River Birch

River birch (*Betula nigra*) is a handsome tree that is native to the southeastern United States. It is considered the most widely adapted of all the birches, and hardy throughout South Carolina.

**Mature Height/Spread**
The river birch is a large deciduous tree, typically growing to 40 to 70 feet tall, but may grow as high as 90 feet. The average tree spread may be as much as 40 to 60 feet.

**Growth Rate**
This native birch grows at a medium to rapid rate (30 to 40 feet over a 20-year period). It tends to be short-lived (30 to 40 years) on many urban sites, possibly due to a shortage of water in restricted areas. They are a riparian tree species, and are primarily found in natural sites along the banks of stream and lakes, including areas that are prone to flooding. Birches situated in moist areas are longer-lived. Birches grow best in full sun to partial shade sites.

**Ornamental Features**
One of the most appealing features of the birch is the bark, which on larger, young branches and stems, is reddish to pinkish brown and peels off in papery strips. The exposed inner bark is gray-brown to cinnamon-brown to reddish brown. The bark of a mature birch is ridged and deepens to dark brown. This tree is handsome without leaves because of its graceful silhouette and exfoliating bark.

Separate male and female flowers are borne on the same tree; the male in the form of a catkin, and the female in cone-like clusters that fall from the tree and are blown for long distances by the wind. In the fall, the foliage turns pale yellow.

**Landscape Use**
The graceful elegance of the birch allows it to be used as a specimen or for naturalizing, and is best used in large areas. It transplants easily and is most effective when planted in groupings. A multi-trunk specimen is more handsome than single-trunk trees.
River birch should not be planted close to the house as a foundation plant because of root growth toward the foundation and the drop of leaves into gutters. It should not be planted in high-use areas such as driveways, walks and patios, as dead branches tend to be messy. Periodic pruning is required to remove these branches; this can be done at any time of year. However, pruning healthy branches should be done in the summer to provide adequate time for cuts to heal, because late season pruning will result in spring “bleeding”. This leaking of sap in the spring from recent wounds is not considered harmful, but may lead to concern that there is another problem.

Although the river birch thrives in wet areas, it does not require excessive amounts of water. It tolerates fairly dry soils once it is established, but does grow best in moist fertile soils. Apply mulch to conserve soil moisture. It requires acidic soils, and may suffer from iron deficiency if pH levels are 6.5 or higher. This species requires full sun to partial shade and tolerates high temperatures. The species grows as far south as USDA Zone 9.

**Problems**

River birch may be troubled by various fungal leaf spot diseases, resulting in early leaf drop during rainy summers. However, they typically occur late in the season and most are not significantly detrimental.

Various leaf miners and aphids may infest it, but these problems are unimportant. One aphid causes the leaves to crinkle in the spring. It causes no lasting damage.

Fall webworms may produce webbing on the ends of limbs from June through the end of summer, and feed on foliage within the webbing. Prompt sprays of B.t. (Thuricide) or spinosad are the safer products to use for webworm control. If control is necessary, always spray in the early evening. River birch is not susceptible to invasion by the bronze birch borer, a common problem with other birches in the south.

**Cultivars**

- **Heritage®** (‘Cully’ PP4409) – This is the most prominent of all the cultivars. It is faster-growing, has larger, glossier leaves and is less prone to leaf spot than the species. The bark exfoliates on younger trees and opens to a lighter, salmon-colored trunk. Grows 40 to 70 high by 40 to 60 feet wide
- **Dura-Heat®** (‘BNMTF’ PPAF) – This is a smaller cultivar that grows to 30 to 40 feet tall. The exfoliating bark reveals inner bark that is creamy white. It is considered more heat and drought tolerant than the species.
- **‘Summer Cascade’** (PP15,105) – This is a newer weeping form of river birch from NC, and has a unique pendulous growing habit. It may grow to 6 to 8 feet tall and 10 feet wide in 10 years.
• Fox Valley® (‘Little King’) – This cultivar is a dwarf that may reach 8 to 10 feet tall and 9 to 12 feet wide in 10 years with good growing conditions.

‘Little King’ river birch (Betula nigra).
Karen Russ, ©2015 HGIC, Clemson Extension

• City Slicker® (‘Whit XXV’ PP16573) – The exfoliating bark reveals creamy white inner bark. This cultivar from Oklahoma grows to 30 to 40 feet tall and 20 to 25 feet wide. May be more cold and heat tolerant than other cultivars.

• x ‘Royal Frost’ – This birch has burgundy-red to purple foliage, followed by yellow-orange to red fall color. The exfoliating bark reveals white inner bark. Because this cultivar has much less heat tolerance, it should only be considered for use in the higher elevations of the upper counties of SC. A micro-climate of afternoon shade may be beneficial. It is a hybrid of B. populifolia ‘Whitespire’ and B. x ‘Crimson Frost’.

• ‘Shiloh Splash’ (PP16362) – This is a variegated leaf cultivar of river birch with green foliage edged in creamy white. It grows to 30 feet tall and 15 feet wide. Growth rate is medium.

Note: Chemical control of diseases and insects on large trees is usually not feasible since adequate coverage of the foliage with a pesticide cannot be achieved.