

PCP's
Year In
Review

2014-
2015

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The North Carolina Plant Conservation Program was established by the Plant Protection and Conservation Act of the North Carolina Legislature in 1979. The Program is part of the Plant Industry Division of the North Carolina Department of Agriculture and Consumer Services.

The mission of the Plant Conservation Program is *to conserve North Carolina's native plants in their natural habitats, now and for future generations.*

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Program Capacity

The PCP staff's combined experience and expertise of decades' worth of land conservation and management practices includes but is not limited to: plant and community ecology, field botany, geospatial analysis, prescribed burning, and forest management.

In 2014, existing staff members **David Welch, Rob Evans, Lesley Starke, Nancy Stewart, Kira Santulli, and Phillip Inman** were joined by field technicians **Thomas Blaine** in March and **Jenny Stanley** in September. In June, **Kira Santulli** took a position with our long-time collaborators, The Nature Conservancy in Wilmington. In late 2014, **Phillip Inman** retired after helping with much needed prescribed fire preparation at the Boiling Spring Lakes Preserve. In March 2015, **Miller Caison** and **Homer (H.L.) Rich** joined our staff as field technicians for the Boiling Spring Lakes Preserve; both being recently retired from NC Forest Service has allowed for a very close working relationship with the county foresters, resulting in increased fire management at our largest preserve. In September 2015, **Thomas Blaine** left the program to expand the bakery he and his wife own. Thomas' precision and enthusiasm will be missed. In October 2015, **Jessica Richmond** joined our staff as a full time conservation technician at the Redlair Preserve.

Rob Evans brought his eleven year tenure with the Plant Conservation Program to an end at the close of 2015. He is heading to Virginia to help secure the treasures of that state as Natural Heritage Program's Natural Area Preserves. His vision for the Plant Conservation Program has been steady yet expansive and progressive. Rob deserves credit for launching PCP into the current era of land buying, preserve designating, and active adaptive management in order *"to conserve the native plant species of North Carolina in their natural habitats, now and for future generations."* His focus on ecology, communities, and ecosystem processes, in particular fire, has produced significant headway in meeting the restoration needs of the PCP Preserves which stand as examples to many other land owners and managers interested in maintaining and protecting similar habitats. Not only has Rob's knowledge been vital to the success of the PCP preserves, but also his experience in land management and ability to apply the successes of ecosystem management in other states here in North Carolina. Rob's outlook on getting the job done has been a tremendous boon to PCP. He successfully acquired many grants and was superlative in building connections around the state with land trusts, colleges and universities, other government agencies, etc. to build capacity for the then very small staff of PCP. To that end, it should be noted how much Rob expanded the program during his leadership of PCP. What was a two person staff when he joined the program grew into three staff members for a number of years and then steadily built to the current staffing level of eight full time positions spread from Charlotte to Raleigh to Wilmington.

Imperiled Plant Assessment

The Plant Conservation Program is the state agency which lists the protected plant species for North Carolina. The current list of protected species has been effective since December 2010 following a thorough and systematic assessment of the state's plant species, their population numbers and viability, as well as the threats they face. In 2014, the Program's Scientific Committee, which advises the Board, embarked on the first phase of a renewed imperiled plant assessment for North Carolina. This reassessment was initially considered in response to a string of Venus flytrap poaching incidents in 2013 which posed the questions, "Do we need to reconsider the severity of threats facing this species?" and "If we determine that the impact of the species' threats has changed, does that change in threat severity warrant a change in imperiled status?" The status and threats of North Carolina's plant species were last analyzed in 2008, suggesting that a reassessment is timely, in particular

for those species for which we have gained new information. The Natural Heritage Program staff have been integral in organizing and prescreening data to identify species which should be reassessed. The protected classes for plant species in North Carolina are Endangered, Threatened, Special Concern- Vulnerable, and Special Concern- Historical. All four of these categories are equal under the law with no greater or lesser protection awarded to one category relative to another. In addition to the poaching incidents, there is a growing list of very rare species which have recently been officially described since the current list was made effective, making these species now qualified for imperiled status assessment. Examples of such species include the Piedmont Flameflower (*Phemeranthus piedmontanus*) and Tall Barbara's Buttons (*Marshallia legrandii*); each are known in only one location in North Carolina.

