maturity</td>
</tr>
<tr>
<td>Ornamental Other:</td>
<td></td>
</tr>
</tbody>
</table>

**Environmental Characteristics**

<table>
<thead>
<tr>
<th>Light:</th>
<th>Full sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone:</td>
<td>3b</td>
</tr>
<tr>
<td>Soil Ph:</td>
<td>Can tolerate acid to neutral soil (pH 5.0 to 7.4)</td>
</tr>
<tr>
<td>Salt Tolerance:</td>
<td>Tolerates salty soil</td>
</tr>
<tr>
<td>Environmental Other:</td>
<td></td>
</tr>
<tr>
<td>Moisture Tolerance:</td>
<td>Consistently moist, well-drained soil; Occasional periods of dry soil; See graphic below</td>
</tr>
</tbody>
</table>

**Insect Disease**

- oak wilt is a serious problem in more southern areas; resistant to anthracnose; preferred by orange-striped oakworm

**Additional Other**

- native to North America (Nova Scotia to Pennsylvania, west to Minnesota and Iowa); transplant in spring; like *Q. palustris*, relatively easy to transplant

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Moisture Level</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
</table>
Photos

- Quercus rubra - Bark
- Quercus rubra - Habit
- Quercus rubra - Leaves

- Quercus rubra - Leaves, Fall Interest
- Quercus rubra - Habit
- Quercus rubra - Habit

- Quercus rubra - Bud
- Quercus rubra - Habit
- Quercus rubra - Habit
Species: *Salix acutifolia 'Blue Streak'*

Long-leaved Violet Willow

**Cultivars**

No cultivars listed

**Ornamental Characteristics**

- Size: Shrub > 8 feet
- Height: 16'
- Leaves: Deciduous
- Shape: Rounded form with arching canes
- Ornamental Other:

**Environmental Characteristics**

- Light: Full sun
- Hardy To Zone: 3a
- Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- Salt Tolerance:
- Environmental Other:
- Moisture Tolerance:
  - Occasionally saturated or very wet soil;
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil
  - Prolonged periods of dry soil
- See graphic below

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Moisture Tolerance</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Species: *Salix alba 'Tristis'*
(say‘liks al‘bah tris‘tis)
Weeping Golden Willow

Cultivars
No cultivars listed

Ornamental Characteristics
Size: Tree > 30 feet
Height: 50' - 70' (to 80')
Leaves: Deciduous
Shape: graceful, weeping tree; rounded outline
Ornamental Other: full sun; cold hardy

Environmental Characteristics
Light: Full sun
Hardy To Zone: 4a
Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
Salt Tolerance:
Environmental Other: full sun; cold hardy
Moisture Tolerance:
Occasionally saturated or very wet soil;
Consistently moist, well-drained soil;
Occasional periods of dry soil
See graphic below

Insect Disease
subject to breakage; many disease and insect problems including canker

Additional Other
native from southern Europe to western Siberia, central Asia, China; easy to transplant; one of the first trees to leaf out and last to shed its leaves; twig litter can be a nuisance, native to Central Europe and Central Asia. Naturalized in North America.

Moisture Tolerance

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasional periods of dry soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
</tbody>
</table>
Photos

- Salix alba 'Tristis' - Habit
- Salix alba 'Tristis' - Buds
- Salix alba 'Tristis' - Habit

- Salix alba 'Tristis' - Habit
- Salix alba 'Tristis' - Habit
- Salix alba 'Tristis' - Habit

- Salix alba 'Tristis' - Bud
- Salix alba 'Tristis' - Leaf
- Salix alba 'Tristis' - Bark
**Species: Salix arenaria**

*Creeping Silver Willow*

**Cultivars**

No cultivars listed

**Ornamental Characteristics**

- **Size:** Shrub < 4 feet
- **Height:** 2' tall x 5' wide
- **Leaves:** Deciduous
- **Shape:** low massing
- **Ornamental Other:**

**Environmental Characteristics**

- **Light:** Full sun
- **Hardy To Zone:** 4a
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:** Tolerates salt spray
- **Environmental Other:**
- **Moisture Tolerance:**
  - Occasionally saturated or very wet soil;
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil
- **See graphic below**

**Insect Disease**

No diseases listed

**Additional Other**

- native to northern European coastal areas-
  - North Sea to Baltic Sea, also found in inland Scotland

