

Flowering Crabapples for Maine

University of Maine Cooperative Extension Bulletin #2058

Prepared by Lois Berg Stack, Extension specialist, ornamental horticulture University of Maine Cooperative Extension, Orono, Maine

Flowering crabapples are some of the most popular trees in the Maine landscape. They are generally hardy throughout the state, although they can be injured and even killed in an exceptionally cold winter. They are easily grown and widely available. Many superior cultivars are resistant to diseases that can be problematic.

Crabapples are often called "plants for all seasons" because they offer flowers in spring, high-quality foliage in summer, fruits in fall and

winter, and a variety of sizes and forms. Few plants offer such outstanding beauty throughout the year.

Flowers

Crabapples flower for a period of two-14 days between mid-May and early June. The white, pink or red buds open to single or double flowers, which range from white to purplish red. Most crabapples flower in midseason (June 1 in central Maine), but a careful selection of early, midseason and late cultivars can provide a succession of flowering in the landscape.

Like many eating apple cultivars, some older types of crabapples tend to flower in alternate years. Most newer introductions flower heavily every year.

Foliage

New leaves in spring may be green or bronze. Most crabapples' leaves turn green about a month into the season, but some retain a reddish or purplish color throughout the season. Most crabapples do not have outstanding fall color, but some do turn orange, bronze or yellow.

Fruit

Both crabapples and "eating" apples are members of the genus *Malus*, with crabapples having fruits smaller than two inches diameter. Some crabapples' fruits are as small as 1/4 inch in diameter. Fruit colors include yellow, orange, red and purple. Some are fully colored by August, while others do not reach full color until September or October. The fruit of a few types of crabapples drop soon after ripening, but the fruit of others remains on the trees until the next spring.

Fruit should be a major consideration when choosing a crabapple. The persistence of the colorful fruit makes it at least as important in the landscape as the spring flowers. Some larger-fruited types are also good for making jams, jellies and preserves. Smaller-fruited crabapples are prized as bird food. Birds eat some types in fall and early winter, and leave more sour types until spring.

Size and Form

Crabapples range in height from five feet to 40 feet. Many crabapples are rounded, but others are upright-spreading or narrow-upright in shape. A few have a graceful weeping form. These various forms make the crabapple a perfect choice for many locations and provide much interest in the landscape throughout the year.

Use in the Landscape

Flowering crabapples have been planted in American landscapes since the late 1700s. Their outstanding attributes make them an excellent choice for many locations. A single tree planted in front of evergreens creates focal point in spring, summer, fall and winter. Dwarf types are effective in borders and even in flower gardens. Crabapples are good street trees, especially where overhead wires prevent the use of larger trees.

They also provide shade in the small urban yard. The flowers are beautiful when viewed at close range, and provide a small urban yard. The flowers are beautiful when viewed at close range, and provide a spectacle when trees are massed together in a larger landscape.

Care

The planting site should have full sun. Crabapples tolerate a wide range of soil types with a pH in the range of 5.0 to 7.5; a pH of 5.5 to 6.5 is ideal. Test the soil before planting. Apply lime, organic matter and/or fertilizer according to the test results. Good soil drainage is essential. Very dry or wet soils should be avoided. If properly cared for, crabapples perform well in narrow planting strips, large containers and planting boxes.

Planting Bare Root Trees

A the nursery, many crabapples are grown three to six feet in height in the field, then dug in the fall and stored cold without soil over the winter. In spring, these bare root trees are available for planting.

