



# A Palette of Tree Canopy Forms

*Donna C. Fare*  
Research Horticulturist  
USDA-ARS  
US National Arboretum

*Wayne K. Clatterbuck*  
Assistant Professor  
Forestry, Wildlife  
& Fisheries



Donna C. Fare

Spreading canopy form of Japanese Maple (*Acer palmatum*).



Wayne K. Clatterbuck

Complimentary canopy forms (vaselike and spreading, respectively) of American elm (*Ulmus americana*) and dogwood (*Cornus florida*).

Trees are the most important landscape plants. They play an essential role in our everyday lives. In Tennessee, trees are bountiful and as varied as anywhere in the nation, making them one of our most valued scenic treasures.

There is a distinct relation between plant forms and topography. The basic forms of the topography are repeated in the native plant material. For instance, the mountainous areas of East Tennessee are often forested with trees that are pyramidal, such as hemlocks. The rolling hills in much of the state are frequently covered with rounded canopy forms like oaks, hickories and maples. In some of the flat areas of West Tennessee, the local flora is short and broad spreading.

Many tree selections are available for landscape use. Trees are used for shade, screening, windbreak, noise reduction and ornamental purposes. Take care when selecting trees to choose ones appropriate for your landscape needs. Your choices should relate in form to your landscape. Also consider scale relations between plants and structures. A large, 75-foot oak tree may overwhelm the landscape setting when located on a small lot with a one-story structure.

Spreading, weeping, columnar, rounded, oval, vase and pyramidal are some of the canopy forms of trees. These basic forms range through all degrees of symmetry and irregularity. The more extreme the form, the more attention the

plant attracts. Many trees are used as a specimen or accent plant. Do not depend on pruning to get the desired shape or form. Choose a plant that will mature into the desired form.

Form is more than the outline of a tree. The line, direction and arrangement of branches also determine form. For instance, a weeping or pendulous form leads the eye to the ground. Ascending and vertical forms lead the eye upward, giving a sense of height. Ascending evergreens can appear overbearing in a landscape, and should be used sparingly. Horizontal and spreading forms emphasize the breadth of space. Rounded forms are the most common and lend themselves to group and mass plantings.

Using only one shape of tree can be boring and monotonous. Different shapes provide variety and interest by accenting the major type with other forms. However, do not try to use one plant of each shape or form in the same planting. Combining trees with extremes in form into one group may not look pleasing. Limit your selection to several plant types that will serve as the dominant forms in the design. Consider planting trees with interesting structure and branching habits so they are attractive in winter when they are without foliage.

Trees selected for shade potential usually require large long-lived selections. The form of the tree will determine the shade potential. (Continued pg. 6)

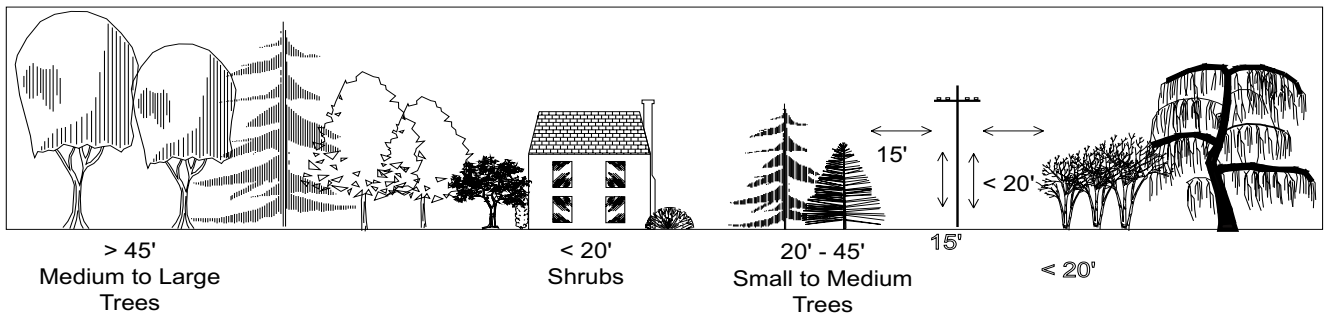


Figure 1. Placement of trees based on tree size and distance from buildings.

