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Woody Plants for Minnesota

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FOR BEAUTY AND SHELTER

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Woody Plants for Minnesota

C. Gustav Hard and Marvin E. Smith¹

Deciduous trees and shrubs form the backbone of any landscape or shelterbelt planting. The trees serve many purposes: they frame the house, provide shade for the family, provide shelter for livestock, and form a background for the house and yard. In windbreaks and shelterbelts they furnish year-round protection to fields and farmstead.

The shrubs are used in the foundation planting to blend the house with landscape; in shrub borders for screening, beauty, and a background for flowers; and in shelterbelts to give ground-line density and control drifting snow. Shrubs are also used in hedges which line the drive or separate landscape areas.

To select and use these materials intelligently, we must know something about them. We must know their hardiness, color and time of bloom, foliage and twig texture, color of summer and fall leaves, color and season of fruits, winter stem color, site preference, and mature size. Only when we know these things about a shrub or tree can we select and use it intelligently.

Ordering and Caring for Nursery Stock

Nursery stock should be ordered early to be certain of a good selection. Order from a reputable nursery, preferably within the state and as near to home as possible. Such nurserymen are interested in your problems and are more likely to have varieties adapted to your locality.

When the nursery stock arrives, open the bundle and examine the roots carefully. If they are at all dry, stand them in water for several hours before planting them. Plant as soon as possible.

If for some reason you cannot plant them immediately, heel-in the stock in a shaded, moist site. The north side of a building or a grove is a good place. Dig a trench with one side vertical and the other sloping, and then lay out the plants on the slope face with the roots toward the vertical side. Throw soil over the roots and tramp this soil down to eliminate air pockets. The plants can be protected until weather and soil conditions are right for planting. See figure 1 (heeling-in).



Fig. 1. "Heeling-in" trees.

¹ Extension horticulturist and extension forester, respectively. Credit is given to Leon C. Snyder, Albert Johnson, Robert A. Phillips, and Henry Hansen for assistance on recommendations and nomenclature of the plant materials.

Spacing

The spacing of trees and shrubs is very important. In shelterbelts and field windbreaks the distance between rows should be 3-4 feet greater than the width of the cultivating equipment. However, an evergreen row and an adjacent row of broadleaf trees should be separated by at least 16 feet. Within rows, trees should be spaced 6 to 8 feet apart and shrubs 4 feet apart.

Trees in the yard should be spaced so that each will have enough room to develop without crowding. You can judge the spacing by measuring the branch spread of several mature trees in your neighborhood. Most large trees will have a branch spread of 50 or more feet.

Trees used for framing the house should be at least 25 to 30 feet from the front corners of the house at about a 45-degree angle. Place shade trees where shade is most needed and background trees near the back of the yard.

Shrubs used in the foundation and border plantings should have plenty of room to develop, too. Large shrubs, such as honeysuckle, lilac, and mockorange, need at least 5 to 7 feet of space. Medium shrubs like cotoneaster and rugosa rose need 3 to 5 feet, while small shrubs like Froebel spirea and alpine currant need 2 to 3 feet.

Where low shrubs are used in front of taller types, it is especially important to allow room for development of both. Otherwise you will find the smaller shrubs will be struggling for their existence under the shade of taller shrubs. Be sure also to leave ample room—about 2½ to 3 feet—so that the shrubs have ample room to grow in all directions. Remember, these shrubs are often quite small when planted in the landscape design, so consideration must be given to their mature size.

Planting

The secret of successful planting is to have the soil properly prepared. For shelterbelts and field windbreaks this means plowing and summer following the previous season if there is a sod cover or where there are silt and clay soils. For foundation and border plantings this means spading and working the soil thoroughly over the entire area where the shrubs are to be planted. This should be done the previous fall, although where water is readily available it can be done just before planting. If there is a thick sod over the area to be planted, scalp the sod off before working the soil.

Dormant trees and shrubs may be planted during the spring season until about June 1. Certain "balled and burlapped" and container-grown stock can be planted throughout the growing season. Fall planting can be done with dormant trees and shrubs.

Dig each hole large enough to accommodate the root system of the shrub. Long, straggly roots should be cut back rather than doubled up to fit into the hole. Set the shrub so that it will be an inch or so deeper than it was in the nursery, then put in good soil around the roots and pack it down. Leave a depression at the top and add enough water to soak the soil thoroughly around the roots. This helps to settle the soil and eliminate air pockets. After the water has soaked in, level the soil around the shrubs. If you reach sub-soil when digging the hole, put this sub-soil in a separate pile and use it only on top or replace it with top-soil.

Pruning should be a thinning-out process which leaves a natural crown on the newly planted tree. When branches are headed back, cut to a side branch or bud. Make all cuts clean with a sharp knife or pruning shears, and leave no stubs sticking out from the trunk or main branches.

Broad-leaved trees and shrubs used in protection plantings need not be any larger than 1- or 2-year-old seedlings and may be planted with a mechanical tree planter or the aid of a two-bottom plow. If you use the plow, straighten the trees and firm the soil around the roots. For further information on planting the shelterbelt see Extension Bulletin 196, "*Planting the Farmstead Shelterbelt.*"

Culture

It is important that you take good care of all new plantings. Keep the soil cultivated to control weeds and help conserve moisture. Water the plants during dry periods, especially the first year after planting. For further information on points of culture such as pruning and fertilizing see Extension Bulletin 196, "*Planting the Farmstead Shelterbelt,*" and 283, "*Landscaping the Home.*"

Selecting Varieties

The varieties of trees and shrubs that you select should be made as a result of a careful study of them and your personal preferences. It is suggested that you consult your local nurseryman about the materials he has available. Attend garden tours where you will see many trees and shrubs growing under home conditions. If possible, visit the Minnesota Landscape Arboretum (located near Excelsior, Minnesota) to see plant materials for landscape and shelterbelt purposes.

Trees and shrubs must be selected carefully to fit the location where they

will be used. Trees used for framing should be long-lived and their size and form should fit the house and grounds. An example is the American elm. It is an excellent tree for framing a large house on a large lot, but a smaller tree might be more suitable for framing a one-story home.

A shade tree should give a reasonable amount of shade but the leaves must not be so dense that the grass cannot grow beneath the tree. Consider also the seasonal appearance of the tree—its flowers, colorful fruits, and autumn color.

In selecting shrubs for the foundation planting, hardiness, size, texture, and form are the most important considerations. Usually fine-textured, compact shrubs are the best. Foliage color, flowering and fruit habits, and fall and winter color should also be considered. Shrubs to be used in a border are selected on much the same basis except that coarser types of shrubs can be used.

In making your selections do not sell your space too cheaply. Select shrubs that combine as many desirable features as possible—taking care to pick those that add interest in all seasons. A lilac or a mockorange has beautiful bloom but has little interest during the balance of the year. On the other hand winged euonymus lacks conspicuous flowers, but has fine-textured foliage which can be enjoyed throughout the summer.

In the shelterbelt, hardiness, density of foliage, mature height, shade, tolerance, and rate of growth are primary considerations. The ability to grow and thrive with a minimum of care is important.

Plant List

To assist with the selection of the right trees, shrubs, and vines for your planting, the following list of material has been prepared. The map on the next page

shows the hardiness zones accepted by the Minnesota Horticulture Society for both fruit and woody plants. New varieties or plants on which sufficient infor-

mation is lacking are suggested for trial only. Plants listed as semihardy are those that kill back but start from the base and will bloom on new wood.

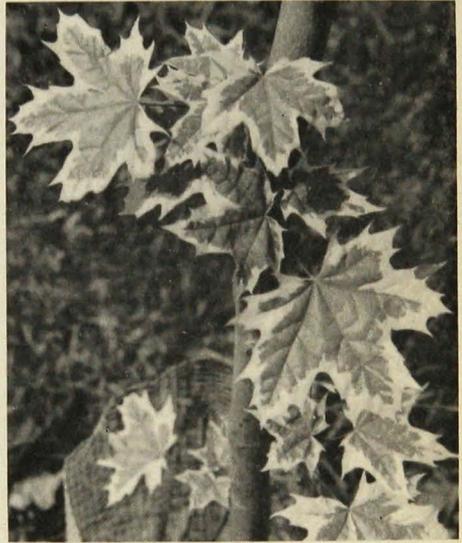
The normal height of the plant under cultivation is given at the beginning of each description. Plants are listed alphabetically according to scientific name and the common name is listed next.

Deciduous Trees

Acer negundo (Boxelder)—50 feet, large, spreading tree with compound leaves. Native over most of the state and widely planted. Valuable in the shelter-belt and field windbreak plantings in western Minnesota. Not recommended for lawn or boulevard plantings because of its irregular form and its brittle branches which often break down in ice storms. Boxelder bugs harbored by this species are also annoying. Hardy in all zones.

Acer platanoides (Norway Maple)—50 feet, large, spreading, dense. Leaves large, dark green, producing very dense shade. It is difficult to grow a good lawn under these trees because of their dense shade and shallow rooting habits. Planted in parks and along boulevards. Hardy in zones 1 and 2; trial in zone 3.

Acer platanoides 'variegatum' (Variegated Norway Maple and its varieties)—Similar to Norway maple except that the



Variegated Norway Maple

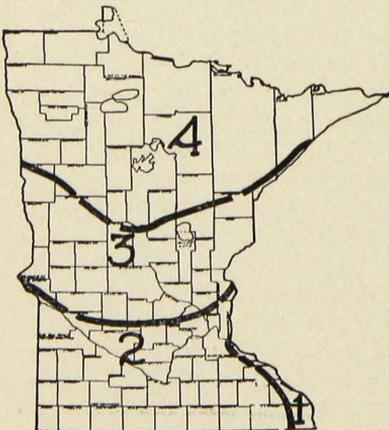
leaves have white borders. Hardiness same as for Norway maple.

Acer platanoides schwedleri (Schwedler Maple)—Similar to Norway maple except that the leaves are bright red when young and turn dark green after a few weeks. Hardiness is the same as for Norway maple.

Acer platanoides 'Crimson King' (Crimson King Maple)—A form of Schwedler maple that was selected in Europe for its brilliant crimson leaves that keep their color all summer. This species and its variety is subject to sunscald and must be protected to prevent injury. Hardiness—trial in zones 1 and 2.

Acer rubrum (Red Maple)—50 feet, narrow upright tree, native in eastern half of Minnesota. It is very attractive in early

Plant Zones



spring with its red flowers that come before the leaves, and later its red fruit. In fall the leaves take on a brilliant scarlet or yellow color. This beautiful native tree should be used more than it is. Suitable for lawn or boulevard tree. Not recommended for dry, alkaline conditions. Hardy in all zones.

Acer saccharinum (Silver Maple)—75 feet, large, fast-growing tree. Native along streams and rivers throughout Minnesota. Leaves are silvery green and turn yellow in fall. Planted widely for shade and shelter. In shelterbelts it gives early results because of its rapid growth. Not recommended for small yards or sites near buildings because it is too large and its brittle wood breaks easily. Hardy in all zones.

Acer saccharinum 'Laciniatum' (Weirs Cutleaf Maple)—This is a weeping form of silver maple with finely lobed leaves. Planted as an ornamental tree. Hardy in zones 1 and 2 and trial in zones 3 and 4.

Acer saccharum (Sugar Maple)—60 feet. Large, round-top tree. Native in rich woods throughout the state. One of the most handsome maples, with bright green leaves that turn yellow or orange and scarlet in the fall. Widely planted for ornamental and boulevard plantings. Grows best in moist, rich soil. Shade tolerant; subject to sunscald when young. Hardy in all zones.

