Plant lists are invaluable resources for garden enthusiasts, designers, nursery trades people and landscape architects. We constantly consult books and nursery catalogs which list landscape plants, especially those that organize plants by their characteristics and landscape uses. As times and fashions change, new plants emerge, old plants are rediscovered, and others lose favor and disappear from these lists. But one point remains clear: listing plants encourages their widespread distribution and use. The purpose of this publication is to encourage the production and use of landscape plants that are more sustainable: those which are not invasive and require reduced inputs of pesticides, water and maintenance.

**Why Sustainable?**

Not long ago, plants from around the world could be introduced into the landscape and provided with the care needed to ensure their long-term beauty and success. Pesticide use was widespread and its effectiveness unquestioned, labor for intensive care was available and affordable, and the supply of natural resources was considered limitless. Much has changed in recent decades; we have become painfully aware of the limits of our natural resources and the precarious balance of nature in which we play a pivotal role. Many in our society are looking for ways to reduce human impacts on the environment. Others lack the time or resources to manage pests or maintain shrubs that require frequent pruning or irrigation. These people should find the sustainable plant list an invaluable resource.

Careful plant selection is the key first step in developing a balanced and self-perpetuating landscape. However, plant survival with minimal maintenance is not the only issue in sustainability. We are having more difficulty with invasive exotic plants which have escaped from managed landscapes, displacing native plants and disrupting natural ecosystems. The use of these potential invasives cannot be seen as sustainable except in very controlled situations.

This list of sustainable plants is not...
offered as the entire answer. Proper siting, planting and maintenance are necessary for a plant to prosper in the landscape. Therefore, climatic conditions, exposure to sun and wind, subsurface soil and moisture conditions, etc. must be considered when selecting plants for a particular location. Sustainable or not, if one ignores the site and a plant’s cultural requirements, that plant will suffer.

A List for Professionals

In preparing this list and the accompanying plant descriptions, we have targeted a professional audience, with an expectation that through time, as these plants become more available, this information will filter down to the consumers. Plants on this list are proven performers in Southern New England (USDA Hardiness Zones 7a–5b), and many of them can be grown both north and south of here (although the pest complexes might change). This list is dynamic and will continue to change as new plants and pests are introduced and as we learn more about existing ones.

The list is only a guide. Plants are included which have qualities appealing to designers and plant lovers alike. Plant descriptions include color, form, texture and growth habits as well as maintenance requirements and hardiness. Many of the plants on the list are well known and currently in production, while others need to be grown and distributed more. We are well aware that it will take a decade or more before some of the newer plants are readily available in the trade.

Many of our favorite plants are not on the list, because serious pests threaten their existence or their maintenance requirements are too high for them to be considered sustainable. That doesn’t mean that we won’t include a few of them in our landscapes. Life would be indeed dull without a rose, but most of us would not want to maintain a half-acre of them. Plants with occasional pest problems or those with relatively minor problems are included on the list with cautionary notes. It is only those plants with life-threatening or chronic pest problems that are omitted from the list, along with seriously invasive species. The list is not intended to eliminate the production of high maintenance plants with desirable traits. Instead, it is intended to encourage the broader distribution of plants which seem to be better suited to satisfying not only our horticultural requirements, but also our environmental concerns.

Native Plants

There is renewed interest in native plants (those found growing outside of cultivation in this region during pre-Colonial times) which often are better acclimated, less pest prone and more favorable for native wildlife than exotic plants. Native plants are identified in Appendix 2. However, it should be noted that many exotic insect and disease pests have been introduced in the past 300 years. They have virtually eliminated some of our native plants and become serious pests of others. In these cases, it is useful to look to other parts of the world where plants have evolved resistance to these pests. Even without introduced pests, some native plants have problems in our landscapes where they are far removed from their natural environments. A fabulous forest shrub can have serious difficulties when sited between a driveway and a sidewalk. It is likely that a sustainable landscape will feature many native plants, but we think there are many non-natives which should be considered as well.
Planting for Sustainable Landscapes

Introduction

Giving plants a healthy start begins with proper planting. Problems showing up on established plants can often be traced back to poor planting. Traditional planting methods are often passed down through the generations. While some of the old ways are still recommended today, many planting practices are changing to reflect current research and technology. Well-informed landscapers and arborists should be aware of the latest planting and transplanting techniques. This chapter presents the techniques and procedures used to plant and transplant trees and shrubs, and explains how the use of proper planting techniques can improve survival and accelerate establishment.

Selecting and Purchasing Plants

THE RIGHT PLANT

A key to sustainable planting is matching the plant and the conditions of the planting site. The best planting procedures will not save a plant that is poorly suited for the site. Plants vary naturally in their ability to tolerate site conditions such as extreme heat or cold, wet or dry soils, sun or shade. The plant also should not outgrow its allotted space. Plants should be healthy and vigorous when planted. The condition of the roots in particular affects transplant success. The roots should be white and numerous; brown or black roots indicate a health problem.

HANDLING NEW PLANTS

Trees and shrubs are available from the nursery in one of three forms: bare root, balled and burlapped, or container grown. Depending upon site requirements and planting specifications, each form has its advantages and disadvantages.

Bare root plants have had the soil shaken from their roots after digging. Most bare root trees and shrubs are purchased by mail order and planted during the dormant season, before roots and buds begin to grow. Since there is no soil on the roots, it is vital that they be kept moist, and if not planted immediately, that they be stored cold (32°–40°F) with moist packing around the roots. When planted, the roots of bare root plants should be spread evenly in the planting hole.

Container grown plants have been grown for months or years in the container in which they are sold. Container growing is becoming very popular in the nursery trade. Container grown plants may be planted anytime the soil is workable, but may
need special attention to correct compacted or circling roots. When selecting container grown trees and shrubs, always check the roots. For example, not all plants purchased in containers are container grown. Often bare root trees or shrubs are potted in containers, grown for a short time and sold from the nursery. If they are not held for at least a year, the roots may not have established in the container. On the other hand, if plants are grown in their container for too long, the roots may have grown in circles. These roots must be separated and spread out during planting. If the roots are densely matted, the outside of the root mass should be sliced vertically with a sharp knife in a few places to help separate the roots. And unless the container is biodegradable, such as a natural peat pot, it must be removed before planting.

If properly watered and maintained, container grown trees can be planted any time of the year. Early fall planting is especially advantageous because the roots can begin to establish before the plant goes dormant for winter. Early spring, before bud break, is also a good time to plant because the roots begin to grow immediately, and light, temperature and soil moisture levels are optimal. Perhaps the most important factor in successfully transplanting container grown trees is maintaining adequate (not excessive) soil moisture, which encourages roots to grow into the surrounding soil.

Many trees and shrubs are dug in the nursery with root balls intact and wrapped with burlap. Be aware that as much as 95% of the absorbing roots can be lost in digging, though some roots are preserved in the root ball. When selecting a balled and burlapped plant, be sure the ball is solid, with little or no movement of the trunk. The burlap used to wrap the root ball holds the soil ball together and keeps the roots from drying out. Natural fiber burlap is biodegradable and may be left in the hole, though it should be rolled back and completely covered with soil. Some nurseries use treated burlap or synthetic burlap which must be removed at planting. All twine or rope holding the burlap together or tied around the trunk must be removed to avoid girdling. Some larger balled and burlapped trees come in wire baskets that keep the ball together during handling. Although the baskets do not have to be removed, it is best to cut the upper rows when planting. This eliminates interference with rakes or lawn mowers if the tree is planted shallow, and allows roots to grow and spread freely near the surface.

**Planting**

**THE PLANTING HOLE**

Installing trees and shrubs properly involves more than just digging holes and setting in plants. The quality of the planting hole will determine the long term health of the root system, and thereby the entire plant. In general, the planting hole should be at least 18 to 24 inches wider in diameter than the root ball. If the soil is compacted or of poor quality, the hole should be even larger, i.e., 3 to 5 times the width of the root ball. The hole should be wider at the
top than the bottom, with sloped walls, because most of the root growth will be shallow and horizontal. Planting too deeply can stress the plant and drown or suffocate the roots. The easiest way to avoid this is never to dig the hole deeper than the root ball. Soft fill should not be left in the bottom of the hole, as the root ball will settle. In almost all types of soil, the tree should be planted slightly shallow, with the top 2-3 inches of the root ball sitting above the surrounding soil grade. Remember, the planting site will be covered with 2-3 inches of mulch by the time you are finished planting.

Drainage is also an important consideration in successful planting. Poor drainage kills more plants than any other cause. A poorly prepared planting hole may act as a dish and hold water, especially in clay soils. Oxygen levels are low in the bottom of such holes and not conducive to healthy root growth. Do not put gravel in the bottom of the planting hole; it does not aid drainage.

**THE ROOT BALL**

Handle roots carefully during planting – small absorbing roots are easily broken. Check balled and burlapped plants to ensure the roots originate near the surface of the ball. When setting the plant in the hole, make sure these roots are no deeper than the soil grade.

**BACKFILLING**

In most cases, it is best to backfill the hole with the same soil that came out of the hole. Research has shown that soil amendments usually do not improve plant establishment or growth. However, if the natural soil is extremely poor, topsoil may be the only alternative. Strive to match the backfill soil type to the soil type of the site, as closely as possible. Backfilling with a sandy loam in heavy clay soils may cause the planting hole to collect water and suffocate the roots. If soil must be brought to the site, or the backfill must be amended, the hole should be extra wide. This will allow for several years' growth within the new soil. While backfilling, work the soil around the ball so that no air pockets remain. Large pockets of air can allow roots to dry out. Firm the soil so that the plant is vertical and adequately supported, but do not pack the soil. Water thoroughly while backfilling. The remaining soil should be mounded into a berm, on the outer edge of the hole, to collect water over the root zone, especially on sloped sites. Remove all tags or labels so that they will not girdle the trunk or branches as the plant grows.

**MULCHING**

After filling the planting basin with water and letting it drain, fill the basin with 2 to 3 inches of an organic mulch. This will conserve soil moisture, moderate soil temperature extremes, and reduce competition from weeds and turf. Many organic mulches such as pine needles, bark or wood chips are fine. Make certain the mulch is not touching the plant stem, as this could promote bark decay, crown rot, winter injury or rodent damage. Do not use black plastic or landscape fabric under the mulch, since these materials, sooner or later, restrict water movement and oxygen availability to the roots.

**WATER AND FERTILIZER**

Planting is a major operation from which most trees and shrubs recover slowly. A major portion of the root system is lost in digging, and the plant must reestablish sufficient roots to sustain itself. During this period, the plant's ability to obtain and transport water and minerals is greatly reduced, which results in varying degrees of water stress and transplant shock. For this reason, proper watering is key to the survival of newly planted trees and shrubs. If rainfall is not sufficient (generally 1 inch...
per week), the tree should be watered every five to seven days. A slow gentle soaking of the root zone is preferable. The watering schedule should be appropriate for the soil type and drainage—remember that excess water in the planting hole is a leading cause of transplant death.

Since the root system functions of a newly planted tree are limited, fertilization often is not recommended at the time of planting. Excessive fertilizer in the root zone can be damaging, so do not add fertilizer to the backfill. If fertilizer must be used at planting or in the first growing season, apply a controlled-release fertilizer or liquid feed. Fertilizing in the fall when the roots are active can be beneficial. However, most plants received from the nursery require no fertilizer in the first year of establishment.

**PRUNING**

Plants grow and establish fastest if pruning is minimized at planting. Beyond the removal of broken or damaged branches, it is usually best to avoid heavy pruning.

**STAKING AND GUYING**

Most shrubs do not need to be supported after planting. In general, trees under 8 feet height do not need support either. In fact, staking can have detrimental effects on the development of trunk taper and root growth. Too often, staking materials end up injuring or girdling the tree.

Trees may be supported by up to three stakes. If a single stake is used, it should be placed on the upwind side of the tree. The material used to attach the tree to the stake should be broad, smooth and somewhat elastic. The tree may be attached to the stake at several points along the trunk. However, do not stake the tree too rigidly, as the tree will develop a less sturdy root system and be more subject to girdling. If two support stakes are used, a single, flexible tie attached to the tops of the stakes will be sufficient. Triple staking provides more protection against strong wind and lawn mowers. Support stakes and guy wires generally should be removed after one growing season. If staking is left in place for more than two years, the tree’s ability to stand alone may be reduced and the chances of girdling injury are increased.

Planting guidelines are based on information found in the International Society for Arboriculture Arborist’s Certification Study Guide, the Penn State University Master Gardener Manual and Arboriculture: Integrated Management of Landscape Trees, Shrubs and Vines by Richard W. Harris.
List of Sustainable Trees and Shrubs

**Abelia x grandiflora**  
Glossy Abelia  
Zone 6-9  
3-6' x equal spread

Bronze-red to bronze-purple leaves persist into late fall/early winter. Flowers are white with a pink blush and bloom from May to frost. Sepals are pink to purple and are quite showy late in the season. Quite hardy and easy to grow. Prefers acid, well-drained, moist soil. Full sun/part shade. Prune dead wood.

**Abies cephalonica**  
Greek Fir  
Zone 5-6  
50-75' x 20-30'

Very heat tolerant. Susceptible to spruce mites.

**Abies cilicica**  
Cilician Fir  
Zone 5-6  
60-70' x 20-30'

Tolerates heavy clay soils, cold temperatures. Tolerant of high pH soil. Can be invasive.

**Abies concolor**  
White Fir  
Zone 4-7  
30-50' x 15-30'

Prefers moist, well-drained, sandy-gravelly loams and full sun. Tolerates heat, drought, cold, intolerant of wet soils. Blue-gray needle color, gray to purple upright cones. Native to Western US. Alternative species for Picea pungens f. glauca (Blue Spruce) which is vulnerable to Cooley spruce gall adelgid.

