



Acer platanoides 'Columnare' 'Columnare' Norway Maple¹

Edward F. Gilman and Dennis G. Watson²

INTRODUCTION

This cultivar of Norway Maple has a height of about 50 to 60 feet, but only spreads to about 15 or 20 feet (Fig. 1). The upright crown fills with greenish-yellow flowers in the spring. Lateral branches are short and grow almost horizontally which is quite unusual for a columnar tree. Some suggest growing the tree with only one central trunk to avoid multiple-trunk crotches from splitting apart. Norway Maple's shallow root system competes with lawn grasses, and the shallow roots can make mowing under the tree difficult. The shallow roots can heave sidewalks so be certain to locate the tree at least four to six feet away. The tree is easily transplanted, grows quickly, is adapted to a wide variety of soils (including alkaline) and has brilliant yellow fall color unmatched by most trees. It can also tolerate coastal conditions. The narrow crown makes this tree well suited to street tree plantings where vertical space is limited.

GENERAL INFORMATION

Scientific name: *Acer platanoides* 'Columnare'

Pronunciation: AY-ser plat-uh-NOY-deez

Common name(s): 'Columnare' Norway Maple

Family: *Aceraceae*

USDA hardiness zones: 4 through 7A (Fig. 2)

Origin: not native to North America

Uses: Bonsai; wide tree lawns (>6 feet wide); medium-sized tree lawns (4-6 feet wide); recommended for buffer strips around parking lots or for median strip plantings in the highway; screen; specimen; sidewalk cutout (tree pit); residential street tree; tree has been successfully grown in urban areas

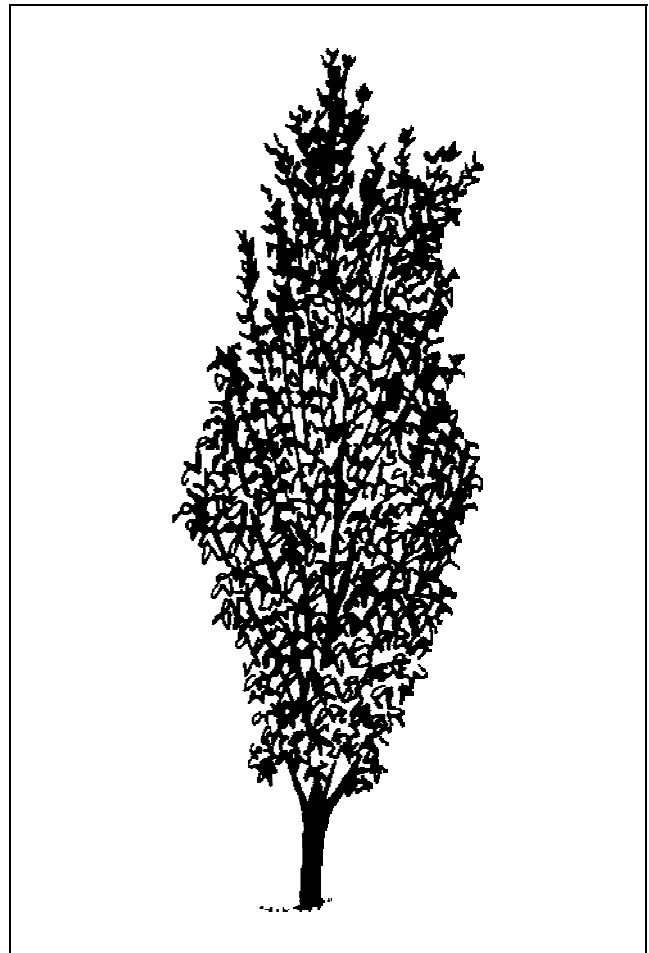


Figure 1. Middle-aged 'Columnare' Norway Maple.

where air pollution, poor drainage, compacted soil, and/or drought are common

Availability: generally available in many areas within its hardiness range

1. This document is adapted from Fact Sheet ST-31, a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: November 1993.
2. Edward F. Gilman, associate professor, Environmental Horticulture Department; Dennis G. Watson, associate professor, Agricultural Engineering Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL 32611.