Aesculus glabra (Ohio Buckeye)—30 feet. Small, round-top tree. Flowers yellowish-white, forming distinct clusters when they appear in early June. Fruits large, nutlike, prickly at first, becoming smooth as they reach maturity. Seeds large, shiny brown. Leaves bright green, turning yellow in fall. Very hardy tree, comparatively free of insects and diseases. Useful where small tree is needed for the lawn. Difficult to transplant except when very small. Hardy in zones 1, 2, and 3; trial in zone 4.

Aesculus hippocastanum (Horse Chestnut)—30 feet. Not as hardy as the Ohio buckeye with which it is often confused. Flowers large, white tinged with red; form large, showy clusters in early June. Hardy in zone 1; trial in zone 2.

Ash—See *Fraxinus*

Basswood—See *Tilia*

Betula papyrifera (Paper Birch)—40 feet. Native to many different sites throughout the state. Bark white. Planted in lawn in natural clumps of three or more. Transplant paper birch to a soil similar to its native habitat. Hardy in all zones.

Betula nigra (River Birch)—40 feet. Bark reddish brown to pinkish cinnamon color. Leaves are dark green on top and whitish on the lower side. A graceful tree with rounded top. Prefers a moist, sandy soil. Hardy in zones 1 and 2, trial in zone 3.

Betula pendula (European Birch)—30 feet. The bark is white. Has drooping branches. Use as a specimen. Tree should be planted on moist site. Hardy in all zones.

Betula pendula 'gracilis' (Cutleaf European Birch)—30 feet. Leaves deeply lobed on drooping branches. Bark white. Frequently planted for lawn specimens or for framing a small home. Avoid planting in dry, exposed sites. Tree is subject to attack of bronze birch borer. Hardy in all zones.

Betula populifolia (Gray Birch)—Small tree to 30 feet with usually ascending branches. Bark chalky or ashy white. A small, graceful tree. Suited for dry, poor sites as well as boggy soil. Hardy in all zones.

Birdcherry—See *Prunus*

Black Locust—See *Robinia*

Boxelder—See *Acer*

Buckeye—See *Aesculus*

Butternut—See *Juglans*

Catalpa speciosa (Northern Catalpa)—40 feet. Flowers large and showy in June,

but rather messy when they drop from the tree. Fruiting pods long and narrow, hanging to the trees all winter. Avoid planting in dry or exposed sites. Hardy in zones 1 and 2; trial in zone 3.

***Celtis occidentalis* (Common Hackberry)**—50 feet. An upright tree with oval shape. Bark much roughened by prominent, short, corky ridges. Drought resistant and long-lived. Widely planted in shelterbelts and street and lawn plantings. Subject to witches broom—a twiggy growth along some of the main branches—and insect galls on the leaves. Hardy in all zones.

***Cercis canadensis* (Eastern Redbud)**—15 feet. Small, round-topped tree. Leaves large and heart-shaped, turning yellow in the fall. Flowers rosy-pink, pealike, coming before the leaves. Some very fine specimens are growing in southern Minnesota. Success with this tree will probably depend on breeding hardy strains. Suitable for a small lawn tree or as a background tree in the shrub border. Trial in zones 1 and 2.

Chokecherry—See *Prunus*

Coffeetree—See *Gymnocladus*

Cottonwood—See *Populus*

Crabapple—See *Malus*

***Crataegus* spp. (Native Hawthorn)**—20



Eastern Redbud



'Toba' Hawthorn

feet. Hawthorns are large shrubs or small trees characterized by prominent thorns and small, applelike fruits. Flowers showy, ranging in color from white to pink and appearing in late May or early June. Several native species in Minnesota are difficult to distinguish. These small trees, some with horizontally spreading branches, are useful in the landscape. Also useful in wildlife plantings for food and shelter. Hardy in all zones.

Toba Hawthorn is a new hybrid with fully double flowers which are white and turn pink as they age. Trial in all zones.

***Elaeagnus angustifolia* (Russian Olive)**—30 feet. Large shrubs or small trees. Leaves silvery green. Flowers small, yellow, very fragrant in mid-June. Very hardy, drought resistant, and alkali tolerant. The black bark characteristic is useful in winter scenes for landscape plantings. Planted as a snow catch and an outside shrub row in shelterbelts. Good contrast shrub for shrub border. Hardy in all zones.

Elm—See *Ulmus*

***Fraxinus pennsylvanica subintegerrima* (Green Ash)**—50 feet. Narrow, upright

tree. Drought resistant and alkali tolerant. One of the better trees for shelterbelt and field windbreak plantings. Also useful for street and lawn plantings in the drier sections of the state. 'Summit' is a selected variety. Hardy in all zones.

Fraxinus mandshurica (Manchurian Ash)—A large tree with good form. Leaves a dull, dark green above and a softer green below. Use similar to that of Green Ash. Trial in all zones.

Ginkgo biloba (Ginkgo or Maidenhair Tree)—30 feet. Usually narrow and upright, sometimes spreading. Leaves fan-shaped, two-lobed, resembling the leaves of the Maidenhair fern. Fruits plumlike and ill-smelling. Since the sexes are separate, it is advisable to plant the male trees only. Hardy in zones 1 and 2.

Gleditsia triacanthos (Common Honeylocust)—50 feet. Open, spreading tree with brown-colored bark and large, simple or branched thorns. Leaves once or twice compound with small leaflets; turning yellow in the fall. Flowers greenish-white and in clusters, coming in early June. Pods large, flattened, sometimes twisted. Native in southeastern Minnesota. A good lawn tree, although selected thornless varieties are preferred; occasionally planted in shelterbelts. Hardy in zones 1 and 2; trial in zone 3.

Gleditsia triacanthos inermis (Thornless Honeylocust)—Similar to the common type except that it is thornless or nearly so. Preferred for this reason. Selected varieties 'Sunburst', 'Moraine', 'Skyline', 'Imperial'. Hardy in zones 1 and 2; trial in zone 3.

Gymnocladus dioica (Kentucky Coffeetree)—50 feet. Open, spreading tree. Leaves large, twice compound. Pods large and broad. Native in southeastern Minnesota. Occasionally planted in parks in southern Minnesota. Avoid dry or exposed sites. Hardy in zones 1 and 2; trial in zone 3.

Hackberry—See *Celtis*

Hawthorn—See *Crataegus*

Honeylocust—See *Gleditsia*

Horsechestnut—See *Aesculus*

Ironwood—See *Ostrya*

Juglans cinerea (Butternut)—50 feet. Large, spreading tree. Leaves large, compound, soft and hairy beneath. Fruits long and pointed, containing a deeply furrowed edible nut. Native in rich woods and on hillsides from Pine County southward. Do not plant in dry or exposed sites. Hardy in zones 1, 2, and 3.

Juglans nigra (Black Walnut)—50 feet. Large tree with majestic widespreading branches. Leaves compound, dark green. Nuts oval, slightly flattened, dark brown, irregularly grooved, edible. Native in rich woods of southeastern Minnesota. Commonly planted in southern Minnesota in both lawns and shelterbelts. Hardy in zones 1 and 2; trial in zone 3.

Lilac—See *Syringa*

Linden—See *Tilia*

Locust—See *Gleditsia* and *Robinia*

Magnolia acuminata (Cucumbertree Magnolia)—50 feet. Upright, round-topped tree. Flowers large, greenish-yellow, appearing in late May or early June. Fruits in long cones of about 3 inches. Tree is occasionally planted in parks in the Twin Cities. Avoid dry or exposed sites. Trial in zones 1 and 2.

Maidenhair Tree—See *Ginkgo*

Malus baccata (Siberian Crabapple)—25 feet. Small, spreading tree. Flowers white, very showy; appearing with leaves. Fruits very small, stay on tree, and are yellow or red. Planted for an ornamental lawn tree in shelterbelts and sometimes used as an understock for apple trees for northern Minnesota. Hardy in all zones.

Malus baccata columnaris (Columnar Siberian Crabapple)—Very upright form of the Siberian crabapple. Flowering and fruiting the same as the Siberian crabapple. Fruits are persistent. Hardy in all zones.

Malus ioensis (Prairie Crabapple)—25 feet. Small tree with horizontal branches. Flowers pink, coming in late May or early June. Common in thickets along streams in southeastern Minnesota. Very susceptible to cedar-apple rust. Hardy in zones 1 and 2; trial in zone 3.

Malus ioensis 'plena' (Bechtel Crabapple)—20 feet. Double-flowering form of the prairie crabapple. Flowers double, large, pink, appearing in late May. Very showy in full bloom but flowers soon fade and few fruits are produced. Plant as lawn tree or background for border. Hardiness same as for prairie crabapple.

Malus hybrids—Numerous red- or rosy-bloom, flowering crabapple hybrids are grown in Minnesota. One of the oldest and perhaps most widely grown of these is the 'Hopa', originated in South Dakota. Hardy in all zones. 'Red silver' is another South Dakota selection and has a deeper red color than Hopa and has reddish foliage. Hardy in zones 1 and 2; trial in zone 3.

A group of 'Rosy-Bloom' crabapples developed in Canada are now being offered for sale in Minnesota. 'Almey' has larger flowers than any of the older varieties and a deeper red color. Hardy in all zones. 'Strathmore' and 'Sundog' are upright varieties that should prove popular.

Two white-flowered forms, 'Dolgo' from South Dakota and 'Flame' from the University of Minnesota Fruit Breeding Farm are very desirable ornamentals and are hardy in all zones.

'Red Splendor' is a new selection, developed by Melvin Bergeson, Fertile, Minnesota. Has good flowering and fruiting characteristics. Hardy in all zones.

'Radiant', a new introduction by the University of Minnesota, has good form and flowering habits, but is especially showy in fall when the fruit becomes a bright scarlet color. Hardy in all zones.

Malus pumila (Common Apple)—The cultivated apple, though usually not

thought of as an ornamental tree, can be used as a small lawn tree. Consideration should be given to the fruit as well as the use of the tree. Recommended varieties should be considered as to their usefulness in various sections of the state.

Morus alba tatarica (Russian Mulberry)—20 feet. Fruits red, edible, but flavor insipid. Sometimes planted in shelterbelts and for wildlife habitat plantings. Hardy in zones 1 and 2; trial in zone 3.

Mountain Ash—See **Sorbus**

Mulberry—See **Morus**

Oak—See **Quercus**

Ostrya virginiana (Hop Hornbeam, Ironwood)—Native tree, grows to 40 feet. Sturdy, durable tree for the landscape planting and naturalizing. Flowers are showy catkins appearing in May. Hardy in all zones.

Plum—See **Prunus**

Populus alba (White Poplar)—50 feet. Large, spreading tree with suckering habit. Bark grayish-white. Leaves silvery white underneath. Occasionally confused with silver maple. Not recommended for the home lawn because of its root suckering and shallow rootedness. Hardy in all zones.

Populus alba bolleana (Bolleana Poplar)—40 feet. Upright form of white poplar. Bark grayish-white. Leaves silvery white beneath; lobed like a maple leaf. Widely planted where a narrow, upright tree is needed—such as for screens and for backgrounds. Fast growing but inclined to be short-lived except in moist, favorable sites. Hardy in all zones.