**Abies homolepis**  
Nikko Fir  
Zone 4-6  
30-50' x 20-30'

Prefers moist, well-drained soil, pH adaptable, little maintenance required.

**Abies koreana**  
Korean Fir  
Zone 5-6  
15-30'

Violet-purple, 2-3" long cones are striking. More heat tolerant than most firs. Prefers moist, well-drained soil. Sun/part shade.

**Abies procera**  
Noble Fir  
Zone 5-6  
50-100' x 20-30'

Prefers moist, deep, cool soil. Not tolerant of high pH or wind. Sun/part shade. ‘Glauca’ has extremely glaucous foliage. Becomes a large tree. Susceptible to spruce mites. Native to Western US.

**Abies veitchii**  
Veitch Fir  
Zone 3-6  
30-60' x 25-35'

Prefers moist, deep, cool soil. Not tolerant of high pH but tolerates semi-urban conditions. Sun/part shade. Susceptible to spruce mites.

**Acanthopanax sieboldianus**  
(see Eleutherococcus sieboldianus)

**Acer buergerianum**  
Trident Maple  
Zone 5-8  
20-25' x equal spread

Prefers well-drained, acid soil; good drought resistance, full sun. Grows well under utility lines. Attractive bark on mature specimens.
Acer campestre
Hedge Maple
Zone 5-8
25-35' x equal spread
Adaptable species, prefers average garden soils but tolerates dry conditions and compaction, acid-alkaline, sunlight shade, withstands shearing. Grows well under utility lines.

Acer ginnala
Amur Maple
Zone 3-8
15-18' x equal spread
Popular small tree. Very cold hardy, shade and high pH tolerant. May be grown in containers.

Acer griseum
Paperbark Maple
Zone 5-7
20-30' x 1/2 to equal spread
Full sun/partial shade, prefers moist well-drained soils. Relatively maintenance free. Outstanding cinnamon-colored exfoliating bark and red-scarlet fall foliage offer year round interest in the landscape. Slow growing specimen tree.

Acer palmatum
Japanese Maple
Acer japonicum
Fullmoon Maple
Zone 5-8
15-25' x variable
Moist, well-drained soils high in organic matter, full sun to dappled shade. Dissectum types scorch in full sun if drought stressed. Protect from wind and late frosts. Sited properly, this is an excellent low maintenance plant. Red leaf forms seem to be somewhat more hardy and stress tolerant than green leaf forms.

Acer pohsylvanicum
Striped Maple
Zone 3-7
15-20' x equal spread
Large shrub or short tree. Prefers semi-shaded woods with well-drained, cool, moist, slightly acid soil. Good native for naturalizing. Green and white striped bark with vibrant yellow fall foliage.

Acer rubrum
Swamp/Red Maple
Zone 3-9
40-60' x equal spread
Tolerates most soils but prefers moist, acid conditions. Excellent for wet conditions. In full sun it will develop clear red fall foliage. Many excellent cultivars available, e.g., ‘October Glory’, ‘Red Sunset’ and Freeman hybrids.

Acer tataricum
Tatarian Maple
Zone 3-7
20' x equal spread
Adaptable to a wide range of conditions, drought tolerant once established, sun/light shade. Many attributes similar to A. ginnala.

Acer triflorum
Three-flower Maple
Zone 5-7
20-30' x equal spread
Moist, acid soils, full sun/partial shade. A good small tree with exfoliating bark, the trifoliate leaves develop a warm yellow to red color in the fall. Good for many different landscape uses.

Acer truncatum
Purpleblow Maple
Zone 4-8
20-25' x less spread
Small, rounded, relatively hardy tree. Potentially drought and urban tolerant. Young purple leaves change to green, yellow-orange-red fall color.

Aesculus parviflora
Bottlebrush Buckeye
Zone 4-8
8-12' x 8-15'
Prefers moist, well-drained soils with high organic matter, drought intolerant, pH adaptable, prefers acid, sun/shade. Large white flowers in June-July. Overall growth habit is clumping as it suckers readily from the base. Good yellow fall color. Native.

Aesculus pavia
Red Buckeye
Zone 5-8
10-20' x equal spread
Prefers moist, well-drained soils, full sun/light shade, red flowers in 4-8" panicles in mid spring. Variability in flower color in the species, ‘Atrosanguinea’ has consistent deep red flowers. Native.

Alnus incana
White Alder
Alnus rugosa
Speckled Alder
Zone 3-6
40-60' x 20-40'
Prefers moist to wet soils, full sun/light shade, pH tolerant, does well on infertile sites as it fixes nitrogen. Several cultivars of A. incana available, including ‘Aurea’ with yellow leaves and ‘Laciniata’, a bright green cut-leaf form. Especially useful for wet or naturalized areas although may be somewhat invasive in the northeast. A. rugosa is a native shrub that reaches 15-20’ and is useful for wetland plantings.
Amelanchier arborea  
**Serviceberry**

Amelanchier canadensis, Amelanchier laevis

Zone 4-9 15-25' x variable spread

Prefers moist, acid soils, good for wet and/or naturalized areas; not particularly stress tolerant. Sun/shade. Newer cultivars are reported to be less subject to pest and disease pressure. Generally multi-stemmed with white flowers in early spring followed by purple-black berries in summer. Good fall foliage. Native.

Amorpha fruticosa  
**Indigobush Amorpha**

Amorpha canescens  
**Leadplant Amorpha**

Zone 4-9 6-20' x 5-15' spread


Andromeda polifolia  
**Bog Rosemary**

Zone 2-6 1-2' x 2-3'

Slow growing, evergreen shrub. Foliage leathery dark green and flowers white tinged pink, 1/4" long and urn shaped. Prefers peaty or sandy, moist, cool soil. Full sun/light shade. Good for naturalizing. Native.

Arctostaphylos uva-ursi  
**Bearberry**

Zone 2-5 6-12" x 2-4'


Aristolochia macrophylla  
(formerly A. durior)
**Dutchman’s Pipe**

Zone 4-8 20-30'

Vigorous climbing vine with large leaves and unusual yellow-green and purple flowers. Full sun to partial shade. Requires moist soils. Native to Southeast.

Aronia arbutifolia  
**Red Chokeberry**

Aronia melanocarpa  
**Black Chokeberry**

Zone 4-9 6-10' x 3-5', suckering

Adaptable; tolerates wet or dry soils. Best fruit production in full sun. Good for massing or naturalizing. White flower clusters in spring, red berries persisting into winter. A. melanocarpa is a smaller shrub with black fruit. Both native.

Azalea (see Rhododendron)

Baccharis halimifolia  
**Groundsel-bush**

Zone 5-9 5-12' x equal spread


Berberis x chenaultii  
**Chenault Barberry**

Zone 5-8 3-4' x slightly larger spread

Low growing, dense, evergreen shrub. Dark green leaves turn rich bronze-red in fall. Prefers moist, well-drained, slightly acid soil. Sun to part shade.

Berberis julianae  
**Wintergreen Barberry**

Zone 6-8 6-8' x 8-10'

Tolerant of most soil conditions except wet. Full sun/light shade. Attractive yellow flowers and dark green spiny evergreen leaves. May show winter damage in exposed, windy locations; considered the hardiest of the evergreen barberries. Best left unpruned; makes an effective thorny hedge.
### Berberis x mentorensis
**Mentor Barberry**  
Zone 5-8  
5' x 5-7'
Culture similar to *B. julianae*; stiff, upright growth habit, dark green leathery foliage, semi-evergreen. Best left unpruned. Excellent hedge or barrier shrub.

### Berberis verruculosa
**Warty Barberry**  
Zone 6-8  
3-6' x equal spread
Forms a dense evergreen shrub. Leaves dark green above, whitish underneath turning purple in winter. Good compact growth, useful as hedging material, may show winter damage in exposed, windy locations. Flowers are golden yellow, fruit black.

### Betula alleghaniensis
**Yellow Birch**  
Betula lenta  
Sweet Birch  
Zone 3-7  
60-75' and 40-55' x 35-45'

### Betula nigra
**River Birch**  
Zone 4-9  
40-70' x 40-60'
Less susceptible to leaf miner than Paper birch, resistant to bronze birch borer which kills Paper birch in Southern RI; prefers moist well-drained soils but tolerates dry conditions once established. The Heritage birch, ‘Cully’, is a superior cultivar with exfoliating bark that is a lighter salmon color than the species. It is a rapid grower once established in the landscape. Native.

### Callicarpa dichotoma
**Purple Beautyberry**  
Zone 5-8  
3-4' x 6'
Moist, well-drained soils, full sun for best fruiting; should be pruned hard in late winter for best fruiting effects. Produces abundant purple berries on arching branches in the fall.

### Calycanthus floridus
**Carolina Allspice**  
Zone 5-9  
6-9' x 6-12'
Adaptable to many soils, pH adaptable, sun/shade. Produces fragrant maroon flowers in late spring. If possible, check fragrance of blooming plants before buying.

### Campsis radicans
**Trumpet Vine, Trumpet Creeper**  
Zone 4-9  
Climbing 30-40' high by aerial rootlets
<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Zone</th>
<th>Height x Spread</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caragana arborescens</td>
<td>Siberian Peashrub</td>
<td>2-7</td>
<td>15-20' x 12-18'</td>
<td>Very easy to grow. Tolerates cold, salt, poor soil, drought, alkalinity, wind. Good for hedge, screen or windbreak. Bright yellow flowers in mid-May.</td>
</tr>
<tr>
<td>Carpinus betulus</td>
<td>European Hornbeam</td>
<td>4-7</td>
<td>40-60' x 30-40'</td>
<td>Tolerates wide range of soil conditions, prefers moist, well-drained soils but moderately drought tolerant once established, full sun/light shade, tolerates shearing. A good landscape tree with smooth gray bark, is often used as hedging or screen.</td>
</tr>
<tr>
<td>Carpinus caroliniana</td>
<td>American Hornbeam</td>
<td>4-9</td>
<td>20-30' x equal spread</td>
<td>Moist, acid soils, tolerates drier sites, partial-deep shade. Smooth gray, beech-like bark, useful as an under-story tree.</td>
</tr>
<tr>
<td>Ceanothus americanus</td>
<td>New Jersey Tea</td>
<td>4-8</td>
<td>3-4' x 3-5'</td>
<td>Low, dense shrub with dark green leaves and white flowers in July. Full sun to shade. Tolerates dry soil. C. ovatus is denser than C. americanus, and has fruit turning bright red in summer. Native.</td>
</tr>
<tr>
<td>Ceanothus ovatus</td>
<td>Inland Ceanothus</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Cedrus atlantica</td>
<td>Atlas Cedar</td>
<td>4-9</td>
<td>40-60' x 30-40'</td>
<td>Large evergreen trees with spreading branches. Prefers moist, well-drained soil. Tolerates acid and alkaline soils and, once established, heat and drought. Sun/part shade. Needs shelter from wind. C. libani is hardy to zone 5.</td>
</tr>
<tr>
<td>Cedrus libani</td>
<td>Cedar of Lebanon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cercidiphyllum japonicum</td>
<td>Katsuratree</td>
<td>4-8</td>
<td>40-60' x 20-30'</td>
<td>Moist, well-drained soil preferred, may need supplemental water during establishment. Tends to develop multi-stemmed character if not trained to a single trunk. Attractive, heart-shaped leaves emerge red, turn blue-green and change to a beautiful golden to apricot fall color.</td>
</tr>
<tr>
<td>Cercis canadensis</td>
<td>Eastern Redbud</td>
<td>4-9</td>
<td>20-30' x 25-35'</td>
<td>Very handsome small tree blooming purple along branches and trunk. Heart shaped leaves turn yellow in fall. Alternative to Cornus florida.</td>
</tr>
<tr>
<td>Chaenomeles japonica</td>
<td>Japanese Flowering Quince</td>
<td>5-8</td>
<td>3' x wide spreading</td>
<td>Flowers orange-red or scarlet on year-old wood. Densely branched. Fruit is greenish yellow and fragrant. Most attractive in flower.</td>
</tr>
<tr>
<td>Chamaecyparis nootkatensis</td>
<td>Alaska-cedar</td>
<td>6-9</td>
<td>30-45' x narrow</td>
<td>Moist, well-drained soil, humid atmosphere, sun. ‘Pendula’ is a graceful weeping form with dark green foliage.</td>
</tr>
</tbody>
</table>

**ATLAS CEDAR**

*Cedrus atlantica*
Chamaecyparis obtusa  
*Hinoki Falsecypress*  
Zone 5-8  
Variable  
Moist, well-drained soil, full sun, some protection from wind. Several attractive cultivars available.

Chamaecyparis pisifera  
*Sawara Falsecypress*  
Zone 4-8  
Variable  
Moist, well-drained, acid soils, full sun, tolerates wind. One of the toughest evergreens for seaside and street side locations. Diverse cultivars available.

Chamaecyparis thyoides  
*Atlantic Whitecedar*  
Zone 3-8  
40-50' x 10-20'  
Moist soils, full sun; found in wet and boggy areas as a native plant.

Chamaedaphne calyculata  
*Leatherleaf*  
Zone 3-6  
2-5'  
Native evergreen shrub with sparse, open habit, blueberry-like flowers. Good for naturalizing in semi-shaded, boggy, wet areas.

Chionanthus retusus  
*Chinese Fringetree*  
Zone 5-8  
15-25' x equal spread  
Moist, well-drained soil, full sun/part shade, tolerates air pollution. Tree form with gray-brown bark, white feathery flowers in June.

Chionanthus virginicus  
*White Fringetree*  
Zone 4-9  
12' x 20'  
Very adaptable to soil types, prefers moist, well-drained, full sun. Grows very wide, careful siting is important. Fragrant creamy-white flowers in June followed by blue-black fruit in September; dioecious. Fruit attractive to birds.

