**Betula pendula**  
European Birch\(^1\)

Edward F. Gilman and Dennis G. Watson\(^2\)

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**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

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1. This document is adapted from Fact Sheet ST-97, a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: November 1993.

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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
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.