Populus deltoides (Cottonwood)—80 feet. Very large, spreading tree. Leaves triangular, glossy green, turning brilliant yellow in fall. Commonly planted in shelterbelt and field windbreaks because of its rapid growth when young. Too large for landscape plantings, except possibly in parks or on very large grounds. To avoid the "cotton" from the female trees, plant only cuttings from male trees.

Hardy in all zones. *Populus* hybrids such as Robusta and Canadian poplars are taking the place of the species in an increasing number of windbreak and shelterbelt plantings. These hybrids are hardy in zones 1, 2, and 3; trial in zone 4.

***Populus nigra italica* (Lombardy Poplar)**—50 feet. A tall, upright, narrow tree. Bark dark colored. Leaves dark, shiny green. Fast-growing but inclined to be short-lived. Subject to occasional winter injury. Widely planted for screens and backgrounds. Hardy in zones 1, 2, and 3; trial in zone 4.

***Prunus americana* (American Plum)**—20 feet. Large shrub or small tree. Branches are more or less thorny. Flowers white, appearing in early May. Fruits edible. Native in thickets throughout the state. Some horticultural varieties are grown for edible fruits. Often planted in shelterbelts for catching snow as well as providing edible fruits. Very good for wildlife plantings. Hardy in all zones.

***Prunus padus commutata* (Harbinger European Birdcherry or Mayday Tree)**—25 feet. Large shrub or small tree. Resembles chokecherry but blooms about 2 weeks earlier, and flower clusters are larger. Since it blooms about May 1, the common name, Mayday tree, has been applied to it in this area. Planted in parks and in shrub borders. Hardy in all zones.

***Prunus armeniaca* X *mandshurica* (Common Apricot)**—Hardy apricot has been produced by crossing the Manchurica with the common apricot. Small tree up to 25 feet. Attractive in bloom and also provides fruit for canning and freezing. Used in the landscape planting as a specimen tree. Trial in all zones.

***Prunus virginiana* (Common Chokecherry)**—20 feet. Large shrub or small tree. Native throughout the state. Fruits edible, making excellent jelly. Occasionally planted in shelterbelts and in background of shrub border. It is known to be a carrier of "X" virus disease of stone fruits.

Schubert Chokecherry is a selection having deep maroon leaves. Its form and habit of growth is considered to be superior. Hardy in all zones.

***Quercus* spp. (Oaks)**—40-60 feet. Several species and varieties of oaks are native in Minnesota but are seldom planted for landscape or windbreak uses. **Northern Red Oak (*Quercus rubra*)** characterized by the sharp pointed lobes and red fall color is native throughout the state. **Northern Pin Oak (*Q. ellipsoidalis*)** is found in many sections of the state on sandy, acid soils; its autumn color is not as brilliant.

The white oak group is characterized by leaves with blunt lobes. The **White Oak (*Q. alba*)** is one of our most valuable oaks. Highly ornamental in fall when the leaves take on a purplish cast. Native as far north as Kanabec County. **Bur Oak (*Q. macrocarpa*)** has acorns enclosed by a prominent burlike cup and leaves that have broader terminal lobes than those of the white oak. Native throughout the state.

Common Pin Oak (*Q. palustris*), although not native to Minnesota, has excellent form as a young tree, and grows quite rapidly. It is often used in some parts of the country as a boulevard tree as well as a specimen tree in the landscape.

Of the oaks, the red and pin types are most easily transplanted. Where white



Black Locust

and bur oaks are native they should be left if they fit into the landscape plan.

Redbud—See *Cercis*

Robinia pseudoacacia (Black Locust)—30 feet. Bark nearly black, rough, and deeply furrowed. Twigs smooth, with spines in pairs at the base of the compound leaves. Flowers white, fragrant, pealike, in clusters, appearing in early June. Sometimes planted as ornamental trees; however, tree tends to sucker badly. Spreads by underground stems, thus forming thickets. Subject to borer attacks and therefore short-lived. Hardy in zones 1, 2, and 3.

Robinia 'Idaho Locust'—Small tree. Similar to Black locust except tree is nearly thornless and flowers are produced in large clusters and are pink. Trial in all zones.

Russian Olive—See *Elaeagnus*

Salix alba (White Willow)—50 feet. Large tree, often planted in shelterbelts. Hardy in all zones. The following two varieties are grown more commonly than the species: **Yellowstem** and **redstem willow**.

Salix alba vitellina (Yellowstem or Golden Willow)—Similar to the white willow but with yellow twigs. Widely used in shelterbelts and windbreaks. Hardy in all zones.

Salix alba chermesina (Redstem Willow)—This willow is similar in form and leaf except that the young branches have a bright red color.

Salix amygdalina (Almond-leaved Willow)—Grows to a height of 30 to 40 feet without a central tree-like stem. Under the name of green willow, it has been used frequently to establish single-row windbreaks on muck soils.

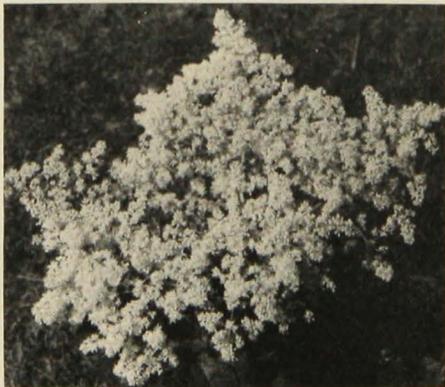
Salix alba 'Niobe' (Niobe Weeping Willow)—Hardest of the weeping willows. Planted as lawn specimen. The drooping branches can be annoying as the tree becomes older. Best used at some distance from the house and outside the

formal landscape area. Should be useful in field windbreaks and as an ornamental shelterbelt tree. Hardy in zones 1, 2, and 3; trial in zone 4.

Salix pentandra (Laurreleaf Willow)—25 feet. Shrub or small tree. Leaves bright green, shiny. Most suited in shelterbelts and windbreaks on fertile soils of silt loams to muck. Hardy in all zones.

Sorbus americana (American Mountain Ash)—20 feet. Large shrub or small tree. Flowers small, appearing in dense clusters in late June or early July. Fruits small, red, about 1/5 inch in diameter. Common in northeastern Minnesota where it grows in mixtures of hardwoods and evergreens. Used in the shrub border for background. Birds, especially robins, are very fond of the berries. Do not plant in dry, exposed sites. Protect trunk from sunscald. Hardy in all zones.

Sorbus decora (Showy Mountain Ash)—30 feet. Small, round-topped tree. Flowers white, showy, appearing in large clusters. Fruits vermilion red, about 1/3 inch in diameter, very showy. Native along north shore of Lake Superior. Occasionally planted as lawn tree. Hardy in all zones.



Flowers of Japanese Tree Lilac

Sorbus aucuparia (European Mountain Ash)—30 feet. Small, round-topped tree. Flowers and fruits much larger than in American mountain ash. Do not plant in dry, exposed sites. Protect the trunk from sunscald. Hardy in all zones.

Syringa amurensis japonica (Japanese Tree Lilac)—20 feet. Small, round-topped tree. Flowers cream-white in large, open clusters, blooming in mid-June. Occasionally planted as lawn tree. Hardy in zones 1, 2, and 3; trial in zone 4.

Tilia americana (American Linden or Basswood)—60 feet. Large tree with well-rounded head, several stems often growing together in clumps. Flowers open in June and are considered an important source of honey by beekeepers. Native throughout the state and widely planted in parks and in lawns for shade. Hardy in all zones.

Tilia cordata (Littleleaf Linden)—50 feet. Leaves smaller than American linden, otherwise trees are similar. Occasionally planted in the Twin Cities area. Hardy in zones 1 and 2; trial in zones 3 and 4.

Ulmus americana (American Elm)—60 feet. Large tree with widespread branches and vase-shaped form. Widely planted in shelterbelts, boulevards, and lawns. Several horticultural varieties have

been selected and propagated. Of these the Lake City and Minneapolis Park elms have been most commonly planted in Minnesota.

Ulmus rubra (Slippery Elm)—60 feet. Differs from American elm in having mucilaginous inner bark, and reddish-brown buds. Not as symmetrical as American elm. Occasionally planted in parks. Hardy in all zones.

Ulmus pumila (Siberian Elm)—40 feet. Small tree with leaves much smaller than those of American elm. Trees grow rapidly when young. Nonhardy strains often suffer branch die-back as a result of low winter temperatures and failure to "harden-off" new growth. Generally short-lived. Sometimes planted for clipped hedges. Plant only hardy strains of Siberian origin, which are hardy in all zones. Harbin, Chinkota, and Dropmore strains are improved selections, especially suited for shelterbelts and field windbreaks. The species is often called mistakingly the Chinese Elm.

Ulmus thomasi (Rock Elm)—40 feet. Medium-sized tree characterized by corky ridges on young branches. Occasionally planted in lawns. Hardy in all zones.

Walnut—See *Juglans*

Willow—See *Salix*

Deciduous Shrubs

Acer ginnala (Amur Maple)—15 feet. Graceful, large shrub. Leaves lobed, much longer than wide, about 3 inches long. Fruits reddish when young, maturing in early fall. Autumn color of leaves a brilliant orange to red; very showy. Valuable shrub for screens, borders, roadside plantings, windbreaks, and shelterbelts. Hardy in all zones.

Acer spicatum (Mountain Maple)—12 feet. Large, spreading shrub that becomes

Amur maple



spindly as it gets old. Leaves lobed, about as wide as long. Flowers and bright red fruits conspicuous on upright stems. Native in northern and eastern Minnesota. May be planted as a background shrub in the shrub border in moist, protected sites. Hardy in all zones.

Acer tatarica (Tatarian Maple)—20 feet. Small tree or very large shrub. Similar to amur maple except tatarian is larger and its leaves are unlobed or nearly so. Planted as small tree or a tall background shrub. Hardy in all zones.

Almond—See **Prunus**

Amelanchier spp. (Juneberry, Serviceberry)—This genus contains numerous species of small trees and shrubs. The flowers are white and quite showy during spring. The fruits are quite showy and may be used for pies and jellies. Common species used for game food and landscape are *A. alnifolia*, *A. humilis*, *A. laevis*, and *A. canadensis*. Hardy in all zones.

Amorpha canescens (Leadplant)—3 feet. Low, spreading bush with silvery green leaves that give plant a gray appearance; hence the name leadplant. Flowers small, deep purple, appearing in dense terminal clusters in late June or July. Very drought resistant. Native on dry hillsides throughout Minnesota; of possible value in exposed sites for border and foundation plantings. Hardy in all zones.

Aronia arbutifolia (Red Chokeberry)—5 feet. Small spreading shrub. Flowers white or pinkish, appearing in flat-topped clusters in late May. Fruits round, red, about $\frac{1}{4}$ inch in diameter, very showy even after the leaves are gone. Foliage turns red in the fall of the year. Useful in the shrub border. The variety 'Brillant' is a selection. Hardy in zone 1; trial in zone 2.

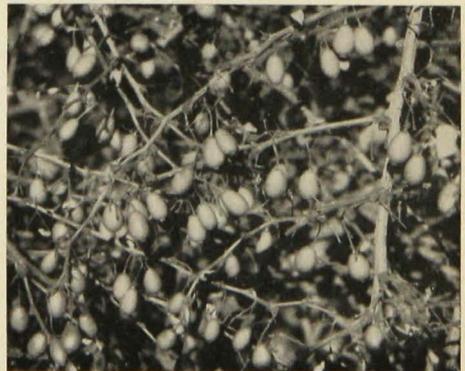
Aronia melanocarpa (Black Chokeberry)—3 feet. Low, branching shrub. Flowers white, showy, appearing in flat-



Korean Barberry

topped clusters in May. Fruits round, black or purplish. Foliage turns red in the fall. Native in wet places in eastern Minnesota. Useful in foundation and border plantings. Hardy in all zones.