When handling a bare root tree, plan ahead and plant as quickly as possible. Choose a site, test the soil and amend if necessary. When you obtain the plant, make very effort to prevent the roots from drying out. Place the tree where it is protected from hot sun and wind. Immerse the tree's roots in a bucket of water, or cover the roots with wet burlap or straw. Do not leave the roots in water longer than overnight. Then follow these steps:

- 1. Dig a hole deep enough to accommodate the roots without having to bend them to fit.
- 2. Place the tree in the hole at about the same depth or slightly higher than its original nursery planting depth. If the native soil is able to hold moisture, yet is well-drained, use it as is. If necessary, add organic matter like compost or rotted manure to improve drainage and water-holding capacity, but do not add more than 25 percent organic matter by volume.
- 3. Shovel the soil into the hole around the roots, filling the hole about halfway.
- 4. Tamp the soil carefully but firmly with the shovel handle, and water to help settle the soil. Continue to fill the hole completely, and tamp and water again.
- 5. Add a two-to-three inch layer of organic mulch, such as bark chips, to reduce water loss from the soil, and to prevent lawnmower damage to the base of the tree trunk.
- 6. Supply 1 to 1 1/2 inches of water to the tree every 10 days, through irrigation or rainfall, during the first three growing seasons. This care is critical for good establishment.

 Remember that a healthy, vigorous, well-established tree is able to tolerate more pressure from diseases, insects and other stress.

Planting Container-Grown Trees

Some crabapples are grown and sold in containers. These trees are best planted in spring, but can be successfully planted later in the growing season if the site is well chosen, if good planting practices are followed, and water is supplied as discussed above.

When handling a container-grown crabapple, carefully remove it from the container, keeping the root ball intact. Dig the hole as deep as the root ball but never deeper. The tree, when placed in the hole, should rest on firm, native soil. If any roots girdle the base of the trunk, cut them. If roots circle around the base of the root ball, remove them. If the surface of the root ball is thickly covered with a dense mat of roots, use a sharp knife to cut an inch into the root ball, from top to bottom, in three or four evenly spaced places around the root ball. Place the tree in the hole, and continue as discussed for bare root trees.

Planting B&B Trees

Crabapples, especially larger specimens, are also available as balled-and-burlapped (B&B) trees. B&B trees are field-grown in nurseries, then dug for transplanting into the landscape. Their root balls are protected with natural-fiber or plastic burlap. Like container-grown crabapples, these are best planted in spring, but can be successfully planted later if care is taken.

Dig a hole only as deep as the depth of the root ball, and place the plant into the hole on firm native soil. Remove the ropes, nails or other fastenings from the burlap. If left intact, the burlap can hinder root penetration into the native soil, and can cause long term problems for the tree. If the burlap is plastic, remove it entirely, disturbing the root ball as little as possible. If the burlap is a natural fiber, either remove it, or fold it into the bottom of the hole, or cut it near the base of the root ball. Remove girdling roots if present, and continue as described for bare root trees.

Pruning

After planting, prune out only damaged branches and suckers at the base of the tree (these should be removed whenever noticed). Leave all remaining growth to maximize the tree's production of sugars in the first critical year of growth. The tree can be pruned for shape in the spring the next season (see Bulletin #2169, "Pruning Woody Landscape Plants").

Crabapple Diseases

Several diseases can cause significant aesthetic damage to crabapples. If severe enough, they can cause permanent damage. You can prevent these diseases by choosing plants wisely. Many crabapples are resistant to some or all of these problems. The crabapples listed in this publication are rated for their resistance to these problems. By choosing resistant crabapples, you can avoid the need for chemical controls in the future.

Apple Scab is the most serious disease threat to apples and crabapples in Maine. The apple scab fungus overwinters in old infected leaves and on previous-year twigs of affected crabapples. The first infection of the season occurs in early June. Secondary infections can occur during periods of wet weather throughout the season.

The fungus causes dull, smoky, irregular spots on leaves. The spots turn olive-colored, and leaves may turn yellow and fall as early as midsummer. The fruits on affected trees develop circular, rough spots, which turn from olive to brown to black.

Fireblight is a bacterium that overwinters in infection sites on apple, crabapple, hawthorn, amelanchier, mountain ash and pear. Splashing rain spreads infections to flowers in spring, and nectar-seeking insects can move the bacteria from tree to tree.

Infections first develop on blossoms, which appear water-soaked, and shrivel and die rapidly. Leaves at the tips of branches turn brown and die, but remain attached to the dead twigs. Tips of infected twigs often curl backward, forming a "shepherd's crook." Slightly sunken areas called cankers often develop on branches.