Figure 2. Shaded area represents potential planting range.

DESCRIPTION

Height: 50 to 60 feet
Spread: 15 to 20 feet
Crown uniformity: symmetrical canopy with a regular (or smooth) outline, and individuals have more or less identical crown forms
Crown shape: columnar; upright
Crown density: dense
Growth rate: medium
Texture: coarse

Foliage

Leaf arrangement: opposite/subopposite (Fig. 3)
Leaf type: simple
Leaf margin: lobed; dentate; incised
Leaf shape: star-shaped
Leaf venation: palmate
Leaf type and persistence: deciduous
Leaf blade length: 4 to 8 inches
Leaf color: green
Fall color: yellow
Fall characteristic: showy

Flower

Flower color: green
Flower characteristics: inconspicuous and not showy; spring flowering

Fruit

Fruit shape: elongated
Fruit length: 1 to 3 inches
Fruit covering: dry or hard
Fruit color: brown; green
Fruit characteristics: attracts birds; no significant litter problem; showy

Trunk and Branches

Trunk/bark/branches: grow mostly upright and will not droop; not particularly showy; should be grown with a single leader; no thorns
Pruning requirement: requires pruning to develop strong structure
Breakage: resistant
Current year twig color: brown
Current year twig thickness: thick

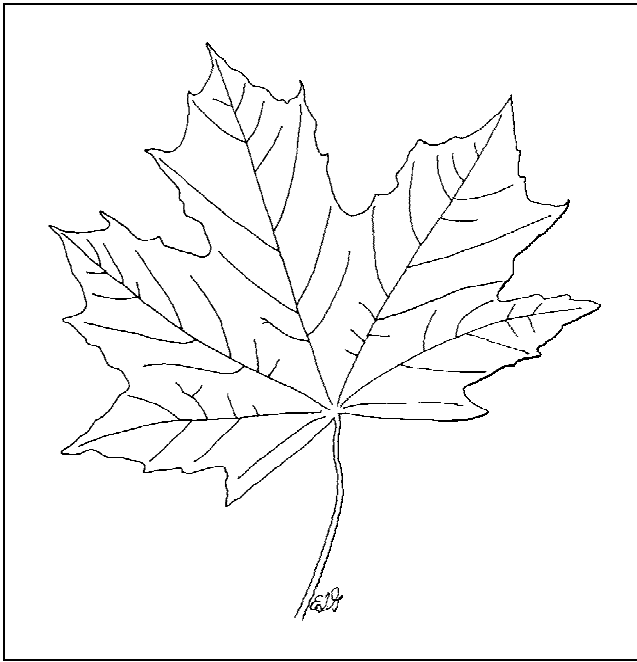


Figure 3. Foliage of 'Columnare' Norway Maple.

Culture

Light requirement: tree grows in part shade/part sun; tree grows in full sun

Soil tolerances: clay; loam; sand; acidic; occasionally wet; alkaline; well-drained

Drought tolerance: moderate

Aerosol salt tolerance: moderate

Soil salt tolerance: good

Other

Roots: surface roots can lift sidewalks or interfere with mowing

Winter interest: no special winter interest

Outstanding tree: tree has outstanding ornamental features and could be planted more

Invasive potential: No entries found.

Verticillium wilt susceptibility: susceptible

Pest resistance: long-term health usually not affected by pests

USE AND MANAGEMENT

Trunks can crack on the southern side during the winter initiating some trunk decay, but the tree usually remains intact. A variety of birds are known to use seeds as a food source. Seeds germinate readily in the landscape and could become a nuisance.