Protection Priorities

PCP's conservation goal is to ensure protection of the two best natural populations of each imperiled species within each of the state's 22 ecoregions in which they naturally occur. We expect that some species will have altered statuses after the reassessment: some may be down-listed and some will be listed for the first time. Given possible changes to the total protected species list as well as new population discoveries, loss of populations to various causes, and updates regarding the viability of known locations, the PCP staff has anticipated also needing to reassess which are the two best sites per ecoregion. PCP has a list of priority sites available to distribute to partners in both spreadsheet and GIS shapefile formats. Send all requests to lesley.starke@ncagr.gov. We will be working with our partners to alert them to any changes in our priority lands portfolio that are in their working area.

Conservation Targets: Plant Conservation Preserves are the only public lands in North Carolina established and managed specifically to protect imperiled plant species. To help accomplish PCP's mission of conserving North Carolina's native plant species *in their natural habitats*, each of our 24 preserves is specifically designed with a focal species, yet in most cases multiple species are protected at a given site. As of December 2015, the Plant Conservation Program's preserve system protects 65 extant threatened, endangered, or vulnerable species (11 of which are federally protected species; see page 16).

Property Acquisition Updates

In late 2015, PCP was successful in purchasing what will be the **Caraway Plant Conservation Preserve** in McDowell County. This feat would not have been possible without the numerous generous contributions made to the Friends of Plant Conservation Program which provided the necessary matching funds to secure state funds from the Clean Water Management Trust Fund.

We were also able to secure funding from the Clean Water Management Trust Fund to (1) add >100 acres to the existing **Paddy Mountain Plant Conservation Preserve** in Ashe County and (2) purchase the Austin tract, part of the McIntosh Bay Complex in Scotland County. Along with this purchase, long-time partner TNC is donating to PCP the adjacent property which they own to create one larger protected area, home to two Carolina bays and many unique species. PCP will work with TNC to develop management plans for this >215 acre property we plan to call the **McIntosh Bay Plant Conservation Preserve**.



The PCP Preserve system includes 24 preserves, in 18 counties across the mountains, Piedmont, and coastal plain totaling 13,625 ac. with an additional 323.5 acres pending with secured funding.

Permits

In North Carolina, a protected plant permit is required to (1) remove from the wild, (2) to propagate or offer for sale/donation/gift, or (3) to plant or reintroduce any protected plants or plant parts into a non-garden environment. Exempt activities include: purchase of propagated protected plant species from nurseries or dealers with necessary permits, activities allowed under existing state laws and regulations, collection or removal from one’s own land, or propagation or sale covered by a current certificate of origin (See 02 NCAC 38F.0407 for more information). PCP staff share all project details as well as copies of permits with partners at the NC Natural Heritage Program and US Fish and Wildlife Service for their records. Most permits require a final report be sent to PCP. We maintain a copy of all findings and reports in an effort to collate available knowledge on the protected plants of North Carolina and their habitats.

North Carolina Protected Plant Permits						
	Scientific Collection	Rescue Reintroduction	Preserve Access	Propagate and Sell	Home Garden	Public Exhibit
2006	7	2	0	6	1	0
2007	16	5	5	13	2	0
2008	19	2	7	17	3	0
2009	12	5	8	8	0	1
2010	4	2	7	0	1	0
2011	18	1	12	0	0	0
2012	21	3	3	21	0	1
2013	8	3	3	10	0	3
2014	10	4	24	1	0	3
2015	13	4	34	1	0	1

Volunteers Really Help!