Fireblight advances quickly and often kills trees in drier climates, but it can often be controlled in Maine through selection of resistant plants, and early pruning of affected shoots.

Cedar-Apple Rust is a rusts fungus. Rust are fungi that require two host plants to complete their life cycle. Because the alternate host for this fungus ("Eastern Red Cedar," *Juniperus virginiana*) is native to Southern Maine, cedar-apple rust can be an occasional problem.

On crabapples, cedar-apple rust causes orange spots, 1/8 to 3/4 inch in diameter, on leaves. The upper surface is covered with tiny black dots in a reddish circle, and the lower surface later becomes covered with circular clusters of 1/6-inch cup-shaped structures with fringed edges. In fall, spores from these cups are windblown to Eastern Red Cedar. Eighteen to 20 months later a different kind of spore is produced, which can reinfect crabapples.

Heavy infection of cedar-apple rust can cause early leaf drop and plant stress in crabapples. This problem can best be controlled by choosing resistant cultivars.

Powdery Mildew is a fungus that can attack the flowers, leaves and fruits of crabapples. Generally, it causes narrow, cupped young leaves with a powdery white fungal growth on the leaf surfaces. The fungus overwinters in dormant buds, and causes new infections in warm humid spring weather. Although unsightly, it generally causes little damage, and it can be avoided through careful plant selection.

Insects & Other Pests

Aphids are small, soft-bodied insects, generally pale green. They feed by piercing and sucking juices from the undersides of young leaves, causing them to curl downward to twist. Aphids also secrete a sticky honeydew, which falls on leaves below and supports the growth of black sooty mold fungus.

Aphids can be controlled by knocking them off branch tips with a forceful stream of water. Heavy infestations can be pruned out. For chemical control recommendations, call your <u>county Extension office</u>.

Mites are a serious problem in Maine only in hot, dry summers. They are very small, spider-like organisms that feed on the under-sides of leaves, causing a yellow-to-bronze discoloration.

Eastern Tent Caterpillars feed in early summer by chewing on young leaves. At night, they retreat to their webbed nests in the branches of trees. Physical destruction of the nests and insects is the best control. Do not burn the nests, as this can cause significant damage to the trees.

Flathead Apple Tree Borers tunnel under crabapple bark at or near the soil line. They can girdle (eat completely around the tree just inside the bark) and kill the tree if left undetected. A clue to their presence is a pile of sawdust at the base of the tree.

Borer attack can generally be avoided by promoting healthy tree growth and by preventing bark damage from lawnmowers. If borers are detected, probe into the holes with a wire to kill them (several may be present).

Rabbits & Mice chew on the bark of young crabapples during the winter. If they remove the bark all the way around the trunk, the tree will die. Mice generally feed on the trunk at ground level, but rabbits sometimes feed on limbs higher in the tree, and may cut off young twigs.

Rabbits are difficult to deter, but they generally cause little damage to crabapples in Maine. Mice can cause serious damage to Maine crabapples. Eliminating sod around trees by applying mulch helps to discourage mice. Protecting trunks with hardware cloth in late fall prevents mice from reaching trees during winter. Tramping down snow around trunks after each snowfall can help eliminate mouse tunnels. For information about baiting and trapping rabbits and mice, call your <u>county Extension</u> office.

Crabapple Height, Spread, Form, Foliage, Flowers, Fruit, and Disease Resistance

Adams

Height: 20 Spread: 20 Form: Rounded

Foliage: Green with a reddish

tint

Flowers: Deep pink buds, clear red flowers, single Fruit: Red, 5/8", very

persistent
Disease:
Scab: Good

Fireblight: Excellent

Cedar Apple Rust: Excellent Powdery Mildew: Good

Adirondack

Height: 18 Spread: 10

Form: Upright, like an inverted

cone

Foliage: Medium green Flowers: Red buds, waxy white flowers with red tinge,

single

Fruit: Bright red, 1/2"