A large number of cultivars are available. Those having colored summer foliage are: 'Crimson King' -

oval, 45 feet tall, foliage purple during the summer; 'Drummondii' - leaves edged in white; 'Schwedleri' - oval, 45 feet tall, foliage reddish in the spring then becoming green. Other cultivars are: 'Almira' - round headed, mature height of about 20 feet; 'Cleveland' - upright growth habit, 50 feet tall; 'Deborah' - new leaves appear as a deep red; 'Emerald Queen' - crown oval, growth rate faster, 60 feet tall; 'Erectum' - upright growth habit; 'Globosum' - rounded head, 20 feet tall; 'Greenlace' - cutleaf cultivar with rapid growth rate; 'Olmstead' - upright growth habit, 45 feet tall; 'Summershade' - crown oval, growth rate faster than species. 'Superform' - round, 45 feet tall, may show more resistance to frost cracks.

Pests

Leaf stalk borer and petiole-borer cause the same type of injury. Both insects bore into the leaf stalk just below the leaf blade. The leaf stalk shrivels, turns black, and the leaf blade falls off. The leaf drop may appear heavy but serious injury to a healthy tree is rare.

Gall mites stimulate the formation of growths or galls on the leaves. The galls are small but can be so numerous that individual leaves curl up. The most common gall is bladder gall mite found on silver maple. The galls are round and at first green but later turn red, then black, then dry up. Galls of other shapes are seen less frequently on other types of maples. Galls are not serious, so chemical controls are not needed.

Aphids infest maples, usually Norway Maple, and may be numerous at times. High populations can cause leaf drop. Another sign of heavy aphid infestation is honey dew on lower leaves and objects beneath the tree. Aphids are controlled by spraying or they may be left alone. If not sprayed, predatory insects will bring the aphid population under control.

Scales are an occasional problem on maples. Perhaps the most common is cottony maple scale. The insect forms a cottony mass on the lower sides of branches. Scales are usually controlled with horticultural oil sprays. Scales may also be controlled with well-timed sprays to kill the crawlers.

If borers become a problem it is an indication the tree is not growing well. Controlling borers involves keeping trees healthy. Chemical controls of existing infestations are more difficult. Proper control involves

identification of the borer infesting the tree then applying insecticides at the proper time.

Diseases

Verticillium wilt symptoms are wilting and death of branches. Infected sapwood will be stained a dark or olive green but staining can't always be found. If staining can not be found do not assume the problem is not verticillium wilt. Severely infected trees probably can't be saved. Lightly infected trees showing only a few wilted branches may be pulled through. Fertilize and prune lightly infected trees. This treatment will not cure the problem but may allow the tree to outgrow the infection. Girdling roots will cause symptoms which mimic verticillium wilt.

Girdling roots grow around the base of the trunk rather than growing away from it. As both root and trunk increase in size, the root chokes the trunk. Girdling roots are detected by examining the base of the trunk. The lack of trunk flare at ground level is a symptom. The portion of the trunk above a girdling root does not grow as rapidly as the rest so may be slightly depressed. The offending root may be on the surface or may be just below the sod. The tree crown shows premature fall coloration and death of parts of the tree in more serious cases. If large portions of the tree have died it may not be worth saving. Girdling roots are functional roots so when removed a portion of the tree may die. When the girdling root is large the treatment is as harmful as the problem. After root removal, follow-up treatment includes watering during dry weather. The best treatment for girdling roots is prevention by removing or cutting circling roots at planting or as soon as they are detected on young trees.

Scorch occurs during periods of high temperatures accompanied by wind. Trees with diseased or inadequate root systems will also show scorching. When trees do not get enough water they scorch. Scorch symptoms are light brown or tan dead areas between leaf veins. The symptoms are on all parts of the tree or only on the side exposed to sun and wind. Scorching due to dry soil may be overcome by watering. If scorching is due to an inadequate or diseased root system, watering may have no effect.

Nutrient deficiency symptoms are yellow or yellowish-green leaves with darker green veins. The most commonly deficient nutrient on maple is manganese. Implanting capsules containing a manganese source in the trunk will alleviate the

symptoms. Test soil samples to determine if the soil pH is too high for best manganese availability. Plants exposed to weed killers may also show similar symptoms.

Tar spot and a variety of leaf spots cause some concern among homeowners but are rarely serious enough for control.