



Betula pendula European Birch¹

Edward F. Gilman and Dennis G. Watson²

INTRODUCTION

European birch is graceful and ornamental with wonderful yellow fall color but is susceptible to fatal attacks of bronze birch borer (Fig. 1). The leaves are often browned by birch leaf miner. When grown, plan to provide the necessary insect control and provide the necessary cultural conditions for best growth.

European birch grows rapidly, reaching a height of 35 to 75 feet. Lawn grasses grow well in its light shade. A moist soil and a regular fertilization program plus watering in dry weather are suggested. Although popular, the tree requires more care and spraying than other ornamental trees. Not a low maintenance tree. Maintaining a good mulch around the root zone is helpful.

GENERAL INFORMATION

Scientific name: *Betula pendula*

Pronunciation: BET-yoo-luh PEND-yoo-luh

Common name(s): European Birch

Family: *Betulaceae*

USDA hardiness zones: 3 through 6 (Fig. 2)

Origin: not native to North America

Uses: near a deck or patio; shade tree; specimen

Availability: generally available in many areas within its hardiness range

DESCRIPTION

Height: 40 to 50 feet

Spread: 15 to 25 feet

Crown uniformity: irregular outline or silhouette

Crown shape: oval; pyramidal; weeping

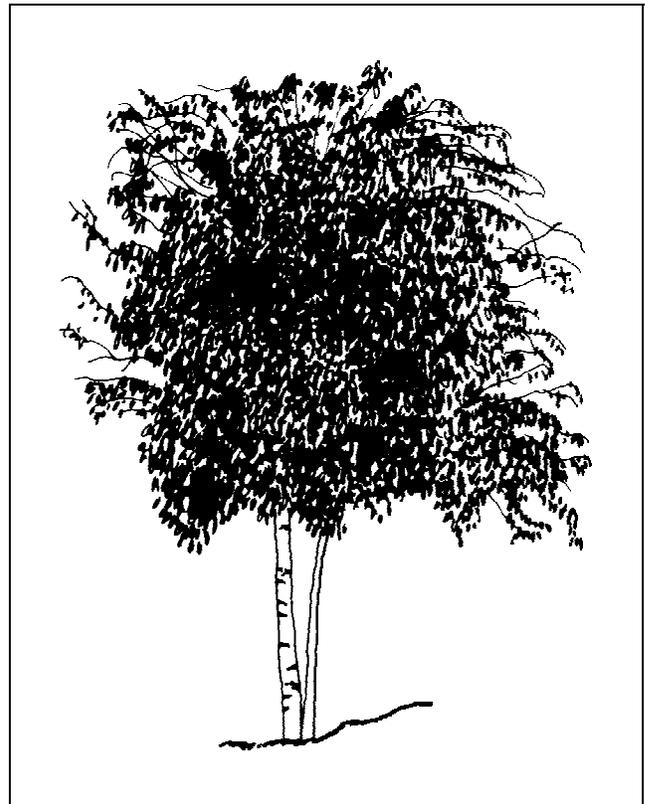


Figure 1. Middle-aged European Birch.

Crown density: open

Growth rate: medium

Texture: fine

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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.

Foliage

- Leaf arrangement:** alternate (Fig. 3)
- Leaf type:** simple
- Leaf margin:** double serrate
- Leaf shape:** ovate; rhomboid
- Leaf venation:** pinnate
- Leaf type and persistence:** deciduous
- Leaf blade length:** 2 to 4 inches; less than 2 inches
- Leaf color:** green
- Fall color:** yellow
- Fall characteristic:** showy

Flower

- Flower color:** brown
- Flower characteristics:** showy; spring flowering

Fruit

- Fruit shape:** elongated
- Fruit length:** 1 to 3 inches; .5 to 1 inch
- Fruit covering:** dry or hard
- Fruit color:** brown
- Fruit characteristics:** attracts birds; inconspicuous and not showy; no significant litter problem

Trunk and Branches

- Trunk/bark/branches:** droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; should be grown with a single leader; very showy trunk; no thorns
- Pruning requirement:** requires pruning to develop strong structure
- Breakage:** resistant
- Current year twig color:** brown
- Current year twig thickness:** thin

Culture

- Light requirement:** tree grows in full sun
- Soil tolerances:** clay; loam; sand; acidic; well-drained
- Drought tolerance:** moderate
- Aerosol salt tolerance:** moderate
- Soil salt tolerance:** moderate

