

Mid-Atlantic Native Woody Plants in Need of Propagation

Michael S. Hollins

President, Sylva Native Nursery & Seed Company, Glen Rock, PA

Abstract

In spite of centuries of interest in North American flora, it was not until the 20th and 21st centuries that a concentrated focus on cultivation of native plants has emerged. This focus has been spurred, in part, by a proliferation of environmental regulations and support of Federal, State, and local programs. In the Mid-Atlantic States, only 20 to 30 percent of the thousands of native plant species are produced in nurseries. The table included with this article provides a brief list of plants that are in need of propagation to increase the diversity of available plant material for restoration, conservation, and landscaping. This paper was presented at a joint meeting of the Northeast Forest and Conservation Nursery Association and Southern Forest Nursery Association (Kent Island, MD, July 20–23, 2015).

History

Interest in North American flora was paramount in the 17th and 18th centuries. Explorers of the New World, including John Bannister (1689–1692, Virginia), Mark Catesby (1731–1743, Carolinas), John Clayton (1743–1773, Virginia), Peter Kalm (1748–1751, New Jersey, New York to Ontario), John Bartram (1720s, Pennsylvania, Ohio, Virginia), Andre Michaux (1746–1800, Florida north to Hudson Bay and west to Missouri), and many others, collected specimens for identification, description, and cataloging by their counterparts in Europe. Andrea Wulf's books, *The Brother Gardeners* (2009) and *Founding Gardeners* (2012), document the transition from initial plant description to collection by English gardeners and the further evolution into an obsession for commercial production. The English nursery trade in North American flora flourished into the 19th century. By contrast, North American plant exploration and cultivation during the 19th century focused on Asian and European species. It appears that

cultivation of exotic plants was a driving force in both the New World and the Old World.

It was not until the 20th and 21st century development of environmental regulations that a new focus on cultivation of our own hometown flora developed. These species were not particularly difficult to propagate nor was propagule availability a problem, but a new stewardship ethic once espoused by Aldo Leopold in *A Sand County Almanac* (1949) and by Ian McHarg in *Design with Nature* (1969) finally matured. By 1989, 300 years after John Bannister's exploration of Virginia and 50 years after Leopold's new land ethic, Americans awoke to a renewed interest in our own ecosystems and their restoration and stewardship.

Current Needs

With the last 25-year proliferation of environmental regulation involving wetlands, floodplains, and upland forests, the interest in use of native trees and shrubs in the Mid-Atlantic States has exploded. While the primary market of reforestation historically may have been dominated in the forestry and mine reclamation markets, new emerging markets have developed through the Federal Clean Water Act/Wetland Mitigation (1972), the U.S. Department of Agriculture's Conservation Reserve Program (+/- 1995), and other State and local environmental programs, such as stormwater management and water quality retrofits in urban and suburban environments (1979–2009) and enhancement of private properties in support of pollinators (Executive Orders 13693, October 2014; 13514 [archive], October 2009).

Of the several thousand native species documented in eastern floras, perhaps only 20 to 30 percent are available in cultivation. Many native woody and herbaceous plants are still in need of propagation (table 1). The list in table 1 is not meant to be exhaustive, nor has it fully explored the wildlife

Table 1. Mid-Atlantic native plants in need of propagation for the Mid-Atlantic States.