**Moisture Tolerance**

<table>
<thead>
<tr>
<th><strong>VERY WET</strong></th>
<th><strong>VERY DRY</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>
Photos

- Salix arenaria - Leaves
- Salix arenaria - Leaves
- Salix arenaria - Habit
- Salix arenaria - Leaves
- Salix arenaria - Habit
- Salix arenaria - Leaves
Species: *Salix candida*

Sageleaf Willow; Hoary Willow

**Cultivars**

'Silver Fox'

**Ornamental Characteristics**

- **Size:** Shrub > 8 feet
- **Height:** 13'
- **Leaves:** Deciduous
- **Shape:** caning, upright shrub to small tree
- **Ornamental Other:** Foliage can be leathery and glossy green on top and felted silver-grey beneath or silvery-grey and pubescent on top and bottom. It bears yellow catkins in the spring.

**Environmental Characteristics**

- **Light:** Full sun
- **Hardy To Zone:** 3a
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:**
- **Environmental Other:** Native across almost all of northern North America. One of the most extremely cold hardy plants, hardy to USDA Zone 1. Very tolerant of saturated soils and high pH. It's drought tolerance is untested but is likely good.
- **Moisture Tolerance:**
  - Occasionally saturated or very wet soil;
  - Consistently moist, well-drained soil
  - See graphic below

**Insect Disease**

**Additional Other**

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>9</td>
</tr>
</tbody>
</table>
Species: *Salix caprea*
(say'liks cap'ree-ah)
Goat Willow; Pussy Willow

**Cultivars**
This European species has few cultivars however there are several closely related species that also can sometime be found in cultivation: *S. discolor* (North America; 'Rosea' has pale rosy catkins), and *S. gracilistyla* (Asia; 'Melanostachys' bears black catkins with red anthers)
'Curly Locks', 'Pendula'

**Ornamental Characteristics**
- **Size:** Shrub > 8 feet
- **Height:** 15' - 25' (to 30') (12' - 15' spread)
- **Leaves:** Deciduous
- **Shape:** shrub or small tree
- **Ornamental Other:** best in full sun (rangy in shade)

**Environmental Characteristics**
- **Light:** Full sun, Part shade
- **Hardy To Zone:** 3b
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:**
- **Environmental Other:** flowers very early - March or April; soft silky catkins (hence the common name
- **Moisture Tolerance:** Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil
See graphic below

**Insect Disease**
short-lived due to many insect and disease problems

**Additional Other**
native to Europe, northeast Asia, Japan

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Occasional periods of dry soil</th>
<th>Consistently moist, well-drained soil</th>
<th>Occasionally saturated or very wet soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>3</td>
<td>10</td>
</tr>
</tbody>
</table>

**Diagram:**

- **Very Wet**
- **Very Dry**
Photos

- Salix caprea - Fruit
- Salix caprea - Fruit, Leaf
- Salix caprea - Habit

- Salix caprea - Habit
- Salix caprea - Habit
- Salix caprea - Leaves

- Salix caprea - Male Catkins, Male Fruit
- Salix caprea - Habit
- Salix caprea - Bark
Species: *Salix integra 'Hakuro Nashiki'*
(say'liks in-teh'grah)

Nishiki Willow

### Cultivars

'Albemaculata'

### Ornamental Characteristics

**Size:** Shrub 4 to 8 feet  
**Height:** up to 10'. Can be easily kept shorter by severe pruning in spring.  
**Leaves:** Deciduous  
**Shape:** shrub  
**Ornamental Other:**

### Environmental Characteristics

**Light:** Full sun  
**Hardy To Zone:** 5b  
**Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)  
**Salt Tolerance:**  
**Environmental Other:** salmon pink new shoots age to white variegation and may be seen as a shrub or grafted as tree form  
**Moisture Tolerance:** Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil  
**See graphic below**

### Insect Disease

bacterial twig light; crown gall; leaf blight; black canker

### Additional Other

cut back late in winter to encourage new growth

### Moisture Tolerance

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>Occasional periods of dry soil</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
</tbody>
</table>
Species: *Salix irrorata*

Dewystem Willow; Bluestem Willow

**Cultivars**

No cultivars listed

**Ornamental Characteristics**

- **Size:** Shrub > 8 feet
- **Height:** 6 - 10'
- **Leaves:** Deciduous
- **Shape:** dense, upright form
- **Ornamental Other:** Stems are bluish-white to blue/bluish purple. Stem color contrasts well with yellow spring catkins and yellow fall foliage.