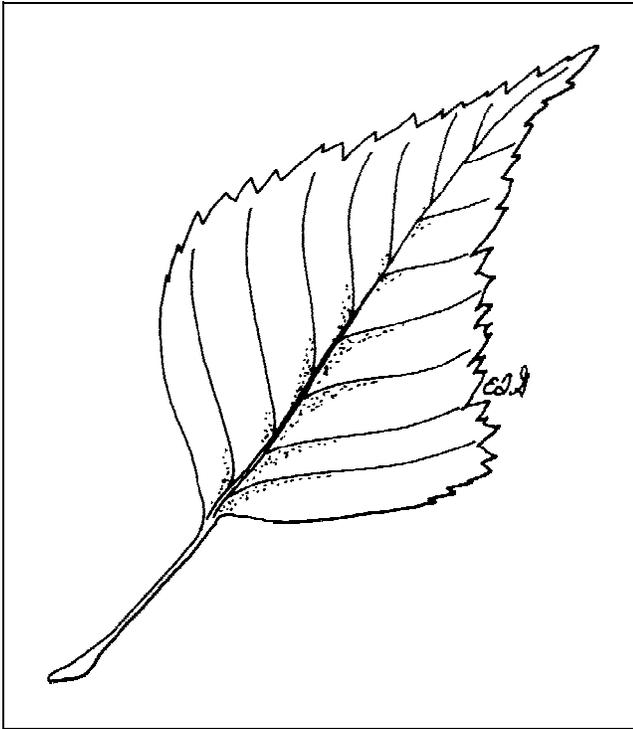


Figure 3. Foliage of European Birch.

Other

Roots: surface roots are usually not a problem

Winter interest: tree has winter interest due to unusual form, nice persistent fruits, showy winter trunk, or winter flowers

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

Invasive potential: little, if any, potential at this time

Ozone sensitivity: tolerant

Verticillium wilt susceptibility: not known to be susceptible

Pest resistance: very sensitive to one or more pests or diseases which can affect tree health or aesthetics

USE AND MANAGEMENT

Several cultivars are available but these too will have pest problems: 'Dalecarlica' - deeply lobed leaves on pendulous branches; 'Laciniata' - cut leaves; 'Fastigiata' - upright growth habit; 'Purple Splendor' (purpurea), 'Scarlet Glory' - purple leaves; 'Tristis' - weeping habit; 'Youngii' - weeping habit.

Pests

A light aphid infestation may not be serious but heavy infestations cause distorted and stunted growth and produce large amounts of honeydew. The honeydew serves as a substrate for sooty mold.

Birch skeletonizer feeding causes leaf browning. The skeletonizer larva is yellowish-green and one quarter-inch-long.

Birch leaf miner is a common insect pest of birch. A small white worm eats out the middle of the leaf which turns brown. Severe attacks of birch leaf miner predispose trees to bronze birch borer infestation. The insect shows up in mid May but timing can vary from one year to the next, and will vary according to your location in the country. The first of two generations per year is the most damaging.

The most serious pest of landscape birches is bronze birch borer. Stressed trees are most susceptible to borer attacks. The insect bores in the sapwood, beginning in the top third of the tree, causing death of the tree crown. The tunnels are slightly raised and faintly rust colored. Emergence holes in the trunk are shaped like capital D's. Keep the trees healthy by controlling other insects, fertilizing, and watering as needed. Chemical control is applied to the trunk and main branches. Timing of the first spray will vary from year to year depending on weather conditions. A commercial sprayer may be needed to apply the spray adequately.

Diseases

Several fungi cause canker diseases on birch. These diseases infect and kill sapwood causing sunken areas on the trunk and larger branches. There is no chemical control for canker diseases. Preventive measures include keeping the tree healthy and avoiding wounding. Regular fertilization will keep birches vigorous and more resistant to cankers. Water in dry weather to prevent water stress.

Dieback is characterized by a slow death of the branches. The tree crown accumulates dead branches. Injury caused by bronze birch borer is similar but far more prevalent. Prevent dieback by maintaining tree vigor with water and fertilizer. When the disease does occur prune out dead branches and increase tree vigor.

Several fungi also cause leaf spots which, when severe, can cause defoliation.