Cultivation Notes

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Black Birch – *Betula lenta L.* **Family:** *Betulaceae*
Yellow Birch – *Betula* alleghaniensis Britt

By Anne B. Wagner


Yellow Birch

When did you last taste birch beer? Fermented Black Birch (Betula lenta) sap flavors this soft drink, an old favorite beverage enjoyed in the northeast where the tree commonly grows in rich, moist, deciduous forests and on steep slopes of ravines with hemlocks. It ranges from southern Maine, south through New England, New York, Pennsylvania and along the Appalachian Mountains into northern Georgia. Black Birch is easy to recognize as a young tree by its smooth, tight, shiny slate-grey bark, marked by horizontal lenticels. Confirm the identification by breaking off a twig to inhale the sharp, sweet wintergreen smell.

The wintergreen odor and flavor are shared by Yellow Birch (Betula alleghaniensis), a stunning sight with its glowing silvery-gold bark and tight horizontal curls. This birch tolerates severe cold and ranges from Newfoundland west to Manitoba, south to Iowa, Tennessee, and the mountains of Georgia. It does not tolerate heat and drought but grows naturally in moist rich woods bordering swamps. Yellow Birch is valuable as lumber in the manufacture of cabinets, plywood, veneer, flooring and paneling.

In the wild both Black and Yellow Birch grow to 60-80 feet high. Alternate leaves, often growing in pairs, are about 4-6 inches long and 2-3 inches wide, oval to elliptical in shape, terminating in a sharp point, heavily veined, and double-saw-toothed. A dull green on top and a lighter green beneath, the leaves in autumn turn bright yellow. Male catkins elongate in early spring from the ends of branches where the wind carries pollen to the cylindrical female catkins, located farther back on the branches. Seeds develop within papery bracts on the female cones and are shed over a long period through fall and winter. Walking in winter woods a hiker can often see the little winged nutlets and the tri-lobed scales lying on the snow. The seeds require bare soil with sufficient moisture and light in order to germinate. The tiny seeds lack the energy to force their root growth through heavy litter. Sometimes a seed germinates on a rotting log and its roots grow down over the log to the soil beneath. Eventually the log decomposes leaving the tree "standing on stilts" [Fergus p. 57] with a void where the log once lay. This is especially true for Yellow Birch. Chickadees, grouse, pine siskins, and other songbirds relish birch buds and seeds, as do red squirrels. Deer, moose, rabbits, beavers, and porcupines browse twigs, bark and foliage. *Cercropia* moth larvae are among a host of larvae which feed upon birch leaves.

Birch bark is high in oil and relatively impervious to moisture. The wood rots before the bark, sometimes leaving a shell of bark standing or lying unaffected for years. Birch bark is flammable. Native people carried it in fire-making pouches to use as tinder. They made tea from bark or twigs to treat fever and in spring drank the sap as a beverage.

In the past the bark of the Black Birch was harvested and distilled to extract methyl salicylate for making oil of wintergreen. It is used as a liniment to ease the pain of rheumatism and sore muscles. The synthetic production of methyl salicylate has reduced the harvest of Black Birch.

Target fungus [Nectria sp.] is common on these birch trees, especially the Yellow Birch. The tree perceives the fungus as a wound and produces a corky ridge of tissue as a healing response. The ridges form a characteristic concentric circles pattern resembling a target. Eventually the fungus weakens the tree and kills it.

Propagation

From seed (recommended method): In late fall or winter, collect mature female cones when they turn brown and break easily. Place in a paper bag and crush to separate the papery winged nutlets from the tri-lobed bracts. Winnow or hand-pick the seeds from the bracts. Sow on the surface of moist peat-sand medium. Do not cover the seeds, as they require light to germinate. Enclose in a plastic bag and place in indirect light outdoors for stratification. Beginning in March, check regularly for signs of germination and remove the plastic at the first signs. Be sure to keep seedlings moist and safe from birds and rodents. As true leaves develop, fertilize regularly, but lightly, until the end of July. Transplant healthy seedlings to individual pots to grow on for a year or two. Birches are slow-growing and may attain only 20" in two years.

From softwood cuttings* (more difficult method): In May or June take six inch cuttings from current year's growth. Twigs should be greenish-brown and pliable. Remove leaves from the lower three inches, dip in rooting hormone, and stick in moist sand. Mist cuttings well, enclose in plastic, provide heat, and indirect light. Mist daily, but do not allow fungus to develop. After four weeks, tug gently. If roots have formed, a gentle pull will meet with resistance. Pot up individually; keep soil moist; place in bright indirect light; fertilize lightly until August; protect from birds and mice. *Note: See Cultivation Note #39, Fall 2004 – "Propagating Woody Plants by Cuttings: Confessions of a Fraud" by Gil Moore.

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Black and Yellow Birch are exacting in their needs. They require cool, moist soil for their relatively shallow roots, yet need sunlight for their leafy canopies. If your property is not wooded, select a northern or eastern exposure where roots will be shaded, but treetops will get sun. Mulch with three to four inches of organic matter, such as chopped leaves or ground bark, avoiding contact with the trunk. U. S. Forest Service bulletin emphasizes the importance of watering landscape birch trees. "During the growing season a slow (2-3 hours), deep (8-18") watering maintains adequate soil moisture." Do a soil test to determine whether or not to fertilize the trees. A light application in early spring may benefit a sapling.

Both Black and Yellow Birch exhibit resistance to birch leafminer and moderate resistance to bronze birch borer. The healthier the tree, the less likely the insects are to attack. Although leafminers cause stress, they do not kill the tree as bronze birch borer does. Seek professional help at the first sign of branch or twig dieback.

References

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Moore, Gil. "Propagating Woody Plants: Confessions of a Fraud." RIWPS Cultivation Note #39, Fall 2004. www.riwps.org. (Accessed 19 Feb. 2011.)

Evans, Erv and Frank A. Blazich. "Plant Propagation by Stem Cuttings: Instructions for the Home Gardener." 1999. www.NCSU.edu. (Accessed 19 Feb. 2011.)

"How to Grow and Maintain a healthy Birch Tree." http://na.fs.fed.us . (Accessed 19 Feb. 2011.)

RIWPS Policy — *Never dig plants in the wild or without the written permission of the landowner. Take seeds sparingly.*

Note: Cultivation Note is a regular feature in ***WildfloraRI*,** the Bulletin of the Rhode Island Wild Plant Society. If you would be interested in writing a future cultivation note article or have suggestions of plants you would like to see included, please contact Dick Fisher at Richard.Fisher2@cox.net. The previous cultivation note topics are listed on the website and there is an easy to follow set of guidelines for the format of your article. — *WildfloraRI* Editorial Committee.