Aronia prunifolia (Purple-fruited Chokeberry)—Tall shrub growing to 10 feet. Foliage is similar to other species. Fruit is purplish-black providing bird food. Hardy in zones 1 and 2; trial in zone 3.



Japanese Barberry

Arrowwood—See *Viburnum*

Barberry—See *Berberis*

Beautybush—See *Kolkwitzia*

Berberis koreana (Korean Barberry)—

A small shrub up to 6 feet. The branches are a light cocoa brown with spines. Leaves are a dark green during the summer, but turn to a bright red in fall. Bright red berries hang in dense clusters. Hardy in all zones.

Berberis thunbergii (Japanese Barberry)

—4 feet. A low, compact shrub. Flowers small, yellow, coming in late May. Leaves small, turning a brilliant scarlet color in the fall. Twigs covered with short thorns, thus making an ideal barrier. Fruits are elongated red berries that are attractive in fall and winter. Useful in foundation and border plantings. Hardy in all zones.

Berberis thunbergii atropurpurea (Red-leaf Japanese Barberry)—Similar to the species except leaves are red during entire season. Often used in front of dwarf evergreens in foundation plantings; also serves as color contrast in the border. Less hardy than the species.

Black Haw—See *Viburnum*

Bladdernut—See *Staphylea*

Bluebeard—See *Caryopteris*

Blueleaf Hedge—See *Salix*

Blue Mist Spirea—See *Caryopteris*



Dwarf Redleaf Barberry



Globe Caragana

Buffaloberry—See *Shepherdia*

Burning Bush—See *Euonymus*

Butterfly Bush—See *Buddleia*

Buxus microphylla koreana (Korean Littleleaf Boxwood)—A small evergreen shrub which grows to 18 inches. Foliage is deep green. Leaves may turn brown during winter on exposed sites. The shrub is useful in the landscape, especially where a very small shrub is required. Plant only in sheltered locations. Trial in zones 1 and 2.

Caragana brevifolia (Shortleaf Peashrub)—A small shrub to 4 feet. It is a green-leaved, finely textured shrub. It forms a low, spreading, compact plant. Useful for foundation plantings. Hardy in zones 1, 2, and 3; trial in zone 4.

Caragana arborescens (Siberian Peashrub)—12 feet. Large, upright shrub, very drought resistant and alkali tolerant. Flowers yellow, pealike, showy, appearing in May. Rather coarse for ornamental plantings and inclined to lose many of its leaves early in fall due to insect attacks and leaf spot diseases. Of value chiefly in shelterbelts and windbreaks in

western Minnesota. Sometimes used for a clipped hedge. Hardy in all zones.

Caragana frutex (Russian Peashrub)—6 feet. Flowers large, yellow, showy, appearing in May-June. Leaves dark green, fine textured. Suckers from base. Used in foundation and border plantings. Hardy in all zones.

Caragana pygmaea (Pygmy Peashrub)—5 feet. Small, upright shrub with fine-textured foliage. Very drought resistant and alkali tolerant. Flowers small, yellow, pealike, appearing in May-June. Useful in foundation and border plantings. Also used as low, informal, or clipped hedge. Hardy in all zones.

Chaenomeles japonica (Japanese Quince)—3 feet. Low, compact bush with large red flowers that come before leaves. Although shrub itself is hardy, the blossom buds are killed by severe winter weather unless protected. Of possible use in foundation and border plantings. **Flowering Quince (C. lagenaria)** and its many horticultural varieties are often sold in this area. Varieties of this species have larger flowers and are more colorful than *C. japonica*. Flower buds are not reliably hardy for this area. Trial in zones 1 and 2.

Cherry—See *Prunus*



Variegated Dogwood



Flowers of Pagoda Dogwood

Chionanthus virginicus (White Fringe-tree)—12 feet. Large, coarse shrub. Flowers white, in large, open panicles, appearing in early June. Fruits dark blue, appearing in grapelike clusters in late fall. Useful for screen or background in shrub border. Hardy in zones 1 and 2; trial in zone 3.

Chokeberry—See *Aronia*

Chokecherry—See *Prunus*

Cinquefoil—See *Potentilla*

Coralberry—See *Symphoricarpos*

Cornus alba sibirica (Siberian Dogwood)—6 feet. Flowers yellowish-white, appearing in flat-topped clusters in early June, followed by white to bluish berries. Stems are coral-red, attractive during winter. A useful shrub for foundation and border plantings. Several horticultural selections have been made and are offered for sale. Hardy in all zones.

Cornus alba argenteo-variegata 'Variegated Dogwood' (Creamedge or Variegated Dogwood)—Similar to the above except leaves are bordered with creamy-white. Hardy in all zones.

Cornus alternifolia (Pagoda Dogwood)—15 feet. Large shrub with horizontally spreading branches. Native throughout eastern Minnesota. Unlike other dogwoods, branches are alternate rather than opposite. Flowers white in June, followed by dark blue berries on red fruiting stalks. Very attractive shrub for the shrub



Redosier Dogwood

border. Sometimes grown as a small lawn tree. Hardy in all zones.

Cornus baileyi (Bailey Dogwood)—6 feet. Upright shrub with reddish stems in winter. Flowers and berries white. Commonly planted in border and foundation plantings. Hardy in all zones.

Cornus racemosa (Gray Dogwood)—8 feet. Flowers appear in small flat-topped clusters in June. Fruits are white berries on red stalks; these stalks persist after the fruits and foliage have dropped. Leaves light green, turning purple in the fall of the year. Stems gray. A good shrub for foundation and border plantings. Hardy in all zones.

Cornus stolonifera (Redosier Dogwood)—6 feet. Large, spreading shrub, often rooting where stems touch the ground. Winter color on young stems is bright red. White flowers appear in June, followed by white berries. Good shrub for border. Native in moist sites throughout the state. Hardy in all zones.

Cornus stolonifera flaviramea (Yellowtwig Dogwood)—Similar to redosier dogwood except that new stems are bright yellow. Hardy in all zones.

Cotinus coggyria 'Royal Purple' (Royal Purple Smoketree)—8 feet. Large, open shrub that often kills back after severe

winter. Fruits are showy in large, pink to grayish, plumose clusters. The autumn foliage takes on brilliant yellow to orange color. Not fully hardy. Trial in zones 1 and 2.

Cotoneaster apiculata (Cranberry Cotoneaster)—Grows to slightly more than 2 feet high with arching branches. In autumn, it is outstanding for its bright red fruit. The foliage is shiny green. May kill back in an open winter. Trial in all zones.

Cotoneaster lucida (Hedge Cotoneaster)—A medium height shrub which grows to a height of 8 feet. Upright in habit of growth. Shrub has lustrous leaves and rather large black fruit. Hardy in all zones.

Cotoneaster multiflora (Many-flowered Cotoneaster)—Shrub grows to 6 feet in height. Many showy flowers white in



Sungari Rockspray Cotoneaster

color. Foliage dark green. Wide spreading, arching branches with showy red fruit in September and October. Hardy in zones 1 and 2; trial in zone 3.

Cotoneaster racemiflora soongorica (Sungari Rockspray Cotoneaster)—8 feet. Flowers white, appearing in showy flat-topped clusters in late May. Fruits bright red, lasting well into winter, very showy. Although it has never been extensively planted in Minnesota, it is considered by some to be the best and one of the hardiest of the cotoneasters. Suitable for screen and border plantings. Trial in zones 1 and 2.

Currant—See *Ribes*

Deutzia X lemoine (Lemoine Deutzia)—4 feet. Small compact bush of hybrid origin, *D. parviflora* X *D. gracilis*. Flowers white, appearing in showy, upright clusters. One of the hardiest of the deutzias. Good in foundation and border plantings. Hardy in zones 1 and 2.

Diervilla lonicera (Dwarf Bushhoney-suckle)—Small shrub to 3 feet. Flower yellow or greenish-yellow. Medium texture foliage. A suckering shrub that may be useful on steep slopes as a ground cover. Hardy in all zones.

Dirca palustris (Leatherwood)—5 feet. Low-growing compact plant. Flowers are yellow, appearing in early spring ahead of all other shrubs. Useful in foundation and border plantings. Hardy in all zones.

Dogwood—See *Cornus*

Elaeagnus commutata (Silverberry)—6 feet. Branches and leaves covered with silvery scales giving entire plant a silvery appearance. Flowers fragrant, silvery outside, yellow inside. Native in northwestern Minnesota. Occasionally planted in border for contrast and for wildlife purposes. It tends to sucker badly. Hardy in all zones.

Elder—See *Sambucus*

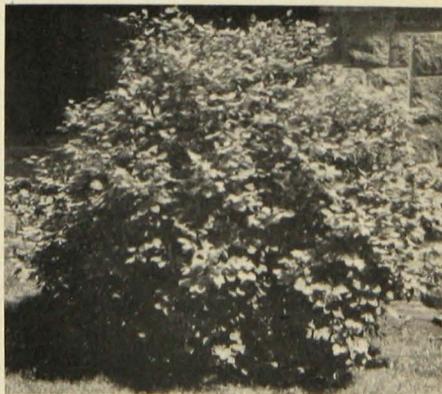
Euonymus alata (Winged Euonymus)—8 feet. Compact shrub with good foliage and form. Fruits are elongated, scarlet,

but seldom numerous enough to be very effective. In fall, leaves take on scarlet color that is most attractive. Twigs have corky wings that add to the winter value of the shrub.

Euonymus alata 'compacta' (Dwarf Winged Euonymus)—4 feet. Similar to the winged euonymus except much smaller. Useful for foundation and border plantings and for a compact hedge that needs little or no pruning. Trial in all zones.

Euonymus alata koreana (Korean Winged Euonymus)—5 feet. This is a compact form of the Common Winged Euonymus. The lower branches face the ground, thus making the shrub very attractive either in a foundation planting or in the shrub border. Hardy in zones 1, 2, and 3; trial in zone 4.

Euonymus atropurpurea (Eastern Wahoo)—8 feet. Large, coarse shrub native in eastern and central Minnesota. Very attractive in fall with its brilliant yellow to red leaves and scarlet to purple fruits similar in shape to bittersweet fruits. Useful as a background shrub in shrub border. Hardy in all zones.



Leatherwood

Euonymus europaea (European Euonymus)—8 feet. Similar to native wahoo except that fruits are a rose-red to orange color and the leaves do not color as well in the fall. Suitable for background. Hardy in zones 1 and 2; trial in zone 3.

Euonymus nana turkestanica (Dwarf Euonymus)—Small, upright shrub to 3 feet, with small leaves. Fruits pink in the fall. Useful for rock gardens and ground covers. Hardy in all zones.

False Spirea—See *Sorbaria*

Flowering Quince—See *Chaenomeles*

Forsythia ovata (Early Forsythia)—5 feet. Hardest and earliest of the forsythias. Flowers yellow, small. Best planted in the shrub border. Hardy in zones 1, and 2; trial in zone 3.

Forsythia intermedia (Border Forsythia)—6-8 feet. Large, spreading shrub. Flower buds of variety Beatrice Farrand are hardier than most horticultural varieties of *F. intermedia*, but may not flower following a severe winter except where branches have been covered with snow. Flowers very large, showy, orange and yellow, bell-shaped coming before the leaves. Should be planted in shrub border in protected sites. Trial in zones 1 and 2.

