Selected Maples for Shade and Ornamental Planting

by Richard E. Weaver, Jr.

Few hardy genera of plants are as diverse and desirable horticulturally or as valuable economically as Acer, the Maples. Several species are among the most important forest trees in eastern North America, and they are largely responsible for the spectacular blaze of color that covers the landscape of that region during the fall of the year. One of these, the Hard, Rock, or Sugar Maple, is particularly dear to the hearts of New Englanders, as its sap is the primary source of maple sugar — a regional specialty.

The most familiar Maples are perhaps those few large species that are grown as shade trees — primarily utilitarian plants with little thought given to their ornamental value except for the color of their autumn foliage. Others, particularly the Japanese Maples, are universally admired as accent plants for their graceful form and delicate foliage. But some extremely decorative aspects of Maples — namely their flowers and their bark patterns — are largely ignored by the American horticultural public. And many of the intermediate-size species, including some of the handsomest of the genus, are almost entirely unknown to most people.

In this article, the various decorative and utilitarian aspects of Maples hardy in Zone 5 are discussed. Under each of these characteristics, some good and not-so-good species are described. Finally, there is a list of the nursery sources for most of the species and cultivars mentioned. Culture, pests, diseases and propagation in general will not be discussed because of the existence of excellent articles on the subjects (see references below).

Hopefully, my basic enthusiasm for these plants will persuade some of my readers to grow a few of the more unusual types. Hopefully also, my warnings will save other readers a lot of aggravation.

REFERENCES


FOLIAGE

A typical leaf of a Sugar or Norway Maple is an object familiar to most people, whether they are interested in plants or not, and the leaves of most other species are basically similar to these. They are always opposite and, in the great majority of species, simple, with palmate veins and lobes; the margins are variously toothed. There are exceptions to the general rule, however, and some of the species displaying them might not be immediately recognizable as Maples unless fruits were present. A few tender Maples are evergreen, and a considerable number of species, including hardy ones, have compound leaves, these usually with three leaflets, but with up to seven in the Box Elder. A few species have leaves with inconspicuous lobes; the Hornbeam Maple has leaves that are pinnately veined and lack lobes completely.

Maples are well known for the spectacular coloration of their autumnal foliage. In fact, they are among the most showy of woody plants in this respect. But other aspects of Maple foliage are decorative as well. Forms and cultivars of several species have colored leaves during the growing season, and the texture of the foliage of many is of unusual interest. All of these aspects will be considered in this section.

Red Maple (Acer rubrum). This species turns swamps and low woodlands throughout eastern North America into a blaze of scarlet in the fall. The brilliant color of the foliage and the abundance of the species make this Maple certainly one of the most conspicuous trees in our autumn landscape. The foliage of the Red Maple is also of interest during the growing season. The leaves are whitish on their undersurfaces, and the tree appears silvery when the leaves are rustled by a breeze.

A number of cultivars have been selected for their unusually good autumn coloration. Those available in the trade are briefly described below.

'Autumn Flame' — foliage turning a brilliant scarlet about two weeks before most other Red Maples.
'Bowhall' — foliage turning a brilliant scarlet; also attractive for its pyramidal habit.

'Morgan' — foliage color consistently brilliant, even on young plants.

'October Glory' — foliage turning brilliant red and persisting on the tree longer than in most others of the species.

'Red Sunset' — brilliant red-orange foliage lasting well into the season.

'Scanlon' — dark green foliage during the summer, turning bright red and orange in the fall; a compactly branched, conical tree.

'Schlesingeri' — foliage coloring rather a darker red at least two weeks before most other Red Maples.

Sugar Maple (Acer saccharum). Like the preceding, this is a common native tree in the eastern United States, although in the Southeast it is primarily a mountain species. The foliage is similar to that of the Norway Maple during the growing season, but the individual leaves are a brighter green, and they are somewhat more slender. The crown is also less densely branched, so the Sugar Maple casts a lighter shade than does the Norway Maple. The foliage is quite delicate and is susceptible to sunscald and spray damage.

Autumnal coloration is somewhat variable, but most commonly the foliage turns golden orange with a tinge of red. A mature specimen tree in full color is about as magnificent a plant as we can grow here in New England.

The two cultivars selected for their outstanding foliage characters are as follows:

'Green Mountain' — autumnal coloration about average for the species, but leaves waxy, dark green during the growing season and reasonably resistant to sunscald.

'Sweet Shadow' ('Laciniatum') — leaves deeply cut, turning bright orange in the fall.

Silver Maple (Acer saccharinum). Although its yellow autumn coloration is less spectacular than that of some of its relatives, the texture and color of the summer foliage of this species are outstanding among the Maples that grow to be large trees. The deeply cut leaves show their silvery undersides in the slightest breeze, accounting for the common name. The cultivar 'Laciniatum' ('Wieri') has more deeply cut leaves than the species, in addition to its somewhat pendulous branches.

Norway Maple (Acer platanoides). Although this is one of the most frequently encountered trees of foreign origin in the eastern United States, its shallow root system and the deep shade cast by its dense, dark green foliage usually destroy the lawns in which it is most commonly planted. Its clear yellow autumn coloration is desirable,
The foliage of the Silver Maple, showing the whitish undersides of the leaves.
Photo: R. Weaver.

however, because it appears late in the season, after many trees have already lost their leaves.