Disease:

Scab: Excellent Fireblight: Excellent

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Baskatong

Height: 25 Spread: 25

Form: Spreading

Foliage: Deep purple turns to bronze green in summer,

reddish in fall

Flowers: Reddish purple,

single

Fruit: Reddish purple, 1"

Disease: Scab: Good

Fireblight: Excellent

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Baccata Jackii

Height: 20 Spread: 20 Form: Rounded Foliage: Shiny green Flowers: White buds tinged pink, white flowers, single

Fruit: Red, 3/8"

Disease:

Scab: Excellent Fireblight: Fair

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Beverly

Height: 20 Spread: 20

Form: Upright-spreading Foliage: Light green

Flowers: Pink buds, white flowers, single

Fruit: Red, 5/8"

Disease:

Scab: Excellent Fireblight: Fair

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Bob White

Height: 20 Spread: 20

Form: Rounded and dense

Foliage: Green

Flowers: Pink buds, white

flowers, single

Fruit: yellow, 1/2 to 5/8",

persistent Disease:

Scab: Excellent Fireblight: Fair

Cedar Apple Rust: Excellent Powdery Mildew: Good

Brandywine

Height: 20 Spread: 20

Candied Apple

Height: 15 Spread: 15

Centurion

Height: 20 Spread: 15 Form: Vase-shaped

Foliage: Purple-tinted green,

deep purple in fall

Flowers: Deep rose, fragrant,

double

Fruit: Green, 1-1/4"

Disease: Scab: Fair

> Fireblight: Excellent Cedar Apple Rust: Poor Powdery Mildew: Excellent

Form: Horizontal to pendulous

branches

Foliage: Dark green with tinge

of red

Flowers: Purplish pink, large,

Fruit: Cherry red, 1/2",

persistent Disease: Scab: Fair

Fireblight: Excellent

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Scab: Good Fireblight: Excellent

persistent

Disease:

green later

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Form: Narrow and upright

Flowers: Rose red, single

Fruit: Bright red, 5/8",

Foliage: Reddish purple early,

David

Height: 12 Spread:12 Form: Rounded

Foliage: Green Flowers: Light pink buds,

white flowers, single

Fruit: Bright red, 3/8 to 1/2",

persistent Disease: Scab: Good Fireblight: Good

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Dolgo

Height: 40 Spread: 40

Form: Upright-spreading Foliage: Glossy green Flowers: Pink buds/ white

flowers, single

Fruit: Red, 1-1/2", edible

Disease: Scab: Good Fireblight: Good

> Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Donald Wyman

Height: 20 Spread: 20 Form: Rounded

Foliage: Medium green Flowers: Red to pink buds,

white flowers, single Fruit: Bright red, 3/8", persistent, abundant

Disease: Scab: Good Fireblight: Good

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Doubloons

Height: 18 Spread: 16

Form: Dense, upright-

spreading

Foliage: Deep green Flowers: Red buds, white

flowers, double

Fruit: Yellow, 3/8", persistent

Disease: Scab: Good Fireblight: Good

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Floribunda

Height: 18 Spread: 25

Form: Horizontally rounded

with dense branches

Foliage: Green

Flowers: Carmine buds open to pink flowers that fade to

white, single

Fruit: Yellow-red, not showy,

3/8"

Disease: Scab: Good

Fireblight: Fair

Cedar Apple Rust: Excellent Powdery Mildew: Good

Henry Kohankie

Height: 20 Spread: 20 Form: Rounded Foliage: Green

Flowers: Pink buds, pinkish

white flowers, single Fruit: Red, 1-1/4", oval,

persistent Disease: Scab: Good

Fireblight: Excellent

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Indian Magic

Height: 15 Spread: 15

Form: Rounded-spreading

Foliage: Dark green

Indian Summer

Height: 18 Spread: 20 Form: Rounded Foliage: Bronze green

Jewelberry

Height: 8 Spread: 12

Form: Rounded, dense

Foliage: Green

Flowers: Red buds, deep pink

flowers, single

Fruit: Glossy red to golden orange, 1/2", persistent

Disease: Scab: Fair

Fireblight: Excellent

Cedar Apple Rust: Excellent

Powdery Mildew: Excellent

Flowers: Rose red Fruit: Bright red, 5/8",

persistent Disease: Scab: Good

Fireblight: Excellent

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Flowers: White with pink edge