Fringetree—See *Chionanthus*

Goldenbell—See *Forsythia*

Highbush Cranberry—See *Viburnum*

Holly—See *Ilex*

Honeysuckle—See *Lonicera*

Hoptree—See *Ptelea*

Hydrangea arborescens grandiflora (Snowhill Hydrangea)—4 feet. Low, compact shrub with large, coarse leaves. Flowers large, creamy-white, appearing in flat-topped clusters in July. For best bloom, prune back heavily in early spring. Should be planted in a moist, protected site. Often used in foundation plantings. Hardy in all zones.

Hydrangea paniculata grandiflora (Peegee Hydrangea)—8 feet. Upright shrub. Flowers appear in August in upright, pointed clusters, white at first, turning

pink as they age. Use both in border and foundation plantings. Hardy in zones 1, 2, and 3; trial in zone 4.

Hypericum kalmianum (Kalm St. Johnswort)—Low shrubs to 2 feet in height. Leaves small, dark green. Clusters of small, yellow flowers in July and August. Trial in all zones.

Ilex verticillata (Winterberry or Minnesota Holly)—8 feet. Only native holly in Minnesota. Native in low, moist places from the Twin Cities northward. Sexes are on separate plants, so both male and female plants must be planted in order to get berries. Fruits are bright red, borne in dense clusters along the stems, and persisting long after the leaves drop. Highly prized for Christmas decorations and winter bouquets. Plant in a moist, protected site in the shrub border. Soil should be acid for best results. Hardy in all zones.

Juneberry—See *Amelanchier*

Kolkwitzia amabilis (Beautybush)—5 feet. Upright, spreading bush. Flowers very showy, pink, appearing in June, followed by brown, bristly seed pods. Must be planted in well-drained soil in order to withstand Minnesota winters. Use in shrub border. Hardy in zones 1 and 2; trial in zone 3.

Leadplant—See *Amorpha*

Ligustrum amurense (Amur Privet)—6 feet. Fine-textured shrub that makes attractive clipped hedge. Sometimes kills back after a severe winter. Hardy in zone 1; trial in zone 2.

Ligustrum vulgare (European Privet)—A tall-growing shrub with slender spreading branches. Has black, lustrous fruit. Used as a hedging plant. Trial in zones 1 and 2.

Lilac—See *Syringa*

Locust—See *Robinia*

Lonicera X bella 'White' (White Belle Honeysuckle)—10 feet. Large, spreading shrub resulting from a cross between *L. morrowi* X *L. tatarica*. Flowers white, ap-

pearing in late May, followed by red fruits in July and August. Adapts wonderfully well to use in both shelterbelts and field windbreaks as it maintains its density close to the ground. Also useful as a background shrub in the shrub border. Hardy in all zones.

Lonicera coerulea edulis (Sweetberry Honeysuckle)—A much-branched shrub up to 5 feet. Foliage bright green. Flowers are yellowish-white; appear in May. Excellent shrub in borders and foundation plantings. Hardy in all zones.

Lonicera korolkowii zabellii (Zabels Blueleaf Honeysuckle)—8 feet. Large shrub grown for attractive, dark pink flowers which appear in late May and for red fruits that come in July. Foliage bluish-green. Very good in shrub border, in clipped or informal hedge, and in shelterbelts. Hardy in all zones.

Lonicera maackii (Amur Honeysuckle)—10 feet. Large shrub with horizontally spreading branches. Flowers white, appearing in early June. Fruits bright red, remaining on the shrub late in the fall. One of the best shrubs for fall display of fruits. Use as a background shrub in the shrub border, as a screen, or in shelterbelts. Hardy in all zones.

Lonicera maximowiczii sachalinensis (Sakhalin Honeysuckle)—Medium height shrub to 6 feet. Leaves leathery dark green above and light green below. Leaves are red as they open and turn to a golden yellow in fall. Flowers are a dark purple. Hardy in zones 1 and 2; trial in 3 and 4.

Lonicera morrowii (Morrow Honeysuckle)—5 feet. Widespreading, mound-shaped shrub. Flowers white, changing to yellow, appearing in late May. Fruits are showy, red berries, appearing in June-July. Commonly planted for broad, clipped hedge or in shrub border. Valuable for bird food and shelter. Hardy in zones 1 and 2; trial in zone 3.

Lonicera sp. 'Claveys Dwarf Honey-

suckle'—Grows to a height of 5 feet. Very compact. Has light green foliage. Useful as a hedging plant or for foundation use. Hardy in all zones.

Lonicera syringantha (Lilac Honey-suckle)—Low spreading shrub which grows to a height of 3 feet. Flowers are white to rosy-lilac and are very fragrant. Trial in all zones.

Lonicera tatarica (Tatarian Honey-suckle)—10 feet. Large, upright, coarse shrub. Flowers pink to white, appearing in late May and followed by yellow to red berries in June and July. Used in shelterbelts as snowcatch and in border plantings where a tall shrub is desired. Too large for foundation plantings except next to tall buildings. Hardy in all zones.

Maple—See *Acer*

Mockorange—See *Philadelphus*

Nannyberry—See *Viburnum*

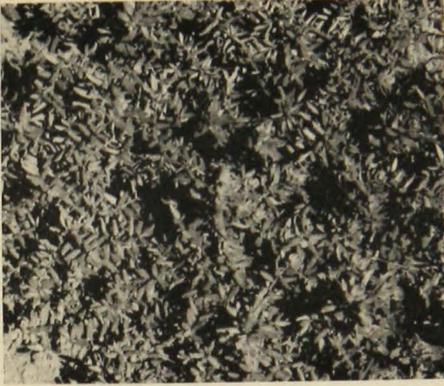
Ninebark—See *Physocarpus*

Peashrub—See *Caragana*

Pachistima canbyi (Canby Pachistima)—Low-growing evergreen shrub with small, glossy leaves. Adapted to rock gardens, borders of evergreen, and as a ground cover. Prefers good light but will grow under partial shade. Plant in sheltered location. Prefers acid and well composted light soils. Trial in all zones.



Tatarian Honeysuckle



Pachistima

Philadelphus coronarius (Sweet Mockorange)—8 feet. Medium shrub. Flowers large, single, white, fragrant, appearing in clusters of 5 to 9 in June. Best used as a background shrub in the shrub border. Drought resistant. Hardy in all zones.

Philadelphus coronarius 'Golden' (Golden Mockorange)—5 feet. Leaves golden yellow when young, becoming yellowish-green as they mature. Not as large or as vigorous as sweet mockorange. Plant in full sun for best color. Useful for



Mockorange

color contrast in shrub border or in foundation planting. Hardy in zones 1, 2, and 3; trial in zone 4.

Philadelphus grandiflorus (Big Scentless Mockorange)—8 feet. Large shrubs with widely spreading branches. Flowers large, single, white, lacking fragrance, appearing in June. One of the best mockoranges for the shrub border. Hardy in all zones.

Philadelphus X lemoinei (Lemoine Mockorange)—3-6 feet. A hybrid group obtained by crossing *P. microphyllus* X *P. coronarius*. Mostly small, compact shrubs. Flowers white, single or double, appearing in June. Valuable for foundation and border plantings. The following varieties are commonly grown: 'Avalanche' (3 feet), 'Belle Etoile' (5 feet), 'Mont Blanc' (3 feet), 'Innocence' (6 feet), 'Enchantment' (6 feet, double flowering), and 'Purity' (6 feet). Hardy in zones 1, 2, and 3; trial in zone 4.

Philadelphus X virginialis (Virginal Mockorange)—4-8 feet. Of hybrid origin, *P. lemoinei* X *P. nivalis plena*. A variable species ranging from a compact, mound-like shrub in the smaller varieties to a tall, leggy shrub in the variety *Virginal*. Flowers large, white, or double or single, very fragrant, appearing in June. These varieties are commonly grown: 'Bouquet Blanc' (5 feet), 'Glacier' (4 feet), and 'Virginal' (8 feet). The variety 'Virginal' appears on the cover. Plant in shrub border. Hardy in all zones.

Philadelphus 'Minnesota Snowflake' (Minnesota Snowflake Mockorange)—6 feet. Upright shrub, fairly compact when young but leggy when mature. A Minnesota introduction with fully double, very fragrant flowers coming in June. Useful in the shrub border but rather coarse in foundation plantings.

Selected variety is 'Frosty Mom.' Hardy in zones 1, 2, and 3; trial in zone 4.

Physocarpus opulifolius (Common Ninebark)—6 feet. Large, coarse shrub.

Flowers small, white or pinkish, appearing in flat-topped clusters. Fruits dry, red to brown in color. Useful in shrub borders. Hardy in all zones.

Physocarpus opulifolius luteus (Gold-leaf Ninebark)—6 feet. Similar to common ninebark except that leaves are yellowish or yellowish-green. Plant in full sunlight for best color. Makes attractive color accent in border. Hardy in all zones.

Physocarpus opulifolius nanus (Dwarf Ninebark)—4 feet. Low, compact shrub. Leaves small, fine textured. Useful for hedges and foundation plantings. Hardy in all zones.

Plum—See *Prunus*

Potentilla fruticosa (Bush Cinquefoil)—3 feet. Compact, fine-textured shrub native in many parts of Minnesota. Flowers yellow to white, shaped like single roses, lasting from June to frost. Many horticultural varieties are grown. The best are the large-flowered variety **grandiflora** with flowers nearly 2 inches across, **veitchii** with large white flowers, and **farrerii** with clear, bright yellow flowers. Said to prefer a high lime soil. Useful for foundation and border plant-



Cistena Sandcherry

ings. Prefers full sunlight. Of the many horticultural varieties, varieties 'Gold Drop' (flowers golden yellow) and 'Katherine Dykes' (flowers a clear yellow) are commonly available. Hardy in all zones.

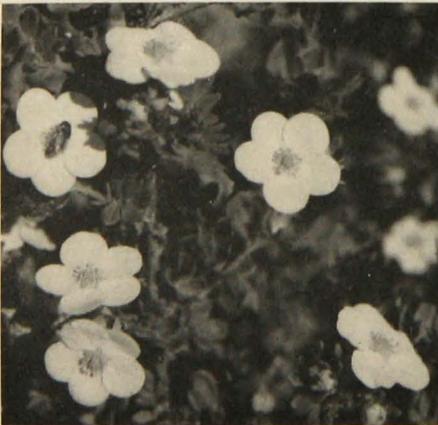
Privet—See *Ligustrum*

Prunus 'Newport' (Purpleleaf Plum)—12 feet. Small tree or large shrub; of hybrid origin, *P. cerasifera pissardi* X *P. americana* X *P. salicina*. Grown primarily for reddish-purple foliage. Suitable for accent in background of shrub border. Hardy in zones 1 and 2; trial in zone 3.

Prunus X cistena (*Cistena* or Purple-leaf Sandcherry)—5 feet. Compact shrub of hybrid origin, *P. pumila* X *P. cerasifera atropurpurea*. Grown primarily for reddish-purple foliage. Useful for accent in the border. Hardy in all zones.

Prunus glandulosa sinensis (Flowering Almond)—3 feet. Low, compact shrub with narrow leaves. Flowers pink, double, coming before the leaves in late April to early May. Useful in border plantings. Kills back following a severe winter. A white-flowered variety, **albo-plena**, is also grown. Hardy in zone 1; trial in zone 2.