A number of cultivars of this species are available in the American nursery trade. Those with colored or “improved” foliage during the growing season are described below. It must be pointed out, however, that these generally carry the same liabilities as the species. Further, the foliage of the red-leaved forms is coarse and characterless in my opinion. Although much cheaper and faster growing, these could never be a reasonable substitute for the Purple Beech, the only other large tree with similarly colored foliage.

‘Crimson King’ — foliage deep red-purple throughout the growing season.

‘Drummondii’ — leaves with a broad, fairly regular, white or yellowish margin.

‘Emerald Queen’ — foliage dark green and of heavy texture — probably a liability.

‘Faassen’s Black’ — similar to ‘Crimson King’.

‘Royal Red’ — foliage a clearer red than ‘Crimson King’ and ‘Faassen’s Black’.

‘Schwedleri’ — foliage red when emerging, turning rusty, then brownish and finally green.

‘Summershade’ — leaves large, dark green, with a heavy cuticle; quite resistant to sunscald.
Paperbark Maple (*Acer griseum*), Manchurian Maple (*A. mandshuricum*), Nikko Maple (*A. nihoense*) and Three-flower Maple (*A. triflorum*). The foliage of all four species is similar during the growing season. The leaves are compound, with three leaflets, and appear loose and airy in comparison with those of most other Maples. In the autumn the foliage of *A. griseum*, *A. nihoense*, and *A. triflorum* turns bright red or orange, that of the first being perhaps the least spectacular. The real standout in the group is *A. mandshuricum*, the foliage of which turns a unique and most attractive rose-red. It is also the hardiest species, surviving quite well in Zone 4.

Japanese-type Maples. These wonderful small trees need little introduction. The foliage is outstanding in all of the species; each of them is distinctive, and each will be treated separately below. The descriptions of the cultivars are largely condensed from those in the catalogue distributed by Greer Gardens, where more than 80 forms of *Acer palmatum* are listed.

Vine Maple (*Acer circinatum*). This native of western North America, and the only species indigenous to this continent, is infrequently cultivated here in the Northeast. Although listed by Rehder as being hardy in Zone 5, it has not proved vigorous at the Arnold Arboretum. The leaves are broad, almost circular, with 7 to 9 shallow lobes, and the texture of the foliage is perhaps not as good as that of its relatives. Its autumn coloration, in shades of brilliant red, orange and yellow, is spectacular, however, even when grown in the shade of evergreens. The cultivar 'Monroe', the only dissected form yet described, has leaves that are finely cut in a most unusual manner. Its autumn coloration is as good as that of the species.

Siebold Maple (*Acer sieboldianum*) and Purplebloom Maple (*A. pseudosieboldianum*). These species are quite similar except for their flowers. The foliage of both is outstanding throughout the growing season, being a fresh green and of fine texture, although the individual leaves are not as deeply lobed as those of *A. palmatum*. Autumn coloration is bright red and yellow.

Fullmoon Maple (*Acer japonicum*). The leaves of this species are among the largest in the group, and their autumn coloration is about as spectacular as that of any woody plant. Being precariously hardy in Zone 5, the specimens at the Arnold Arboretum are rather poor and small. But they are still magnificent in the fall. The coloration is brilliant red and yellow, without a hint of purple, and the plants appear as if they were on fire at the height of the season. Two outstanding cultivars are:
‘Aconitifolium’ — leaves large, so deeply cut as to appear almost compound; autumn coloration as good as the species.

‘Aureum’ — leaves of medium size, yellowish during the summer.

Japanese Maple (*Acer palmatum*). This native of Japan is certainly one of the finest of all small trees, with its spreading habit, somewhat “layered” branches, and elegantly formed, deeply lobed, almost star-like leaves. Many cultivars have been selected for their outstanding foliage; all of them are beautiful. The few described below are grouped according to the character of their leaves. It should be noted that all of them develop their best form, and best colors, when grown in full sun.

*A. palmatum* var. *heptalobum*. Since this type occurs commonly in the wild it has been designated a botanical variety as opposed to a cultivar. The plants in general have leaves that are larger than normal, usually 7-lobed and with fine teeth. Many plants of this type develop a bright red autumn coloration, and the cultivar ‘Osakazuki’ is outstanding for its intense crimson display.

‘Atropurpureum’ group — leaves more or less of normal shape, but red during the summer.

‘Bloodgood’ — leaves perhaps the deepest red of any of the forms, and holding the color well throughout the summer; autumn foliage bright red.

‘Burgundy Lace’ — leaves deeply lobed, holding their deep red color well during the summer.

‘Oshio-beni’ — leaves more orange-red, the color lasting well.

‘Sherwood Flame’ — similar to ‘Burgundy Lace’, but holding its color better.

‘Dissectum’ group — leaves deeply divided, the 7 to 11 lobes deeply cut and separate almost to the base of the leaf; color green or red; form of the plant generally low and weeping.

‘Everred’ — one of the best red-leaved forms.

‘Filigree’ — leaves green with tiny flecks of white or cream.

‘Garnet’ — leaves a transparent garnet-red throughout the summer; a vigorous grower with bright red autumn coloration.