Fruit: Bright red, 1/2"

Disease:

Scab: Excellent Fireblight: Excellent

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Liset

Height: 15 Spread: 15 Form: Upright

Foliage: Red-maroon new leaves, turning bronze green Flowers: Dark crimson buds, bright pinkish red flowers.

single

Fruit: Dark red, too dark to be

showy, 1/2 to 1"

Disease: Scab: Good Fireblight: Good

Cedar Apple Rust: Excellent

Powdery Mildew: Fair

Mary Potter

Height: 10 Spread: 15

Form: Low spreading Foliage: Dark green

Flowers: Pink buds, white flowers, single

Fruit: Red, 3/8", persistent,

great for birds Disease:

> Scab: Good Fireblight: Fair

Cedar Apple Rust: Excellent Powdery Mildew: Fair

Ormiston Roy

Height: 20 Spread: 25

Form: Upright, but spreading

with age Foliage: Green

Flowers: Pink buds, white

flowers, single

Fruit: Yellow with orange blush, 3/8", persistent

Disease:

Scab: Excellent Fireblight: Good Cedar Apple Rust:

Excellent

Powdery Mildew: Excellent

Pink Spires

Height: 15 Spread: 12 Form: Narrow Foliage: Maroon

Flowers: Dark lavender buds,

pink flowers, single

Fruit: Maroon, 1/2", persistent

Disease: Scab: Fair Fireblight: Fair

Cedar Apple Rust: Excellent Powdery Mildew: Good

Prairifire

Height: 20 Spread: 20

Form: Upright, becoming

rounded

Foliage: Red maroon, turning

reddish areen

Flowers: Crimson buds, bright pinkish red flowers, single Fruit: Dark red, 3/8" to 1/2",

persistent Disease:

> Scab: Excellent Fireblight: Excellent

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Professor Sprenger

Height: 20 Spread: 20

Form: Upright spreading

Foliage: Green

Flowers: Pink buds, white

flowers, single

Fruit: Orange-red, 1/2",

persistent Disease:

Scab: Excellent Fireblight: Excellent

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Profusion

Height: 20 Spread: 20

Form: Upright spreading Foliage: Purplish, fading to

bronze

Flowers: Deep red buds, deep

Purple Prince

Height: 20 Spread: 20 Form: Rounded

Foliage: Purple, becoming

bronze green

Flowers: Carmine buds, rose

Red Baron

Height: 18 Spread: 8 Form: Narrow

Foliage: Reddish purple aging to bronze green; good fall color Flowers: Deep red buds, dark

pink flowers, single Fruit: Maroon, 1/2"

Disease: Scab: Fair Fireblight: Good

Cedar Apple Rust: Excellent Powdery Mildew: Good

red flowers, single

Fruit: Maroon, 3/8 to 1/2

Disease:

Scab: Excellent Fireblight: Good

Cedar Apple Rust: Excellent Powdery Mildew: Good

red flowers, single Fruit: Dark red, 1/2"

Disease: Scab: Fair Fireblight: Good

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Red Splendor

Height: 20 Spread: 20

Form: Open, graceful,

spreading

Foliage: Glossy reddish green Flowers: Rose buds, pink flowers keep their color well Fruit: Red, 1/2", persistent,

showy, very hardy

Disease: Scab: Fair Fireblight: Fair

Cedar Apple Rust: Good Powdery Mildew: Good

Robinson

Height: 25 Spread: 25

Form: Upright, becomes

spreading

Foliage: Reddish, aging to bronze green, good fall color Flowers: Crimson buds, deep pink flowers, single; good

contrast with leaves

Fruit: Dark glossy red, 3/8", hidden by leaves which hold

on late in fall Disease:

