The Invasive

Acer platanoides (Norway maple)

Acer platanoides (Norway maple) has long been used as an ornamental shade tree since botanist John Bartram introduced it from Europe to his garden in Philadelphia in 1756. When Dutch elm disease devastated the American elms that lined urban streets in the 20th century, Norway maples were planted as alternatives and became popular for their fast growth and deep shade, as well as their ability to withstand urban conditions. However, the same traits that made Norway maples desirable landscape plants have led to their invasiveness in forests, forest edges and urban and suburban settings. The tree’s dense shade prevents native plants from establishing, and because of its high shade tolerance, it grows easily in forests, displacing native plants. It also produces large amounts of winged seeds that spread by wind. Norway maples can easily be distinguished from other maples by milky sap that is visible when the leaf petiole is broken off the stem.

Sugar maple is a common tree in the beech-maple forests at The Holden Arboretum. It is well known for its beautiful fall color and as the tree used for making maple syrup. Charles Tubbsing, Holden’s plant collections curator, said that sugar maples are a good alternative to Norway maples, as they grow perfectly well in situations where Norway maple is often selected. Hardy to Zone 3, sugar maple has an upright to rounded form and can reach 75 feet tall and up to 60 feet wide. Greenish yellow flowers appear in the spring, which turn into horseshoe-shaped samaras in late summer. Dark green leaves unfurl after the flowers, casting a deep shade in the summer.

The Native Alternatives

Acer saccharum (Sugar maple)

As fall approaches, the leaves turn bright yellow to orange with occasional red. Sugar maple performs best in soil of average or better quality that has been relatively undisturbed. In general, it does not do well in soil that has been compacted. Use sugar maple as a shade tree or as a street tree where pollution, road salt and soil compaction will not be issues. Viki Ferreniea, Holden’s lead horticulturist who is in charge of the Helen S. Layer Rhododendron Garden, admits to loving the straight species, but recommends a cultivar that is resistant to scorch, such as ‘Wright Brothers’. Toby Davidson, the horticulturist in charge of Holden’s Display Garden, recommends ‘Green Mountain’, a cultivar with an oval form and beautiful dark green leaves. ‘Green Mountain’ is located next to the Lily Pond in the Display Garden. ‘This tree provides a favorite spot for visitors to sit in the shade and gaze across the water,’ Davidson said. ‘The vibrant orange color is stunning in the autumn garden.’

Acer x freemanii (Freeman maple)

Freeman maple is a hybrid of A. rubrum (red maple) and A. saccharinum (silver maple). Hardy to Zone 4, select cultivars of Freeman maple combine the best attributes of its parents - excellent form, brilliant fall color, fast growth and tolerance of unfavorable conditions. Like the red maple, red flowers appear in the spring before the leaves. Its leaves have three to five lobes with deep sinuses and resemble those of the silver maple. Its fall color, a trait inherited from the red maple, ranges from vibrant red to yellow. Freeman maple performs best in full sun, and while it prefers rich, well-drained soils, it can adapt to poorly drained or disturbed sites where sugar maples struggle, Tubbsing said. Freeman maple can be used as a shade tree or street tree and is available only as vegetatively-propagated cultivars. A popular cultivar is Autumn Blaze (‘Jeffersred’), an upright, fast-growing tree with brilliant orange-red fall color.

Plant This, Not That

by Annie Raup, education intern

Hundreds of plants have been introduced to the United States from other parts of the world. Some have come here accidentally in seed stock, while others were brought here intentionally for horticultural use. A small number of these introduced plants have gotten a little too comfortable in their new environment. Because they have no native predators and produce a lot of fruit and seed that are efficiently dispersed, they are invading natural areas. The aggressiveness of these invasive plants affects natural areas and wildlife by decreasing biodiversity, competing with native and rare plants and eliminating wildlife habitat and food sources.

The alternatives were chosen because their characteristics – form, flowers, fruit or fall color – are similar to that of the invasive and fulfill the same landscaping need. On a broader scale, native plants help create a healthier ecosystem, attract a greater diversity of wildlife and may minimize the need for fertilizers and pesticides.