‘Viridis’ — leaves green, turning to gold in the fall; habit gracefully drooping; twigs green.

‘Waterfall’ — one of the most graceful of the green-leaved types; leaves divided into long segments.

‘Linearilobum’ group — leaves deeply lobed; lobes straplike and not cut; color red or green.
‘Atrolineare’ — leaves blood red.
‘Linearilobum’ — leaves green.
‘Red Pygmy’ — a round-headed shrub with red leaves.

**Variegated group** — leaves with regular or irregular white, yellowish or pinkish markings.
‘Butterfly’ — leaves tiny and blue-green with cream or pink margin.
‘Roseo-marginatum’ — leaves dark green with a pinkish margin and with irregular white streaks.
‘Sagara-nishiki’ — leaves dark green with scattered golden spots.
‘Tsumagaki’ — leaves green with purple tips and borders during spring and early summer.
Other Maples of interest for their foliage:

Amur Maple (*Acer ginnala*). This is one of the hardiest of all the species, and it is also tolerant of poor, dry soils. It is recommended for its brilliant red, scarlet or orange autumn coloration particularly in the Plains States where such a display is especially desirable.

Box Elder (*Acer negundo*). Although this is a rather weedy, weak-stemmed tree, it is almost as hardy as the preceding species, and it is recommended only for cold, dry areas. The autumn coloration of the species is a good yellow, and the following cultivars have colored leaves during the growing season.

- 'Aureum' — leaves golden-yellow, the color persisting through much of the summer.
- 'Variegatum' — leaflets and fruits with an irregular white border, in many becoming almost totally colorless.

Mountain Maple (*Acer spicatum*). Again a very hardy species, the autumn foliage turns shades of red and orange. Although the color is not as good as in *A. ginnala*, this tree has somewhat more character.

Painted Maple (*Acer mono*). A relative of the Norway Maple, this medium size tree is outstanding for its low, rounded crown. The foliage is fine-textured, the individual leaves being bright green, small and more or less star-shaped.

Striped Maple (*Acer pensylvanicum*). An elegant small tree with large 3-lobed leaves, this species is hardy in Zone 3. The foliage is attractive during the summer and turns bright yellow in the fall. Its Asiatic relatives (mentioned elsewhere) are equally desirable.

BARK AND TWIGS

Maples are variable in the texture and color of their bark. In most species it is quite thin, making the plants vulnerable to mechanical injury and therefore adding to their limitations as street trees. But on the other hand, the bark of many species is unusually decorative, adding greatly to the ornamental value of the plants, particularly during the winter. Following is an enumeration of the species with the most handsome or distinctive bark; most of them are illustrated on pages 157 and 159. The descriptions, except where noted, pertain to the mature trunks and larger branches.

*The foliage and flowers of Acer pensylvanicum, our native Striped Maple.*
*Photo: P. Bruns.*
Paperbark Maple (*Acer griseum*). This is perhaps the most celebrated species as far as decorative bark is concerned. The bark has a waxy sheen, and on old trunks is smooth and mottled in shades of rich red-brown; that on less mature growth peels off in thin papery strips. The pattern and texture are exceptionally attractive, and they make this species one of the most desirable of all deciduous trees for winter interest.

Three-flower Maple (*Acer triflorum*). The bark of this species is a blend of cream, buff, and pearly gray-brown, with a waxy sheen, and splits into thin, irregularly shaped vertical plates. Although very different in appearance from that of its close relative, *A. griseum*, the bark of the Three-flower Maple is almost equally decorative.

Trident Maple (*Acer buergerianum*). The bark on mature trunks is basically buff with pale gray-brown patches and from a distance resembles that of the preceding species. The flakes or plates are thicker, however, more irregular in shape, and not oriented vertically.

Snake-bark Maples (*Acer pensylvanicum, A. davidii, A. tegmentosum, A. rufinerve, A. grosseri*). The bark is much the same in all of the species, being smooth and tight and basically dark olive-green, with vertical stripes of bright green and white, particularly on the branches. The common names "Snake-bark" or "Striped" Maples are derived from this bark pattern. The best species in the group are *A. davidii* and *A. grosseri*, both of which are precariously hardy in Zone 5; in these, the stripes are most pronounced. A cultivar, 'Erythrocladum', of our native *A. pensylvanicum* is also outstanding in that the twigs turn bright red after the leaves have fallen.

Japanese-type Maples (*Acer palmatum and A. pseudosieboldianum*). The bark on the trunks and the main branches is similar to that of the Snake-bark Maples, except that the basic color is medium gray and the stripes are dark gray. The twigs of the above species and several of their cultivars are decoratively colored. Those of *A. pseudosieboldianum* are an unusual gray-lavender, while many green-leaved *A. palmatum* have bright green twigs. A selection, 'Aoyagi', of the latter species is particularly outstanding in this respect, while another, 'Sango-Kaku' ('Senkaki'), the Coral-bark Maple, has bright red twigs in the winter.

Red Maple (*Acer rubrum*). The bark on the branches and the upper part of the main trunk is smooth and silvery gray. That on the older parts of the trunk becomes dark with thick plates, presenting an interesting contrast.