**Environmental Characteristics**

- **Light:** Full sun
- **Hardy To Zone:** 5a
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:**
- **Environmental Other:**
- **Moisture Tolerance:** Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Moisture Tolerance</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>
Photos

Species: *Salix matsudana 'Tortuosa'*
(SAY-licks mat-soo-DAH-nuh)
Dragon's Claw Willow

Cultivars

No cultivars listed

Ornamental Characteristics

<table>
<thead>
<tr>
<th>Size: Tree &lt; 30 feet</th>
<th>Height: 20-25 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaves: Deciduous</td>
<td>Shape: Upright Spreading</td>
</tr>
<tr>
<td>Ornamental Other:</td>
<td></td>
</tr>
</tbody>
</table>

Environmental Characteristics

<table>
<thead>
<tr>
<th>Light: Full sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone: 5b</td>
</tr>
<tr>
<td>Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)</td>
</tr>
<tr>
<td>Salt Tolerance: Tolerates salt spray</td>
</tr>
<tr>
<td>Environmental Other:</td>
</tr>
<tr>
<td>Moisture Tolerance: Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil</td>
</tr>
<tr>
<td>See graphic below</td>
</tr>
</tbody>
</table>

Insect Disease

Canker

Additional Other

Moisture Tolerance

<table>
<thead>
<tr>
<th>VERY WET</th>
<th>VERY DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octcasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Photos

- Salix matsudana 'Tortuosa' - Leaves
- Salix matsudana 'Tortuosa' - Leaves
- Salix matsudana 'Tortuosa' - Bark
- Salix matsudana 'Tortuosa' - Bud
- Salix matsudana 'Tortuosa' - Habit
- Salix matsudana 'Tortuosa' - Habit
- Salix matsudana 'Tortuosa' - Bark
- Salix matsudana 'Tortuosa' - Bark
Species: *Salix nigra*

(say'liks nye'grah)

Black Willow

### Cultivars

No cultivars listed

### Ornamental Characteristics

- **Size:** Tree > 30 feet
- **Height:** 50'
- **Leaves:** Deciduous
- **Shape:** broad, irregular oval; coarse texture
- **Ornamental Other:**

### Environmental Characteristics

- **Light:** Full sun
- **Hardy To Zone:** 3b
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:**
- **Environmental Other:**
- **Moisture Tolerance:**
  - Occasionally saturated or very wet soil;
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil
  - See graphic below
- **Insect Disease:** many insect and disease problems
- **Additional Other:**
  - very weak wooded; naturalizes freely;
  - invasive, naturalized in North America

### Moisture Tolerance

<table>
<thead>
<tr>
<th>Occasions of Wet Soil</th>
<th>Occasions of Dry Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Very Wet**

**Very Dry**
Photos

- Salix nigra - Bark
- Salix nigra - Habit
- Salix nigra - Bark
- Salix nigra - Habit
- Salix nigra - Habit
- Salix nigra - Bud
- Salix nigra - Habit
Species: *Salix purpurea*

(say'liks per-poo'ree-ah)

Purpleosier Willow; Basket Willow

**Cultivars**

'Canyon Blue', 'Gracilis', 'Nana', 'Nancy Saunders', 'Pendula', 'Streamco'

**Ornamental Characteristics**

Size: Shrub > 8 feet, Shrub 4 to 8 feet

Height: 8' - 10' (spread 12' - 15')

Leaves: Deciduous

Shape: round, dense, finely branched

Ornamental Other: best in full sun

**Environmental Characteristics**

Light: Full sun

Hardy To Zone: 3b

Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)

Salt Tolerance:

Environmental Other: best in full sun

Moisture Tolerance:

Occasionally saturated or very wet soil;
Consistently moist, well-drained soil;
Occasional periods of dry soil

See graphic below

**Insect Disease**

prone to a variety of insect and disease problems

**Additional Other**

*S. purpurea* native to Europe, North Africa, central Asia, Japan; introduced by Soil Conservation Service, USDA; useful for stream bank stabilization; lay bundles in stream stabilization areas and will send up shoots to help prevent erosion; needs maintenance to remain attractive; useful for phytoremediation

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>Occasional periods of dry soil</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
</tbody>
</table>
Photos

