

RIVER BIRCH

Betula nigra L.

Plant Symbol = BENI

Contributed by: USDA NRCS New York State Office
and USDA NRCS National Plant Data Center



Robert H. Mohlenbrock
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Alternate Names

black birch, red birch, water birch

Uses

Buffers: River birch fits well into buffer installations along with its companion species.

Erosion Control: It has been used successfully in strip mine reclamation and in erosion control.

Wildlife: Its young twigs, buds and foliage are browsed by white-tailed deer; seeds are eaten by grouse, turkeys, small birds and rodents. Its spring ripening make it particularly valuable.

Timber: Its wood is locally used for fuel and occasionally for inexpensive furniture, basket hoops and turned articles; artificial limbs and toys.

Recreation and Beautification: River birch is useful in native-oriented landscapes. It has a balanced and well-formed growth habit and interesting features through all seasons.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's

current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

River birch is native to the eastern United States; south to Florida, north to Minnesota and west to Kansas; it is restricted to stream banks and other moist places. The tree can grow as tall as 40 to 70 feet and 15 to 30 inches in diameter. The bark is exfoliating; gray-brown to ivory or copper colored. The leaves are alternate, simple, 1-3 inches long, and oval-shaped with serrated edges; they are green above and whitish underneath. Flowers are inconspicuous. The winged fruit is small, brown, and borne in clusters in the spring. River birch bears an average of 375,000 seeds per pound. Root crowns and roots survive fire and sprout vigorously. The growth rate of river birch is typically 1.5 to 3 feet per year.

Adaptation and Distribution

This species is restricted to low and medium elevations, and is most common along streams. River birch is at home on somewhat poorly drained to well drained soils making it an easy choice for riparian buffers throughout the range of the species. River birch, like other pioneer species, is not particularly pH sensitive and seems to be tolerant of soils that are in the 4.5 to 7.5 range. It will occasionally develop iron chlorosis in soil with neutral and higher pH. River birch is shade intolerant.

For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

Seed ripens and sheds in the spring and should be directly sown. A seeding density of 25 to 44 per square foot is desirable, lightly covered or without covering if seedbed is kept moist. Stratification of birch seed is usually counter-productive. Seedlings have moderate growth rate and are usually outplanted as 2 year old bareroot stock. Given effective grass and weed control, river birch is easy to establish.

Fertilization of tree and shrub seedlings at planting is generally not recommended. Defer any necessary fertility applications to the second year to avoid root

damage, but only drastically disturbed soils are likely to need fertility inputs.

Management

Attention to weed control is the most critical factor for rapid establishment and early growth of riparian buffers. Grass competition for moisture, nutrients and light is generally more critical than broadleaf weed pressure, however there are broadleaved weeds that are serious threats--these are the very large annuals and the spreading perennials.

The use of selected herbicides or a weed control fabric are two ways to reduce weed competition. State land grant college weed control guidelines for herbicide use should be reviewed for application rates and species compatibility. Consider the grass control herbicides which allow application contact with tree and shrub species.

Weed control fabric can be placed at planting time and provide protection for 3-5 years. The initial expense is greater, but the overall expense may be less where weed pressure is heavy and multiple sprayings of herbicide would otherwise be necessary.

Pests and Potential Problems

The principal leaf disease of river birch is anthracnose leaf blight caused by *Gloeosporium betularum*. Christmas mistletoe (*Phoradendron serotinum*) is a common pest in the South. Minor problems with leaf miner and iron chlorosis which commonly occurs when grown on calcareous soils and other high pH soils. River birch has no serious insect pests and is considered borer resistant. The tree is not very vulnerable to deer browsing.

Cultivars, Improved, and Selected Materials (and area of origin)

No conservation cultivars of river birch exist, but there are horticultural selections in the marketplace. Avoid those selections that exhibit growth patterns not typical of the species, such as variegated leaves or weeping growth habit.

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://Plant-Materials.nrcs.usda.gov>>

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