*The bark of Maple species. Upper left, Three-flower Maple; upper right, Trident Maple; lower left, Paperbark Maple; lower right, Red Maple.*

*Photos: R. Weaver.*
Sycamore Maple (*Acer pseudoplatanus*). The bark somewhat resembles that of a Sycamore, hence the common name. It is darker in color, however, and basically in shades of gray rather than brown. The exfoliating plates also are thicker, tighter, and smaller.

**Norway Maple (*Acer platanoides*).** The bark of this species is about the thickest of any hardy Maple. It is dark gray-brown with a conspicuous network of tight, crisscross ridges.

**Devil Maple (*Acer diabolicum*).** "Elephantine" would be the best adjective to describe the bark of this tree. It is dark gray with a "pebbled" texture, resembling the skin of pachyderms.

**FLOWERS AND FRUITS**

Most everyone is familiar with the fruits of maples. They are certainly the most distinctive feature of the genus. Although their shapes vary considerably, the fruits (technically termed samaras) are always borne in pairs, the members tightly fused together, each with a broad, elongate wing and a single seed. They drop from the tree in pairs, and as they fall they spin like the blades of a helicopter, often landing a considerable distance from the parent plant. While the large and abundant fruits of species such as the Norway Maple are often considered a nuisance, those of other species are brightly colored and add to the decorative value of the trees.

Few people would think of growing Maples for their flowers. However, while none could actually be called showy, the flowers of most species are distinctly charming, and those of a number of species are, at least in my opinion, quite beautiful. Individually they are small, seldom exceeding ½ inch in diameter, and they are borne in rounded or elongate clusters which may be erect or drooping. The flowers are generally unisexual, with "males" and "females" present in the same cluster in many species, or on separate trees in others. The petals are red, whitish, or greenish, or occasionally absent; in many species they persist in good condition while the fruits are maturing.

The flowers are most conspicuous when they appear before the leaves, a normal occurrence in several common native and introduced Maples. The most attractive species, however, are those in which the flowers appear with the expanding foliage. Viewed with or against the foliage, the dark flowers of some produce a lovely contrast, while the greenish ones of others complement its already elegant texture. The best species for flowers and/or fruits are described below.

*The bark of Maple species. Upper left, Norway Maple; upper right, Sycamore Maple; lower left, Striped Maple (*Acer tegmentosum*); lower right, Devil Maple. Photos: R. Weaver.*
Silver Maple (Acer saccharinum). This species is included because it is one of the first plants to bloom in the spring. The flowers, which are borne in dense, tight clusters, and the expanding bud scales cast a reddish haze upon the trees in late February or early March — a time when any flower is a treasure.

Red Maple (Acer rubrum). Appearing later than those of the preceding species but still before the leaves are evident, the bright red flowers of the Red Maple contrast beautifully with its silvery gray branches. The young fruits are about the same color as the flowers, and due to their size are more conspicuous.

Sugar Maple (Acer saccharum). The delicate, yellowish, somewhat bell-shaped flowers gracefully drooping on long, slender stalks are almost superfluous on what is already one of the most elegant of large trees.

Norway Maple (Acer platanoides). The soft yellow-green, delicately fragrant flowers that cover this species just as the leaves are expanding help greatly to soften the curse of the monster that bears them, at least for a week or two. Individually quite large, and borne in clusters as much as 4 inches broad, the flowers make this species about the showiest Maple in bloom. Their contrast against the red leaves of such cultivars as 'Schwedleri' and 'Crimson King' is particularly striking. This species bears fruit prolifically, and the large samaras are a bit messy when they fall. The equally prolific seedlings that inevitably follow are a further annoyance.

Japanese-type Maples (Acer circinatum, A. japonicum, A. palmatum, A. pseudosieboldianum). The flowers are quite similar in all of these species, with conspicuous dark red to purple sepals and/or petals. They are borne in drooping or pendent, loosely globose clusters, each of these containing both "males" and "females." The combination of the dark flowers and the fresh green, beautifully shaped leaves is truly exquisite, although this quality admittedly cannot be realized when the plants are viewed from a distance. In my opinion, the Vine Maple (Acer circinatum) is the most beautiful of the species in bloom, although the flowers of A. japonicum are by far the largest. In the red-leaved forms of A. palmatum, the leaves and the flowers are about the same color, and the latter therefore are not so effectively displayed. However, the fruits of these forms have reddish wings and provide a pleasing contrast with the darker foliage. The fruits of A. circinatum and A. pseudosieboldianum are also red, at least when young.

The flowers and expanding foliage of (above) the Schwedler Maple (Acer platanoides 'Schwedleri') and (below) the Sugar Maple. Photos: R. Weaver, P. Chvany.
Hornbeam Maple (*Acer carpinifolium*) and Snake-bark Maples (*A. capillipes*, *A. davidii*, *A. grosseri*, *A. pensylvanicum*, *A. tegmentosum*). The Hornbeam Maple is quite a different species from the Snake-bark types, but its aspect in bloom is similar, and therefore it is included with them here. To me these are among the most beautiful of the Maples, in bloom or otherwise. The pale yellow-green flowers are borne in long, slender drooping or pendent racemes. They are seen to best advantage from beneath, looking up into the canopy of the tree (see page 155). Although the individual flowers are delicately beautiful, the form of the inflorescences is more so, particularly in conjunction with the foliage. The young fruits produce about the same effect as do the flowers and therefore prolong the show. It must be pointed out, however, that these species are basically dioecious (separate “male” and “female” trees) and therefore only the “females” bear fruit.

