

USDA Forest Service Botany in the News

Chicago Botanic Garden & US Forest Service – Eastern Region Partnership Field Season 2013 Progress

Our ongoing Challenge Cost Share agreement with the Chicago Botanic Garden continues to support the Forest Service in the preservation of native plants of concern within the Eastern Region. The goals and objectives of our agreement are to develop a comprehensive seed collection and banking protocol; collect plant species and prepare seed for storage; implement the Endangered Species Act; provide a foundation for adaptation and preparation for Climate Change; preserve species lost in the soil seed bank due to invasive worm activity; maintain Forest Service conservation targets; provide an avenue for the conservation of Regional Forester Sensitive



Seed Storage at Shaw Arboretum, Missouri Botanical Garden.

Species (RFSS); and provide a fundamental seed source for future Forest Service restoration efforts. Collections of the RFSS are often accompanied by collections of associated species (AS) that found in the same habitat. AS collections are held at the Chicago Botanic Garden, and become part of the national Seeds of Success (SOS) collection held at Pullman, Washington.

SOS is a national effort to collect and bank species for restoration across the US and put them into the seed production stream. Thus, bulk seed will be available for restoration and repatriation at sites where it is needed in response to natural disasters such as fire.

Chicago Botanic Garden (CBG) staff commenced training with collectors for the Mark Twain and Hoosier National Forests, including seed collection protocols, priorities and target strategies for the FS Eastern Region 9. CBG entered into an agreement with Missouri Botanical Garden and the New England Wildflower Society to collect seed for the Mark Twain, Green Mountain, and White Mountain National Forests.

CBG was able to place a seed collection intern on the Chippewa National Forest this past fall. Working with Kirk Larson, who spearheaded the work necessary to make this a success; Josh Trautner was able to focus on seed collection on the Chippewa for eight weeks. The first step in undertaking seed collections is identifying priority species, their locations, and seed readiness. For many RFSS species, the last known occurrence of the species may not have been seen in quite some time. Josh spent the majority of his time relocating populations of RFSS species to target for collection. While he was unable to find populations with seed in the right stage of maturity for collection, his work did relocate many species and he provided detailed directions as well as GPS locations and other information to ensure their collection next year.

CBG also placed intern Justin Aaron at the Midewin National Tallgrass Prairie. Justin has worked as a CBG seasonal rare plant-monitoring assistant for Midewin for the past two years, funded by an agreement with Midewin. CBG provided additional funding for him collect Regional Forester Sensitive Species (RFSS), which proved an excellent arrangement. Due to his familiarity with sites and rare plant locations, he was able to make 12 collections during 2013. Collections were made on six different dates, and when possible, seed collection was coordinated with other monitoring activities (Cypripedium and Isoetes monitoring, etc.). Several additional species were targeted for seed collection, however no plants were found, either few plants were found, or seed had already dropped. These included *Neobeckia aquatic* - lakecress, *Sisyrinchium angustifolia* – narrow leaf blue eyed grass, *Deschampsia caespitosa*- tufted grass, *Lobelia siphilitica* – great blue lobelia, *Gentiana andrewsii* – closed bottle gentian, *Tomanthera auriculata* – earleaf false foxglove.

Drummond Prairie

- *Allium cernuum* (RFSS) – nodding onion
- *Bouteloua curtipendula* (RFSS) –sideoats gramma
- *Gratiola quartermaniae* (RFSS) - limestone hedge hyssop
- *Malvastrum hispidum* (RFSS) – hispid false mallow
- *Minuartia patula* (RFSS) – pitcher’s stitchwort



Allium cernuum seeds.

Blodgett Marsh

- *Festuca paradoxa* (RFSS) – clustered fescue
- *Veronicastrum virginicum* (Seeds of Success/ SOS) – Culver’s root

Blodgett Road Restoration

- *Physostegia virginiana* (SOS) – obedient plant
- *Rudbeckia fulgida* var. *speciosa* (SOS) – orange coneflower

Schoolhouse Road Near Abandoned Bunkers

- *Teucrium canadense* - Canada germander

Blodgett Road Dolomite Prairie (IDNR)

- *Allium cernuum* (RFSS)
- *Minuartia patula* (RFSS)

CBG collector Timothy Chambers collected four RFSS species and six associated species on the Chequamegon Nicolet National Forest.

Bladder Lake Region

- *Scheuchzeria palustris* – rannoch rush (RFSS)
- *Carex oligosperma* – fewhead sedge (RFSS)
- *Vaccinium oxycoccos* - small cranberry (AS)

Anderson Lake

- *Scheuchzeria palustris* - (RFSS)
- *Calamagrostis Canadensis* –bluejoint (AS)
- *Carex crinita* – fringed sedge (AS)

Pigeon Lake Northwest

- *Astragalus Canadensis* – Canada milkvetch (RFSS)

Drummond, Wisconsin, Southwest

- *Eriophorum virginicum* - tawny cottongrass (AS)
- *Ledum groenlandicum* – Labrador tea (AS)
- *Glyceria Canadensis* – rattlesnake manna (AS)

The Chicago Botanic Garden expanded the agreement to work with other botanic gardens, The New England Wildflower Society and the Missouri Botanical Garden. Botanists with the New England Wildflower Society collected 10 RFSS species in the White Mountain National Forest this year.



Astragalus canadensis seeds.



Eriophorum virginicum.

Tuckerman Ravine, New Hampshire

Arnica lanceolata – arnica (RFSS)

Alpine Garden, New Hampshire

- *Carex arctogena* – (*Carex capitata* L. ssp. *arctogena*) - capitate sedge - RFSS
- *Harrimanella hypnoides* – mossplant - RFSS
- *Vaccinium uliginosium*- alpine blueberry (RFSS)

Mt. Cardigan

- *Carex arctogena*

Auto Road Mt. Washington

- *Silene acaulis* – moss campion (RFSS)

Great Gulf

- *Geum peckii* – mountain avens (RFSS)
- *Juncus trifidus* – highland rush (RFSS in R9 but not WM)
- *Nabalus boottii* (*Prenanthes boottii*) - alpine rattlesnake root (RFSS)
- *Oxyria digyna* – mountain sorrel (RFSS)

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