In addition to staff time, PCP's stewards and other volunteers logged **over 600 person hours** across eight preserves in 2014 and then nearly doubling that in 2015 with **1,175 person hours** across seven preserves! Their time and efforts included ~175 stewardship site visits, volunteer workdays, and time spent on augmentation projects. **There is more to do. If you or someone you know who would like to help, please contact us!**



Left: Duke University students pose with invasive privet at a volunteer workday at the Hebron Road Plant Conservation Preserve.

Right: Volunteer Jean cuts invasive wisteria at volunteer workday at the Mineral Springs Barren Plant Conservation Preserve.

Of special note: PCP enjoys a very productive partnership with the Eno River Association in Durham County. As preserve neighbors, we have been able to collaborate on projects and share resources to meet our common goals to protect the rare plants in the Eno River Diabase Sill area. Among other things, Eno River Association has supported and expanded PCP's volunteer pool by sponsoring multiple workdays with groups and individuals who had never heard of the Plant Conservation Program before. Similarly, our close relationship with the Catawba Lands Conservancy in Gaston County is very fruitful and has contributed significantly to our reach at Redlair. This partnership has produced volunteers for workdays at Redlair who typically work closely with the preserve steward and previous owner Haywood Rankin.

Field Trips

PCP staff hosted a whopping 14 guided field trips and speaking engagements from March through June 2014 at **Cedar Mountain Bog, White Woods (aka Pondberry Bay), Morgan's Bluff, Eno Diabase Sill, Hog Branch Ponds, Hebron Road, Mineral Spring Barrens, Redlair Preserves** as well as several partnership sites. We sustained this effort in 2015 with 13 guided field trips and speaking engagements from March through October at **Boiling Spring Lakes, Camassia Slopes (TNC/WRC), Redlair, White Woods, Eno Diabase Sill**, pending preserve **McIntosh Bay**, TNC's Antioch Bay, **Tater Hill**, Bluff Mountain, and visiting the neighbors of **Cedar Mountain Bog**. PCP's field trips are open to the public. Each trip provided participants the opportunity to observe rare plants, while also learning more about land management and ecological stewardship. Participants included special guests, volunteer stewards, and co-hosts from some of our partner organizations. Remember to check out our website, www.ncplant.com for a current field trip schedule!

Partnerships/Collaborations

The PCP staff regularly reaches out to the public with special presentations and by filling information requests. In 2014 and 2015 presentations included the following audiences: NCDA & CS field specialists, International Grassland Scientists, Village Nature Series (Cashiers, NC), Saluda Community Land Trust, Cullowhee Native Plant Conference, NC Botanical Gardens, North Carolina Museum of Natural Sciences, Roseboro-Salemburg Community Members, Biltmore Garden Club, Highlands Native Plant Symposium, Uwharrie Garden Club, and the Friends of Plant Conservation, our not for profit support network.

A partial list of collaborators and partner organizations in 2014:

Atlanta Botanical Garden, www.atlantabotanicalgarden.org

Carolina Mountain Land Conservancy, www.carolinamountain.org

Catawba Lands Conservancy, catawbalands.org

City of Boiling Spring Lakes, www.cityofbsl.org

Duke Forest at Duke University, www.dukeforest.duke.edu

Eno River Association, www.enoriver.org

Friends of Mountains to Sea Trail, www.ncmst.org

Friends of Plant Conservation, www.ncplantfriends.org

Highlands-Cashiers Land Trust, www.hicashlt.org

James F. Matthews Center for Biodiversity Studies, <http://charmeck.org/MECKLENBURG/COUNTY/PARKANDREC/>

Land Trust for Central NC, landtrustnc.org

NC Botanical Garden, ncbg.unc.edu

NCDA Forest Service, ncforestservice.gov

NCDA Research Station Division, www.ncagr.gov/research

NC Museum of Natural Sciences, naturalsciences.org

NC Native Plant Society, www.ncwildflower.org

NC Natural Heritage Program, www.ncnhp.org

NC Division of Parks and Recreation, www.ncparks.gov

NC Wildlife Resources Commission, www.ncwildlife.org

The Nature Conservancy, www.nature.org

UNC Asheville, www.unca.edu

US Army Corps of Engineers

US Fish and Wildlife Service, www.fws.gov/southeast/

Young Offenders Forest Conservation Program (BRIDGE), http://ncforestservice.gov/fire_control/bridge.htm