Cladrastis kentukea (lutea)  
*American Yellowwood*  
Zone 4-8  
30-50' x 40'  
Well-drained soils, alkaline conditions, tolerates acidic soils, full sun. Sensitive to drought-heat and compacted soils. Do not prune in spring.

Clematis species  
*Clematis*  
Zone 4-8  
5-6' to 18' on appropriate structure  
Fast growing vines, excellent for trellises, fences, rock walls, etc. Prefers some shade and higher pH soils.

Clethra alnifolia  
*Sweet Pepperbush*  
Zone 4-9  
4-8' x 4-6'  
Prefers moist, acidic soil supplemented with organic matter, light shade/sun, salt tolerant. Fragrant flowers in late summer; pink flowered and dwarf cultivars are also available. Blooms best in full sun. Native.

Clethra barbinervis  
*Japanese Clethra*  
Zone 5-7  
10-20' x 8-10'  
Prefers a soil supplemented with organic matter, considered drought and heat intolerant, full sun/part shade. Attractive, exfoliating bark, fragrant, white flowers in drooping panicles in late summer, maroon fall color.

Comptonia peregrina  
*Sweetfern*  
Zone 2-6  
2-4' x 4-8'  
Well adapted to poor, dry infertile soils, full sun/light shade. Difficult to transplant, best when container grown. Good for naturalizing or on embankments.

Cornus alternifolia  
*Pagoda Dogwood*  
Zone 3-7  
15-25' x equal spread  
Low branched tree or large shrub with horizontal tiered branching. Plant in part shade although can tolerate sun. Needs moist, cool, acidic soil. Yellowish-white fragrant flowers in May to early June. Great for naturalizing.
**Cornus kousa**  
**Kousa Dogwood**  
Zone 5-8  20-30' x equal spread  
Performs well in moist, acidic soils, does well in sandy soils supplied with organic matter, prefers sun. More drought tolerant and cold hardy than flowering dogwood, resistant to dogwood anthracnose. Blooms after the foliage has emerged in early June, creamy white bracts persist for several weeks; large red gumball fruit effective in the fall. Exfoliating bark on mature specimens. Seeds readily. Cornus x ‘Stellar’ series or Hybrid Dogwoods are interspecific hybrids developed at Rutgers University and appear to be resistant to dogwood borer and dogwood anthracnose. Bloom times between C. florida and C. kousa. Of the six cultivars, one is pink and the rest are creamy white. Fruitless.

**Cornus mas**  
**Corneliancherry Dogwood**  
**Cornus officinalis**  
**Japanese Cornel**  
Zone 4-7  20-25' x 15-20'  
Large multi-stemmed shrub or small tree with exfoliating bark. Yellow flowers in March. Red fruit. C. officinalis similar with showy exfoliating bark.

**Cornus racemosa**  
**Gray Dogwood**  
Zone 4-8  10-15' x equal spread  
Adaptable to wet or dry soils, full sun to deep shade. Spreads by root suckers; adequate space needed. Best for naturalized areas. Most drought tolerant of the native shrub dogwoods.

**Corylopsis glabrescens**  
**Fragrant Winterhazel**  
**Corylopsis spicata**  
**Spike Winterhazel**  
Zone 5-8  8-15' x similar spread  
Dense shrub with fragrant, pale yellow flowers in April before leaves develop. Very nice plant for early spring color and fragrance. C. spicata is smaller but also beautiful in flower.

**Corylus americana**  
**American Filbert**  
**Corylus avellana**  
**European Filbert**  
**Corylus cornuta**  
**Beaked Filbert**  
Zone 4-8  4-30" x similar spread  
Multi-stemmed shrub is pH adaptable. Grow in full sun to light shade. Good for naturalizing. C. avellana can be a small tree but usually forms a thicket. Cultivar ‘Contorta’ most commonly grown, grafted plants tend to sucker. Obtain plants raised from cuttings. C. cornuta has interesting beaked fruits.

**Corylus columna**  
**Turkish Filbert**  
Zone 4-7  40-50' x 12-15'  
Adaptable to adverse conditions, adaptable to pH, very drought tolerant once established. Broadly pyramidal in habit, useful as a street tree.

**Cotinus coggyria**  
**Common Smoketree**  
**Cotinus obovatus**  
**American Smoketree**  
Zone 4-8  10-15' x10-15'  
Prefers well-drained soil but will tolerate a wide range of conditions, sun/light shade. Small five-petaled flowers are surrounded by 6-8" pinkish hairs which impart a “smokey” appearance from late June-August. Several forms are available with differing foliage colors. C. obovatus adaptable to a wide range of soils, tolerates drought and alkaline soils. Best growth in full sun. Somewhat longer than C. coggygria, outstanding fall foliage.

**Cotoneaster adpressus**  
**Creeping Cotoneaster**  
Zone 5-7  1-1.5' x 4-6'  
Moist, well-drained soils, full sun, drought tolerant once established, pH tolerant and adaptable to seaside conditions. Compact ground cover with glossy green leaves, white blossoms in May, red fruits effective in fall and winter. Subject to mites under hot dry conditions.

**Cotoneaster divaricatus**  
**Spreading Cotoneaster**  
Zone 4-7  5-6' x 6-15'  
Culture similar to C. adpressus; multi-stemmed shrub with arching branches, dark green foliage with yellow to red fall color; white flowers in May with red fruit effective in the fall and winter. Less subject to pests than others in this genus.
Cotoneaster salicifolius  
Willowleaf Cotoneaster  
Zone 6-8  
10-15' x 10'  
Culture similar to C. adpressus; large evergreen shrub with arching branches, dark green foliage turns purple in winter; bright red fruit persist through winter. Usually available as low growing cultivars such as ‘Emerald Carpet’, ‘Repens’ and ‘Scarlet Leader’.

Davidia involucrata  
Dove-tree  
Zone 6 to 8  
20-40' x variable  
Handsome specimen tree. Slow growing and late to flower. Striking large, creamy white bracts look like handkerchiefs fluttering in the breeze. Attractive orange-brown exfoliating bark. Prefers moist, well-drained soils.

Cratageus viridis ‘Winter King’  
Green Hawthorn  
Zone 4-7  
20-25' x equal spread  
Tolerates poor soil conditions and windy sites. Less susceptible to pests than other hawthorns. Attractive bark and showy red fruit are good winter characteristics.

Cryptomeria japonica  
Japanese Cedar  
Zone 5-8  
5' x 20'  
Graceful evergreen. Prefers sun/light shade. Easy to grow in rich, acid, moist soil. Foliage turns bronze in winter. Cultivars retaining green winter color are preferred.

Deutzia x lemoinei  
Lemoine Deutzia  
Zone 4-8  
5-7' x similar spread  
Dense shrub with pure white flowers in late May and good yellow fall color. One of the hardiest deutzias.

Cryptomeria japonica  
Japanese Cedar  
Zone 5-8  
5' x 20'  
Graceful evergreen. Prefers sun/light shade. Easy to grow in rich, acid, moist soil. Foliage turns bronze in winter. Cultivars retaining green winter color are preferred.

Daphne cneorum  
Rose Daphne  
Zone 4-7  
6-12" x 2' spread  

Daphne x burkwoodii  
Burkwood Daphne  
Zone 4-7  
3-4' x equal spread  

Daphne caucasica  
Caucasian Daphne  
Zone 5-7  
4-5' x equal spread  
A low, trailing evergreen shrub forms loose masses and groundcover. Slow growing in well-drained, moist, neutral pH soil. Prefers light-medium shade. Difficult to transplant. D. cneorum’s bright rosy-pink, fragrant flowers open in April or May and again in late summer. D. x burkwoodii is a cross between D. cneorum and D. caucasica. Flowers are fragrant and white with a pink tinge. D. caucasica is deciduous and produces very fragrant, long-season white flowers and black or red fruit.

Deutzia gracilis  
Slender Deutzia  
Zone 4-8  
2-4' x 3-4'  
Tolerates most soil conditions. Prefers well-drained soil, full sun/light shade. White flowers in late May; ‘Nikko’ is a compact cultivar useful as a groundcover.

Deutzia scabra  
Fuzzy Deutzia  
Zone 5-7  
6-10' x 4.8'  
Average garden soil, full sun, pH tolerant. White flowers in late May. Several good cultivars available.

Disanthus cercidifolius  
Zone 5-7  
6-10' x 4.8'  
Magnificent, but rare, shrub with small heart shaped leaves turning a rich red purple in fall. Purple flowers in October.

Eleutherococcus sieboldianus  
Fiveleaf Aralia  
Zone 4-8  
8-10' x 8-10'  
Easily transplanted, withstands adverse conditions, tolerates dry soils, clay-sand-acid soils and urban conditions. Sun/shade. Suckers readily; may be maintenance problem if not sited correctly and allowed ample room, thorny.
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Common Name</th>
<th>Zone</th>
<th>Height/Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enkianthus campanulatus</td>
<td>Redvein Enkianthus</td>
<td>4-7</td>
<td>12-15' x 6-8'</td>
</tr>
<tr>
<td>Eucommia ulmoides</td>
<td>Hardy Rubber Tree</td>
<td>4-7</td>
<td>40-60' x equal spread</td>
</tr>
<tr>
<td>Evodia daniellii (see Tetradium daniellii)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exochorda racemosa</td>
<td>Common Pearlbush</td>
<td>4-8</td>
<td>10-15' x equal spread</td>
</tr>
<tr>
<td>Fagus grandifolia</td>
<td>American Beech</td>
<td>4-7</td>
<td>50-60' x 50-100'</td>
</tr>
<tr>
<td>Fagus sylvatica</td>
<td>European Beech</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forsythia x intermedia</td>
<td>Border Forsythia</td>
<td>6-8</td>
<td>8-10' x 10-12'</td>
</tr>
<tr>
<td>Forsythia suspensa</td>
<td>Weeping Forsythia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fothergilla gardenii</td>
<td>Dwarf Fothergilla</td>
<td>4-8</td>
<td>2-3' (6-10') x equal spread</td>
</tr>
<tr>
<td>Fothergilla major</td>
<td>Large Fothergilla</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Enkianthus campanulatus

Requires moist, acid soil supplemented with organic matter, culture similar to rhododendron, sun/light shade. Bright green, whorled and bell-shaped creamy, red veined, lobed flowers in late May-early June. Bright orange-scarlet fall foliage.

Eucommia ulmoides

Excellent shade tree. Drought tolerant, full sun, pH adaptable.

Evodia daniellii (see Tetradium daniellii)

Exochorda racemosa

Prefers well-drained, acid soils, full sun/light shade, drought and heat tolerant once established. Flower buds arranged like pearls along the stem, opening into five-petaled, white flowers in April.

Fagus grandifolia

European beech is more tolerant of various soil conditions than American beech which likes acidic, organic soils. Both prefer full sun. Shallow rooted, big for the average residential landscape but excellent for parks, golf courses, other open spaces; needs room to develop into a mature specimen. Many fine cultivars of European beech available in green and purple leaf forms, weeping, cutleaf, etc.
**Franklinia alatamaha**  
**Franklin Tree**  
Zone 5-8 10-20' x 6-15'  
Large, fragrant, white flowers in mid-September. Prefers acid, rich organic, moist, well-drained soils in sun/light shade. Good drainage is crucial for tree to thrive. Leaves orange-mahogany red in fall.

**Fraxinus pennsylvanica**  
**Green Ash**  
Zone 3-9 50-60' x 25-30'  
Tolerates variable soils, salt, high pH, wind. Very adaptable. Yellow fall color. ‘Marshall’s Seedless’ a preferred male cultivar.

**Ginkgo biloba**  
**Ginkgo**  
**Maidenhair Tree**  
Zone 4-8 50-80' x 30-40'  
Adaptable to variable soil conditions and high pH. Tolerates air pollution, salt, and heat. Male cultivars preferred as decomposing fruit on female trees in the fall are malodorous. Attractive leaves turn clear yellow in fall.

**Gymnocladus dioicus**  
**Kentucky Coffeetree**  
Zone 3-8 60-75' x 40-50'  
Adaptable to various soil conditions but prefers deep, rich loam, full sun, tolerates drought, high pH and urban conditions; a large tree for park-like surroundings. Slow to establish.

**Halesia diptera**  
**Two-winged Silverbell**  
**Halesia monticola**  
**Mountain Silverbell**  
**Halesia tetraptera**  
**Carolina Silverbell**  
(formerly H. carolina)  
Zone 4-8 30-40' x 20-35'  
Moist, acid soils, sun/light shade. White, bell-shaped flowers in early spring before foliage emerges. H. tetraptera native. H. diptera is multi-stemmed, rounded tree with pretty, white, bell-shaped flowers. H. monticola much larger (60-80') with larger size fruit and flowers than H. tetraptera but otherwise similar.

**Halesia tetraptera**  
**CAROLINA SILVERBELL**  
Halesia tetraptera

**Hammamelis**  
**Witchhazel**  
**Hammamelis x intermedia**  
**Witchhazel**  
**Hammamelis mollis**  
**Chinese Witchhazel**  
**Hammamelis vernalis**  
**Vernal Witchhazel**  
**Hammamelis virginiana**  
**Common Witchhazel**  
Zone 5-8 15-20'  
Witchhazels are deciduous understory plants blooming in fall (H. virginiana) or late winter. Prefer moist, acidic soils high in organic matter, sun or part shade. Flower colors range from yellow to red. H. x intermedia represents a group of hybrids between H. japonica x H. mollis. Upright spreading plants bloom from late January into mid-March. ‘Arnold Promise’, ‘Jelena’ and ‘Pallida’ are noteworthy cultivars. H. mollis has yellow, fragrant flowers in February to March. Most fragrant of the Hammamelis species, H. vernalis has excellent golden yellow fall color. pH adaptable. H. virginiana is a native shrub and generally prefers moist, acid soils high in organic matter, sun/part shade. Tolerant of urban conditions.
### Heptacodium miconioides
#### Seven-Son Flower
**Zone 5-8**
10-20' x 10-15'

Preferences moist soils but is adaptable. Full sun to part shade. Creamy white fragrant flowers from September to October. Very popular with bees. After flowering, the calyces turn red and are very striking.