Amur Maple (*Acer ginnala*), Mountain Maple (*A. spicatum*), Tatarian Maple (*A. tataricum*). Although related to the other two species included here, the Mountain Maple stands out in flower and fruit. The yellow-green flowers are borne in erect racemes as much as 6 inches long. They are followed by red fruits borne in the same manner. Both flowers and fruits are decorative. Like the preceding species, the Amur and Tatarian Maples bloom after the leaves have almost fully expanded. Their white flowers and red fruits are held in shorter clusters, and are conspicuous against the foliage.

**FORM AND SIZE**

The species and cultivars treated here are divided into three groups according to their size and form. Good and bad types are discussed in each group, as are appropriate or inappropriate planting situations. The form of trees is somewhat difficult to describe, except in terms of the ratio between the height and the width of the crown. The table below presents this ratio for representative specimens at the Arnold Arboretum. If the ratio is more than 2, the tree is columnar; if it is less than 1, the tree is more or less spreading. The trees are listed from the highest to the lowest height/width ratio; actual dimensions are given in parentheses.

**Height/Width Ratios of Representative Maples at the Arnold Arboretum**

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Species and Cultivar</th>
<th>Height/Width</th>
<th>Dimensions</th>
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</thead>
<tbody>
<tr>
<td>3.6</td>
<td><em>Acer saccharum</em> 'Temple's Upright'</td>
<td>(54 x 15 feet)</td>
<td></td>
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<tr>
<td>2.5</td>
<td><em>Acer platanoides</em> 'Erectum'</td>
<td>(42 x 17 feet)</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td><em>Acer saccharum</em> 'Newton Sentry'</td>
<td>(60 x 27 feet)</td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td><em>Acer rubrum</em> 'Columnare'</td>
<td>(63 x 30 feet)</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td><em>Acer saccharinum</em></td>
<td>(103 x 88 feet)</td>
<td></td>
</tr>
</tbody>
</table>
The flowers of the Red Maple appear before the leaves have begun to expand. Photo: H. Howard.
The flowers and expanding foliage of “Japanese-type” Maples. Above, Acer pseudosieboldianum; below, A. palmatum ‘Burgundy Lace’.  
Photos: M. Rosenfeld, P. Chvany.
The flowers and foliage of Acer pensylvanicum (above) and A. ginnala (below). Photos: P. Chvany, R. Weaver.
1.3 Acer tegmentosum (44 x 35 feet)
1.2 Acer platanoides 'Schwedleri' (60 x 51 feet)
1.2 Acer triflorum (36 x 60 feet)
0.9 Acer griseum (35 x 39 feet)
0.8 Acer mono (38 x 45 feet)
0.8 Acer tataricum (30 x 39 feet)
0.7 Acer carpinifolium (multiple trunks) (24 x 37 feet)
0.7 Acer palmatum var. heptalobum (28 x 38 feet)
0.7 Acer palmatum 'Sanguineum' (27 x 38 feet)
0.7 Acer pseudosieboldianum (18 x 25 feet)
0.5 Acer capillipes (multiple trunks) (26 x 50 feet)

Large Trees (more than 50 feet tall at maturity):

Norway Maple (*Acer platanoides*). In cultivation in this country, this species seldom grows more than 75 feet tall. The crown is typically even, dense and rounded, nearly as broad as tall. Although it is fast growing and cheap, and it has attractive flowers and good autumn color, the Norway Maple is not as desirable as most of the other species in this section. It tolerates air and salt pollution reasonably well, but its shallow roots cause heaving of sidewalks as the tree matures, therefore limiting its use for street planting. Grass cannot compete with a Norway Maple for water, nor can it survive in the dense shade cast by the tree. Therefore this species is also unsuitable as a lawn tree, unless the branches are periodically thinned.

The following cultivars are distinctive for their rapid growth: 'Emerald Queen', 'Jade Glen', and 'Superform'. 'Cleveland', 'Columnare', and 'Summershade' are more upright in growth than the typical Norway Maples, all developing a regular, broadly oval crown.

Red Maple (*Acer rubrum*). This relatively fast growing native tree develops an open, somewhat irregular crown at maturity. Height and spread seldom exceed 60 feet. The foliage is not dense, and this is an excellent lawn tree, at least in rural or suburban areas where air pollution is not a serious problem. It should be used as a street tree only where salt is not applied during the winter. The cultivars 'Bowhall' and 'Scanlon' are more upright growing and more symmetrical than the species.

Silver Maple (*Acer saccharinum*). Typically a tree with a tall, irregularly spreading crown, this is among the largest of all Maple species. Specimens more than 90 or even 100 feet tall are not unusual. Although it is a graceful and very beautiful tree, the wood is brittle, limiting its usefulness for planting along streets or close to buildings. The roots in addition have a reputation for invading water mains and sewer pipes.
The form of various Maples. Upper left, Acer saccharum 'Temple's Upright'; upper right, A. saccharum 'Newton Sentry'; lower left, A. rubrum 'Columnare'; lower right, typical A. rubrum. Photos: D. Wyman, M. Rosenfeld, H. Howard, H. Howard.
Sugar Maple (*Acer saccharum*). A stately tree with a regular crown typically somewhat taller than broad, this species occasionally reaches a height of 100 feet. It makes a magnificent specimen tree for lawn planting. Although it casts quite a dense shade, grass generally does well beneath it. Sugar Maples cannot tolerate air pollution and they are unsuitable as street trees in areas where salt is applied during the winter.

