Hedging your shrub investments: Managing for pests on ornamental shrubs

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Definition of Shrub

- A woody plant of relatively low height, having several stems arising from the base and lacking a single trunk; a bush
Why Shrubs?

• Next to trees, shrubs provide structure and framework
Ornamental Shrubs

ABIOTIC DISORDERS
Overwatering - poorly drained soils

Yews –

**Symptoms** – decline and dieback,

**Cause:** lack of oxygen, root rots,

Winter dieback (due to transpiration during warm days during the winter)
Overwatering
Spiraea
• Fire Blight
• Leaf spot-fungus
• Powdery mildew
Overwatering

• Iron Chlorosis -
  Over watering is probably the most common cause of chlorosis, in fact iron chlorosis can be induced if soils are kept excessively wet as a result of over watering, compacted soils, or poor drainage.
Winter Injury

Plant away from steam vents
Drought stress
Protect with loose wrapping
Water during winter during
Warm days above freezing
Herbicide Injury

• Non – specific roundup around grass edges
• 2,4-D volatilization above 85 degrees
Euonymus japonicus
Bright golden foliage

‘Aureo-marginata’
Euonymus japonicus
‘Silver King’ & ‘Silver Queen’

• Evergreen hedge plant with attractive, silvery-white or silvery cream on leaf margins
• Can be grouped to form a low screen.
• Tolerates poor soils, heat.
• Moderate size to 6 feet tall, 3 feet wide.
• Full sun to partial shade
Euonymus Scale

**Symptoms:** white or yellow spots on leaves, scales concentrated on stems, females overwinter

**Management:** plant further from buildings for better air circulation, insecticidal soap, horticulture oils
Euonymus Powdery Mildew

White flecks on upper surface leaves

Management:
• Prune out affected leaves
• Provide adequate spacing for air circulation to lower humidity
• Some horticulture oils may help
• Fungicides Bravo, Flotox, Funginex rotate
Burning Bush or Winged Euonymus
*Euonymus alatus* ‘Compacta’

This is a **deciduous** shrub, which grows to a height of 10 to 20 feet and similar spread, depending on the variety. The dark-green foliage turns brilliant red in fall. The flowers are ornamentally unimportant, yellow-green, and present in May and June. The plant likes partial shade to full sun and well-drained soil.
Winged Euonymus: Two Spotted Spider Mite

The life cycle from egg to adult can occur in five days at 75 degrees F, thus several generations occur from late spring through fall.

Management:
• Plant in part sun
• Insecticidal soap or horticulture oil
• Water plant during dry periods
Boxwood (Buxus spp.)

Deer Resistant, Evergreen, pruned to any shape or left to take on natural shape. Zone 5-9
Boxwood Psylla

- American boxwood
- aka jumping plant lice (1/16”) covered with white secretion
- Winged adults early summer
- Symptoms: infected shoots arch inward (cabbage like clusters), sticky honeydew, black sooty molds
- Prune out infestation
- Insecticidal soap or horticulture oil
Lilac
*Syringa vulgaris*

Fragrant
Blooms spring (cut blooms)
Colors from white to deep purple
Renewal pruning
Powdery mildew
Lilac borer
Lilac Powdery Mildew

Severity: 2 out of 5
Frequency 4 out of 5

Management:
• Plant in sunny location with good air movement
• Do not crowd
• Remove diseased and dead leaves around plants
• Avoid excessive fertilization
Lilac/Ash Borer

- Larvae of a clear winged moth feed in the wood of lilac
- Adults emerge as adult moth when common lilac is in full bloom for ~ 6 weeks thereafter
- After mating lays eggs within 10 days on bark of host plant

**Treatment:** pheremone traps to determine emergence, permethrin or bifenthrin
Cotoneaster
Can be susceptible to Fire Blight
Manage by pruning
Junipers

*Juniperus spp*

Low maintenance

Spreading
Phytophthora Root Rot in Juniper

- fungus like organism that becomes active with host plant and saturated soil conditions
- Inner bark becomes brown as tissue dies

Treatment:
Avoid overwatering and plant resistant species
Invest in shrubs that are more resistant to low water use and native species. SHRUBS LESS PRONE TO DISEASES.
Star Magnolia  
*Magnolia koebus*  
var. *stellata*  
15 – 20 feet tall  
Zone 4-8  
Dense oval shrub  
Protect from south exposure
Ninebark
*Physocarpus opulifolius*

8 -10 ft tall upright shrubs
White pink flowers
Red or purple leaves in fall
Prefers sun but will tolerate partial shade

‘Center Glow’