### Hovenia dulcis
#### Japanese Raisintree
**Zone 5-7**
30' x 20'

Adaptable to various soil conditions. Prefers good drainage and full sun. Fragrant white flowers in summer.

### Hydrangea anomala
#### Climbing Hydrangea
**subspecies petiolaris**
**Zone 4-7**
Climbing 60-80'

Lovely clinging vine with white flowers in late June to early July. Full sun or shade and moist soils. Excellent for massive effect on brick or stone walls. Slow to establish but then vigorous.

### Hydrangea arborescens
#### Smooth Hydrangea
**Zone 4-9**
3-5' x greater spread

Adaptable, prefers well-drained, moist soil, partial shade. Will tolerate full sun if ample moisture is available. ‘Annabelle’ is an improved selection.

### Hydrangea macrophylla
#### Bigleaf Hydrangea
**Zone 6-9**
3-6' x equal spread

Prefers a moist soil supplemented with organic matter, tolerates coastal conditions, sun/light shade. Pink and blue cultivars available.

### Hydrangea paniculata
#### Panicle Hydrangea
**Zone 3-8**
10-20' x equal spread

Prefers loamy soil but is adaptable, sun/part shade, urban tolerant. ‘Grandiflora’ (PeeGee Hydrangea) and ‘Tardiva’ are improved selections. Extremely long flowering period as the dry flowers persist well into the fall. Potentially invasive.

### Hydrangea quercifolia
#### Oak-leaved Hydrangea
**Hydrangea quercifolia**
**Zone 5-9**
4-6' x equal or wider spread

Moist, fertile, well-drained soils, sun/part shade, prefers cool, moist root environment. ‘Snow Queen’ is an improved selection. Excellent fall color.

### Hypericum species
#### St. Johnswort
**Zone 4-8**
1-4' x equal spread

Dense shrubs often treated as a perennial. Adaptable to dry, high pH soils. Beautiful yellow summer flowers. Hypericum ‘Hidcote’ and H. kalmianum are notable varieties.

### Ilex crenata
#### Japanese Holly
**Zone 5-7**
Varies with cultivar

Small-leaved evergreen shrub prefers moist, well-drained soil, full sun/part shade, adaptable.
**Ilex glabra**  
*Inkberry Holly*  
Zone 5-9  
6-8' x 8-10'  
Small-leaved deciduous shrub prefers moist to wet soils, shade tolerant. ‘Compacta’ is a better-shaped plant than the species. Native.

**Ilex × meserveae**  
*Hybrids*  
*Blue Holly*  
Zone 5-8  
Variable spread  

**Ilex pedunculosa**  
*Longstalk Holly*  
Zone 5-8  
Prefers moist, acid soil, sun/part shade. Leaves resemble Mountain Laurel, bright red berries on long stalks.

**Ilex serrata**  
**Ilex verticillata**  
*Winterberry*  
Zone 3-9  
6-10' x equal spread  
Deciduous shrubs. Prefer moist, acid soils supplemented with organic matter, does well under wet conditions, also in lighter soils but is considered drought intolerant, sun/light shade. Plants are dioecious, both sexes required for pollination and berry production. Many cultivars available; fruit colors up after the first frost and is often retained through the winter. Tolerates heavy pruning; fruits on new wood. The hybrid ‘Sparkleberry’, a National Arboretum introduction, is noted for its persistent berries.

**Itea virginica**  
*Virginia Sweetspire*  
Zone 5-9  
3-5' x 6'  
Moist, fertile soils, tolerates wet or dry conditions, pH adaptable, full sun/part shade. Cultivar ‘Henry’s Garnet’ sports white flowers in upright spikes in June-July; foliage reddish-purple color in fall.

**Juniperus chinensis**  
*Chinese Juniper*  
Zone 3-9  
Varies with cultivar  
Moist, well-drained soils, pH adaptable, sun. Salt, drought and wind tolerant. Useful as a groundcover, shrub, screen, etc., depending on the cultivar. Some cultivars susceptible to blights, which can cause serious dieback. The following cultivars are reported to be resistant to one or two of the blights: ‘Foemina’ (P), ‘Iowa’ (P), ‘Keteleeri’ (P), ‘Pfitzeriana-aurea’ (P+K), ‘Robusta Green’ (P), var. sargentii (P+K), ‘Gold Coast’ (K).

**Juniperus conferta**  
*Shore Juniper*  
Zone 6-9  
1.5' x spreading  
Adaptable to poor, dry soils, full sun, salt tolerant, good for coastal locations. Low-growing groundcover, intolerant of wet soils.

**Juniperus virginiana**  
*Eastern Red Cedar*  
Zone 3-9  
15-30' x 8-10'  
Adaptable to poor, droughty soils, pH adaptable, full sun, salt tolerant. Alternate host for cedar-apple rust. Tough native plant for screening, naturalizing, coastal planting.
<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Common Name</th>
<th>Zone</th>
<th>Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kalmia latifolia</td>
<td>Mountain-Laurel</td>
<td>4-9</td>
<td>7-15' x similar spread</td>
</tr>
<tr>
<td>Requires acid, moist soil supplemented with organic matter, good drainage, full sun to shade. A good native plant if sited correctly. Many new cultivars available; red and pink flowered forms need full sun to develop good flower color.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kalopanax septemlobus</td>
<td>Castor-aralia</td>
<td>4-7</td>
<td>40-60' x equal spread</td>
</tr>
<tr>
<td>Moist soils, full sun. Tolerant of alkaline soil and long lived. Coarse textured plant provides tropical effect in the landscape.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kerria japonica</td>
<td>Japanese Kerria</td>
<td>4b-9</td>
<td>3-6' x 6-9'</td>
</tr>
<tr>
<td>Hearty, free-flowing shrub. Plant in full sun/part shade. 'Pleniflora' has double, golden yellow flowers and grows in an upright, lanky form. Best grown unpruned except thinning.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Koelreuteria paniculata</td>
<td>Goldenraintree</td>
<td>5-9</td>
<td>30-40' x equal spread</td>
</tr>
<tr>
<td>Adaptable to a wide range of soils, tolerates drought, heat, wind, pH and air pollution. Yellow blossoms in mid-summer followed by lantern-like seed capsules in fall.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kolkwitzia amabilis</td>
<td>Beautybush</td>
<td>4-8</td>
<td>6-10' x 8'</td>
</tr>
<tr>
<td>Adaptable to a variety of soil conditions; prefers moist, well-drained soils and full sun. Usually requires annual pruning of older canes to retain form and prevent legginess, or cut back to ground.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Larix kaempferi</td>
<td>Japanese Larch</td>
<td>2-7</td>
<td>70-90' x 25-40'</td>
</tr>
<tr>
<td>Prefers moist, well-drained, acid soils. Will not tolerate heat, shade or pollution. L. larcina only grows to 40-80', less heat tolerant.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ledum groenlandicum</td>
<td>Labrador Tea</td>
<td>2-5</td>
<td>2-4' x equal spread</td>
</tr>
<tr>
<td>Dwarf evergreen shrub forms a rounded mass. Prefers moist, sandy, peaty soils in sun to part shade. Transplants easily. Pure white flowers in May-June.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leucothoe species</td>
<td>Leucothoe</td>
<td>5-8</td>
<td>2-6' x equal spread depending on species</td>
</tr>
<tr>
<td>Broadleaf, evergreen shrub that is good for naturalizing. Prefers moist, acid soil, partial to full shade.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lindera benzoin</td>
<td>Spicebush</td>
<td>4-9</td>
<td>6-12' x equal spread</td>
</tr>
<tr>
<td>Prefers acid, moist soils in full sun/partial shade. Small greenish-yellow flowers appear in early spring. Bright green leaves turn bright yellow in fall. Fruit bright red in late September to October.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquidambar styraciflua</td>
<td>American Sweetgum</td>
<td>6-9</td>
<td>60-75' x 2-3 spread</td>
</tr>
<tr>
<td>Difficult to transplant and needs large area for root development. Beautiful, glossy green leaves with rich yellow-purple fall color. Messy fruit.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liriodendron tulipifera</td>
<td>Tuliptree</td>
<td>4-9</td>
<td>70-90' x 35-50'</td>
</tr>
</tbody>
</table>
**Lonicera sempervirens**  
Trumpet Honeysuckle  
Zone 4-9  
Climbing 10-20'  
Fast growing, twining vine. Orange-red to red to yellow flowers in early spring. Great for hummingbirds.

**Maackia amurensis**  
Amur Maackia  
Zone 4-7  
20-30' x equal spread  
Very adaptable, full sun, pH and drought tolerant.

**Magnolia acuminata**  
Cucumbertree Magnolia  
Zone 3-8  
50-80' x equal spread  
Prefers moist, well-drained acid soils, but performs well in calcareous soils also. Not tolerant of extreme drought or wetness, or air pollution. Native.

**Magnolia species**  
Magnolia  
Zone 5-8  
15-40' x equal spread  
Many species and cultivars available. Most prefer moist, well drained soil but can be tolerant of high pH. Sun/part shade. M. x loebneri particularly urban tolerant.

**Mahonia aquifolium**  
Oregon Grapeholly  
Zone 5-7  
3-6' x 3-5'  
Does well in moist, acid soil. Prefers shade and protection from wind. Bright yellow flowers in April, attractive blue fruit in autumn.

**Malus species**  
Crabapple  
Zone 4-7  
Varies with cultivar  
Quite adaptable to many soil types but prefers well-drained, acid conditions, full sun, salt tolerant. The best crabapples flower annually and are disease resistant. See Appendix 1 for a listing. Crabapples are particularly attractive to Japanese beetle adults, and may need protection when beetle populations are high.

**Metasequoia glyptostroboides**  
Dawn Redwood  
Zone 5-8  
70-100' x 25'  
Deciduous conifer suitable for large areas. Attractive orange-brown fall color. Prefers deep, well-drained, slightly acid soils. Full sun.
**Microbiota decussata**
*Russian Arborvitae*
Zone 3-7

Low growing evergreen shrub, bright green summer foliage turning purple-brown in winter. Graceful branchlets arranged in flat sprays. Prefers moist soils, tolerant of shade, very cold hardy.

**Myrica pensylvanica**
*Northern Bayberry*
Zone 3-6

Does extremely well in poor sandy soils, may adapt to heavy soils, full sun/light shade. Salt tolerant. Myrica gale, or Sweetgale, is a low growing (2-4') deciduous shrub native to Rhode Island.

**Nemopanthus mucronatus**
*Mountain Holly*
Zone 4-6

Deciduous, native shrub. Good for naturalizing in cold climates. Tolerates moist soils. Bright red fruit in late summer.

**Nyssa sylvatica**
*Black Tupelo, Sour Gum*
Zone 4-9

Prefers moist, well-drained soils but tolerates wet soils, will also grow on upland areas. Full sun/light shade. Difficult to transplant. Excellent orange-scarlet fall foliage.

**Ostrya virginiana**
*American Hop Hornbeam, Ironwood*
Zone 4-9

Prefers moist, well-drained soils, slightly acid. Tolerates dry conditions once established, full sun/part shade. One of the most drought tolerant and salt resistant small trees. Difficult to transplant.

**Oxydendrum arboreum**
*Sourwood*
Zone 5-9

Prefers moist, well-drained soils, slightly acid, tolerates dry conditions, full sun/part shade. Drooping flower clusters in mid-summer; excellent burgundy fall foliage.

**Pachysandra procumbens**
*Allegheny Pachysandra*
Zone 4-8

One of the best evergreen ground covers for deep shade. Spreads by rhizomes to form a dense mat. White flowers in March to early April. ‘Green Sheen’ is a particularly nice pest free cultivar of *P. terminalis*.

**Pachysandra terminalis**
*Japanese Pachysandra*
Zone 4-8
6-12" high

Excellent pest-free specimen tree with attractive exfoliating bark and fall color. Tolerant of varying conditions once established, sun/part shade.

**Parrotia persica**
*Persian Parrotia*
Zone 5-8

20-40' x 15-30'

Excellent pest-free specimen tree with attractive exfoliating bark and fall color. Tolerant of varying conditions once established, sun/part shade.
Parthenocissus quinquefolia
Virginia Creeper
Parthenocissus tricuspidata
Japanese Creeper, Boston Ivy
Zone 4-9
Climbing 30-50’
Deciduous vine will crawl on ground, up trees or other structures. Tolerates virtually any condition. Low maintenance cover for walls. Foliage of P. quinquefolia is more lustrous and leaf is 3-lobed.

Paxistima canbyi
Canby Paxistima
Zone 3-7
1’ x 3-5’
Low growing, evergreen shrub with dark green leaves. Full sun/part shade. Tolerates high pH.

Phellodendron amurense
Amur Corktree
Zone 4-7
30-45’ x equal or greater spread
Adaptable to a wide range of soils, tolerates pH, drought, air pollution and full sun. Grows quite large so siting is important; fruit can be messy.

Philadelphus species
Sweet Mockorange
Zone 4-8
10-12’ x 10-12’

Physocarpus opulifolius
Common Ninebark
Zone 2-7
5-10’ x 6-10’
Native shrub easily transplanted and adaptable. Full sun/part shade. Tolerates all soil conditions and drought. Good for naturalizing.