Sycamore Maple (*Acer pseudoplatanus*). This European plant is similar to the Norway Maple in its mature size and form, but its crown is less dense. It is a stately tree with attractive bark, but its foliage is somewhat coarse. Perhaps this tree’s outstanding attribute is its salt tolerance, thus it is one of the best deciduous trees for seaside planting.

Columnar or Fastigiate Forms:

Several upright growing cultivars have already been mentioned, but these still have a rather broad crown. Those briefly described here are distinctly narrow, with the crown less than half as broad as tall. All of the following are more or less formal in aspect. They grow about as tall as their normal counterparts, but their spread will be less than half; they are also somewhat slower in growth. The number in parentheses following the names of the plants below is the height/spread ratio of the specimens at the Arnold Arboretum.

Norway Maple (*Acer platanoides*).

‘Erectum’ (2.5) — a narrowly upright form of rather graceful aspect; far superior to normal Norway Maples for street planting.

Red Maple (*Acer rubrum*).

‘Columnare’ (2.1) — less formal than many columnar forms because of its somewhat irregular outline; autumn coloration more orange than scarlet.

‘Armstrong’ — slightly narrower and more symmetrical than the preceding.

Sugar Maple (*Acer saccharum*).

‘Newton Sentry’ (2.2) — a beautifully shaped tree with a symmetrical, conical crown; very formal in appearance.

‘Temple’s Upright’ (3.6) — the narrowest of all the Maples discussed here; the branches very stiffly erect, the crown broadest at the top.
Medium Size Trees (30 to 50 feet tall at maturity):

**Painted Maple** (*Acer mono*). An exceptionally attractive plant, with a symmetrical, broad, low, umbrella-shaped crown, this species is unfortunately rare in cultivation. Maximum height is about 40 feet with a spread of slightly more. The texture of the foliage is similar to that of the Japanese Maples, but more dense. Casting a moderate shade, this is a fine specimen lawn tree.

**Paperbark Maple** (*Acer griseum*) and related species (*A. mandshuricum*, *A. nikoense*, and *A. triflorum*). All of these have unique ornamental features which were mentioned earlier, but they are similar
in size and form and therefore are treated together. They are cer-
tainly among the most desirable of all medium size trees for speci-
men planting. The crown is open, somewhat irregularly rounded
or broad oval, and many specimens branch a few feet from the
ground. Maximum height and spread is approximately 40 feet.

Snake-bark Maples (Acer capillipes, A. davidii, A. grosseri, A. pen-
sylvanicum, A. ruﬁnerve, A. tegmentosum). These again are fine
lawn trees where a specimen of intermediate size is desirable. All
are occasionally multi-trunked trees, and then they are spreading
and umbrella-shaped. More typically, perhaps, they grow with a
single trunk, and then the crown is irregularly rounded or oval.
Maximum height and spread is generally 30 to 40 feet (but see
A. capillipes in table above.)

Small Trees (12 to 25 feet tall at maturity):

Amur Maple (Acer ginnala) and Tatarian Maple (A. tataricum).
Both of these occasionally grow larger than 25 feet tall. Young
specimens are bushy in habit, but as they mature they assume a
broad moundlike or umbrella-shaped crown, with several trunks.
They can be grown with a single trunk, however, and then might
be useful for street planting when small trees are desirable. Suckers,
however, would have to be kept under control. Both of these species are quite hardy and tolerant of dry soils and would be good screen plants for colder areas.

**Hornbeam Maple (Acer carpinifolium).** Normally a spreading tree with several small trunks, this tree is very rare in cultivation. Its form and its unusual (for a Maple) foliage are most graceful, but autumn coloration is poor. It would be a fine tree for a patio where an informal effect is desirable.

**Japanese-type Maples (Acer circinatum, A. japonicum, A. palmatum, A. pseudosieboldianum, and A. sieboldianum).** These are certainly among the most elegant of small trees, and their landscaping uses are infinite. Most develop their best form in full sun, however, and they do not grow well in dry soil. The first two species listed above are not vigorous in Zone 5 and at least A. japonicum is often shrubby in this climate. The dissected forms of A. palmatum are also shrublike, the weeping branches forming a red or green mound at maturity. The remaining forms of A. palmatum, and typical A. pseudosieboldianum and A. sieboldianum form gracefully spreading small trees, with multiple trunks or with a single trunk branched close to the ground. The habit of all three is similar, except that the crowns of the last two are typically more open with the branches in more horizontal planes.

**HARDINESS**

All of the Maples mentioned in this article are hardy in at least Zone 5, although Acer davidii, A. grosseri, and A. japonicum are not vigorous there. A number of species are perfectly hardy further north. The hardiest species, and their hardiness zone according to Rehder are listed below.