- Salix purpurea - Habit
- Salix purpurea - Leaves
- Salix purpurea - Leaves
- Salix purpurea leaves2
- Salix purpurea 'Streamco' - Habit
- Salix purpurea 'Pendula' - Habit
- Salix purpurea twig
- Salix purpurea - Habit
- Salix purpurea - Habit
Species: Syringa reticulata
(sir-ring‘gah reh-tick‘you-lay-tah)
Japanese Tree Lilac

Cultivars

'Cameo Jewel', 'Chantilly Lace', 'Ivory Silk', 'Regent', 'Snow Cap', 'Snowdance', 'Summer Snow'

Ornamental Characteristics

- Size: Tree < 30 feet
- Height: 25' - 30' (spread 15' - 25')
- Leaves: Deciduous
- Shape: oval tree
- Ornamental Other: slow growing

Environmental Characteristics

- Light: Full sun
- Hardy To Zone: 3a
- Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- Salt Tolerance: Tolerates salty soil
- Environmental Other: large, cream colored flowers in late June; suitable for large containers; lustrous brown bark with horizontal lenticels similar to cherry bark; slow growth rate
- Moisture Tolerance: Consistently moist, well-drained soil; Occasional periods of dry soil; Prolonged periods of dry soil
- See graphic below

Insect Disease

resistant to powdery mildew; borers and scale may be problematic in warmer regions

Additional Other

transplant in spring or fall, native to Northern Japan

Moisture Tolerance

<table>
<thead>
<tr>
<th>VERY WET</th>
<th></th>
<th>VERY DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Consistently moist, well-drained soil</td>
<td>Occasional periods of dry soil</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Photos

- Syringa reticulata - Bark
- Syringa reticulata - Flowers
- Syringa reticulata - Flowers
- Syringa reticulata - Leaves, Fruit
- Syringa reticulata - Habit
- Syringa reticulata - Leaf
- Syringa reticulata - Habit
- Syringa reticulata - Fruit
- Syringa reticulata - Buds
Species: *Tilia americana*  
(til'ee-ah a-mer-i-kay'nah)  
American Linden; Basswood  

<table>
<thead>
<tr>
<th>Cultivars</th>
</tr>
</thead>
<tbody>
<tr>
<td>'Boulevard', 'Continental Appeal', 'Duros', 'Fastigiata', 'Legend', 'Lincoln', 'Redmond', 'Sentry'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ornamental Characteristics</th>
<th>Environmental Characteristics</th>
</tr>
</thead>
</table>
| Size: Tree > 30 feet  
Height: 60' - 80'  
Leaves: Deciduous  
Shape: pyramidal  
Ornamental Other: | Light: Full sun  
Hardy To Zone: 3a  
Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)  
Salt Tolerance:  
Environmental Other:  
Moisture Tolerance:  
Occasionally saturated or very wet soil;  
Consistently moist, well-drained soil;  
Occasional periods of dry soil  
See graphic below |  

<table>
<thead>
<tr>
<th>Insect Disease</th>
<th>Additional Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very susceptible to Japanese beetles, mites, aphids, borers; leaf miners and scale may also be problematic</td>
<td>native to U.S. (Maine to Florida); transplant in spring or fall</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Moisture Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Moisture Tolerance Diagram" /></td>
</tr>
</tbody>
</table>

1 2 3 4 5 6 7 8 9 10 11 12
Photos

- Tilia americana - Bark
- Tilia americana - Buds
- Tilia americana - Leaf
- Tilia americana - Leaves
- Tilia americana - Habit
- Tilia americana - Leaves, Suckers
- Tilia americana - Habit
- Tilia americana - Buds
- Tilia americana - Fruit
Species: *Tilia cordata*  
(til'ee-ah kore-day' tah)  
Littleleaf Linden; Small-leaved Lime

**Cultivars**

There are many cultivars of this commonly used species.  

**Ornamental Characteristics**

Size: Tree > 30 feet  
Height: 60' - 80'  
Leaves: Deciduous  
Shape: dense, pyramidal  
Ornamental Other:

**Environmental Characteristics**

Light: Full sun  
Hardy To Zone: 3b  
Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)  
Salt Tolerance:  
Environmental Other:  
Moisture Tolerance:  
Consistently moist, well-drained soil; Occasional periods of dry soil  
See graphic below

**Insect Disease**

highly susceptible to aphids and Japanese beetles especially the cultivar, 'Greenspire'

**Additional Other**

native to Europe; transplant in spring or fall

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>10</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td>11</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
</tr>
</tbody>
</table>
Photos

- Tilia cordata - Flowers
- Tilia cordata - Flowers
- Tilia cordata - Fruit
- Tilia cordata - Bark
- Tilia cordata - Bud
- Tilia cordata - Buds
- Tilia cordata - Habit
- Tilia cordata 'Glenleven' - Habit
- Tilia cordata - Leaf
Species: *Tilia tomentosa*
(til'ee-ah toe-men-tose'ah)
Silver Linden

Cultivars

A few cultivars are available for this superior species and it is likely that more will be developed in the future. Several cultivars available in Europe are not yet found in the US.