Picea glauca
White Spruce
Zone 2-6
40-60’ x 10-20’
Broad conical tree. Prefers full sun to some shade. Light green needles form dense shape. ‘Conica’, the Alberta Spruce, is widely sold and used in the landscape. Susceptible to spider mites, particularly when grown against buildings.

Picea omorika
Serbian Spruce
Picea orientalis
Oriental Spruce
Zone 4-7
50-60’ x 20-30’
Graceful evergreen trees tolerate drought, high pH and urban conditions. Protect from winter winds.

Pieris floribunda
Mountain Pieris, Fetter Bush
Zone 4-8
2-6’ x equal spread
Evergreen shrub prefers moist, well-drained soil, tolerant of high pH and resistant to lacebug. Susceptible to Phytophthora root rot if not sited in a well-drained location. An interspecific hybrid, ‘Brouwer’s Beauty’, has flower clusters that are horizontal and arching.

Pieris japonica
Japanese Pieris
Zone 5-7
9-12’ x 6-8’
Upright, broadleaf evergreen shrub with bronze new growth which changes to dark green at maturity. White, slightly fragrant urn-shaped flowers appear in March to April. Plant in partial shade to minimize lacebug problems.

Pinus banksiana
Jack Pine
Zone 2-7
35-50’ x irregular spreading
Very hardy for colder climates. Will survive in almost pure sand, and dry, acid soils. Initially pyramid shaped but becomes more open and flat-topped at maturity.

Pinus bungeana
Lacebark Pine
Zone 5-7
30-50’ x 20-35’
Nice specimen tree with interesting, exfoliating bark. Prefers well-drained soil and sun. Tolerant of high pH.
<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Zone</th>
<th>Height x Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Pinus strobus</em></td>
<td>Eastern White Pine</td>
<td>3-7</td>
<td>50-80' x 20-40'</td>
</tr>
<tr>
<td><em>Prunus subhirtella</em></td>
<td>Higan Cherry</td>
<td>5-8</td>
<td>20-40' x wider spread</td>
</tr>
<tr>
<td><em>Potentilla fruticosa</em></td>
<td>Bush Cinquefoil</td>
<td>2-6</td>
<td>1-4' x 2-4'</td>
</tr>
<tr>
<td><em>Ptelea trifoliata</em></td>
<td>Hoptree</td>
<td>3-9</td>
<td>15-20' x equal spread</td>
</tr>
<tr>
<td><em>Prunus maackii</em></td>
<td>Amur Chokecherry</td>
<td>3-6</td>
<td>35-45' x 20-35'</td>
</tr>
<tr>
<td><em>Prunus maritima</em></td>
<td>Beach Plum</td>
<td>3-6</td>
<td>6' x equal spread</td>
</tr>
<tr>
<td><em>Prunus sargentii</em></td>
<td>Sargent Cherry</td>
<td>4-7</td>
<td>20-30' x similar spread</td>
</tr>
<tr>
<td><em>Quercus acutissima</em></td>
<td>Sawtooth Oak</td>
<td>6-9</td>
<td>40-60' x equal spread</td>
</tr>
<tr>
<td><em>Quercus alba</em></td>
<td>White Oak</td>
<td>4-9</td>
<td>50-80' x equal spread</td>
</tr>
</tbody>
</table>

*Pinus strobus* Eastern White Pine

Prefers moist, well-drained soils but tolerates dry conditions, full sun/light shade, rapid growing when young. Subject to white pine weevil damage to terminal, intolerant of salt. An excellent native evergreen.

*Prunus subhirtella* Higan Cherry

Culture similar to the above; semi-double pink flowers in spring, occasionally re-blooming in fall. Considered short-lived though relatively free of problems in a trouble-prone genus.

*Potentilla fruticosa* Bush Cinquefoil

Moist, well-drained soils but is very adaptable, will do well under dry conditions, full sun/light shade, likes neutral to alkaline conditions. Extremely cold hardy. Long bloom period. Many improved cultivars available.

*Ptelea trifoliata* Hoptree

Prefers moist, well-drained soils but very adaptable, sun/heavy shade. An interesting native tree with trifoliate leaves and fragrant flowers in June.

*Potentilla fruticosa* Bush Cinquefoil

Moist, well-drained soils but is very adaptable, will do well under dry conditions, full sun/light shade, likes neutral to alkaline conditions. Extremely cold hardy. Long bloom period. Many improved cultivars available.

*Ptelea trifoliata* Hoptree

Prefers moist, well-drained soils but very adaptable, sun/heavy shade. An interesting native tree with trifoliate leaves and fragrant flowers in June.

*Prunus sargentii* Sargent Cherry

Moist, well-drained soils, full sun/light shade. Single pink flowers in spring before the foliage, fall colors of yellow to red. Considered short-lived though relatively free of problems in a trouble-prone genus.

*Quercus alba* White Oak

Adaptable to various soil types; prefers moist, acid conditions, full sun. Dark green lobed leaves, fall color red to brown. Scaly white bark attractive year round. Native.
Quercus bicolor
Swamp White Oak
Zone 4-8
50-60' x equal spread
Moist, acid soils but very drought tolerant once established, broadly lobed, leathery leaf, good dark green color, yellow fall foliage. Drought tolerant. Native.

Quercus imbricaria
Shingle Oak
Zone 4-8
50-60' x equal spread
Simple leaved oak. Easy to transplant, tolerant of dry soils and urban conditions; full sun. Native.

Quercus macrocarpa
Bur Oak
Zone 3-8
70-80' x equal spread
Large tree with large lobed leaves, white undersides. Tolerates dry sites and urban conditions. Difficult to transplant. Native.

Quercus palustris
Pin Oak
Zone 4-8
60-70' x 25-40'
Prefers moist, acid soils, intolerant of high pH, full sun, tolerates wet soils and urban conditions. Deeply lobed leaves with pyramidal growth habit; lower branches droop.

Quercus phellos
Willow Oak
Zone 5-9
40-60' x equal spread
Adaptable to many soil conditions, full sun, fibrous root system allows for ease of transplanting; narrow, simple leaves.

Quercus rubra
Northern Red Oak
Zone 4-8
60-75' x equal spread
Moist, acid soils, full sun. Intolerant of high pH, tolerates urban conditions. Easily transplanted.

Quercus shumardii
Shumard Oak
Zone 5-9
40-60' x equal spread
Leaves may turn red in fall. Easy to transplant. Tolerant of drought or wet conditions.

Quercus velutina
Black Oak
Zone 3-9
50-60' x variable spread
Does well in moist, acid soils. Very difficult to transplant because of extensive tap root. Bark is nearly black with deep, vertical furrows.

Rhododendron species and cultivars
Zone 2-9
Ground cover to small tree
Over 900 species and thousands of hybrids exist, most are low maintenance plants when grown in the appropriate site. They generally prefer moist well-drained acid soils high in organic matter and perform best in partial shade. In full sun winter injury and blossom fading is more pronounced as are problems with lace bugs. In southern New England ‘Dora Amateis’ and R. maximum are particularly susceptible to lacebug when grown in full sun; and to our south, lacebug problems are much more widespread. With the exception of some of the heavily induced rhododendrons (R. yakushimanum, R. smirnovii and hybrids), all are susceptible to the black vine weevil which can kill small plants. (See discussion under Taxus.) Among the large leaved rhododendrons, R. fortunei and its hybrids (‘Scintillation’) are very attractive to deer. Small leaved rhododendrons, including ‘PJM’, ‘Silvery Pink’, ‘Anglo’, etc., are particularly cold tolerant as are deciduous azaleas (R. schlippenbachii, R. calendulaceum, R. viscosum, etc.). The deciduous Exbury hybrids, however, have too many insect and disease problems to be included on this list. There are thousands of good hardy, hybrid, evergreen azaleas including ‘Hino crimson’, ‘Delaware Valley White’, R. yedoense var. poukhenensis, etc. However, Belgian or florist azaleas are often mistakenly sold as hardy. As a rule of thumb, if the flower looks too good to be true, it is probably not hardy. Several species are native to southern New England, including R. maximum, R. viscosum, R. prinophyllum, R. canadense and R. periclymenoides. Rhus aromatica
Fragrant Sumac
Zone 3-9
2'-6' x 6-10'
Adaptable to various soil conditions, full sun. Attractive glossy leaves in threes, yellow flowers and spiky male catkins. Native. Spreading habit of cultivar ‘Gro-Low’ makes a good choice for embankments or a ground cover.
**Rhus copallina**  
*Shining Sumac*  
Zone 4-9  
5-15’ x similar spread  

Good for wet or dry, rocky areas or embankments. Careful siting is important as it can form large colonies. Good for naturalizing, excellent fall color.

**Sarcococca hookeriana**  
*Sweetbox*  
Zone 6-8  
4-6’ x equal spread  

Prefers acid, well-drained soils in partial shade to shade. Will tolerate drought and polluted air quality. White, fragrant flowers appear in March-April. *S. hookeriana var. humilis* grows smaller, has black fruits, and is very cold hardy.

**Sassafras albidum**  
*Common Sassafras*  
Zone 4-9  
30-60’ x 25-40’  


**Schizophragma hydrangeoides**  
*Japanese Hydrangea-vine*  
Zone 5-7  
Climbing 20-30’  

This clinging vine is similar to but not as vigorous or as large as *Hydrangea anomala* subsp. *petiolaris*. Inflorescences are flat-topped and 8-10” across and droop slightly. Flowers in late June or early July.

**Sciadopitys verticillata**  
*Japanese Umbrella Pine*  
Zone 4-9  
20-30’ x 15-20’  

Prefers moist, well-drained soil, full sun, some protection from wind. Drought tolerant once established. Slow growing.

**Sophora japonica**  
*Japanese Pagoda Tree*  
Zone 4-7  
50-75’ x wide spreading  

Well-drained soil supplemented with organic matter, drought and urban tolerant. White, fragrant flowers in mid summer. ‘Regent’ is reputed to flower earlier than the species.

**Spiraea x bumalda**  
*Bumald Spirea*  
Zone 3-8  
2-3’ x 4-5’  

A tough plant in the landscape, annual pruning required for best effect. White flowers in June-August.

**Spiraea x vanhouttei**  
*Vanhoutte Spirea*  
Zone 3-8  
6-8’ x 10-12’  

Adaptable to various soil types, full sun. White flowers on arching stems in May. Requires pruning of dead wood in spring.

**Stephanandra incisa**  
*Cutleaf Stephanandra*  
Zone 4-7  
2-3’ x spreading  

Graceful shrub prefers well-drained soils supplemented with organic matter, drought intolerant, full sun/part shade. ‘Crispa’ makes an excellent ground cover.

**Stewartia koreana**  
*Japanese Stewartia*  
Zone 6-9  
20-30’ x 10-15’  

Styrax japonica  
Japanese Snowbell  
Zone 5-8  
20-30' x equal spread

Prefers moist, well-drained, acid soil supplemented with organic matter, full sun/part shade. May be subject to winter damage in cold sites. Exquisitely fragrant, white, bell-shaped, pendulous flowers in June.

Symphoricarpos × chenaultii  
Chenault Coralberry  
Zone 4-7  
2' x 12'

A cross between S. microphyllus and S. orbiculatus. Pink flowers in June and white fruit in fall. Tolerant of various soil types and high pH. ‘Hancock’ is a beautiful low-growing cultivar.

Syringa meyeri  
Meyer Lilac  
Zone 3-7  
4-8' x 6-12'

Small, dense, mounded shrub. Flower buds emerge early, may be damaged by early frost. Violet-purple flowers cover entire plant for 10-14 days in May. Easy to grow and resistant to mildew. ‘Palibin’ is common compact form.

Syringa microphylla  
Littleleaf Lilac  
Zone 4-7  
6-9' x 12'

Rosy lilac, fragrant, flowers in May to early June. Adaptable, heat tolerant, mildew resistant.

Syringa patula  
Manchurian Lilac  
Zone 4-7  
4-8' x equal spread

Adaptable to various soil conditions, full sun, resistant to powdery mildew. ‘Miss Kim’ is a noteworthy cultivar.

Syringa reticulata  
Japanese Tree Lilac  
Zone 3-7  
20-30' x 15-25'

Good small urban tree prefers well-drained, moist soil, pH tolerant, full sun. Salt and wind tolerant. Resistant to lilac borer and powdery mildew. Early summer flowering. ‘Ivory Silk’ and ‘Summer Snow’ are excellent cultivars.

Taxodium ascendens  
Pond Baldcypress  
Taxodium distichum  
Common Baldcypress  
Zone 4-9  
50-70' x 20-30'

Prefers moist acid soils, very adaptable to wet or dry soils, full sun. A large tree for parks, estates or wet areas. Good wind tolerant urban tree.

Taxus species and cultivars  
Yews  
Zone 4-7  
Variable spread

High quality, versatile evergreens, slow growing, easily grown and pruned, resistant to many pests. Have been overused, and now black vine weevil is a very serious pest of young plants, particularly in the nursery. Larger plants sited in the landscape are reasonably tolerant of this pest; but because yews can harbor large populations of weevils, landscapers should exercise care in planting small susceptible plants (rhododendron, euonymus, etc.) near infested yews. The foliage and fruit of yew are toxic to children if ingested, yet the foliage qualifies as a deer candy.