Prunus 'Muckle'—Compact, flowering



Bush Cinquefoil

shrub of medium height. Flowers are pink. Useful in shrub border or as a specimen planting. Trial in all zones.

Prunus 'Prairie Almond'—Early spring flowering shrub. Flowers semi-double and pink with red centers. Useful in shrub border plantings and as a specimen. Trial in all zones.

Prunus tenella (Russian Almond)—4 feet. Low, compact bush that suckers from the base. Flowers white to red, appearing in early May. Suitable for foundation or border plantings. Hardy in all zones.

Prunus tomentosa (Nanking or Manchurian Cherry)—8 feet. Shrub or small tree. Flowers white to pink, coming before the leaves, very showy. Fruits small, white to red, edible, ripening early in July. Fruits must be protected from birds by covering with cheesecloth. Excellent shrub for borders. Hardy in zones 1, 2, and 3; trial in zone 4.

Prunus triloba (Flowering Plum)—8 feet. Large, coarse shrub with 3-lobed leaves. Flowers pink, double, very showy, coming in early May before the leaves. Wild plum suckers on grafted plants may come up from the base and should be cut out as soon as they appear. Use for accent in the shrub border. Hardy in all zones.

Prunus virginiana (Common Chokecherry)—15 feet. Very large shrub that suckers from base. Flowers white, appearing in elongated clusters in May. Fruits nearly black, edible, used for jellies. Used as wildlife cover; also valuable in shelterbelts and windbreaks. Can be used in parks or large grounds for background shrub in border. In the purple-leaved variety, 'Schubert,' the new growth at the tips of the branches is green. Carrier of "x" virus disease of stone fruits. Hardy in all zones.

Ptelea trifoliata (Common Hoptree)—12 feet. Large shrub or small tree with compound, trifoliolate leaves. Flowers in-

conspicuous. Fruits borne in clusters which bear a flattened wing on each side—giving the fruits the appearance of a cluster of hop fruits. A good background shrub in the border. Hardy in zones 1, 2, and 3; trial in zone 4.

Quince—See *Chaenomeles*

Rhododendron spp. The following species of *Rhododendron*: *R. canadense* (*Rhodora*), *R. mollis* (*Mollis Azalea*), *R. roseum* (*Roseshell Azalea*), *R. schlippenbachii* (*Royal Azalea*), *R. mucronulatum* (*Korean Rhododendron*), and *R. yedoense poukhanense* (*Korean Yodogawa Azalea*) have shown enough promise in early tests to warrant further testing. All of the species except *R. mollis* bloom early in May. *R. mollis* blooms in late May or early June. Flower color ranges from lavender in *R. canadense*, *R. mucronulatum*, and *R. yedoense poukhanense* to yellow orange, and red in *R. mollis* and clear pink in *R. roseum*. Trial in all zones.

Rhus aromatica (Fragrant Sumac)—3 feet. Low, spreading shrub with compound, trifoliolate leaves. Flowers small, yellow, coming in May. Fruits red, berry-like, showy, appearing in dense clusters in late summer and early fall. Useful in front of tall shrubs in the border and in the foundation planting. Hardy in zones 1 and 2; trial in zone 3.

Rhus glabra (Smooth Sumac)—10 feet. Becomes large under favorable conditions. Since it suckers badly, it should be limited to mass plantings and erosion control projects. One of the showiest of native shrubs in the fall, with its red, spikelike fruits and bright red leaves. Hardy in all zones.

Rhus typhina (Staghorn Sumac)—12 feet. Similar to the smooth sumac except taller and has stems that are covered with thick, feltlike hairs. Fruits and autumn leaves highly colored. Hardy in all zones.

Rhus typhina laciniata (Cutleaf Staghorn Sumac)—Similar to staghorn sumac

except that leaves are finely divided. Beautiful shrub in fall, with its orange to red foliage color. Hardy in all zones.

Ribes alpinum (Alpine Currant)—4 feet. Low, dense shrub with fine-textured, dark green foliage. Flowers inconspicuous; sexes separate. Fruits are scarlet in late summer. The male plant does not act as a host plant to white pine blister rust and therefore is commonly propagated. Used for low hedges and foundation plantings. Hardy in all zones.

Ribes odoratum (Clove Currant)—6 feet. Upright, spreading shrub inclined to be leggy. Flowers yellow, fragrant, appearing in mid-May. Leaves shiny green, turning scarlet in the fall. Best used in the shrub border with something low in front. Hardy in all zones.

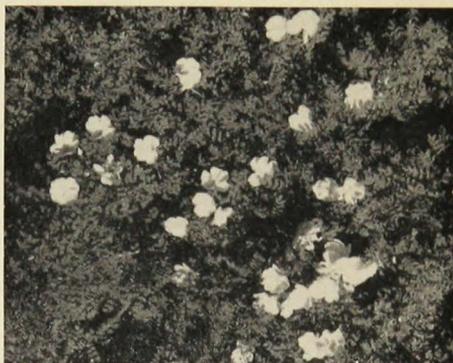
Robinia hispida (Roseacacia Locust)—6 feet. Flowers are rose to pale purple, appear in elongated clusters, and resemble flowers of the sweet pea. Stems covered with stiff, black bristles. Suckers from the base. Kills back following severe winters. Useful for covering slopes; also grows in sandy soils. Hardy in zones 1 and 2; trial in zone 3.

Rosa blanda (Meadow Rose)—3 feet. Native rose with single, pink flowers that appear in May. Fruits scarlet and round or slightly elongated. Sometimes planted in the shrub border. Hardy in all zones.

Rosa X harisonii (Harisons Yellow Rose)—5 feet. Bush covered in early June with double yellow roses 2 inches across. Useful for shrub borders, but prickly and hard to work with. Hardy in all zones.

Rosa hugonis (Father Hugo Rose)—6 feet. Flowers canary yellow, single, 2 inches across, appearing in early June. Leaves fine textured, having small leaflets. Suitable for border and foundation plantings. Kills back partially in severe winters. Hardy in zone 1; trial in zone 2.

Rosa laxa (Turkestan Rose)—Attains a height of 6 feet. Blooms mid-June. Flower color white. Use in combination with



Father Hugo Rose

other border shrubs. Trial in all zones.

Rose multiflora (Japanese or Multiflora Rose)—Thorny bush, forming a dense impenetrable hedge. Flowers white, small, in clusters. Fruits are small, red, berrylike in open clusters, very showy in fall and winter. Highly publicized for living fences and wildlife cover. Unfortunately, the species has not proved hardy in Minnesota, usually killing back to the snowline. Selected varieties have been reported to be hardy in southern Minnesota. Trial in zones 1 and 2.

Rosa pomifera (Apple Rose)—Densely branched shrub to 6 feet in height. Flowers are pink. Large, persistent fruit. Trial in all zones.

Rosa rugosa (Rugosa Rose)—5 feet. Very hardy shrub rose. Flowers red to white, single, appearing in June. Large fruit, brick-red, in fall. Leaves dark green, rough, turning orange in fall. Hardy in all zones.

The rugosa hybrids are planted more often than the species. These retain much of the hardiness of the species but have more attractive, double flowers. Some of these hybrids are 'Hansa' (red), 'F. J. Grootendorst' (red), 'Grootendorst Supreme' (red), 'George Will' (red), 'Pink Grootendorst' (pink), 'Belle Poitevine' (pink), 'Sir Thomas Lipton' (white), 'Dr.

E. M. Miles (yellow), and 'Agnes' (yellow). These *rugosa* hybrids are often planted in foundation and border plantings. Hardy in all zones.

Russian Olive—See *Elaeagnus* (under Deciduous Trees)

***Salix alba chermesina* (Redstem Willow)**—Large tree that can be maintained as a shrub by cutting back to the ground every other spring. With this treatment it grows to about 6 feet. Foliage typical of narrow-leaved willows. Winter twigs a brilliant red color when pruned back as suggested. Use in shrub border or for informal hedge. Hardy in all zones.

***Salix caprea* (Goatwillow)**—A "cut-back" shrub with very showy pinkish catkins. Grow in the landscape as a specimen shrub for its catkins. The form commonly available at nurseries is the **French Pussywillow**. Trial in all zones.

***Salix purpurea* (Purpleosier Willow)**—10 feet. Upright shrub with purple twigs. It is an excellent snowcatch shrub in shelterbelts and as a background plant in shrub borders. Thrives on a wide range of soils. Hardy in all zones.

Salix purpurea lambertiana—Quite similar to purpleosier willow, but branches are thicker and grows somewhat taller. Used in shelterbelts, field windbreaks, and soil conservation plantings. Hardy in all zones.

***Salix purpurea gracilis* (Dwarf Purpleosier Willow)**—4 feet. Leaves bluish-green, fine textured. Stems upright, willowy. Makes a compact clipped hedge or an informal hedge. May kill back after a severe winter. Trial in all zones.

***Sambucus canadensis* (American Elder)**—8 feet. Coarse native shrub with white flowers in large flat-topped clusters, appearing in late June. Fruits blue to black, small, appearing in large clusters. Fruits used for pies and elderberry wine. Suitable in border as background shrub and in wildlife plantings. Hardy in zones 1, 2, and 3; trial in zone 4.

***Sambucus canadensis aurea* (Golden Elder)**—Similar to American elder except that foliage is yellow and fruits are cherry-red. Used for contrast in shrub border. Plant in full sun for best color. Hardy in zones 1, 2, and 3; trial in zone 4.

***Sambucus canadensis acutiloba* (Cutleaf Elder)**—Similar to American Elder except that leaves are finely divided into fernlike lobes. Hardy in zones 1, 2, and 3; trial in zone 4.

***Sambucus pubens* (Scarlet Elder)**—8 feet. Large, coarse shrub. Flowers yellowish-white, appearing in large pyramidal clusters in May. Fruits scarlet, very showy in summer. Native throughout the state. Use as a background shrub in the border. Susceptible to cane borer. Hardy in all zones.

***Sambucus racemosa* (European Red Elder)**—8 feet. Similar to the scarlet elder except that leaves are smaller and smoother. Both cutleaf and golden varieties are planted. Variety 'Redman' is often planted. Susceptible to cane borer. Hardy in all zones.

Sandcherry—See *Prunus*

Saskatoon—See *Amelanchier*

Serviceberry—See *Amelanchier*

***Shepherdia argentea* (Silver Buffalo-berry)**—12 feet. Large, coarse shrub. Flowers inconspicuous; fruits red to yellow, edible. Effective in July and August. Leaves silvery green, attractive. Alkali tolerant. Used in shrub border for color contrast; also suited in shelterbelt and windbreak plantings. Hardy in all zones.

Silverberry—See *Elaeagnus*

Smoketree—See *Cotinus*

Snowball Bush—See *Viburnum*

Snowberry—See *Symphoricarpos*

***Sorbaria sorbifolia* (Ural False-Spirea)**—5 feet. Very shade-tolerant shrub with suckering habit. Leaves compound, fernlike. Flowers white, appearing in large upright clusters in June-July. Flowers soon fade to a dirty brown color, so it is best to cut off faded flowers. Use on north side

of buildings and on slopes. Hardy in all zones.

Spiraea X arguta (Garland Spirea)—5 feet. A fine-textured, upright, spreading shrub of hybrid origin, *S. thunbergi* X *S. multiflora*. White flowers in flat-topped clusters on arching stems appear in early May. One of the showiest of early spireas. Useful in foundation and border plantings. Hardy in zones 1 and 2; trial in zones 3 and 4.