Common name(s)	Scientific name	Site	Wildlife use
Indigo bush	<i>Amorpha fruticosa</i> L.	Well drained/xeric-mesic	Sparrows, quail
Black birch, sweet birch	<i>Betula lenta</i> L.	Well drained/mesic Cove hardwood species	Dusky birch sawfly (host)
Gray birch	<i>B. populifolia</i> Marshall	Well drained/hydric Mountains and Northeast	Grouse
Hornbeam, blue beech	<i>Carpinus caroliniana</i> Walter	Mesic-hydric/floodplains	—
Allegheny chinquapin	<i>Castanea pumila</i> (L.) Mill.	Well drained Throughout woodland borders	Wild turkey
Fringetree	<i>Chionanthus virginicus</i> L.	Mesic-hydric Coastal Plain and Piedmont floodplains	Thrushes, small mammals
American hazelnut	<i>Corylus americana</i> Walter	Mesic Chiefly Piedmont	Wild turkey
American beech	<i>Fagus grandifolia</i> Ehrh.	Mesic/rich woods and gravel deposits circum neutral	Wild turkey, deer
Blue huckleberry	<i>Gaylussacia frondosa</i> (L.) Torr. & A. Gray ex Torr.	Mesic or dry Common Coastal Plain	Thrushes, small mammals
Black huckleberry	<i>G. baccata</i> (Wangenh.) K. Koch	Dry forests Throughout the Mid-Atlantic	Thrushes, small mammals
Possumhaw	<i>Ilex decidua</i> Walter	Mesic Southern Maryland	Thrushes, small mammals
Coastal winterberry	<i>I. laevigata</i> (Pursh) A. Gray	Mesic-hydric Chiefly Coastal Plain	Thrushes, small mammals
Maleberry	<i>Lyonia ligustrina</i> (L.) DC.	Hydric Throughout the State	—
Staggerbush	<i>L. mariana</i> (L.) D. Don	Hydric-mesic-xeric/sandy soils Chiefly Coastal Plain	—
Ironwood	<i>Ostrya virginiana</i> (Mill.) K. Koch	Mesic-xeric calcareous Piedmont and Mountains	Wild turkey
Pitch pine	<i>Pinus rigida</i> Mill.	Xeric, sandy, or rocky Throughout the State	Crossbills and pine siskins
Pond pine, marsh pine	<i>Pinus serotina</i> Michx.	Hydric, sandy, or peaty Coastal Plain	Crossbills and pine siskins
American plum	<i>Prunus americana</i> Marshall	Well drained/xeric Ridge and Valley	Thrushes, small mammals
Allegheny plum	<i>Prunus alleghaniensis</i> Porter	Xeric, shaly soils Ridge and Valley	Thrushes, small mammals
Wafer ash	<i>Ptelea trifoliata</i> L.	Mesic to xeric soils Chiefly Mountain zones	Giant swallowtail, Eastern swallowtail
Southern red oak, Spanish oak	<i>Quercus falcata/pagodifolia</i> Michx.	Mesic to hydric Chiefly Coastal Plain	Wild turkey, deer
Chinquapin, yellow oak	<i>Q. muehlenbergii</i> Engelm.	Xeric, shaly, calcareous Ridge and Valley	Wild turkey, deer
Chestnut, rock oak	<i>Q. prinus</i> L.	Xeric to Mesic soils Throughout the State	Wild turkey, deer
Mountain, red elderberry	<i>Sambucus racemosa</i> L.	Mesic to hydric Appalachian Mountains	Thrushes, small mammals
Sassafras	<i>Sassafras albidum</i> (Nutt.) Nees	Mesic to xeric soils Throughout the State	Spicebush swallowtail, thrushes, and small mammals
American bladdernut	<i>Staphylea trifolia</i> L.	Mesic, floodplains and rich woods/circumneutral Ridge and Valley/Mountain	—
Basswood, American linden	<i>Tilia americana</i> L.	Mesic, cove hardwood Mountains	—
Early sweet blueberry	<i>Vaccinium vacillans</i> Aiton	Xeric soils Throughout the State	Thrushes, small mammals
Blackhaw	<i>Viburnum prunifolium</i> L.	Mesic to xeric Throughout the State	Thrushes, small mammals

use, pollinator use, and hosts for arthropods. The purpose of this article is to stimulate interest of State and private forest tree nurseries in the Mid-Atlantic United States to develop more robust inventories with a wide range of seed provenance. Some examples of the diversity of eastern flora plantings can be seen at the Dolly Sods Wilderness Area (figure 1), Frostburg Reservoir (figure 2), and Mount Storm (figure 3) restoration projects.



Figure 1. Bog restoration following a peat fire at Dolly Sods Wilderness Area, West Virginia. (Photo by Mike Hollins, Ecosystem Recovery Institute, 2010)



Figure 2. Frostburg Reservoir scrub shrub wetland mitigation. (Photo by Mike Hollins, Envirens Inc., 1990)



Figure 3. Mount Storm power plant bog restoration and mitigation. (Photo by Mike Hollins, Envirens Inc., 1995)

Address correspondence to—

Mike Hollins, Sylva Native Nursery & Seed Company, 3815 Roser Road, Glen Rock, PA 17327; phone: 717-227-0486; e-mail: sylvanat@aol.com

REFERENCES

- Leopold, A. 1949. A sand county almanac. Oxford, United Kingdom: Oxford University Press. 240 p.
- McHarg, I. 1969. Design with nature. New York: John Wiley and Sons. 208 p.
- Wulf, A. 2009. The brother gardeners: botany, empire and the birth of an obsession. New York, NY: Vintage Books. 369 p.
- Wulf, A. 2012. The founding gardeners: the revolutionary generation, nature, and the shaping of the American Nation. New York, NY: Knopf Doubleday. 380 p.