



### **Facts About the Eastern U.S. Seed Banking Project**

- The “Seed Banking for Resiliency in the Eastern US” project focuses on collecting seeds from common native plants that are integral to the resilience of coastline ecosystems.
- Stabilizing plant communities and restoring habitat following disturbance or destruction requires a source for plant material. This project fills a critical need, as restoration projects in the eastern United States have had few sources for native seeds and plants and have had to rely on plant material from other parts of the country. Plants native to a particular ecoregion are adapted to the soils and climate and are successful hosts for the local insects and wildlife, especially pollinators, with which they evolved over millennia.
- Partners will make multiple collections of dominant and keystone species across their range to capture the genetic diversity that can help ensure successful restoration. The goal is to re-establish the plant community matrix.
- Plants grown from seed preserve natural genetic diversity. In general, plants from the nursery industry are cloned, so that a single genotype is planted everywhere, which both reduces diversity on the landscape and expands the vulnerability to, for instance, a disease or pest (akin to monocultures in agricultural crops).
- The project is the first large-scale, coordinated seed banking effort in the Eastern United States under the auspices of the Seeds of Success program, an initiative of the Bureau of Land Management that, since its founding in 2001, has focused on collecting wild seed for long-term germplasm conservation and for use in seed research, development of native plant materials, and ecosystem restoration projects, primarily on federal land in the West.
- The Society and its project partners were among six organizations that signed an MOU with BLM in 2008 to establish Seeds of Success as a national native seed collection program. The six partners are Chicago Botanic Garden, Lady Bird Johnson Wildflower Center, New England Wild Flower Society, New York City Department of Parks and Recreation, North Carolina Botanical Garden, and the Zoological Society of San Diego.
- The project will store seed that can be used for restoration projects for many years. With climatologists predicting more severe weather events in the future, banking native plant seed is critically important to the survival of coastal ecosystems.
- Additional partners in the project are the Chicago Botanic Garden, which through a well-established program has trained the interns for each lead organization; and the Cape May Plant Materials Center in New Jersey, which is part of the Natural

Resources Conservation Service of the U.S. Department of Agriculture. The PMC will clean all the seeds collected and propagate some of the plants for the restoration projects.

### **About New England's Plants and Plant Communities**

In March 2015, New England Wild Flower Society published a comprehensive “State of the Plants” report (<http://newenglandwild.org/stateofplants>), which clearly outlines the need for both habitat restoration initiatives and management and seed banking to preserve species and plant communities under stress.

Key findings relevant to the East Coast seed banking for resiliency project, which focuses on sub-tidal habitats and dunes, wetlands, salt marshes, near-coastal freshwater habitats, coastal forests, and inland rivers and streams, are:

- Today, 22% of New England's native plants are rare or deemed historic, 31% of the 3,514 documented species are not native, and 10% of those are invasive and directly threaten native species. On average, rare plant species have lost 67% of their known range in the region and are also rare in 38% of states and provinces outside New England in which they occur.
- **Estuarine Marshes:** New England has lost an estimated 37% of marshes. In RI, 53% have been filled for development; 20% of marsh area in the Gulf of Maine (from Nova Scotia to Cape Cod) exhibits reduced tidal flow due to manmade controls; 80% of Cape Cod's marshes exhibit die-back.
- **Sandplain Grasslands and Heathlands (maritime and inland):** Development has claimed more than 50% of the historical area of sandplain grasslands and heathlands in New England. In MA and RI these habitats occur mostly in remnant patches of 12 acres or less. Encroachment of trees, due to fire-suppression, has reduced heathland on Cape Cod by 62% since 1962.
- **Rivers and Streams:** These natural systems are highly altered by development and infrastructure, especially dams. There are more than 10,250 dams on New England's rivers—3,070 active dams in NH; 2,892 in MA; 1,304 in CT; 1,200+ in VT; 1,168 in ME; 618 in RI. Although New England leads the nation in dam removal, the total breached or removed in the last decade is only approximately 100 dams.

### **About New England Wild Flower Society**

New England Wild Flower Society conserves and promotes New England's native plants to ensure healthy, biologically diverse landscapes. Founded in 1900, the Society is the nation's oldest plant conservation organization and a recognized leader in native plant conservation, horticulture, and education.

From the Society's base in Framingham, MA, at the Garden in the Woods, 25 staff and more than 700 volunteers work throughout New England to monitor and protect rare and

endangered plants, collect and preserve seeds to ensure biological diversity, detect and control invasive species, conduct research, and offer a range of educational programs. The Society also operates a native plant nursery at Nasami Farm in western Massachusetts and has eight sanctuaries in Maine, Massachusetts, New Hampshire, and Vermont that are open to the public.

Among the Society's recent achievements are the award-winning Go Botany website, which offers an online field guide and tool for learning botany. It is based on the Society's *Flora Novae Angliae: A Manual for the Identification of Native and Naturalized Higher Vascular Plants of New England* (Yale University Press, 2011) by research botanist Arthur Haines, which is the most authoritative, comprehensive work available on the plants of New England. In March 2015, the Society published the first "State of the Plants" report to wide acclaim and recognition as the most comprehensive survey ever conducted of New England's flora.

For more information about New England Wild Flower Society, visit <http://www.newenglandwild.org>.