'Brabant', 'Chelsea Sentinel', 'Green Mountain', 'Hungary Globe', 'Petiolaris', 'Sashazam', 'Sterling Silver'

Ornamental Characteristics

Size: Tree > 30 feet
Height: 60' - 80'
Leaves: Deciduous
Shape: pyramidal
Ornamental Other: tolerates drought and heat better than *T. cordata*

Environmental Characteristics

Light: Full sun
Hardy To Zone: 5a
Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
Salt Tolerance:
Environmental Other:
Moisture Tolerance:
Consistently moist, well-drained soil;
Occasional periods of dry soil
See graphic below

Insect Disease

less susceptible to Japanese beetles than other lindens

Additional Other

native to southeastern Europe, western Asia; transplant in spring; slower to recover from transplanting than other lindens

Moisture Tolerance

<table>
<thead>
<tr>
<th>VERY WET</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

![Moisture Tolerance Graphic](https://example.com/moisture-tolerance.png)
Photos

- Tilia tomentosa - Bark
- Tilia tomentosa - Leaf
- Tilia tomentosa - Fruit
- Tilia tomentosa - Buds
- Tilia tomentosa - Habit
- Tilia tomentosa - Habit
- Tilia tomentosa - Habit
- Tilia tomentosa - Leaves
- Tilia tomentosa - Leaves
Species: *Tilia x euchlora*  
(til'e-ah you-klor'ah)  
Crimean Linden

### Cultivars

'Laurelhurst'

### Ornamental Characteristics

<table>
<thead>
<tr>
<th>Size:</th>
<th>Tree &gt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height:</td>
<td>50'</td>
</tr>
<tr>
<td>Leaves:</td>
<td>Deciduous</td>
</tr>
<tr>
<td>Shape:</td>
<td>round; branches skirt the ground</td>
</tr>
<tr>
<td>Ornamental Other:</td>
<td>Reported to be more drought tolerant than <em>T. cordata</em></td>
</tr>
</tbody>
</table>

### Environmental Characteristics

<table>
<thead>
<tr>
<th>Light:</th>
<th>Full sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone:</td>
<td>5a</td>
</tr>
<tr>
<td>Soil Ph:</td>
<td>Can tolerate acid to alkaline soil (pH 5.0 to 8.0)</td>
</tr>
<tr>
<td>Salt Tolerance:</td>
<td>vigorous compact growth; basal suckering on grafted trees; lustrous dark green leaves</td>
</tr>
<tr>
<td>Moisture Tolerance:</td>
<td>Consistently moist, well-drained soil; occasional periods of dry soil</td>
</tr>
<tr>
<td>Environmental Other:</td>
<td>vigorous compact growth; basal suckering on grafted trees; lustrous dark green leaves</td>
</tr>
</tbody>
</table>

### Insect Disease

more resistant to aphids than *T. cordata*

### Additional Other

transplant in spring or fall; parentage: *T. cordata* x *T. dasystyla*

### Moisture Tolerance

<table>
<thead>
<tr>
<th>Moisture Tolerance</th>
<th>VERY DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td></td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>2</td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td>3</td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

See graphic below
Photos

Tilia x euchlora - Leaves, Fruit
Tilia x euchlora - Leaves
Tilia x euchlora - Bark

Tilia x euchlora - Leaves, Fall Interest
Tilia x euchlora - Habit
Tilia x euchlora - Habit

Tilia x euchlora - Bark
Tilia x euchlora - Leaf
Tilia x euchlora - Habit
Species: *Ulmus 'Accolade'*

'Accolade' Hybrid Elm

**Cultivars**

No cultivars listed

**Ornamental Characteristics**

- Size: Tree > 30 feet
- Height:
- Leaves: Deciduous
- Shape: Vase-shaped, arching, American Elm-like glossy
- Ornamental Other:

