

Birch - *Betula sp.*

**General information:** Birches are pioneer trees, meaning that they grow in open fields, and grow rather quickly at that. They are thus short-lived, usually dying back between age 60-100, and they will not grow in the shade. Birches have peeling bark and pendulous catkins. Many birches have a distinctive white bark which is colored by a pigment called, appropriately enough, betulin. A few birches, such as the yellow birch and sweet birch will grow in the south, but most birches prefer colder climates.

Birches are much loved for bonsai because of their elegant beauty, but they do not take easily to pot culture. Their short lives are also seen as a disadvantage; however, some birches will live as long as 300 years.

**Lighting:** Birches like a lot of light, although some shade is advisable in the hottest areas or in midsummer.

**Temperature:** Birches are very cold hardy, but may need protection from cold winds to prevent twig die-back.

**Watering:** Birches like frequent watering, although they should not be left to stand in moisture. Reduce water in winter, but never let the soil dry completely.

**Feeding:** Wait one month after leaves open, then feed every two weeks till the end of summer.

**Pruning and wiring:** Trim back shoots to the first pair of leaves throughout growth. It is wise to make large pruning cuts late in the season, as birches "bleed" profusely when the sap begins to run.

**Propagation:** Propagation methods vary depending on the species. *Betula pendula* grows most reliably from seed; cuttings root only with difficulty. Cultivars of this species need special measures to root successfully. Some suggestions from Brent Walston of the Internet Bonsai Club that will work for *B. pendula* 'Trost's Dwarf' and 'Youngii':

Growing them from cuttings is possible, but difficult. As with all birches the timing is critical. The best time is get them just before end bud set in mid summer. This will vary from region to region, in Northern California, the ideal time seems to be early July. For those that have never noticed, terminal buds develop throughout the growing season only to open into new leaves until mid to late season when instead of expanding the bud hardens in preparation for dormancy and opening the following spring. This is called bud set. Before bud set the buds are green, but the set buds turn brownish as they harden. Birches root best just before set, so look for intact buds that you think are not going to open and take the semi hardwood cuttings while the buds are still bright green. Use hormex 8 or IBA 0.8%. Keep the cuttings cool and moist, if they root the buds will break and you will get some new growth before the end of the season. This is nearly

essential for overwintering them.

Other species, such as *Betula nana*, are reputed to root easily from cuttings.

**Repotting:** Birches younger than age 10 will need repotting every two-three years. Older trees need repotting as necessary. Repot in spring, before bud burst, using free-draining soil mix. The bark may take up to ten years to turn white in pot culture, but this can be expedited by a few years in a growing bed. Care should be taken to protect the bark when wiring. The tree may sucker from the roots; these should be removed quickly to keep from sapping the vigor of the main trunk.

**Pests and diseases:** Pests and assorted obstacles: Bronze birch boarer, birch leaf miner. Proper watering and a good fertilization in early spring have been reported to help stave off miner attacks. *B. pendula* 'Trost's Dwarf' must be shipped only when dormant or the tree may become sick or die. This may be due to abrupt change in lighting, climate etc. and may be a consideration if the tree is to be transported any great distance. Birch may "bleed" to death if pruned out of season. It has been my experience that birch can be sickly in pot culture and shocks easily when root pruned.

### Some species suitable for bonsai:

- *Betula alleghaniensis*: yellow birch - A native of northeastern America, reaching as far south as Georgia, the yellow birch can reach up to 70 feet tall. Its bark is a pale gray-brown, and peels off in rolls. It has larger leaves than most birch.
- *Betula lenta*: black birch, sweet birch, cherry birch - In nature, grows in moist, cool woods east of Ohio, further south than most birches, ranging from Ontario to Alabama. Its bark is gray-black or reddish-brown. Its oval leaves turn brilliantly gold in the fall, and it can grow up to 70 feet. Used in the manufacture of oil of wintergreen, this tree is very nice smelling.
- *Betula maximowicziana*: monarch birch.
- *Betula nana*: dwarf birch, Arctic birch - The dwarf birch is especially recommended for bonsai because of its tiny leaves, which show a fine red-gold autumn color. It also has a copper colored bark. It is native to the far north up to the Arctic circle, and can survive on only three months of sunlight a year!
- *Betula papyrifera*: canoe birch, paper birch, white birch - Has white bark and oval leaves. Native to the colder parts of North America.
- *Betula papyrifera*: paper birch, white birch, canoe birch: The shiny white bark of this birch was used by Native Americans to build canoes, hence the name. It grows in northern climates, zones 2-6. The leaves are heart-shaped, from 2-4 inches long, yellowing in autumn. It can grow up to 90 feet, but usually not more than 70, and takes on an oval habit. It is susceptible to bronze birch boarer.
- *Betula pendula*: the European white birch, silver birch - This tree has silver-white bark with black, diamond-shaped markings. Its heart shaped leaves turn gold in the autumn. A cold climate tree native to Europe, it has been planted as far south as Maryland, but prefers zones 3-5. It can grow to 60 feet, and the branches tend to weep. Many trees in the north-east have been devastated by the bronze birch boarer.
- *Betula pendula* 'Fastigata'
- *Betula pendula* 'Lanciniata'
- *Betula pendula* 'Purpurea'
- *Betula pendula* 'Trost's Dwarf': This dwarf only grows 3-4 feet, and is

highly sought after for bonsai. It has leaves unique for birch, which resemble those of a threadleaf maple. The leaves are about 2 inches and the tree will grow to 4 ft. tall. It is more light tolerant than most birches.

- *Betula pendula* 'Youngii': The small leaves, very white bark and excellent ramification of this tree make it very desirable for bonsai. It weeps naturally, without wiring, and can easily be twisted into serpentine shapes.
- *Betula platyphylla Japonica*: Japanese white birch
- *Betula populifolia*: gray birch - The gray birch is identifiable by its leaves, long-tailed and pointed, which have Pale yellow autumn color. The bark is white with black markings where branches have arisen. It is native to Northern America and Canada.
- *Betula pubescens*: smooth-bark birch

Compiled by Sabrina Caine