Taxus baccata ‘Repandens’  
Spreading English Yew  
Zone 5-7  
2-4' x 12-15'

Hardy dwarf, spreading form has pendulous branch tips and dark green needles. Tolerant of high pH but requires good drainage. ‘Adpressa’ is another good, low, shade-loving cultivar.
<table>
<thead>
<tr>
<th>Taxus cuspidata</th>
<th>Japanese Yew</th>
<th>Zone 4-7</th>
<th>10-40' x equal spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefers a moist, sandy loam, does not tolerate wet soils for any length of time. Extremely cold hardy.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Taxus x media cultivars</strong></td>
<td><strong>Yews</strong></td>
<td>Zone 4-7</td>
<td>Variable</td>
</tr>
<tr>
<td><strong>Tetradium danielli</strong></td>
<td>Korean Evodia</td>
<td>Zone 5-8</td>
<td>25-30' x equal spread</td>
</tr>
<tr>
<td>Prefers moist, well-drained soil. pH adaptable and drought tolerant once established; full sun. Small white flowers in flat-topped clusters in mid summer; attractive to bees.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thuja occidentalis</td>
<td>American Arborvitae</td>
<td>Zone 3-7</td>
<td>40'-60' x 10'-15'</td>
</tr>
<tr>
<td>Very durable. Can be grown in most conditions and soils. Good plant for screens or hedges. Rich green in summer. Plant cultivars that stay green through winter.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thuja plicata</td>
<td>Western Arborvitae</td>
<td>Zone 5-7</td>
<td>50-70' x 15-25'</td>
</tr>
<tr>
<td>Moist, fertile soils but tolerant of drier soils; sun/shade; pH adaptable. A fast growing pyramidal tree with bright evergreen leaves and reddish-brown fibrous bark. Large for many landscapes but possible substitute for Eastern Hemlock.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thujopsis dolobrata</td>
<td>Hiba Arborvitae</td>
<td>Zone 5-7</td>
<td>30-50' x 10-20'</td>
</tr>
<tr>
<td>Dense, pyramidal, evergreen with shiny flattened leaves. Prefers moist, acid soil and some shade. Protect from drying winds.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tilia species</td>
<td>Linden</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T. americana</td>
<td>American Linden</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T. cordata</td>
<td>Littleleaf Linden</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T. tomentosa</td>
<td>Silver Linden</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zone 4-7</td>
<td>60-80' x 2-3 spread</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easily transplanted. Prefer moist, acid, organic soil. Full sun/part shade; pH adaptable. T. americana is particularly suited for naturalizing. T. cordata will tolerate pollution but is more susceptible to aphids. T. tomentosa is shorter, more sustainable and will tolerate heat and drought. T. tomentosa is recommended for urban and residential plantings.</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Tsuga diversifolia | Northern Japanese Hemlock | Zone 5-7 | 35-60' x 20-30' |
| Slow growing, multi-stemmed tree with dense, dark green foliage. Prefers moist sites in full sun, easily transplanted. At least one R.I. nursery has been growing this plant for years, and it appears to be well suited to our climate. |

Tsuga heterophylla | Western Hemlock | Zone 6-8 | 60-80' x 30' |
| Looks very much like Canadian Hemlock. Prefers a humid climate and moist soil. Cold hardiness is marginal in New England; plants from northern Idaho show very slight winter damage, coastal material is probably not hardy here. Plant hardy stock. |
**Ulmus parvifolia**  
*Lacebark Elm*  
Zone 5-9  
40-50' x equal spread

Adaptable to various soil and pH conditions, good for urban areas, resistant to Dutch elm disease, elm leaf beetle and Japanese beetle. Several new cultivars recently introduced; excellent bark and foliage.

**Vaccinium angustifolium**  
*Lowbush Blueberry*  
Zone 2-5  
0.5'-2' x 2' or greater spread

Does very well in dry, acid, poor soils. Lowbush blueberry is a managed wild crop in Maine.

**Vaccinium corymbosum**  
*Highbush Blueberry*  
Zone 3-7  
6-12' x 8-12'

Native to swamps but does well in dry, acid, poor and sandy soils in full sun or partial shade. Mulch.

**Vaccinium macrocarpon**  
*American Cranberry*  
Zone 2-6  
2-6' x spreading

Evergreen groundcover prefers full sun, acid conditions and moist, cool roots. Pinkish flowers in spring and red, cranberry-like fruit in fall.

**Vaccinium vitis-idaea**  
*Cowberry*  
Zone 2-5  
10' x spreading

Evergreen, dark green foliage turns mahogany in winter. Flowers are white or pinkish borne in May-June. Prefers full sun, moist, peaty soil. Fruit is dark red.

**Viburnum acerifolium**  
*Mapleleaf Viburnum*  
Zone 4-8  
4-6' x 4'

Deciduous, native shrub. Very shade tolerant and excellent for naturalizing. Suckering shrubs can form extensive thickets. Flowers are yellowish-white and fall foliage ranges from pink to rose to red to grape.
Viburnum dilatatum  
Linden Viburnum  
Zone 5-7  
8-10' x equal spread

Similar to other viburnums in site preference. White flat-topped flower clusters in May, showy red fruit in fall. pH tolerant.

Viburnum wrightii  
Wright Viburnum  
Zone 5-7  
8-10' x equal spread

Viburnum farreri  
Fragrant Viburnum  
Zone 5-8  
8-12' x similar spread

Early to flower, flower buds may be damaged by late frost. White, fragrant blooms in mid-April.

Viburnum lentago  
Nannyberry Viburnum  
Zone 3-7  
15-18' (possibly to 30') x variable spread

Suckers easily to form thicket. Adaptable to a range of conditions. Tolerates sun to shade. Very durable. A good native shrub or small tree for naturalizing.

Viburnum plicatum var. tomentosum  
Doublefile Viburnum  
Zone 5-7  
8-10' x 9-12'

Prefers moist, well-drained soils and shade, not particularly drought tolerant. Lovely bloom along branches in May. Preferred cultivars include ‘Mariesii’ and ‘Shasta’.

Viburnum prunifolium  
Blackhaw Viburnum  
Zone 3-9  
12-15' x 8-12'

Adaptable to various soil conditions, drought tolerant once established, sun/part shade. A good native shrub or small tree for naturalizing.

Viburnum x rhytidophylloides  
Lantanaphyllum  
Zone 4-8  
8-10' x equal spread

Evergreen shrubs adaptable to soil conditions, full sun/light shade, needs protection from winter wind. White flat-topped flower clusters in April followed by black fruit effective in the fall. Dark green leathery leaves persist in the fall. ‘Allegheny’ and ‘Willowwood’ are fine selections of V. x rhytidophylloides. V. rhytidophyllym shade tolerant and hardy to zone 5.

Viburnum sargentii  
Sargent Viburnum  
Zone 4-7  
12-15' x equal spread

Adaptable to various soil conditions, pH tolerant, full sun/shade; a number of USDA introductions to choose from: ‘Onondaga’, ‘Susquehanna’. Attractive red fruit last into winter.

Viburnum sieboldii  
Siebold Viburnum  
Zone 4-7  
15-20' x 10-15'

Adaptable to various soil conditions but prefers moist, well-drained soil; pH adaptable, sun/part shade, not particularly drought tolerant. ‘Seneca’ has persistent red fruit.

Viburnum trilobum  
American Cranberrybush  
Viburnum  
Zone 2-7  
8-12' x equal width

Adaptable to various soil conditions, easy to grow, full sun/part shade. Native.

Weigela florida  
Weigela  
Zone 5-8  
6-9' x 9-12'

Quite adaptable but prefers a moist well-drained soil, full sun, tolerates air pollution. Requires rejuvenation pruning to maintain decent shape; many improved cultivars available. Early summer blooming.

Xanthorhiza simplicissima  
Yellowroot  
Zone 3-9  
2-3' x spreading

Groundcover prefers moist, well-drained soils, tolerates heavy soils, sun/shade, tolerates dry conditions.
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Cedar, Japanese ............................................... Cryptomeria japonica
Cedar of Lebanon ............................................. Cedrus libani
Cherry, Higan ................................................. Prunus subhirtella ‘Autumnalis’
Cherry, Sargent ............................................. Prunus sargentii
Chokecherry, Amur ......................................... Prunus maackii
Chokecherry, Black ......................................... Aronia melanocarpa
Chokecherry, Red ............................................ Aronia arbutifolia
Cinquefoil, Bush .............................................. Potentilla fruticosa
Clematis ............................................................ Clematis species
Clethra, Japanese ........................................... Clethra barbinervis
Clethra, Sweet Pepperbush ............................... Clethra alnifolia
Cranberry, American ....................................... Vaccinium macrocarpon
Cranberry, Turkish ........................................... Vaccinium macrocarpon
Cranberry, European ....................................... Vaccinium macrocarpon
Cowberry ........................................................... Vaccinium vitis-idaea
Daphne, Burkwood .......................................... Daphne x burkwoodii
Daphne, Caucasian .......................................... Daphne caucasia
Daphne, Rosé ................................................... Daphne cneorum
Deutzia, Fuzzy ............................................... Deutzia scabra
Deutzia, Lemoine ............................................ Deutzia x lemoinei
Deutzia, Slender ............................................. Deutzia gracilis
Disanthus cercidifolius .................................... Disanthus cercidifolius
Dogwood, Cornelian-Cherry ............................. Cornus mas
Dogwood, Gray ............................................... Cornus racemosa
Dogwood, Hybrid ............................................. Cornus x ‘Stellar’ series
Dogwood, Japanese Cornel ............................... Cornus officinalis
Dogwood, Kousa ............................................. Cornus kousa
Dogwood, Pagoda ............................................ Cornus alternifolia
Dove-tree ....................................................... Davidia involucrata
Dutchman’s Pipe ............................................. Aristolochia macrophylla
Eastern Redbud .............................................. Cercis canadensis
Eastern Red Cedar ........................................... Juniperus virginiana
Elm, Lacebark ............................................... Ulmus parvifolia
Enkianthus, Redvein ........................................ Enkianthus campanulatus
Epaulettetree, Fragrant .................................... Pterostyrax hispida
Evodia, Korean ............................................... Tetradium danielli
Falsecypress, Hinoki ....................................... Chamaecyparis obtusa
Falsecypress, Sawara ....................................... Chamaecyparis pisifera
Filbert, American ........................................... Corylus americana
Filbert, Beaked ............................................... Corylus cornuta
Filbert, European ........................................... Corylus avellana
Filbert, Turkish ............................................... Corylus colurna
Fir, Greek ...................................................... Abies cephalonica
Fir, Cilician .............................................. F. cedrus
Fir, Korean .............................................. Abies koreana
Fir, Nikko .............................................. Abies homolepis
Fir, Noble .............................................. Abies procera
Fir, Veitch .............................................. Abies veitchii
Fir, White .............................................. Abies concolor
Firethorn, Scarlet ................................. Pyracantha coccinea
Forsythia, Border ................................... Forsythia x intermedia
Forsythia, Weeping ................................... F. suspensa
Fothergilla, Dwarf ................................... Fothergilla gardenii
Fothergilla, Large ................................... Fothergilla major
Franklin Tree ....................................... Franklinia alatamaha
Fringetree, Chinese ................................. Chionanthus retusus
Fringetree, White ................................... Chionanthus virginicus
Ginkgo or Maidenhair Tree ...................... Ginkgo biloba
Goldenrain-tree ....................................... Koelreuteria paniculata
Golden-larch ......................................... Pseudolarix amabilis
Groundsel-bush ...................................... Baccharis halimifolia
Hawthorn, Green ................................... Crataegus viridis ‘Winter King’
Hemlocks ................................................ Tsuga species
Hemlock, Northern Japanese ..................... Tsuga diversifolia
Hemlock, Western .................................... Tsuga heterophylla
Hercules Club .......................................... Aralia spinosa
Hiba arboretae ....................................... Thujaopsis dolobrata
Holly, Blue ............................................. Ilex x meserveae hybrids
Holly, Finetooth ...................................... Ilex serrata
Holly, Inkberry ....................................... Ilex glabra
Holly, Japanese ....................................... Ilex crenata
Holly, Longstalk ..................................... Ilex pedunculosa
Holly, Winterberry .................................. Ilex verticillata
Honeysuckle, Thornless Common ............. Gleditsia triacanthos
Honeysuckle, Dwarf Bush ....................... Diervilla sessilifolia
Honeysuckle, Trumpet ............................. Lonicera sempervirens
Hornbeam, American .............................. Carpinus caroliniana
Hornbeam, American Hop ....................... Ostrya virginiana
Hornbeam, European .............................. Carpinus betulus
Hoptree .................................................. Ptelea trifoliata
Hydrangea, Bigleaf ................................. Hydrangea macrophylla
Hydrangea, Climbing ............................... Hydrangea anomala subsp. petiolaris
Hydrangea, Oak-leaved ............................ Hydrangea quercifolia
Hydrangea, Panicule ................................. Hydrangea paniculata
Hydrangea, Smooth .................................. Hydrangea arborescens
Japanese Hydrangea-vine ....................... Schizophragma hydrangeoides
Japanese Pagoda Tree ............................ Sophora japonica
Japanese Plum Yew ................................. Cephalotaxus harringtonia
Japanese Raisintree ................................ Hovenia dulcis
Japanese Snowbell .................................. Styrax japonica
Japanese Umbrella Pine ......................... Sciadopitys verticillata
Juniper, Chinese ..................................... Juniperus chinensis
Juniper, Eastern Red Cedar .................... Juniperus virginiana
Juniper, Shore ....................................... J. conferta
Katsura Tree .......................................... Cercidiphyllum japonicum
Kentucky Coffeetree ............................... Gymnocladus dioicus
Kerria, Japanese ..................................... Kerria japonica
Labrador Tea ......................................... Ledum groenlandicum
Larch, Eastern ....................................... Larix laricina
Larch, Japanese ...................................... Larix kaempferi
Leatherleaf ........................................... Chamaedaphne calyculata
Lemonwood ........................................... Dirca palustris
Leucothoe ............................................. Leucothoe species
Lilac, Japanese Tree ............................... Syringa reticulata
Lilac, Littleleaf ....................................... S. microphylla
Lilac, Manchurian ................................. S. patula ‘Miss Kim’
Lilac, Meyer .......................................... S. meyeri
Linden ..................................................... Tilia species
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Linden, Silver ....................................... T. tomentosa
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Magnolia, Kobus ...................................... Magnolia kobus
Magnolia, Loebner .................................. Magnolia x loebneri
Magnolia, Oyama ..................................... Magnolia sieboldii
Magnolia, Saucer .................................... Magnolia x soulangiana
Magnolia, Star ........................................ Magnolia kobus var. stellata
Magnolia, Sweetbay ................................. Magnolia virginiana
Magnolia, Yulan ...................................... Magnolia denudata
Maple, Fullmoon ..................................... Acer japonicum
Maple, Hedge ........................................ Acer campestre
Maple, Japanese ..................................... Acer palmatum
Maple, Paperbark .................................... Acer griseum
Maple, Purpleleaf ................................... Acer truncatum
Maple, Striped ....................................... Acer pennsylvanicum
Maple, Swamp/Red ................................. Acer rubrum
Maple, Tatarian ..................................... Acer tataricum
Maple, Three-flowered ............................ Acer triflorum
Maple, Trident ......................................... Acer buergerianum
Mockorange, Sweet ...................... Philadelphus species
Mountain Holly, Sour Gum .................. Nemopanthus mucronatus
Mountain-Laurel .................................... Kalmia latifolia
Ninebark, Common ......................... Physocarpus opulifolius
Oak, Black ........................................... Quercus velutina
Oak, Northern Red ............................... Quercus rubra
Oak, Pin ................................................ Quercus palustris
Oak, Sawtooth ...................................... Quercus acutissima
Oak, Shingle .......................................... Quercus imbricaria
Oak, Shumard ........................................... Quercus shumardii
Oak, Swamp White .................................... Quercus bicolor
Oak, White ............................................... Quercus alba
Oak, Willow ............................................. Quercus phellos
Oregon Grapeholly .................................. Mahonia aquifolium
Pachysandra, Japanese ......................... Pachysandra terminalis
Parrotia, Persian ................................... Parrotia persica
Paxistima, Canby .................................. Paxistima canbyi
Pear, Callery ........................................ Pyrus calleryana cultivars
Pearlbusb, Common ............................... Exochorda racemosa
Pieri, Japanese ....................................... Pieris japonica
Pieri, Mountain, Fetterbush ..................... Pieris floribunda
Pine, Eastern White ................................ Pinus strobus
Pine, Jack ............................................. Pinus banksiana
Pine, Japanese White ............................... Pinus parviflora
Pine, Korean .......................................... Pinus koraiensis
Pine, Lacebark ....................................... Pinus bungeana
Pine, Swiss Stone .................................... Pinus cembra
Redwood, Dawn ................................... Metasequoia glyptostroboides
Rhododendron ................................. Rhododendron species and cultivars
Rubber Tree, Hardy ............................ Eucommia ulmoides
Quince, Japanese Flowering .................. Chaenomeles japonica
Sassafras, Common ............................... Sassafras albidum
Serviceberry, Allegheny ......................... Amelanchier laevis
Serviceberry, Downy ............................. Amelanchier arborea
Serviceberry, Shadblow ......................... Amelanchier canadensis
Seven-Son Flower ................................... Heptacodium miconoides
Siberian Peashrub ............................... Caragana arborescens
Silverbell, Carolina .................. Halesia tetraptera
Silverbell, Mountain ............................ Halesia monticola
Silverbell, Two-winged ......................... Halesia diptera
Smoketree, American ....................... Cotinus obovatus
Smoketree, Common ............................. Cotinus coggyria
Sourwood ........................................... Oxydendrum arboreum
Spicebush ........................................... Lindera benzoin
Spirea, Bumald .................. Spiraea x bumalda
Spirea, Vanhoutte ......................... Spiraea x vanhouttei
Spruce, Oriental ................................ Picea orientalis
Spruce, Serbian .................................. Picea omorika
Spruce, White ..................................... Picea glauca
Stephanandra, Cutleaf ......................... Stephanandra incisa
Stewartia, Japanese ........................... Stewartia pseudocamellia
Stewartia, Korean ................................ Stewartia koreana
St. Johnswort .................................. Hypericum species
Sumac, Fragrant ...................... Rhus aromatica
Sumac, Shining ................................. Rhus copallina
Sweetbox ......................................... Sarcococca hookeriana
Sweetgum, American .................. Liquidambar styraciflua
Sweet Fern ........................................ Comptonia peregrina
Trumpet Vine ...................................... Campsis radicans
Tuliptree .......................................... Liriodendron tulipifera
Tupelo, Black ....................................... Nyssa sylvatica
Viburnum, American Cranberrybush .... Viburnum trilobum
Viburnum, Arrowwood ..................... Viburnum dentatum
Viburnum, Blackhaw .............. Viburnum prunifolium
Viburnum, Burkwood ................ Viburnum x burkwoodii
Viburnum, Doublefile ................ Viburnum plicatum
Viburnum, Fragrant .................. Viburnum x carleecephalum
Viburnum, Fragrant ................ Viburnum farreri
Viburnum, Judd ................................. Viburnum x juddii
Viburnum, Koreanspice ................ Viburnum carlesii
Viburnum, Lantanaphyllum .... Viburnum x rhytidophylloides
Viburnum, Leatherleaf ................ Viburnum rhytidophylloides
Viburnum, Linden ........................ Viburnum dilatatum
Viburnum, Mapleleaf ................ Viburnum acerifolium
Viburnum, Nannyberry ................ Viburnum sieboldii
Viburnum, Siebold ................ Viburnum sieboldii
Viburnum, Wayfaring Tree .... Viburnum lantana ‘Mohican’
Viburnum, Witherod ................ Viburnum cassinoïdes
Viburnum, Wright ........................ Viburnum wrightii
Virginia Creeper ............................... Parthenocissus quinquefolia
Virginia Sweetspire ...................... Itea virginica
Winterhazel, Fragrant ................ Corylopsis glabrescens
Winterhazel, Spike ....................... Corylopsis spicata
Witchhazel .................................. Hamamelis x intermedia
Witchhazel, Chinese .................. Hamamelis mollis
Witchhazel, Common .................. Hamamelis virginiana
Witchhazel, Vernal ................... Hamamelis vernalis
Weigela .............................................. Weigela florida
Yellowwood, American ................. Cladrastis kentukea
Yellowroot ................................ Xanthorrhiza simplicissima
Yew ........................................... Taxus species and cultivars
Yew ........................................... Taxus x media cultivars
Yew, Japanese ................................ Taxus cuspidata
Yew, Spreading English ........ Taxus baccata ‘Rependens’
# Appendix One