**Environmental Characteristics**

- Light: Full sun
- Hardy To Zone: 4b
- Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- Salt Tolerance:
- Environmental Other: fast growing
- Moisture Tolerance:
  - Occasionally saturated or very wet soil;
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil;
  - Prolonged periods of dry soil
  - See graphic below

**Insect Disease**

- Reportedly resistant to Elm Yellows, resistant to Elm Leaf Beetle

**Additional Other**

- Parentage: *U. japonica* x *U. wilsoniana*

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>VERY WET</th>
<th></th>
<th></th>
<th>VERY DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Consistently moist, well-drained soil</td>
<td>Occasional periods of dry soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Photos

Species: *Ulmus 'Frontier'*

'Frontier' Hybrid Elm

**Cultivars**

No cultivars listed

**Ornamental Characteristics**

- **Size:** Tree > 30 feet
- **Height:** 40' height, 30' spread
- **Leaves:** Deciduous
- **Shape:** Broadly oval
- **Ornamental Other:**

**Environmental Characteristics**

- **Light:** Full sun
- **Hardy To Zone:** 5a
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:**
- **Environmental Other:**
- **Moisture Tolerance:**
  - Occasionally saturated or very wet soil;
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil; Prolonged periods of dry soil;
  - See graphic below

**Insect Disease**

Good resistance to Dutch elm disease and elm yellows (phloem necrosis); moderately resistant to

**Additional Other**

- **Parentage:** *U. carpinifolia* with *U. parvifolia*
elm leaf beetles.

### Moisture Tolerance

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Very Wet</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Very Dry</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
<td></td>
<td>10</td>
<td>11</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Photos

- Ulmus 'Frontier' - Habit
- Ulmus 'Frontier' - Leaves, Fall Interest
- Ulmus 'Frontier' - Habit, Fall Interest
- Ulmus 'Frontier' - Leaves, Fall Interest

Species: *Ulmus americana*

(*ul'mus a-mer-i-kay'nah)*

American Elm

Cultivars

Much selection has been attempted for dutch elm disease resistant varieties of this long-prized native street/shade tree. Below are the best of the few resistant cultivars that have been yet discovered. There is great hope that more resistant varieties will be discovered moving forward.

'Independence', 'New Harmony', 'Valley Forge'
**Ornamental Characteristics**
- Size: Tree > 30 feet
- Height: 60' - 80' (30' - 50' spread)
- Leaves: No value
- Shape: majestic, upright-spread
- Ornamental Other: withstands extreme cold

**Environmental Characteristics**
- Light: Full sun
- Hardy To Zone: 3a
- Soil Ph: No Value
- Salt Tolerance: Tolerates salty soil
- Environmental Other: withstands extreme cold
- Moisture Tolerance:
  - Occasionally saturated or very wet soil;
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil;
  - Prolonged periods of dry soil
- See graphic below

**Insect Disease**
- Susceptible to many pests, particularly dutch elm diseases, elm yellows, verticillium

**Additional Other**
- Easy to transplant; fast growth, native to Eastern and Mid-West N. America

**Moisture Tolerance**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Prolonged periods of dry soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Photos

- Ulmus americana - Leaves
- Ulmus americana - Habit
- Ulmus americana - Habit, Fall Interest
- Ulmus americana - Leaves
- Ulmus americana - Habit
- Ulmus americana - Buds
- Ulmus americana - Leaves
- Ulmus americana - Leaves
- Ulmus americana - Bark
Species: *Ulmus carpinifolia*

(ul’mus car-pine-ih-fo’lee-ah)

Smooth-leaf Elm

Cultivars

Many pest and disease resistant cultivars exist for this species and are listed below.


Ornamental Characteristics

<table>
<thead>
<tr>
<th>Size: Tree &gt; 30 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height: 70' - 90'</td>
</tr>
<tr>
<td>Leaves: Deciduous</td>
</tr>
<tr>
<td>Shape: pyramidal - oval</td>
</tr>
<tr>
<td>Ornamental Other: tolerates wet soil or drought</td>
</tr>
</tbody>
</table>