**Zone 2**
- Acer ginnala (Amur Maple)
- Acer negundo (Box Elder)
- Acer spicatum (Mountain Maple)

**Zone 3**
- Acer pensylvanicum (Striped Maple)
- Acer platanoides (Norway Maple)
- Acer rubrum (Red Maple)
- Acer saccharinum (Silver Maple)
- Acer saccharum (Sugar Maple)

**Zone 4**
- Acer campestre (Hedge Maple)
- Acer mandshuricum (Manchurian Maple)
- Acer tataricum (Tatarian Maple)
- Acer tegmentosum (Manchurian Striped Maple)

*The low, weeping growth typical of the ‘Dissectum’ types of Acer palmatum.*

*Photo: D. Wyman.*
The habit of some small to medium-sized Maples. Above, Acer pseudosieboldianum; below, A. palmatum 'Sanguineum' in front of A. mono. 
Photos: R. Weaver.
NURSERY SOURCES

Following is a list of the Maple species and cultivars discussed in this article which are in the American nursery trade, together with the nurseries which have listed them in recent years. Addresses of the nurseries are at the end; those nurseries printed in capital letters are exclusively wholesale. The Maples with no sources given are generally available at any large nursery.

* A. buergerianum — Gossler, Greer, HOLLANDIA, Mellinger's, MONROVIA, SCANLON, Silver Falls, VIEWCREST.
* A. capillipes — Greer, GULFSTREAM.
* A. circinatum — COLE, Eddie, Fiore, Greer, Light's, MALMO, Robin, Rosedale, Silver Falls, Siskiyou, TEUFEL, Wild Garden.
  'Monroe' — Greer.
* A. davidii — GREENBRIER, Greer, Gossler, HOLLANDIA, MELLINGER'S.
* A. ginnala — too many sources to list.
* A. griseum — too many sources to list.
* A. grosseri ( hersii ) — Eddie, Greer, Gossler, HOLLANDIA.
  'Aconitifolium' — Brimfield, Greer, Raraflora, TEUFEL.
  'Aureum' — Brimfield, Greer, Palette, Raraflora, Spingarn, VERMEULEN.
  'Aoyagi' — Greer.
  'Atrolineare' — Greer.
  'Atropurpureum' — too many sources to list.
  'Bloodgood' — BOYD, GREENBRIER, Greer, HESS, HILL'S, LAKE COUNTY, MONROVIA.
  'Burgundy Lace' — COTTAGE, Greer, HESS, MONROVIA, Park, Raraflora, TEUFEL.
  'Burgundy Lace' — Greer.
  'Dissectum' — too many sources to list.
  'Everred' — Brimfield, Greer, TEUFEL.
  'Filigree' — Greer.
  'Garnet' — Greer.
  var. heptalobum — Greer.
  'Linearilobum' — Greer.
  'Oshio-beni' — Comerford's, Greer, HESS, Jackson & Perkins, MONROVIA, Park, Raraflora, TEUFEL, VERMEULEN, Weston.
  'Red Pygmy' — Greer.
  'Roseo-marginatum' — Greer, HESS.
  'Sangara-nishiki' — Greer.
  'Sango-kaku' ('Senkaki', 'Corallinum') — Brimfield, Comerford's, Greer, HESS, HOLLANDIA, TEUFEL, Tingle.
  'Sherwood Flame' — Greer.
  'Tsumagaki' — Greer.
  'Viridis' — Brimfield, Greer, HESS, Jackson & Perkins, TEUFEL.
  'Waterfall' — Brimfield, Greer.
* A. pensylvanicum — Brimfield, Dutch Mountain, Gardens of the Blue Ridge, Greer, Sinclair.
A. platanoides and cultivars — too many sources to list, the following nurseries offer a large selection of cultivars: COLE, Fiore, LAKE COUNTY, Lafayette, PRINCETON, SCANLON, Sheridan, TEUFEL.


A. rubrum — too many sources to list.
- 'Armstrong' — BOYD, COLE, COTTAGE, Lafayette, LAKE COUNTY, Light's, Sheridan, TEUFEL.
- 'Autumn Flame' — Atlantic, BOBBINK, BULK'S, COLE, Lafayette, Weston.
- 'Bowhall' — COLE, Lafayette, LAKE COUNTY, TEUFEL.
- 'Columnare’ — COLE, Dauber's, Fiore, Lafayette, PRINCETON, Sheridan, TEUFEL.
- 'October Glory' — too many sources to list.
- 'Red Sunset' — COLE, COTTAGE, LAKE COUNTY, TEUFEL, Weston.
- 'Schlesingeri' — HESS, HILL’S, Lafayette, TEUFEL, Weston.

A. rufinerve — Greer, Gossler, HOLLANDIA, MONROVIA, Tingle.

A. saccharinum — too many sources to list.
- 'Laciniatum' ('Wieri') — Fiore, Hinsdale, Robin, Sheridan, TEUFEL.

A. saccharum — too many sources to list.
- 'Green Mountain' — Bachman’s, COLE, Corliss Bros., Lafayette, LAKE COUNTY, Light's, MILLCREEK, PRINCETON, SHENANDOA.
- 'Newton Sentry’ ('Columnare') — BOYD, Dauber's, Fiore, Lafayette, PRINCETON, SCANLON.
- 'Sweet Shadow' — Weston.
- 'Temple's Upright’ ('Monumentale') — Brimfield, Cole, Dauber's, Fiore, HILL’S, PRINCETON, Raraflora, TEUFEL, Weston.

