



White-barked Birch

The beautiful white, peeling bark makes white barked birch a popular specimen plant in the landscape. Included in this group of “white-barked birches” are:

European White Birch (*Betula pendula*) - The most commonly used birch native to the mountains of Europe and northern Asia. No longer recommended by most experts, European white birch is a short-lived tree easily stressed by heat and drought. This species is susceptible to many pests, particularly the bronze birch borer and the birch leafminer.

Paper Birch (*Betula papyrifera*) - A beautiful birch, native to northern North America, paper birch usually grows in mountainous regions following forest fires. Although paper birch occasionally becomes a relatively large tree, reaching heights of 100 feet, it is considered a short-lived species. Trees mature in 60-70 years, and few live longer than 140 years, even on ideal sites. Paper birch has reddish-brown bark when young, but this becomes creamy white by the fourth year. There is evidence that paper birch is a better landscape species than European white birch.

Asian White Birch (*Betula platyphylla*) - Several varieties are available for landscaping, with ‘Whitespire’ the most commonly recommended. Some studies have indicated that ‘Whitespire’ is more adaptable to landscape conditions than other white birches. ‘Whitespire’ appears to have some resistance to borers and leafminers. ‘Whitespire’ bark is not white when the trees are young. Some trees may be 5 - 8 years old before the bark begins to whiten.

Many other birches are used in landscaping. Gray birch, Himalayan birch, Chinese paper birch and Monarch birch are all occasionally used. Like the other white birches, they should be viewed as high maintenance, short-lived landscape trees. River birch, *Betula nigra*, variety ‘Heritage’ is a good replacement for the tree white barked birch.



In general, the white birches are susceptible to the following pests and cultural problems:

1. Bronze Birch Borer - This beetle attacks all the white barked birches, although paper birch and 'Whitespire' have been shown to be somewhat resistant. Larval feeding galleries that girdle the trunk and branches cause injury. The bronze birch borer is most damaging to birches stressed by heat and drought. Preventative treatments for this borer are an important aspect of birch management.

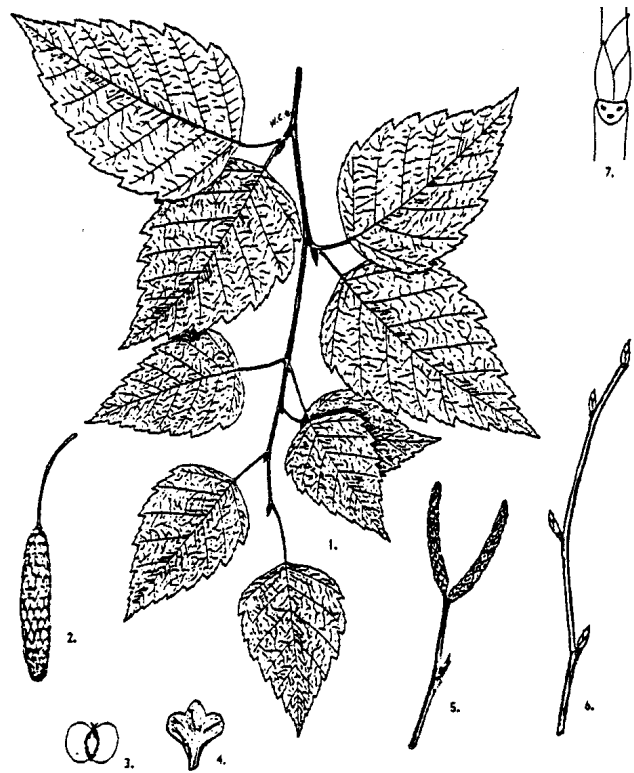
2. Environmental Stress - Heat and lack of sufficient soil moisture are important stresses on white-barked birches. In areas with hot summers, alternatives such as river birch (*Betula nigra*) should be used. Proper mulching and irrigation will reduce stress. Tensiometers are recommended as a soil moisture-measuring instrument.

3. Soil Nutrient Deficiencies - Birches respond well to fertilization in color, growth, and reduces other problems such as borers.

4. Poor transplanting procedure and lack of proper maintenance after transplanting - Birches are often planted too deeply or settle after planting. Root collar excavation is a service designed to improve this situation.

5. Birch Leafminers - At least four species of sawflies mine the leaves of birches. They have 2-4 generations per year, leading to extensive foliage damage. If not controlled, branch dieback and decline usually results.

6. Aphids, sawflies, caterpillars, mites and scales - The white barked birches are unusually susceptible to a wide range of pests. The best approach to managing birches is an IPM program of regularly scheduled inspection/treatments.



1. Branch with mature leaves.
2. Strobile.
3. Winged nutlet.
4. Scale from strobile.

PAPER BIRCH

5. Winter twig with catkins.
6. Winter twig.
7. Details of bud and leaf scar.

Recommended Monitoring for White Barked Birches

Timing	Treatment
Early Spring	Sample soil for nutrient and pH levels if plants exhibit decline. Add additional mulch to root zone as needed. Apply fertilizers and soil treatments to adjust pH as needed based on soil test results.
Mid Spring	Monitor and treat for birch borer, birch leafminers, aphids, mites, caterpillars and scale.
Late Spring	Monitor and treat for birch borer, birch leafminers, aphids, mites, caterpillars and scale. Inspect irrigation and soil moisture levels to reduce moisture stress and prevent root disease. Inspect mulch levels and adjust as necessary.
Early Summer	Monitor and treat for birch borer, birch leafminers, aphids, mites, and adjust as necessary.
Mid Summer	Monitor and treat for birch borer, birch leafminers, aphids, mites, caterpillars and scale. Inspect irrigation and soil moisture levels to reduce moisture stress and prevent root disease. Inspect mulch levels and adjust as necessary.
Late Summer	Monitor and treat for birch borer, birch leafminers, aphids, mites, caterpillars and scale. Inspect irrigation and soil moisture levels to reduce moisture stress and prevent root disease. Inspect mulch levels and adjust as necessary.
Fall	Monitor and treat for birch borer, birch leafminers, aphids, mites, caterpillars and scale. Ensure adequate soil moisture levels prior to onset of winter to minimize injury. Remove any mulch from stems to reduce risk of disease and rodent injury. Inspect plant for evidence of deer browse. Make soil applied insecticide treatment to reduce next year's problems. Prune out injured or cankered branches.