Spiraea X billiardii (Billiard Spirea)—4 feet. Upright, open shrub of hybrid origin, *S. douglasii* X *S. salicifolia*. Pink flowers in upright clusters appear in June-July. Very susceptible to alkali injury. Useful for covering banks, because of its suckering habit. Sometimes used in border and foundation plantings. Hardy in zones 1, 2, and 3; trial in zone 4.

Spiraea X bumalda 'Anthony Waterer' (Anthony Waterer Spirea)—2 feet. Low, compact shrub of hybrid origin, *S. japonica* X *S. albiflora*. Bright crimson flowers in flat clusters, appearing in June-July. Foliage turns red in fall. Sometimes kills back but since flowers form on new wood, this does not affect usefulness of shrub. Commonly used in foundation and border plantings. Semi-hardy in zones 1, 2, and 3; trial in zone 4.

Spiraea X bumalda froebelii (Froebel Spirea)—Very similar to **Anthony Waterer** spirea except that **Froebel** is more vigorous and its leaves a little broader. Widely used for foundation and border plantings. Semi-hardy in all zones.

Spiraea trilobata (Threelobe Spirea)—4 feet. Small, compact shrub. Flowers white, borne in flat-topped clusters. Similar to **Vanhoutte Spirea** except smaller and more compact. Selected variety is Swanlake. Hardy in all zones.

Spiraea vanhouttii (Vanhoutte Spirea)—6 feet. Wide-spreading shrub with arching branches. Flowers white, appearing in flat-topped clusters in May-June. Foliage fine textured. Widely used for foundation



American Bladdernut

and border plantings. Hardy in zones 1, 2, and 3; trial in zone 4.

Staphylea trifolia (American Bladdernut)—9 feet. Large, coarse shrub native in moist thickets and ravines in southern Minnesota. Flowers greenish-white, bell-shaped, borne in elongated clusters. Fruits bladderlike, containing several small, hard seeds. Use as a background shrub in border. Tolerates wet soil. Hardy in zones 1 and 2; trial in zone 3.

Sumac—See **Rhus**

Symphoricarpos albus laevigatus (Garden Snowberry)—5 feet. Compact, fine-textured, shade-tolerant shrub. Flowers pink, small, appearing in terminal clusters in mid-June. Fruits are large white berries, very effective in late fall and early winter. Useful for foundation and border plantings, Hardy in zones 1, 2, and 3; trial in zone 4.

Symphoricarpos chenaultii (Chenault Coralberry)—2 feet. Small, compact shrub. Flowers small, pink, appearing in mid-July. Fruits are red berries in compact terminal clusters, effective in late fall. This is a hybrid, *S. microphyllus* X *S. orbiculatus*. Kills back but comes from the base and blooms on new wood. Superior to the following species in texture of foliage and color of fruit. Useful for foundation and border plantings. Trial in zone 1.

Symphoricarpos orbiculatus (Indian Currant Coralberry)—4 feet. Flowers small, inconspicuous. Fruits purplish-red, coral-like berries appearing in clusters along and at the ends of twigs in late fall. Foliage fine textured. Use in foundation and border plantings. Hardy in all zones.

Syringa amurensis (Amur Lilac)—15 feet. Large, spreading shrub. Flowers creamy-white, in large, open clusters, coming late in June—almost a month after other lilacs have finished blooming. Useful for background shrubs in border, for screens, and for snowcatches in shelterbelts. Hardy in all zones.

Syringa chinensis (Chinese Lilac)—10 feet. Large, compact shrub with fine-textured foliage. Flowers purple-lilac, in small clusters, appearing in late May. White and violet-red varieties are also grown. A red-flowered form is often sold as *rothamogensis*. Leaves much smaller than those of common lilac. Does not sucker. Of hybrid origin, *S. laciniata* X *S. vulgaris*. Useful for hedges, screens, border, and foundation plantings. Hardy in zones 1 and 2; trial in zone 3.

Syringa microphylla superba (Daphne Lilac)—Small shrub with graceful branches. Has mahogany-red buds opening to a soft pink. The small leaves are a dark green. Trial in all zones.

Syringa persica (Persian Lilac)—5 feet. Smaller shrub than the Chinese lilac but otherwise very similar. Flowers pale lilac, appearing in late May. Of hybrid origin, *S. afghanica* X *S. laciniata*. Useful in foundation and border plantings. Hardy in all zones.

Syringa villosa (Late Lilac)—10 feet. Large, coarse shrub. Flowers rosy-lilac to white. Leaves large, hairy. Useful for shrub borders, screens, and shrub components of shelterbelts. Hardy in all zones.

Syringa vulgaris (Common Lilac)—15 feet. Large, coarse shrub with suckering

habit. Flowers lilac or white, fragrant, coming in late May. Very good for snowcatches in shelterbelts and in windbreaks; may also be used in groups around the edge of large lawns. Hardy in all zones.

Syringa vulgaris hybrids (French Lilacs)—French hybrids are among most highly prized of lilacs. They come in wide variety of flower colors and range from single to completely double. Visit a nursery featuring these lilacs at flowering time to select varieties. Useful in shrub border. Most French hybrids sucker, though not as much as common lilac. Hardy in all zones.

Tamarix pentandra (Fivestamen Tamarisk)—10 feet. Tall, open shrub with feathery texture. Flowers small, pink, borne in fluffy clusters in mid-July. Hardest of tamarisks. Use as background shrub in border. 'Summer glow' is a selected variety. Hardy in all zones.

Viburnum X *Burkwoodii* (Burkwood Viburnum)—Small shrub that reaches a height of 6 feet. Leaves are smooth with a dark brown vein. Flowers are mostly white and somewhat fragrant. Useful in the foundation planting and shrub border. Trial in all zones.

Viburnum carlesii (Koreanspice Viburnum)—Grows to 6 feet with spreading upright branches. Flowers appear with the leaves. Large, pinkish-white flowers. Very fragrant. Trial in all zones.

Viburnum dentatum (Arrowwood)—8 feet. Large, compact shrub. Flowers white, in flat-topped clusters, appearing in early June. Fruits blue to black, coming in fall. Leaves dark green, turning red in fall. Shade tolerant. Valuable as food for song birds and upland game birds. Use for background shrub in border. Hardy in all zones.

Viburnum lantana (Wayfaringbush Viburnum)—8 feet. Foliage is attractive, silvery green, turning red in fall. Flowers white, borne in flat-topped clusters in mid-May. Fruits red to black, appearing



Nannyberry Viburnum

in fall. Good shrub for border. Hardy in all zones.

Viburnum lentago (Nannyberry Viburnum)—12 feet. Flowers white, appearing in flat-topped clusters in late May. Fruits black, coming in fall and early winter, edible, an important food for song and upland game birds. Leaves glossy green, turning purplish-red in fall. Rather open and straggly in the wild, where it grows among other trees and shrubs. Under cultivation, given plenty of light, it forms an attractive, compact shrub. Use in the shrub border or for screens. Hardy in all zones.

Viburnum opulus (European Highbush Cranberry)—8 feet. Flowers white in flat clusters; outer flowers sterile, large and showy; inner flowers small, perfect. Fruits are red berries, appearing in fall and winter. Leaves turn red in fall. Good shrub for border. Plant where red berries can be enjoyed from indoors in winter. Hardy in all zones.

Viburnum opulus nanum. Dwarf compact form with small leaves. Rarely flowers. Hardy in all zones.

Viburnum opulus roseum (Snowball Bush)—8 feet. Variety of European highbush cranberry. Flowers are sterile; form snowball-like clusters. No fruits. Subject to leaf injury by aphids. Use in shrub border. Hardy in all zones.

Viburnum trilobum (American Highbush Cranberry)—8 feet. Similar to European highbush cranberry, except that fruits are edible. Valuable food for birds. Tolerates wet soil. Use in shrub border. Hardy in all zones.

Wahoo—See *Euonymus*

Wayfaringbush—See *Viburnum*

Weigela florida (Old-fashioned Weigela)—6 feet. Flowers lavender to rose-pink, large, bell-shaped, coming in late May. Plant in protected sites in foundation and border plantings. A variegated leaf variety is available. Hardy in zones 1 and 2; trial in zone 3.

Weigela hybrids—6 feet. The following hybrid varieties have been grown successfully in Minnesota: 'Eva Rathke', 'Bristol Ruby', and 'Vaniceki'. Flower color of these hybrids is a brighter red than *W. florida*. Plant in sheltered location. Trial in zones 1 and 2.

Willow—See *Salix*

Winterberry—See *Ilex*



American Highbush Cranberry

Woody Vines

Aristolochia durior (Common Dutchmans Pipe)—30 feet. Vigorous, twining vine with dark green, large, heart-shaped leaves. Flowers of peculiar shape, resembling Meerschaum pipe and greenish. Useful for covering porches and trellises. Hardy in zones 1 and 2; trial in zone 3.

Bittersweet—See *Celastrus*

Boston Ivy—See *Parthenocissus*

Campsis radicans (Common Trumpet Creeper)—30 feet. Flowers orange to scarlet, trumpet-shaped, showy, appearing in mid-July. Shrubby vine clinging to stone or woodwork by small, rootlike holdfasts, but often requires more tying to hold it in place. Plant in full sun to get attractive bloom. Hardy in zone 1; trial in zone 2.

Celastrus loeseneri (Loesener Bittersweet)—Climbing vine to 24 feet. Showy fruit, outer color yellow, inside color red. Trial in all zones.

Celastrus scandens (American Bittersweet)—20 feet. Flowers inconspicuous, sexes separate. Fruits are orange berries, opening to show a scarlet interior; effective in fall and winter. Leaves turn yellow in the fall. A twining vine that grows on almost any support. Highly prized for fruiting branches used for winter bouquets. Plant both sexes to be sure of getting fruits. Hardy in all zones.

Clematis X jackmanii (Jackman Clematis)—10 feet. Flowers violet to purple, large, 5 to 7 inches across, appearing in July-August. Fruits are plumelike, borne in dense clusters, attractive in fall. Of hybrid origin, *C. languinosa* X *C. viticella*. One of the most popular of flowering vines. May kill back to the snowline but comes from the base and flowers on new wood. Semi-hardy in all zones.

Clematis paniculata (Sweet Autumn Clematis)—30 feet. Flowers white, about an inch across, in showy clusters, appear-

ing in September. Fruits plumelike, in dense clusters. Foliage dense, lustrous. Vigorous vine but not too hardy. Hardy in zone 1; trial in zone 2.

Clematis virginiana (Virgins Bower)—18 feet. Flowers small, white, in dense clusters, appearing in July. Fruits plumelike, in dense clusters. Leaves turn purple in fall. Native throughout state. Often used in fence rows. Hardy in all zones.

Dutchmans Pipe—See *Aristolochia*

Engelmann Creeper—See *Parthenocissus*

Honeysuckle—See *Lonicera*

Japanese Creeper—See *Parthenocissus*

Lonicera heckrottii 'Goldflame' (Ever-blooming Honeysuckle)—12 feet. Flowers red outside, yellow inside, shaped like 2-inch trumpets, blooming all summer. Useful for covering arches and trellises. Kills back in winter but blooms again on new wood. Trial in zones 1 and 2.

Lonicera sempervirens (Trumpet Honeysuckle)—20 feet. Flowers orange to scarlet, shaped like 2-inch trumpets, appearing in mid-June to August. Red berries produced in fall. Popular vine for trellises and porches. Hardy in all zones.