## Columnar

\*Evergreen



### Height 15-20'

#### Botanical Name

*Amelanchier* x 'Robin Hill'  
\**Ilex aquifolium* x *I. cornuta*

#### Common Name

Robin Hill Serviceberry  
Nellie R. Stevens Holly

### Height 20-45'

#### Botanical Name

*Acer platanoides* 'Columnar'  
*Acer* x *Freemani* 'Armstrong'  
*Acer rubrum* 'Bowhall'  
*Acer rubrum* 'Karpick'  
*Acer saccharum* 'Arrowhead'  
*Carpinus betulus* 'Frans Fontaine'  
*Fagus sylvatica* 'Dawyck Purple'  
*Fagus sylvatica* 'Fastigiata'  
*Ginkgo biloba* 'Princeton Sentry'  
\**Ilex opaca* 'Croonenburg'  
\**Pinus strobus* 'Fastigiata'  
*Pyrus calleryana* 'Capital'  
*Pyrus calleryana* 'Cleveland Select'  
*Tilia cordata* 'Corzam'

#### Common Name

Columnar Norway Maple  
Armstrong Red Maple  
Bowhall Red Maple  
Karpick Red Maple  
Arrowhead Sugar Maple  
Frans Fontaine European Hornbeam  
Dawyck Purple Beech  
Fastigate Beech  
Princeton Sentry Ginkgo  
Croonenburg Holly  
Fastigate White Pine  
Capital Pear  
Cleveland Select Pear  
Corinthian Linden

### Height > 45'

#### Botanical Name

\**X Cupressocyparis leylandii*  
*Quercus robur fastigiata*

#### Common Name

Leyland Cypress  
Skyrocket English Oak

## Pyramidal

\*Evergreen



### Height 15-20'

#### Botanical Name

*Malus* 'Red Jewel'

#### Common Name

Red Jewel Crabapple

### Height > 20-45'

#### Botanical Name

*Betula platyphylla japonica* 'Whitespire'  
*Cercidiphyllum japonicum*  
*Ginkgo biloba* 'Autumn Gold'  
*Ginkgo biloba* 'Shangri-la'  
\**Ilex opaca*  
\**Picea pungens* 'Hoopsii'  
*Pyrus calleryana* 'Aristocrat'  
*Tilia americana* 'Redmond'  
\**Tsuga canadensis*

#### Common Name

Whitespire Birch  
Katsura Tree  
Autumn Gold  
Shangri-la Ginkgo  
American Holly  
Hoopsii Blue Spruce  
Aristocrat Pear  
Redmond Linden  
Canadian Hemlock

## Pyramidal (Cont.)

### Height > 45'

#### Botanical Name

\**Abies concolor*  
*Acer saccharum* 'Seneca Chief'  
*Fagus sylvatica*  
*Metasequoia glyptostroboides*  
 \**Picea abies*  
*Quercus palustris*  
*Taxodium distichum*  
*Tilia cordata* 'Glenleven'  
*Tilia cordata* 'Greenspire'

#### Common Name

White Fir  
 Seneca Chief Sugar Maple  
 European Beech  
 Dawn Redwood  
 Norway Spruce  
 Pin Oak  
 Bald Cypress  
 Glenleven Linden  
 Greenspire Linden

## Oval

\*Evergreen

### Height 15-20'

#### Botanical Name

*Acer buergeranum*  
*Amelanchier x grandiflora* 'Autumn Brilliance'  
*Chionanthus virginicus*  
*Cotinus coggygria*  
*Prunus caroliniana*

#### Common Name

Trident Maple  
 Autumn Brilliance Serviceberry  
 White Fringe Tree  
 Smoketree  
 Carolina Cherry Laurel



### Height > 20-45'

#### Botanical name

*Acer x freemanii* 'Jeffersred'  
*Acer platanoides* 'Crimson King'  
*Acer platanoides* 'Emerald Queen'  
*Acer platanoides* 'Royal Red'  
*Acer rubrum*  
*Acer truncatum* x *A. platanoides* 'Keithsform'  
*Betula nigra*  
*Betula nigra* 'Cully'  
*Gymnocladus dioica*  
 \**Magnolia grandiflora*  
*Magnolia virginiana*  
*Oxydendron arboreum*  
*Prunus* 'Okame'  
*Prunus cerasifera* 'Kratuer Vesuvius'  
*Pyrus calleryana* 'Bradford'  
*Tilia americana* 'Lincoln'

#### Common Name

Autumn Blaze Maple  
 Crimson King Maple  
 Emerald Queen Maple  
 Royal Red Maple  
 Red Maple  
 Keithsform  
 River Birch  
 Heritage Birch  
 Kentucky Coffee Tree  
 Southern Magnolia  
 Sweetbay Magnolia  
 Sourwood  
 Okame Cherry  
 Krauter Vesuvius Plum  
 Bradford Pear  
 Lincoln Linden