## URI Flowering Crabapple Tree Disease Evaluations: 1997

<table>
<thead>
<tr>
<th>Variety</th>
<th>Flower/Fruit</th>
<th>Shape</th>
<th>Ht x Wd</th>
<th>Comments</th>
<th>Apple Scab</th>
<th>Fire Blight</th>
<th>Cedar Apple Rust</th>
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### Resistance to Disease

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<td>Round</td>
<td>20x20</td>
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<td>White/Yellow</td>
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<td>25x25</td>
<td>2,4 Fair * Fair Excel</td>
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### Additional Comments

1. Flowers lightly in alternate years
2. Fragrant flowers
3. Colorful fall foliage
4. Fruit remains on tree
5. Birds favor fruit as food
6. Messy fruit drop in midsummer

### Key to Disease Resistance

**Excel:** No problem with disease  
**Good:** Some leaves affected  
**Fair:** Most leaves affected yet little or no defoliation, thus not a significant problem  
**Poor:** Consistently defoliates in summer

* Apple Scab is the disease of consequence in the Northeast. Although we've not seen the potentially lethal fire blight, or the less serious Powdery Mildew, future conditions in the Northeast may favor these diseases.

Please note: this compilation is composed of local data collected over the last 4 years, adjusted with national disease ratings from NCEP/NCIP plantations throughout the country.

Marsha Browning & Larry Englander, 1997
APPENDIX TWO

Tree, Shrub and Vine Selections for Demanding Situations

DROUGHT OR DRY SOILS

Abies concolor
Acer campestre
Acer ginnala
Acer tataricum
Acer truncatum
Aesculus pavia
Amorpha fruticosa
Aralia spinosa
Arctostaphylos uva-ursi
Aronia arbutifolia
Aronia melanocarpa
Berberis x mentorensis
Caragana arborescens
Carpinus betulus
Ceonothus americanus
Ceonothus ovatus
Cephalotaxus harringtonia
Chaenomeles speciosa
Cladrastus kentukea
Comptonia peregrina
Cornus racemosa
Corylus americana
Corylus colurna
Cotinus coggyria
Cotinus obovatus
Cotoneaster adpressus
Cotoneaster divaricatus
Cotoneaster salicifolius
Crataegus viridis ‘Winter King’
Diervillia sessilifolia
Eleutherococcus sieboldianus
Eucommia ulmoides
Exochorda racemosa
Fagus sylvatica
Fraxinus pennsylvanica
Ginkgo biloba
Gymnocladus dioicus
Hammamelis mollis
Hammamelis vernalis
Hammamelis virginiana
Hammamelis x intermedia
‘Arnold Promise’

Hydrangea arborescens
Hypericum species
Juniperus chinensis
Juniperus conferta
Juniperus virginiana
Koeleria paniculata
Kolkwitzia amabilis
Maackia amurensis
Malus species
Myrica pensylvanica
Ostrya virginiana
Oxydendrum arboreum
Parrotia persica
Parthenocissus quinquifolia
Parthenocissus tricuspidata
Phellodendron amurense
Physocarpus opulifolius
Picea omorika
Picea orientalis
Pinus banksiana
Pinus bungeana
Pinus cembra
Pinus koraiensis
Pinus parviflora
Pinus strobus
Potentilla fruticosa
Prunus maritima
Prunus sargentii
Pyrus calleryana cultivars
Quercus acutissima
Quercus alba
Quercus bicolor
Quercus imbricaria
Quercus phellos
Quercus rubra
Quercus shumardii
Rhus aromatica ‘Gro-Low’
Rhus chinensis
Rhus copallina
Sarcococca hookeriana
Sciadopitys verticillata
Sophora japonica
Spirea x bumalda ‘Anthony Waterer’

Syringa reticulata
Taxodium ascendens
Taxodium distichum
Tetradium daniellii
Thuja plicata
Tilia tomentosa
Ulmus parvifolia
Vaccinium angustifolium
Vaccinium corymbosum
Viburnum acerifolium
Viburnum dentatum
Viburnum prunifolium
Viburnum rhytidophyllum
Viburnum sieboldii
Viburnum x rhytidophyloides
Weigela florida
Xanthorrhiza simplicissima

WET SOILS OR FLOODING

Acer rubrum
Aesculus parviflora
Aesculus pavia
Alnus incana
Alnus rugosa
Amelanchier arborea
Amelanchier canadensis
Amelanchier laevis
Aronia arbutifolia
Betula nigra
Calycanthus floridus
Carpinus caroliniana
Cercidiphyllum japonicum
Chamaecyparis nootkatensis
Chamaecyparis obtusa
Chamaecyparis pisifera
Chamaecyparis thyoides
Chamaedaphne calyculata
Chionanthus retusus
Chionanthus virginicus
Clethra alnifolia
Clethra barbinervis

SUSTAINABLE PLANT LIST · THIRD EDITION · 1999
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Dierella sessilifolia
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Hydrangea arborescens
Hydrangea macrophylla
Hydrangea paniculata
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Juniperus conferta
Juniperus virginiana
Koelreuteria paniculata
Magnolia acuminata
Magnolia kobus
Magnolia virginiana
Magnolia x loebneri
Magnolia x soulangiana
Myrica pensylvanica
Nyssa sylvatica
Oxydendrum arboreum
Parthenocissus quiniquifolia
Parthenocissus tricuspidata
Phellodendron amurense
Potentilla fruticosa
Prunus maritima
Prunus sargentii
Pyracantha coccinea
Quercus acutissima
Quercus alba
Quercus bicolor
Quercus rubra
Rhus aromatica ‘Gro-Low’
Rhus chinensis
Rhus copallina
Sciadopitys verticillata
Sophora japonica
Syringa meyeri
Syringa microphylla
Syringa patula
Syringa reticulata
Taxodium distichum
Taxus baccata ‘Repandens’
Taxus cuspidata
Taxus x media cultivars
Thuja occidentalis
Ulmus parvifolia
Vaccinium corymbosum
Viburnum dentatum
Viburnum prunifolium
Viburnum sieboldii

OCEANSIDE, ROADSIDE OR AERIAL SALT
Amelanchier canadensis
Amorpha fruticosa
Arctostaphylos uva-ursi
Aronia arbutifolia
Aronia melanocarpa
Baccharis halimifolia
Campsis radicans
Caragana arborescens
Chamaecyparis pisifera
Clethra alnifolia
Clethra barbinervis
Comptonia peregrina
Cotoneaster adpressus
Cotoneaster divaricatus
Cotoneaster salicifolius
Fraxinus pennsylvanica
Halesia carolina
Halesia diptera
Hydrangea arborescens
Hydrangea macrophylla
Ilex glabra
Juniperus chinensis
Juniperus conferta
Juniperus virginiana
Myrica pensylvanica
Nyssa sylvatica
Oxydendrum arboreum
Parthenocissus quiniquifolia
Parthenocissus tricuspidata
Pinus banksiana
Pinus cembra
Pinus parviflora
Potentilla fruticosa
Prunus maritima
Ptelea trifoliata
Pyrus calleryana cultivars
Quercus alba
Quercus bicolor
Quercus rubra
Rhus aromatica ‘Gro-Low’
Symphoricarpos x chenaultii
Taxodium ascendens
Taxodium distichum
Vaccinium corymbosum
WIND
Abies concolor
Acer ginnala
Acer truncatum
Caragana arborescens
Cephalotaxus harringtonia
Chamaecyparis pisifera
Comptonia peregrina
Cornus racemosa
Corylus colurna
Cotoneaster divaricatus
Crataegus viridis ‘Winter King’
Dierella sessilifolia
Eleutherococcus sieboldianus
Eucommia ulmoides
Fraxinus pennsylvanica
Ginkgo biloba
Gymnocladus dioicus
Juniperus chinensis
Juniperus conferta
Juniperus virginiana
Ledum groenlandicum
Microbiota decussata
Myrica pensylvanica
Parrotia persica
Parthenocissus quiniquifolia
Parthenocissus tricuspidata
Pinus banksiana
Pinus cembra
Pinus parviflora
Potentilla fruticosa
Prunus maritima
Ptelea trifoliata
Pyrus calleryana cultivars
Quercus alba
Quercus bicolor
Rhus aromatica ‘Gro-Low’
Symphoricarpos x chenaultii
Taxodium ascendens
Taxodium distichum
Vaccinium corymbosum
NATIVE SPECIES
Acer pensylvanicum
Acer rubrum
Aesculus parviflora
Aesculus pavia

