

PLANT HEALTH CARE REPORT

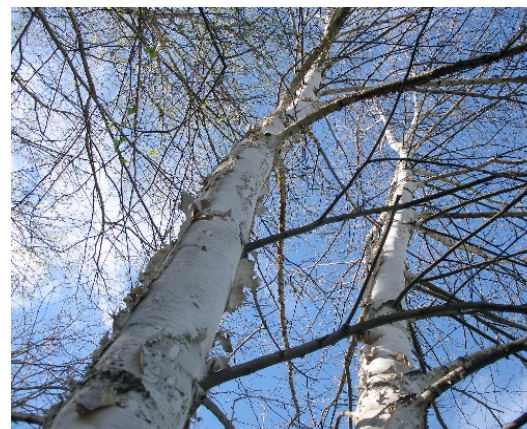


White-barked Birch

The year-round visual appeal of white, peeling bark makes birches popular specimen plants in the landscape. A descriptive category, “white-barked birch,” is made up of multiple species and varieties. Correct plant identification coupled with a complete plant health care program is the best approach to managing the biotic and abiotic problems that affect these birches.

European white birch (*Betula pendula*): Also referred to as silver birch, this species is native to the mountains of Europe and northern Asia and is the most commonly used birch species in the landscape. 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 birch leafminers.

Paper birch (*Betula papyrifera*): Considered a better landscape species than European white birch, paper birch is native to northern North America. It usually grows in mountainous regions following forest fires. Although paper birch occasionally reaches a height of 100 feet, it is considered a short-lived species. It matures in 60 to 70 years, and few live longer than 140 years, even on ideal sites. Paper birch has reddish-brown bark when young; the bark turns a creamy white by the fourth year. This species



Paper birch stems

is considered much more resistant to bronze birch borer than European white birch.

Asian white birch (*Betula platyphylla*): As the common name suggests, this species is native to portions of central and eastern Asia and is closely related to European white birch. Asian white birch is suited to cooler climates and may perform poorly in areas with high heat and high humidity. It is highly susceptible to attack by bronze birch borer.

Gray birch (*Betula populifolia*): This species is native to northeastern North America. Young trees have reddish brown bark that turns chalky white and eventually gray with age. The variety ‘Whitespire’, formerly housed under *Betula platyphylla*, is the primary cultivar available commercially. Some studies have indicated that ‘Whitespire’ is more adaptable to landscape conditions than other white birches and appears to have resistance to bronze birch borer (but not leafminers).

Many other birches are used in landscaping: Himalayan, Chinese paper, and Monarch birches are all occasionally used. They too require high maintenance and are short-lived landscape trees. River birch (*Betula nigra*) variety ‘Heritage’, is a good replacement for white-barked birches.

White-barked birches are susceptible to the following problems:

1. Environmental stress: Heat and lack of sufficient soil moisture are important stressors of white-barked birches. In areas with hot summers, alternatives,

Monitoring and Treatment Considerations for OBWhite-barked Birch

Early spring

Apply dormant treatment to suppress mites and aphids. Expose and inspect root collar for problems; add mulch as needed. Sample soil for nutrient and pH levels. Fertilize, adjust pH, and amend soil according to soil analysis. If decline is evident, submit root samples for Phytophthora root rot testing.

Mid-spring

Monitor for birch borer, birch leafminers, aphids, mites, caterpillars, and scales; treat as needed. Submit soil and foliar nutrient samples if micronutrient deficiency is suspected.

Late spring to summer

Monitor for birch borer, birch leafminers, aphids, mites, caterpillars, and scales; treat as needed. Inspect irrigation and soil moisture levels to reduce moisture stress and prevent root disease. Inspect mulch levels and adjust as necessary.

Early fall

Monitor and treat for birch borer, birch leafminers, aphids, mites, caterpillars, and scales. Inspect irrigation and soil moisture levels to minimize winter injury. Remove mulch from stem to reduce risk of disease and rodent injury.

such as river birch, should be used. Proper mulching and irrigation will reduce stress.

2. Planting and maintenance: Birches are often planted too deeply or settle after planting. Root collar excavation may be necessary to remove soil and moisture from the root collar.

3. Soil nutrient deficiencies: Birches respond well to fertilization by increasing in color and growth and susceptibility to borers is reduced.

4. Bronze birch borer: This beetle attacks all the white-barked birches, although paper birch and ‘Whitespire’ have shown some resistance. Larval feeding galleries that girdle the stem 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.

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

6. Additional pests: White-barked birches are susceptible to a wide range of pests including aphids, sawflies, caterpillars, lacebugs, mites, and scales. An integrated pest management (IPM) program of scheduled inspections and treatments is key to maintaining their health.

Mid to late fall

If sucking insects were problematic this past growing season, consider treating with an appropriately timed systemic product. Inspect plants for deer browse; apply repellent treatment as needed. Remove injured or cankered branches.