Parthenocissus quinquefolia (Virginia Creeper)—50 feet. Rank, native vine used for covering such objects as telephone poles and windmills. Leaves compound with five radiating leaflets; turn brilliant red in fall. Hardy in all zones.

Parthenocissus quinquefolia engelmannii (Engelmann Creeper)—Leaves smaller, and vine more refined than Virginia creeper. Used for covering brick walls and buildings. Clings by suckerlike discs on tendrils. Hardy in all zones.

Parthenocissus tricuspidata (Japanese Creeper or Boston Ivy)—30 feet. Tight, clinging vine that holds fast to brick or stone with small rootlike holdfasts. Leaves three-lobed, lustrous green, turning scarlet

in fall. Forms interesting patterns on stone or brick walls. Sometimes kills back but new growth comes up from base. Hardy in zones 1 and 2.

Trumpet Creeper—See *Campsis*

Virgins Bower—See *Clematis*

Virginia Creeper—See *Parthenocissus*

Wisteria floribunda (Japanese Wisteria)
—12 feet. Flowers violet to violet-blue, appearing in long, drooping clusters in late May to early June. Used for trellises. Popular vine in the East but not considered very hardy in Minnesota. Trial in zones 1 and 2.

General Lists

(See descriptions for scientific name, site preference, and hardiness ratings)

Large Trees

(50 feet or more in height)

Basswood	Thornless Honeylocust
Cottonwood	Silver Maple
American Elm	Sugar Maple
Common Hackberry	Kentucky Coffeetree

Medium Trees

(25-50 feet in height)

Paper Birch	Littleleaf Linden
Cutleaf European Birch	Norway Maple
Green Ash	Schwedler Maple
European Mountain Ash	Red Maple
Showy Mountain Ash	Bolleana Poplar
Ohio Buckeye	Lombardy Poplar
Northern Catalpa	Niobe Weeping Willow
Ginkgo	

Small Trees

(Under 25 feet)

Amur Maple	Radiant
American Mountain Ash	White-flowered Flowering Crabapples—
Bechtel Flowering Crabapple	Dolgo, Flame
Pagoda Dogwood	Hawthorns
Rosybloom Flowering Crabapples—	Japanese Tree Lilac
Hopa, Red Silver, Sundog, Almey,	Russian Olive

Large Shrubs*(Over 8 feet in height)*

Silver Buffaloberry	Amur Maple
Pagoda Dogwood	Newport Plum
White Fringetree	Nannyberry Viburnum
Amur Honeysuckle	Highbush Cranberry Viburnum
French Hybrid Lilacs	Eastern Wahoo
Late Lilac	Siberian Peashrub

Medium Shrubs*(5 to 8 feet in height)*

Nanking Cherry	Chinese Lilac
Peking Cotoneaster	Virginal Mockorange
Sungari Rockspray Cotoneaster	Golden Ninebark
Bailey Dogwood	Russian Peashrub
Creamedge Dogwood	Flowering Plum
Siberian Dogwood	Roseacacia
Winged Euonymus	Vanhoutte Spirea
Morrow Honeysuckle	Arrowwood Viburnum
Zabels Blueleaf Honeysuckle	Winterberry
Peegee Hydrangea	Purpleosier Willow

Small Shrubs*(3 to 5 feet in height)*

Japanese Barberry	Dwarf Ninebark
Redleaf Japanese Barberry	Father Hugo Rose
Pygmy Caragana	Harisons Yellow Rose
Red Chokeberry	Rugosa Hybrid Roses
Alpine Currant	Garden Snowberry
Lemoine Deutzia	Garland Spirea
Dwarf Winged Euonymus	Threelobe Spirea
Golden Mockorange	Fragrant Sumac
Lemoine Mockorange	Dwarf Purpleosier Willow

Low Shrubs*(Under 3 feet)*

Flowering Almond	Anthony Waterer Spirea
Bush Cinquefoil	Froebels Spirea
Chenaults Coralberry	Pachistima

Special Lists

Trees and Shrubs for Informal Hedges

	Spacing in feet	Height in feet
<i>Acer ginnala</i> , Amur Maple	4-5	12
<i>Berberis thunbergii</i> , Japanese Barberry	2-3	4
<i>Berberis thunbergii atropurpurea</i> , Redleaf Barberry	2-3	4
<i>Caragana pygmaea</i> , Pygmy Caragana	2-3	4
<i>Cornus stolonifera</i> , Redosier Dogwood	3-4	6
<i>Cotoneaster lucida</i> , Hedge Cotoneaster	2-3	6
<i>Euonymus alata compacta</i> , Dwarf Winged Euonymus	3-4	4
<i>Lonicera</i> sp. 'Claveys Dwarf Honeysuckle'	3-4	4
<i>Lonicera claveyii</i> , Claveys Honeysuckle	3-4	4
<i>Physocarpus opulifolius nanus</i> , Dwarf Ninebark	2-3	4
<i>Ribes alpinum</i> , Alpine Currant	2-3	4
<i>Shepherdia argentea</i> , Silver Buffaloberry	3-4	12
<i>Spiraea vanhouttii</i> , Vanhoutte Spiraea	3-4	6
<i>Syringa chinensis</i> , Chinese Lilac	2-3	8
<i>Syringa persica</i> , Persian Lilac	2-3	5
<i>Syringa vulgaris</i> hybrids, French Lilac	3-4	8-10
<i>Viburnum lentago</i> , Nannyberry <i>viburnum</i>	3-4	8-12
<i>Viburnum trilobum</i> , (American) Highbush cranberry	4-5	8

Trees and Shrubs for Clipped Hedges

	Spacing in feet	Height in feet	Width in feet
<i>Acer ginnala</i> , Amur Maple	2-3	6-10	3-5
<i>Berberis thunbergii</i> , Japanese Barberry	1½-2	2-3	2-3
<i>Berberis thunbergii atropurpurea</i> , Redleaf Barberry	1½-2	2-3	2-3
<i>Caragana pygmaea</i> , Pygmy Caragana	1-2	2-3	1½-2
<i>Cotoneaster lucida</i> , Hedge Cotoneaster	2-3	3-5	2-4
<i>Euonymus alata compacta</i> , Dwarf Winged Euonymus	1½-2	3-4	3-4
<i>Lonicera Korolkowi zabelii</i> , Zabels Honeysuckle	2-3	4-6	3-5
<i>Lonicera</i> sp. 'Claveys Dwarf Honeysuckle'	1½-2	2-3	2-3
<i>Physocarpus opulifolius nanus</i> , Dwarf Ninebark.....	1½-2	3-4	3-4
<i>Ribes alpinum</i> , Alpine Currant	1-1½	2-3	1½-3
<i>Syringa chinensis</i> , Chinese Lilac	2-3	5-7	2-4

Trees and Shrubs with Colored Winter Stems

Paper Birch	Redosier Dogwood
Cutleaf European Birch	Redstem Willow
River Birch	Bolleana Poplar
Russian Olive	Yellowtwig Dogwood

Trees and Shrubs for Moist to Wet Soils

Highbush Cranberry	Red Maple
Dogwoods	Serviceberries
Scarlet Elder	Willows
Leatherwood	Winterberry

Trees and Shrubs for Dry or Sandy Soils

Green Ash	Siberian Peashrub
Japanese Barberry	Roseacacia
Buffaloberry	Sandcherry
Pygmy Caragana	Sumacs
Leadplant	Tamarix
Honeylocust	Russian Olive

Trees and Shrubs for Shady Locations

Arrowwood	Maples
Basswood	Nannyberry
Chokeberries	Serviceberries
Coralberry	Snowberry
Alpine Currant	Ashleaved Spiraea
Dogwood	Wahoo
Snowhill Hydrangea	Wayfaringbush Viburnum
American Elm	Leatherwood

Vines for Stone or Brick Walls

Boston Ivy

Engelmann Creeper

Vines for Trellises

Bittersweet

Goldflame Honeysuckle

Jackman Clematis

Trumpet Honeysuckle

Virgins Bower Clematis

Dutchmans Pipe

Trees and Shrubs (generally fast-growing) for Shelterbelts

Cottonwood

Siberian Elm

Silver Maple

Honeysuckle

Boxelder

Golden Willow

Robusta Poplar

Norway Poplar

American Plum

Trees and Shrubs (generally slower-growing) for Shelterbelts

Russian Olive

Black Walnut

American Elm

Siberian Peashrub

Green Ash

Amur Maple

Buffaloberry

Silverberry

Hackberry

Purpleosier Willow

Honey Locust

Common Lilac

Trees and Shrubs with Showy Bloom

Flowering Almond

Japanese Tree Lilac

Beautybush

Hybrid Lilacs

Ohio Buckeye

Red Maple

Northern Catalpa

Mayday Tree

Bush Cinquefoil

Mountain Ash

Flowering Crabapples

Russian Peashrub

Highbush Cranberry

Flowering Plum

Lemoine Deutzia

Eastern Redbud

White Fringetree

Roseacacia

Hawthorne

Roses

Zabels Honeysuckle

Spiraeas

Snowhill Hydrangea

Weigela

Peegee Hydrangea

Trees and Shrubs with Showy Fruits

Arrowwood (blue)	Redosier Dogwood (white)
Japanese Barberry (red)	European Red Elder (red)
Silver Buffaloberry (yellow to red)	Scarlet Elder (red)
Nanking Cherry (white to red)	Amur Honeysuckle (red)
Red Chokeberry (red)	Tatarian Honeysuckle (yellow to red)
Coralberry (violet to red)	Amur Maple (red)
Sungari Rockspray Cotoneaster (red)	Mountain Ash (orange to red)
Hedge Cotoneaster (black)	Nannyberry (black)
Flowering Crabapple (yellow to red)	Roses (red)
Highbush Cranberry (red)	Serviceberry (red to blue)
Golden Currant (black)	Snowberry (white)
Silky Dogwood (blue)	Eastern Wahoo (purplish red)
Gray Dogwood (white)	Winterberry (red)

Trees and Shrubs with Highly Colored Summer Foliage

Redleaf Japanese Barberry	Golden Ninebark
Variegated Dogwood	Russian Olive
Crimson King Maple	Newport Plum
Schwedler Maple	Cistena Sandcherry
Golden Mockorange	Japanese Barberry
Variegated Maple	White Poplar
Variegated Weigela	

Trees and Shrubs with Highly Colored Autumn Foliage

Red Chokeberry	Sugar Maple
Winged Euonymus	Oaks
Leatherwood	Sumac
Amur Maple	Eastern Wahoo
Red Maple	

Trees and Shrubs for High Lime Soil

Boxelder	Siberian Elm (Dropmore)
Hackberry	Tatarian Honeysuckle
Russian Olive	Bush Cinquefoil
Green Ash	Alpine Currant
Cottonwood	Silver Buffaloberry
Siberian Peashrub	Chinese Lilac
Pygmy Peashrub	Common Lilac
Silverberry	Tamatisk

For your further information . . .

Evergreen plants—which are not covered in this bulletin—are given in Extension Bulletin 258, *Evergreens*.

Two valuable bulletins which will tell you how to use the plants in these bulletins are Extension Bulletin 283, *Landscaping the Home*, and Extension Bulletin 196, *Planting the Farmstead Shelterbelt*. You can get these bulletins from your county agent or by writing Bulletin Room, University of Minnesota, Institute of Agriculture, St. Paul 1, Minnesota.

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