A. sieboldianum — Greer.


A. tataricum — COLE, COTTAGE, Dauber's, HILL’S, Valley.

A. tegmentosum — Greer, Tingle.

Addresses

Atlantic Tree Service, Inc.
2 Church Street, Tariffville, Connecticut 06081

Bachman’s, Inc.
6010 Lyndale Avenue South, Minneapolis, Minnesota 55423

Bobbink Nurseries, Inc.
P. O. Box 124, Freehold, New Jersey 07728

Boyd Nursery Co., Inc.
P. O. Box 71, McMinnville, Tennessee 37110

Brimfield Gardens Nursery
3109 Main Street, Rocky Hill, Connecticut 06067

Bulk's Nurseries, Inc.
3109 Main Street, Rocky Hill, Connecticut 06067

Bulky Nurseries, Inc.
610 West Montauk Highway, Babylon, L.I., New York 11704

Cole Nursery Co.
R. D. #1, Route 1, Circleville, Ohio 43113

Corliss Bros. Garden Center
Essex Road, Ipswich, Massachusetts 01938

The Cottage Gardens, Inc.
Rt. #3, South Waverly & Bishop Roads, Lansing, Michigan 48910

Dauber's Nurseries
1705 N. George Street, Box 1746, York, Pennsylvania 17405
Dutch Mountain Nursery
   Augusta, Michigan 49012
H. M. Eddie & Sons
   4100 S. W. Marine Drive, Vancouver, British Colombia, Canada
Charles Fiore Nurseries, Inc.
   Prairie View, Illinois 60069
Gardens of the Blue Ridge
   Ashford (McDowell County), North Carolina 28603
Girard Nurseries
   #4 North Ridge East, Geneva, Ohio 44041
Gossler Farms Nursery
   1200 Weaver Road, Springfield, Oregon 97477
Greenbrier Farms, Ltd.
   412 Thrasher Road, Chesapeake, Virginia 23320
Greer Gardens
   1280 Goodpasture Island Road, Eugene, Oregon 97401
Gulfstream Nurseries
   Wachapreague, Virginia 23480
Hess Nurseries
   P. O. Box 326, Route 553, Cedarville, New Jersey 08311
Hill's Nurseries
   Warsaw, Kentucky 41095
Hinsdale Nurseries
   7200 S. Madison Road, Hinsdale, Illinois 61257
Hollandia Gardens
   10125 37th Avenue NE, Seattle, Washington 98125
Jackson & Perkins Co.
   Box 1028, Medford, Oregon 97501
Lafayette Home Nursery
   Box 148, Route 17, LaFayette, Illinois 61449
Lake County Nursery Exchange
   Box 122, Route 84, Perry, Ohio 44081
Light's Landscape Nurserymen
   9153 East D. Avenue, Richland, Michigan 49083
Littlefield-Wyman Nurseries
   227 Centre Avenue, Abington, Massachusetts 02351
Malmo Wholesale Nurseries
   4700 25th Avenue, Seattle, Washington 98901
Mellinger's, Inc.
   2310 W. S. Range Road, North Lima, Ohio 44452
Millcreek Nurseries
   Corner Ketch, Route 3, Newark, Delaware 19711
Monrovia Nursery Co.
   Box Q, 18331 E. Foothill Blvd., Azusa, California 91702
Palette Gardens
   26 W. Zion Hill Road, Quakertown, Pennsylvania 18951
George W. Park Seed Co.
   Greenwood, South Carolina 29646
Princeton Nurseries
   Box 191, Princeton, New Jersey 08540
Raraflora
   Fred W. Bergman, 1195 Stump Road, Feasterville, Pennsylvania 19047
Clyde Robin
   Box 2091, Castro Valley, California 94546
Rosedale Nurseries  
Saw Mill River Parkway, Hawthorne, New York 10532
Edward H. Scanlon & Associates  
7621 Lewis Road, Olmstead Falls, Ohio 44138
Shenandoah Nurseries  
Box 99, 301 Wabash Avenue, Shenandoah, Iowa 51601
Sheridan Nurseries  
100 Sherway Drive, Etobicoke, Ontario, Canada
Silver Falls Nursery & Christmas Tree Farm  
Silver Falls Highway, Star Route, Box 55, Silverton, Oregon 97381
Siskiyou Rare Plant Nursery  
522 Franquette Street, Medford, Oregon 97501
Francis M. Sinclair  
R. F. D. 1, Newmarket Road, Exeter, New Hampshire 03833
Joel W. Spingarn  
1535 Forest Avenue, Baldwin, New York 11510
Alfred Teufel Nursery  
12345 N.W. Barnes Road, Portland, Oregon 97229
Tingle Nursery Company  
Pittsville, Maryland 21850
Valley Nursery  
Box 845, 2801 N. Montana, Helena, Montana 59601
John Vermeulen & Son, Inc.  
Box 267, Woodfern Road, Neshanic Station, New Jersey 08853
Viewcrest Nurseries  
9617 N. E. Burton Road, Vancouver, Washington 98662
Weston Nurseries  
Hopkinton, Massachusetts 01748
The Wild Garden  
George Schenk, 8243 N.E. 119th, Kirkland, Washington 98033