Environmental Characteristics

<table>
<thead>
<tr>
<th>Light: Full sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardy To Zone: 5b</td>
</tr>
<tr>
<td>Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)</td>
</tr>
<tr>
<td>Salt Tolerance: Tolerates salty soil</td>
</tr>
<tr>
<td>Environmental Other: Lustrous green leaves turn limited yellow fall color</td>
</tr>
<tr>
<td>Moisture Tolerance: Occasionally saturated or very wet soil; Consistently moist, well-drained soil; Occasional periods of dry soil</td>
</tr>
</tbody>
</table>

Insect Disease

Less susceptible to dutch elm disease than *U. americana*;
susceptible to elm leaf beetle and many more

Additional Other

Easily transplanted, native to Europe

Moisture Tolerance

<table>
<thead>
<tr>
<th>VERY WET</th>
<th>VERY DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td></td>
</tr>
<tr>
<td>Occasional periods of dry soil</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
</tr>
</tbody>
</table>
Photos

Ulmus carpinifolia - Leaves  
Ulmus carpinifolia - Habit  
Ulmus carpinifolia - Habit

Ulmus carpinifolia 'Regal' - Habit  
Ulmus carpinifolia 'Regal' - Habit  
Ulmus carpinifolia 'Sapporo Autumn Gold' - Habit

Ulmus carpinifolia 'Sapporo Autumn Gold' - Habit  
Ulmus carpinifolia 'Sapporo Autumn Gold' - Leaves, Fall Interest  
Ulmus carpinifolia 'Urban' - Habit
Species: *Ulmus glabra*
*(ul'mus glā'brÅ½)*
Scotch Elm; Wych Elm

**Cultivars**

Several cultivars of this species are available in Europe but due its invasive nature here only a few are available in the U.S. The two below are commonly found in the trade.

'Camperdownii', 'Pendula'

**Ornamental Characteristics**

- Size: Tree > 30 feet
- Height: 80'-100' H; 50'-70' W
- Leaves: Deciduous
- Shape: Large, massive, open
- Ornamental Other:

**Environmental Characteristics**

- Light: Full sun
- Hardy To Zone: 4b
- Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- Salt Tolerance:
- Environmental Other:
- Moisture Tolerance:
  - Occasionally saturated or very wet soil;
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil;
  - See graphic below

**Insect Disease**

No diseases listed

**Additional Other**

**Moisture Tolerance**

![Moisture Tolerance Diagram]

<table>
<thead>
<tr>
<th>Occasional periods of dry soil</th>
<th>Consistently moist, well-drained soil</th>
<th>Occasionally saturated or very wet soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>6</td>
<td>9</td>
<td>12</td>
</tr>
</tbody>
</table>

Very Wet

Very Dry
Photos

- Ulmus glabra - Bark, Leaves, Fall Interest
- Ulmus glabra - Habit
- Ulmus glabra - Habit
- Ulmus glabra - Leaves
- Ulmus glabra - Leaves, Fall Interest
- Ulmus glabra - Leaves
- Ulmus glabra - Leaves
- Ulmus glabra - Bud
Species: *Ulmus parvifolia*

(ul’ mus par-vi-fo’lee-ah)

Chinese Elm; Lacebark Elm

**Cultivars**

Many cultivars of this species exist. The straight species has variable bark and pest/disease resistance. A new group of cultivars with good resistance to Dutch Elm disease, elm leaf beetle and elm yellows are becoming available.

' Burgundy', ' Caitlin', ' Central Park Splendor', ' Drake', ' Dynasty', ' Emerald Isle', ' Emerald Vase', ' Golden Ray', ' King's Choice', ' Ohio', ' Prairie Shade'

**Ornamental Characteristics**

- Size: Tree > 30 feet
- Height: 40' - 75'
- Leaves: Deciduous
- Shape: round, vase
- Ornamental Other:

**Environmental Characteristics**

- Light: Full sun
- Hardy To Zone: 5b
- Soil Ph: Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- Salt Tolerance:
- Environmental Other: leathery dark green leaves; gray/green/brown/orange exfoliating bark
- Moisture Tolerance:
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil; Prolonged periods of dry soil
  - See graphic below

**Insect Disease**

resistant to Dutch Elm disease, elm yellows and other insect problems

**Additional Other**

transplant in spring or fall, native to China, Japan and Korea

**Moisture Tolerance**

![Moisture Tolerance Graph]

<table>
<thead>
<tr>
<th>Very Wet</th>
<th>Very Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occasionally saturated or very wet soil</td>
<td>Prolonged periods of dry soil</td>
</tr>
<tr>
<td>Consistently moist, well-drained soil</td>
<td>Occasional periods of dry soil</td>
</tr>
<tr>
<td>1 2 3</td>
<td>4 5 6</td>
</tr>
</tbody>
</table>
Photos