‘Coppertina’
**Beauty bush**

*Kolkwitzia*

- 6 – 10 ‘ tall, upright vase-shaped
- Blossoms heavily in spring followed by pinkish-brown bristly fruits
- Transplant b-and-b
- Well-drained soil, full sun for best flowering
- Prune out old canes yearly; can shear to revitalize
- Adaptable to pH
- ‘Rosea’ deep pink flowers
- Zone 4-8
Hazelnut
*Corylus spp.*
Pest resistant
Drought tolerant
Smokebush
*Cotinus coggygria*

10-12 feet
Upright loose open habit
Different foliage – green to purple
Tolerate drought and salt
Silver Buffaloberry
(*Shepherdia rotundifolia*)

- Attractive shrub
- 4 to 6 feet
- Prefers rocky soil and slopes
- Silvery foliage
Serviceberry
*Amelanchier alnifolia*

Also native species available –
*Amelanchier utahensis*
Potentilla fruticosa

• Small to medium deciduous shrub
• Blooms throughout summer
• Tolerant of various soils
• Susceptible to spider mite damage
Butterfly Bush

*Buddleia davidii*

- Large shrub to 10’ tall
- Flowers perfect, usually lavender, orange at the mouth
- Very fast-growing
- Prune to the ground in early spring; flowers on new growth
- Seeds freely- remove flowers before they go to seed
- Prefers alkaline soils
- Many cultivars available
- Zones 5 – 9
Resources

• University of Illinois Extension  
  [http://www.urbanext.uiuc.edu/shrubselector](http://www.urbanext.uiuc.edu/shrubselector)

• Utah State University Extension  [www.treebrowser.org](http://www.treebrowser.org)

• Conservation Garden Park Plant List  

### University of Illinois Extension

**Selecting Shrubs for Your Home**

<table>
<thead>
<tr>
<th>Shrub Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpine Currant</td>
<td><em>Ribes alpinum</em></td>
</tr>
<tr>
<td>Anglojap Yew</td>
<td><em>Taxus x media</em></td>
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<tr>
<td>Bigleaf Hydrangea</td>
<td><em>Hydrangea macrophylla</em></td>
</tr>
<tr>
<td>Black Chokeberry</td>
<td><em>Aronia melanocarpa</em></td>
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<tr>
<td>Black Jetbead</td>
<td></td>
</tr>
</tbody>
</table>
Creeping Cotoneaster
Cotoneaster adpressus

Hardiness Zone: 5 - 7

Mature Height: 1-2 Feet

Mature Width: 4-6 Feet

Features: Small, white flowers tipped with pink in spring; summer leaves are small but lustrous; small, bright red fruit in late summer and autumn; autumn color is red.

Culture: Full sun; prefers a moist, well-drained soil, but can tolerate dryness; tolerates alkaline soil.

Mature Form: Low, spreading form that roots along the branches where they touch the ground; stiff branches.

Native To: China

Soil Conditions: ✓ Dry
✓ Moist, Well-Drained
✓ Wet

Tolerance: ✓ Alkaline Soil

Creeping Cotoneaster flowers

Size:
- Small
- Medium
- Large

Exposure/Light Requirements:
- Full Shade
- Full Sun
- Partial Sun/Shade
# TREE LIST

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Family</th>
<th>Favorites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alder, European or Common</td>
<td>Alnus glutinosa</td>
<td>Betulaceae - Birch</td>
<td></td>
</tr>
<tr>
<td>Alder, Thinleaf or Mountain</td>
<td>Alnus tenuifolia</td>
<td>Betulaceae - Birch</td>
<td></td>
</tr>
<tr>
<td>Apple</td>
<td>Malus pumila</td>
<td>Rosaceae - Rose</td>
<td></td>
</tr>
<tr>
<td>Apricot</td>
<td>Prunus armeniaca</td>
<td>Rosaceae - Rose</td>
<td></td>
</tr>
<tr>
<td>Arborvitae, Oriental</td>
<td>Thuja (Platycedrus) orientalis</td>
<td>Cupressaceae - Cypress</td>
<td></td>
</tr>
<tr>
<td>Ash, Blue</td>
<td>Fraxinus quadrangulata</td>
<td>Oleaceae - Olive</td>
<td></td>
</tr>
<tr>
<td>Ash, European</td>
<td>Fraxinus excelsior</td>
<td>Oleaceae - Olive</td>
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<tr>
<td>Ash, Green</td>
<td>Fraxinus penncylvianica</td>
<td>Oleaceae - Olive</td>
<td></td>
</tr>
<tr>
<td>Ash, Singleleaf or Dwarf</td>
<td>Fraxinus anomala</td>
<td>Oleaceae - Olive</td>
<td></td>
</tr>
</tbody>
</table>

## Arborvitae, Oriental

**Thuja (Platycedrus) orientalis**

See Northern White-Cedar for description. Major differences:

- **Twigs/buds:** Twigs arranged in vertically flattened sprays.
- **Flowers/fruit:** Monoecious, fruit a cone; 1/3” to 1” long; upright; 6 to 8 scales, thicker than above.