



## River Birch - A Noteworthy Native

Birch and their Alder relatives, are lightweight trees from the forest fringes, adapted to poor soils and extremes of drought or wet. Birch are the hardest of broadleaf trees, with species growing all the way up to the tundra. The 60 or so species of Birch vary mostly by bark color, but *Betula nigra*, known as Red birch, Water birch, or Black birch, but most commonly as River Birch, is one of most adaptable to sites, diseases, and heat. It is also the largest of our native birches, and is one of the most widespread in range, growing naturally in 30 states, for most of the Eastern half of the US (until the prairie soils begin).

River birch has a light, delicate appearance, with small but dense branches that bow under the weight of spring catkins. Triangular leaves flutter in the wind, light green in spring and summer and yellow in fall.



Papery sheets of cream-colored bark peel away to reveal salmon to cinnamon brown. Older trunks are dark reddish or grayish brown with deep ridges. A young River Birch will be pyramidal in form, rounding out with maturity. Most are sold commercially as clump form, and have a maximum visual effect when planted in groups.

A healthy birch should be able to live up to 50 years, but many in urban sites have a lifespan less than 20 years.



### Site- The Most Important Factor

River Birch grows as a canopy tree in woodlands and along sunny edges. They can be grown in open sunny areas in the landscape, especially sites that are wet a portion of the year, and with acidic soil. The attractive form and bark of the River Birch, as well as its resistance to Bronze Birch Borer make it a valuable ornamental tree in Midwest landscapes.

With its fast growth and extensive root system, it can be used for erosion control along banks, and to quickly establish trees disturbed sites (also used in strip mine reclamation). In reestablishing sites, River birch usually follows Willow and is then replaced by other hardwoods trees (oaks). Birch is one of the tree species with roots that form mycorrhizae, which help obtain nutrients in the reclamation of poor, degraded soils (for more info see [A Word of Caution on Fertilizing Woody Plants](#)).

River Birch is fairly easily transplanted, but they do have prefer some special site conditions. Cool moist soils are preferred, but River Birch can grow in dry soils if their naturally shallow roots can be encouraged go down deep. They love acidic soil (pH<6.5 preferred), and can grow in places (stream bottoms, coal mine drainage) that are too acidic (pH 2-4) for other hardwoods grow. They will tolerate some clay, but if too alkaline can develop iron chlorosis.

River Birch can tolerate flooding if it is less than a quarter of the growing season, and can grow in soils that are waterlogged half of the season. They do not tolerate shade, as a pioneer species they need full sun from germination to maturity. They will, however, welcome some afternoon shade to cool the roots, and can be successfully grown on the North or East side of buildings.

### The Birds and The Bees...

Male catkins form on branch tips in the fall, and mature in the Spring. Female catkins appear in early Spring with the leaves, and the flowers are wind pollinated (see box below). The winged seeds ripen by early summer, and are dispersed by wind or water (River Birch is the only birch that fruits in spring). Water is important in the wild because the seeds land on moist alluvial shores where they can quickly germinate and grow, forming thickets.

Many forest trees rely on wind to spread their pollen, and developed simple open flowers that hang in clusters from the bare branches in early springs. Without the need to attract pollinators, wind pollinated flowers can be small, green, and without petals or scent.

(see [Spring Moves Forward: The Early Flowering Trees & Shrubs](#))







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### Take Good Care of Your Birch

After choosing the right site, mulching and watering are most important factors in growing healthy River Birch. Mulch is critical in moderating temperature and protecting shallow roots from the sun as well as conserving water. Irrigation may be required to supply adequate water, and regular watering (slowly and deeply once a week) will maintain Birch during the growing season. They will need at least 3" per week when temperatures are over 90°. Irrigation should be decreased by September so they can prepare for winter.

### Tough Trees

Usually the problems seen in River Birch are cosmetic, not fatal but merely a biological survival technique developed to survive in extreme conditions. They can make it through summer drought, but will drop leaves and even small branches to cut down on water loss (see side box). Most drought-damaged plants, even if completely defoliated, will recover and return to normal if the water stress is relieved. Give it a chance to recover, and it should be fine the next year. If the stems are still pliable, there is a good chance it will produce healthy leaves the following season. You can prune dead branches, but Birch are one of the species that 'bleed' sap if pruned in the Spring.

Drought tolerators (like River Birch) have shallower and usually more fibrous roots but have also evolved mechanisms to survive without water for a time by adjusting leaf stomata to maximize photosynthesis during stress.

(See [Drought So Bad Trees Chase Dogs](#))

Bronze birch borer (*Agrilus anxius*), bane of our native Birch species, is attracted by a chemical called rhododendrol, which is produced by a stressed birch. River birch is the only native species that do not produce this chemical, making it resistant to the pest. (Other Birch are able to fend off the Bronze Birch Borer if healthy and stress-free)

A River Birch established in the proper site with little stress can fend off most insects and diseases. In really wet years, River Birch may have some leaf spot and lose inner leaves early. Old age, damage, or water stress can make it more susceptible to problems, but a healthy tree will usually be disease-free.

### Birch In the Forest

River Birch are found in Oak/Hickory, Oak/Gum/cypress, and Elm/Ash/Cottonwood forests. The natural habitat of River birch, the bottomland hardwood forest, is also home to wildlife. River Birch can be a nesting site for waterfowl, and supply food and cover for many others. Birds such as ruffed grouse, wild turkey, and others eat the seeds and white-tailed deer browse the foliage.

### GO Roots- Container Growing to Field Growing

Grower and propagator, Mary T. McClelland (of our sister company [Glacier Oaks Nursery](#)), propagates the majority of our River Birch by softwood cuttings. The strongest cuttings are developed into liners, and are grown in pots for several years as we strive for a vigorous top and a well-branched root system. Small container plants are then shifted up to larger containers depending on the species, and maintained in our [GO Trees Container Tree](#) system. They are then lined out in the forest soils of our growing fields and spaced to develop a heavy specimen clump. We supply irrigation by drip lines to keep the Birch from shutting down in dry periods.



### Planting Birch

River Birch are one of the Spring-only dug trees. Spring is also the best season to plant Birch, but they can be planted in fall (preferably by the end of October) if dug in the spring and maintained over the summer in our GO Yard (see [Fall Is For Planting](#)). Trees can be transplanted any time of year as long as they dug in the correct time, planted at correct depth, and well watered and mulched in their new site. (see [Root Tips](#))

**Cultivars** 'Little King'/ Fox Valley® River Birch ([Chicagoland Grows](#))- is a compact, slower growing form of River Birch. The round uniform habit and attractive bark is maximized when planted against a dark background.