### Height >45'

#### Botanical Name

*Acer saccharum*  
*Celtis occidentalis*  
*Fraxinus americana* 'Autumn Applause'  
*Fraxinus oxycarpa* 'Raywood'  
*Fraxinus pennsylvanica* 'Marshall'  
*Gleditsia triacanthos* 'Skycole'  
*Liquidamber styraciflua*  
*Nyssa sylvatica*  
*Quercus acutissima*  
*Quercus shumardii*  
*Ulmus* 'Frontier'

#### Common Name

Sugar Maple  
 Hackberry  
 Autumn Applause White Ash  
 Raywood Ash  
 Marshall Ash  
 Skyline Honeylocust  
 Sweetgum  
 Black Gum  
 Sawtooth Oak  
 Shumard Oak  
 Frontier Elm

## Rounded



### Height 15-20'

#### Botanical name

*Acer buergeranum*  
*Amelanchier grandiflora* 'Princess Diana'  
*Amelanchier* x 'Cumulus'  
*Carpinus caroliniana*  
*Chionanthus retusus*  
*Crataegus phaenopyrum*  
*Magnolia stellata*  
*Magnolia* x *soulangiana*  
*Malus* 'Bob White'  
*Malus* 'Prairifire'  
*Malus* 'Snowdrift'  
*Prunus cerasifera* 'Thundercloud'

#### Common Name

Trident Maple  
 Princess Diana Serviceberry  
 Cumulus Serviceberry  
 American Hornbeam  
 Chinese Fringetree  
 Washington Hawthorne  
 Star Magnolia  
 Saucer Magnolia  
 Bob White Crabapple  
 Prairifire Crabapple  
 Snowdrift Crabapple  
 Thundercloud Plum

### Height > 20-45'

#### Botanical Name

*Acer rubrum* 'Autumn Flame'  
*Acer truncatum* x *A. platanoides*  
 'Warrenred'  
*Aesculus* x *carnea* 'Briottii'  
*Gleditsia triacanthos* 'Christie'  
*Gleditsia triacanthos* 'True Shade'  
*Koelreuteria paniculata*  
*Malus* 'Snowdrift'  
*Pistacia chinensis*  
*Prunus subhirtella* 'Autumnalis'

#### Common Name

Autumn Flame Red Maple  
 Pacific Sunset Maple  
 Briotti Red Horsechestnut  
 Halka Honeylocust  
 True Shade Honeylocust  
 Goldenrain Tree  
 Snowdrift Crabapple  
 Chinese Pistache  
 Autumn Flowering Cherry

### Height > 45'

#### Botanical Name

*Acer saccharum*  
*Acer saccharum*  
 'Flax Mill Majesty'  
*Fagus grandifolia*  
*Quercus alba*  
*Quercus bicolor*  
*Quercus macrocarpa*  
*Quercus phellos*  
*Quercus robur*

#### Common Name

Sugar Maple  
 Flax Mill Majesty  
 Sugar Maple  
 American Beech  
 White Oak  
 Swamp White Oak  
 Bur Oak  
 Willow Oak  
 English Oak

## Spreading



### Height 15-20'

#### Botanical name

*Acer ginnala* 'Flame'  
*Acer palmatum*  
*Cercis canadensis texensis* 'Oklahoma'  
*Cornus mas*  
*Crataegus viridis* 'Winter King'  
*Malus* 'Mary Potter'  
*Malus* 'Jewelberry'  
*Malus* 'Snowdrift'  
*Malus sargentii*  
*Prunus serrulata* 'Mt. Fuji'  
*Rhus glabra laciniata*

#### Common Name

Flame Amur Maple  
 Japanese Maple  
 Oklahoma Redbud  
 Cornelian Cherry Dogwood  
 Winter King Hawthorn  
 Mary Potter Crabapple  
 Jewelberry Crabapple  
 Snowdrift Crabapple  
 Sargent Crabapple  
 Mt. Fuji Cherry  
 Cutleaf Smooth Sumac

### Height > 20-45'

#### Botanical Name

*Carpinus japonica*  
*Cercis canadensis*  
*Cornus florida*

#### Common Name

Japanese Hornbeam  
 Redbud  
 Flowering Dogwood

#### Botanical Name

*Malus floribunda*  
*Prunus sargentii*  
*Prunus yeodensis*

#### Common Name

Japanese Flowering  
 Crabapple  
 Sargent Cherry  
 Yoshino Cherry

## Vase (Upright Spreading)



### Height 15-20'

#### Botanical Name

*Acer palmatum* 'Moonfire'  
*Acer palmatum* 'Bloodgood'  
*Aronia arbutifolia* 'Brilliantissima'  
*Cornus kousa* 'Milky Way'  
*Lagerstroemia* spp.  
*Malus* 'Adirondack'  
*Vitex agnus-castus*