38 SUSTAINABLE PLANT LIST · THIRD EDITION · 1999
Alnus rugosa
Amelanchier arborea
Amelanchier canadensis
Amelanchier laevis
Amorpha fruticosa
Andromeda polifolia
Aralia spinosa
Arctostaphylos uva-ursi
Aronia arbutifolia
Aronia melanocarpa
Baccharis halimifolia
Betula alleghanensis
Betula lenta
Betula nigra
calycanthus floridus
Campsis radicans
Carpinus caroliniana
Carpinus ovata
Cercis canadensis
Chamaecyparis thyoides
Chamaedaphne calyculata
Chionanthus virginicus
Cladrastus kentukea
Clethra alnifolia
Comptonia peregrina
Cornus alternifolia
Cornus racemosa
Corylus americana
Cotinus obovatus
Crateagus viridis ‘Winter King’
Diervilla sessilifolia
Dirca palustris
Fagus grandifolia
Fothergilla gardenii
Fothergilla major
Franklinia alatamaha
Fraxinus pennsylvanica
Gymnocladus dioicus
Halesia carolina
Halesia diptera
Hammamelis vernalis
Hammamelis virginiana
Hydrangea arborescens
Hydrangea quercifolia
Hypericum species
Ilex glabra
Ilex verticillata
Itea virginica
Juniperus virginiana
Kalmia latifolia
Larix laricina
Ledum groenlandicum
Leucothoe species
Lindera benzoin
Liquidambar styraciflua
Liriodendron tulipifera
Magnolia acuminata
Magnolia virginiana
Myrica pensylvanica
Nemopanthus mucronatus
Nyssa sylvatica
Ostrya virginiana
Oxydendrum arboreum
Pachysandra procumbens
Parthenocissus quinquefolia
Paxistima canbyi
Physocarpus opulifolius
Picea glauca
Pieris floribunda
Pinus banksiana
Pinus strobos
Potentilla fruticosa
Prunus maritima
Ptelea trifoliata
Quercus alba
Quercus bicolor
Quercus imbricaria
Quercus macrocarpa
Quercus palustris
Quercus phellos
Quercus rubra
Quercus shumardii
Quercus velutina
Rhododendron species & cultivars
Rhus aromatica ‘Gro-Low’
Rhus copallina
Sassafras albidum
Taxodium distichum
Tilia americana
Vaccinium angustifolium
Vaccinium corymbosum
Vaccinium macrocarpon
Vaccinium vitis-idaea
Viburnum acerifolium
Viburnum cassinoides
Viburnum dentatum
Viburnum lantana
Viburnum prunifolium
Viburnum trilobum
Xanthorhiza simplicissima

Comptonia peregrina
Enkianthus campanulatus
Hydrangea macrophylla
Ilex crenata
Ilex glabra
Ilex pedunculosa
Ilex verticillata
Ilex x meserveae hybrids
Kalmia latifolia
Ledum groenlandicum
Leucothoe species
Myrica pensylvanica
Nemopanthus mucronatus
Vaccinium angustifolium
Vaccinium corymbosum
Vaccinium macrocarpon
Vaccinium vitis-idaea

Tolerant of pH 4.5 or lower

Abelia x grandiflora
Abies cilicica
Abies concolor
Abies homolepis
Abies veitchii
Acer buergerianum
Acer rubrum
Acer triflorum
Amelanchier arborea
Amelanchier canadensis
Andromeda polifolia
Aronia arbutifolia
Aronia melanocarpa
Berberis x chenaultii
Carpinus betulus
Carpinus caroliniana
Chaemaecyparis obtusa
Chaemaecyparis pisifera
Chionanthus virginicus
Clethra alnifolia
Enkianthus campanulatus
Fagus grandifolia
Fagus sylvatica
Forsythia intermedia
Forsythia suspensa
Fothergilla gardenii
Fothergilla major
Franklinia alatamaha
Halesia carolina
Halesia diptera
Hammamelis mollis
Hammamelis vernalis
Hammamelis virginiana
Hammamelis x intermedia

Tolerant of pH 5.0

Abelia x grandiflora
Abies cilicica
Abies concolor
Abies homolepis
Abies veitchii
Acer buergerianum
Acer rubrum
Acer triflorum
Amelanchier arborea
Amelanchier canadensis
Andromeda polifolia
Aronia arbutifolia
Aronia melanocarpa
Berberis x chenaultii
Carpinus betulus
Carpinus caroliniana
Chaemaecyparis obtusa
Chaemaecyparis pisifera
Chionanthus virginicus
Clethra alnifolia
Enkianthus campanulatus
Fagus grandifolia
Fagus sylvatica
Forsythia intermedia
Forsythia suspensa
Fothergilla gardenii
Fothergilla major
Franklinia alatamaha
Halesia carolina
Halesia diptera
Hammamelis mollis
Hammamelis vernalis
Hammamelis virginiana
Hammamelis x intermedia
'Arnold Promise'
Juniperus virginiana
Larix kaempferi
Larix laricina
Magnolia acuminata
Magnolia kobus var. stellata
Magnolia virginiana
Magnolia x soulangiana
Malus species
Nemophila maculata
Nyssa sylvatica
Ostrya virginiana
Oxydendrum arboreum
Pachystachys lutea
Pinus banksiana
Pinus cembra
Pinus koraiensis
Pinus strobus
Pterostyrax hispida
Quercus acutissima
Quercus alba
Quercus bicolor
Quercus palustris
Quercus phellos
Quercus rubra
Quercus velutina
Rhododendron species & cultivars
Sassafras albidum
Stewartia koreana
Stewartia pseudocamellia
Syrax japonica
Taxodium ascendens
Taxodium distichum
Viburnum prunifolium

TOLERANT OF pH 7.5 OR HIGHER

Abies cilicica
Abies concolor
Acer buergerianum
Acer campestre
Acer ginnala
Acer griseum
Acer palmatum
Acer tataricum
Aesculus pavia
Alnus incana
Amelanchier arborea
Amelanchier canadensis
Amelanchier laevis
Amorpha fruticosa
Aralia spinosa
Berberis julianae
Berberis verruculosa
Berberis x montorensis
Buxus microphylla
Buxus sempervirens
Caragana arborescens
Carpinus betulus
Cedrus atlantica
Cercidiphyllum japonicum
Cercis canadensis
Chionanthus retusus
Chionanthus virginicus
Cladrastis kentukea
Clematis species
Cornus kousa
Cornus mas
Cornus officinalis
Cornus racemosa
Corylus americana
Corylus colurna
Cotinus coggyria
Cotinus obovatus
Cotoneaster adpressus
Cotoneaster divaricatus
Cotoneaster salicifolius
Crataegus viridis 'Winter King'
Dierickxia sessilifolia
Eleutherococcus sieboldianus
Eucommia ulmoides
Forsythia intermedia
Forsythia suspensa
Fraxinus pennsylvanica
Ginkgo biloba
Gymnocladus dioicus
Hammamelis vernalis
Hovenia dulcis
Hydrangea arborescens
Hydrangea macrophylla
Hydrangea paniculata
Hydrangea quercifolia
Hypericum species
Juniperus chinensis
Juniperus conferta
Juniperus virginiana
Kalopanax septemlobus
Koelreuteria paniculata
Kolkwitzia amabilis
Lonicera sempervirens
Maackia amurensis
Magnolia acuminata
Magnolia kobus
Magnolia kobus var. stellata
Magnolia x loebneri
Malus species
Ostrya virginiana
Parrotia persica
Parthenocissus quinquefolia
Parthenocissus tricolor
Paxistima canby
Pseudotsuga amabilis
Physocarpus opulifolius
Picea omorika
Picea orientalis
Pieris floribunda
Pinus bungeana
Pinus koraiensis
Pinus parviflora
Pinus strobus
Potentilla fruticosa
Prunus maackii
Prunus maritima
Prunus sargentii
Prunus subhirtella 'Autumnalis'
Ptelea trifoliata
Pyrus calleryana cultivars
Quercus bicolor
Quercus macrocarpa
Quercus phellos
Rhus aromatica 'Gro-Low'
Rhus chinensis
Rhus copallina
Sophora japonica
Sorbus alnifolia
Spiraea x bumalda 'Anthony Waterer'
Spiraea x vanhouttei
Stephanandra incisa 'Crispa'
Symphoricarpos x chenaultii
Syringa meyeri
Syringa microphylla
Syringa patula
Syringa reticulata
Taxodium distichum
Taxus baccata 'Rependens'
Taxus cuspidata
Taxus x media cultivars
Tetradeis daniellii
Ulmus parvifolia
Viburnum dentatum
Viburnum fareri
Viburnum plicatum f. tomentosum
Viburnum prunifolium
Viburnum rhytidophyllum
Viburnum sargentii
Viburnum sieboldii
Viburnum trilobum
Viburnum wrightii
Viburnum × juddii
Viburnum × rhytidophylloides
Weigela florida

USEFUL BENEATH POWER LINES
Acer buergerianum
Acer campestre
Acer ginnala
Acer griseum
Acer tataricum
Acer triflorum
Acer truncatum
Alnus incana
Alnus rugosa
Amelanchier canadensis
Amelanchier laevis
Carpinus caroliniana
Cercis canadensis
Chionanthus retusus
Cornus kousa
Cornus mas
Cornus officinalis
Cotinus coggygria
Crataegus viridis ‘Winter King’
Enkianthus campanulatus
Halesia carolina
Halesia diptera
Hammamelis mollis
Hammamelis vernalis
Hammamelis virginiana
Hammamelis × intermedia
 ‘Arnold Promise’
Hovenia dulcis
Koelreuteria paniculata
Maackia amurensis
Magnolia kobus var. stellata
Magnolia virginiana
Magnolia × loebneri
Magnolia × soulangiana
Malus species
Ostrya virginiana
Parrotia persica
Prunus maackii
Prunus maritima
Prunus sargentii
Prunus subhirtella ‘Autumnalis’
Ptelea trifoliata
Pterostyrax hispida
Pyrus calleryana cultivars
Sorbus alnifolia

TOLERANT OF URBAN CONDITIONS
Abies concolor
Acer buergerianum
Acer campestre
Acer ginnala
Acer tataricum
Acer triflorum
Amelanchier canadensis
Amorpha fruticosa
Aralia spinosa
Baccharis halimifolia
Betula nigra
Caragana arborescens
Carpinus betulus
Carpinus caroliniana
Cedrus atlantica
Cephalotaxus harringtonia
Cercidiphyllum japonicum
Corylus colurna
Cotinus coggygria
Cotinus obovatus
Crataegus viridis ‘Winter King’
Eleutherococcus sieboldianus
Eucommia ulmoides
Forsythia intermedia
Forsythia suspensa
Fraxinus pennsylvanica
Ginkgo biloba
Gymnocladus dioicus
Hammamelis virginiana
Hydrangea paniculata
Illex crenata
Juniperus chinensis
Juniperus conferta
Juniperus virginiana
Koelreuteria paniculata
Maackia amurensis
Magnolia kobus var. stellata
Magnolia × loebneri
Magnolia × soulangiana
Malus species
Nyssa sylvatica
Ostrya virginiana
Pachysandra terminalis
Parrotia persica
Parthenocissus quinquefolia
Parthenocissus tricuspidata
Picea omorika
Picea orientalis
Potentilla fruticosa
Pyrus calleryana cultivars
Quercus acutissima
Quercus bicolor
Quercus imbricaria
Quercus palustris
Quercus phellos
Quercus rubra
Quercus shumardii
Sophora japonica
Sorbus alnifolia
Syringa reticulata
Taxodium ascendens
Taxodium distichum
Taxus cuspidata
Tilia cordata
Tilia tomentosa
Ulmus parvifolia
Weigela florida
### APPENDIX THREE

Cross-reference for Demanding Situations

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DR = drought or dry soils  
LO = useful beneath powerlines  
NA = native species  
OC = oceanside, roadside or aerial salt  
P45 = tolerant of pH 4.5 or below  
P50 = tolerant of pH 5.0  
P75 = tolerant of pH 7.5 or higher  
SH = shade  
SP = best planted in spring  
SS = soil salt  
UR = urban conditions  
WI = wind  
WT = wet soils or flooding
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**DR** = drought or dry soils  
**LO** = useful beneath powerlines  
**NA** = native species  
**OC** = oceanside, roadside or aerial salt  
**P45** = tolerant of pH 4.5 or below  
**P50** = tolerant of pH 5.0  
**P75** = tolerant of pH 7.5 or higher  
**SH** = shade  
**SP** = best planted in spring  
**SS** = soil salt  
**UR** = urban conditions  
**WI** = wind  
**WT** = wet soils or flooding
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