Ulmus parvifolia - Bark

Ulmus parvifolia - Bark

Ulmus parvifolia - Buds

Ulmus parvifolia - Habit

Ulmus parvifolia - Leaves, Seeds

Ulmus parvifolia - Habit

Ulmus parvifolia - Seeds

Ulmus parvifolia - Bark

Ulmus parvifolia - Leaves
Species: *Ulmus pumila*

(ul'mus pue'mi-lah)

Dwarf Asiatic Elm: Siberian Elm

**Cultivars**

'Coolshade', 'Dropmore', 'Hamburg Hybrid', 'Improved Cascade', 'Lincoln', 'Mr. Buzz', 'Pendula'

**Ornamental Characteristics**

- **Size:** Tree > 30 feet
- **Height:** 50' - 70' (spread 40' - 50')
- **Leaves:** Deciduous
- **Shape:** open
- **Ornamental Other:**

**Environmental Characteristics**

- **Light:** Full sun
- **Hardy To Zone:** 4a
- **Soil Ph:** Can tolerate acid to alkaline soil (pH 5.0 to 8.0)
- **Salt Tolerance:** Tolerates salty soil
- **Environmental Other:** fast growth, poor form; susceptible to wood breakage; a poor choice except for difficult sites
- **Moisture Tolerance:**
  - Occasionally saturated or very wet soil;
  - Consistently moist, well-drained soil;
  - Occasional periods of dry soil;
  - Prolonged periods of dry soil
- **Insect Disease:**
  - Very susceptible to elm leaf beetle;
  - Wood is brittle and breaks easily

**Additional Other**

- Native to Siberia, China, Korea

**Moisture Tolerance**

<table>
<thead>
<tr>
<th>Occasional periods of dry soil</th>
<th>Prolonged periods of dry soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>VERY WET</strong></td>
<td></td>
</tr>
<tr>
<td><strong>VERY DRY</strong></td>
<td></td>
</tr>
</tbody>
</table>
Species: *Zelkova serrata*
(zel-koe‘vah ser-ray‘tah)
Japanese Zelkova; Saw-leaf Zelkova; Keaki Tree

**Cultivars**
Some cultivars <30'
'City Sprite', 'Goshiki', 'Green Vase', 'Halka', 'Musashino', 'Schmidtlow', 'Spring Grove', 'Variegata', 'Village Green'

**Ornamental Characteristics**
- Size: Tree > 30 feet, Tree < 30 feet
- Height: 60' - 80', some cultivars <30'
- Leaves: No value
- Shape: vase
- Ornamental Other:

**Environmental Characteristics**
- Light: Full sun
- Hardy To Zone: 5b
- Soil Ph: No Value
- Salt Tolerance:
- Environmental Other: narrow crotch angles and poor branch attachment can cause splitting when older; dark green leaves turn yellow, bronze or reddish purple; cherrylike bark becomes gray and exfoliating when mature
- Moisture Tolerance:
- Consistently moist, well-drained soil; Occasional periods of dry soil; Prolonged periods of dry soil
- See graphic below
Insect Disease
No diseases listed

Additional Other
transplant in spring, native to Japan, Korea, Northern China, Taiwan

Moisture Tolerance

<table>
<thead>
<tr>
<th>Occasional periods of dry soil</th>
<th>Prolonged periods of dry soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

**Very Wet**

**Very Dry**
<table>
<thead>
<tr>
<th>Photos</th>
</tr>
</thead>
<tbody>
<tr>
<td>✗ Zelkova serrata - Fruit</td>
</tr>
<tr>
<td>✗ Zelkova serrata - Bark</td>
</tr>
<tr>
<td>✗ Zelkova serrata - Leaves, Fall Interest</td>
</tr>
<tr>
<td>✗ Zelkova serrata - Habit</td>
</tr>
<tr>
<td>✗ Zelkova serrata - Habit</td>
</tr>
<tr>
<td>✗ Zelkova serrata - Leaf</td>
</tr>
<tr>
<td>✗ Zelkova serrata - Fruit</td>
</tr>
<tr>
<td>✗ Zelkova serrata - Habit</td>
</tr>
<tr>
<td>✗ Zelkova serrata - Leaves</td>
</tr>
</tbody>
</table>