Scab: Good

Fireblight: Excellent

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Sargentii

Height: 10 Spread: 12

Form: Dense, shrubby, often

twice as wide as tall Foliage: Dark green Flowers: White, single, fragrant, abundant

Fruit: Dark red, 1/4 to 1/3",

persistent Disease:

Scab: Excellent Fireblight: Excellent

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Sentinel

Height: 20 Spread: 12

Form: Narrow and upright Foliage: Dark green, glossy Flowers: Red buds, white flowers with pink tint, single Fruit: Bright red, 1/2",

persistent
Disease:
Scab: Good
Fireblight: Good

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Snowdrift

Height: 20 Spread: 20

Form: Round, dense, uniform Foliage: Green, glossy

Flowers: Pink buds, white

flowers, single

Fruit: Orange, under 3/8",

persistent
Disease:
Scab: Good
Fireblight: Poor

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Strawberry Parfait

Height: 18 Spread: 20

Form: Vase shaped

Foliage: Reddish purple aging

to green

Flowers: Red buds, pink flowers, single, in clusters Fruit: Yellow with red blush,

3/8" Disease:

Scab: Excellent Fireblight: --

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Sugartyme

Height: 18 Spread: 15

Form: Upright spreading, oval

Foliage: Green

Flowers: Pale pink buds, white flowers, single Fruit: Red, 1/2", persistent

Tina

Height: 5 Spread: 6

Form: Shrub-like, spreading

Foliage: Green

Flowers: Bright red buds, white flowers, single

Fruit: Bright red, 1/4 to 1/3",

White Candle

Height: 14 Spread: 6-8

Form: Columnar, becoming

vase shaped Foliage: Green

Flowers: Pink buds, white flowers with pink tint, semi-

Disease:

Scab: Good Fireblight: Fair

Cedar Apple Rust: Excellent

Powdery Mildew: Excellent

persistent Disease:

Scab: Excellent

Fireblight: Excellent
Cedar Apple Rust: Excellent

Powdery Mildew: Excellent

double

Fruit: Red, 5/8", sparse

Disease: Scab: Fair Fireblight: Fair

Cedar Apple Rust: Excellent Powdery Mildew: Good

White Cascade

Height: 15 Spread: 15 Form: Weeping Foliage: Green

Flowers: Pink buds, white

flowers, single Fruit: Yellow, 3/8"

Disease:

Scab: Good

Fireblight: Excellent

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Zumi Calocarpa

Height: 20 Spread: 20

Form: Upright, later rounded and gracefully spreading Foliage: Green, dense Flowers: Pink buds, pinkish white flowers, fragrant, single

Fruit: Bright red, glossy, 3/8", persistent Disease:

Scab: Good Fireblight: Fair

Cedar Apple Rust: Excellent Powdery Mildew: Good

Zumirang

Height: 20 Spread: 20

Form: Upright, rounded Foliage: Green, glossy

Flowers: White Fruit: Red, 3/8"

Disease: Scab: Good Fireblight: Fair

Cedar Apple Rust: Excellent Powdery Mildew: Excellent

Published and distributed in furtherance of Acts of Congress of May 8 and June 30, 1914, by the University of Maine Cooperative Extension, the Land Grant University of the state of Maine and the U.S. Department of Agriculture cooperating. Cooperative Extension and other agencies of the U.S.D.A. provide equal opportunities in programs and employment.

Return to Publications Catalog Online Table of Contents Return to Publications Homepage

COUNTY OFFICES | PROGRAMS | RESOURCES | PUBLICATIONS | NEWS AND EVENTS | UMAINE EXTENSION HOME | UMAINE

Putting knowledge to work with the people of Maine



A Member of the University of Maine System

Last Modified: 08/12/08

These pages are currently being maintained from the

Communications Office, University of Maine Cooperative Extension.

Send comments, suggestions or inquiries to www-questions@umext.maine.edu