#### Common Name

Moonfire Japanese Maple  
Bloodgood Japanese Maple  
Brilliant Red Chokeberry  
Milky Way Dogwood  
Crapemyrtle  
Adirondack Crabapple  
Chaste Tree

### Height > 20-45'

#### Botanical Name

*Acer griseum*  
*Acer rubrum* 'Franksred'  
*Cladrastis lutea*  
*Gleditsia triacanthos* 'Shademaster'  
*Prunus* 'Snow Goose'  
*Prunus serrulata* 'Kwanzan'

#### Common Name

Paperbark Maple  
Red Sunset Red Maple  
Yellowwood  
Shademaster Honey Locust  
Snow Goose Cherry  
Kwanzan Cherry

### Height > 45'

#### Botanical Name

*Ulmus* 'Pioneer'  
*Ulmus parvifolia* 'Dynasty'  
*Ulmus parvifolia* 'Emer I'  
*Zelkova serrata* 'Green Vase'  
*Zelkova serrata* 'Village Green'

#### Common Name

Pioneer Elm  
Dynasty Elm  
Athena Elm  
Green Vase Zelkova  
Village Green Zelkova

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## Weeping

\*Evergreen



### Height 15-20'

#### Botanical Name

*Acer palmatum* 'Crimson Queen'  
*Acer palmatum* 'Ever Red'  
*Betula pendula* 'Youngii'  
*Cercidiphyllum magnificum* 'Pendulum'  
\**Ilex vomitoria* 'Pendula'  
*Malus* 'Cascole'  
*Malus* 'Weepczam'  
*Morus alba* 'Chaparral'  
\**Pinus strobus* 'Pendula'  
*Prunus subhirtella pendula*

#### Common Name

Crimson Queen Japanese Maple  
Ever Red Japanese Maple  
Young's Weeping Birch  
Weeping Katsura Tree  
Weeping Yaupon Holly  
White Cascade Crabapple  
Weeping Candied Apple Crabapple  
Chaparral Weeping Mulberry  
Weeping White Pine  
Weeping Japanese Cherry

### Height > 20-45'

#### Botanical Name

*Betula pendula*  
*Fagus sylvatica* 'Pendula'  
*Prunus subhirtella* 'Pendula Plena Rosea'  
*Prunus* x 'Snofozam'

#### Common Name

European White Birch  
Weeping Beech  
Double Weeping Cherry  
Snow Fountain Cherry

### Height > 45'

#### Botanical Name

*Salix alba* 'Tristis'  
*Salix babylonica*  
*Salix matsudana* 'Tortuosa'

#### Common Name

Golden Weeping Willow  
Weeping Willow  
Contorted Willow



Donna C. Fare



Pyramidal canopy form of pond cypress (*Taxodium distichum*).

A red maple, *Acer rubrum*, with a mature oval canopy can provide a d e q u a t e shade; but, 'Armstrong', a cultivar of red maple, is very columnar in form, thus providing little shade. The density of the branches and foliage determines the amount of shading. Sugar maples can produce a very dense shade that inhibits the growth of other plants. The Chinese pistache tree

has a similar canopy form, but the leaves are small and fine textured. The filtered shade does not hinder turf or other plants from growing beneath the tree.

Be sure to select a tree whose ultimate height will be less than the height of the lowest utility line. A maximum height for plants under utility lines is 20 feet. Trees that will mature to 20-45 feet in height should be planted at least 15 feet from utility lines. Large trees with mature heights greater than 45 feet should never be planted near utility lines.

When planting close to a building, plant small trees, 30 feet or less in height, at least 8-10 feet from a wall and at least 6-8 feet from a corner (Figure 1). Medium-size trees, 30-70 feet in height should be planted 12-15 feet from a wall or cor-

Carol Reese



Columnar crown form of fastigiated European hornbeam (*Carpinus betula* 'Fastigiata').

ner. Trees that mature greater than 70 feet in height need at least 15-20 feet of space from a building. If trees are to be planted in a mass or grouping, space trees at least one-half of their expected canopy spread.

Nursery producers and plant breeders have selected many tree cultivars for unique canopy forms. These cultivars have different canopy forms than do their parent species. For instance,

Bradford Pear, *Pyrus calleryana* 'Bradford', a commonly used landscape tree, has a rounded or oval canopy form. Another cultivar of *Pyrus calleryana*, 'Capital', has a very columnar form. Both of these trees exhibit outstanding flowering and fall color.

Familiarize yourself with the mature form and size of the trees you are contemplating planting. The trees listed in this publication show tree forms and average sizes for mature trees for our region. Actual growth will depend on soil, moisture, light and temperatures of the site. Choose trees that are easy to maintain, fairly resistant to insects and diseases and available in and adapted to your area.

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