Controlled Burning Program

Controlled burns are one of the most important management and restoration activities needed across the PCP preserves and for North Carolina's rare plants in general; surprising numbers of imperiled species state-wide benefit from such fires and are threatened by fire suppression. PCP Staff burned a total 164 acres in 2014 in six burns on PCP Preserves. Through a partnership with the NC Forest Service, we had an additional 29 acres burned on our behalf for a total of **193 burned acres in 2014**. PCP Staff **burned 459 acres in 2015** on three preserves. At least a third of these acres were possible with the help of Miller and H.L. who were able to work on small pocket burns with greater frequency. Although these burns were beneficial, this total was **far below** our annual need and represents a marked decrease in total burning capacity compared to recent years. PCP Staff also burned other imperiled plant habitat for partners.

PCP staff burned the smooth coneflower site owned by multinational Freudenberg in Durham for the first time in spring of 2014.



Drip torch at prescribed burn. Photo credit- PCP Staff.



Michaux's Sumac discovered at the Eno Diabase Sill Preserve after 2014 prescribed burn. Photo credit- PCP Staff.

Risen from the Ashes

In April 2014, PCP Staff, with the help of the NC Forest Service, conducted a prescribed burn at the Williams tract of the **Eno Diabase Sill Preserve**. This property is primarily forested in oak and hickory and has a small population of smooth coneflower on the western roadside edge with other prairie associated species along the east side, along a nonoperational railroad line and water easement. One month later, **PCP staff discovered Michaux's Sumac (*Rhus michauxii*)!** The significance of this finding was enormous! The only other population of this species ever known in Durham County was extirpated with rescued plants from a Wake County population reintroduced in the vicinity of the extirpated population. Also, this is the first record of this species on any Plant Conservation Preserve which increases our protected species portfolio in a very gratifying way! A total of 44 stems were observed with nearly half of them flowering.

Species Augmentation

At the request of PCP, volunteer Preserve Stewards Herb and Pat Amyx collected, germinated, and outplanted Smooth Coneflowers (*Echinacea laevigata*) at several locations on the **Eno River Diabase Sill and Hebron Road Plant Conservation Preserves**, augmenting existing natural populations. This herculean task has resulted in 250 volunteer hours in 2014 and 370 volunteer hours in 2015! Special attention was given to keeping all seeds from varying subpopulations separate and matching seedlings with their parent subpopulations, providing a substantial boost to our three smallest subpopulations of this federally endangered species. Herb and Pat Amyx also planted Prairie Dock (*Silphium terebinthinaceum*) and Cutleaf Coneflower (*Rudbeckia laciniata*) seedlings at the **Hebron Road Preserve**, grown from seeds collected onsite. They have collected additional species to continue and expand this work in the upcoming year.

Smooth Coneflower Augmentation Summary- seedlings propagated by Herb and Pat Amyx

<u>Site Name</u>	<u>2012</u> <u>seedlings</u>	<u>2013</u> <u>seedlings</u>	<u>2014</u> <u>seedlings</u>	<u>2015</u> <u>seedlings</u>	<u>TOTALS</u>
Eno Diabase-Williams tract	0	74	4	48	126
Eno Diabase-Penny tract	15	29	52	6	102
Eno Diabase- Harrelson tract	50	0	0	10	60
Hebron Rd. Preserve	0	29	28	30	87
					375

In summer of 2013 PCP Staff collaborated with Preserve Stewards, Mimi Westervelt and Kathy Schlosser, and NC Forest Service to identify interior locations at Harvest Field to create canopy light gaps by removing fire intolerant tree species like red maple. Mimi and Kathy then collected sunflower seeds and scattered them into these light gaps in 2014.



Left to Right: Mimi Westervelt with new native Schweinitz's sunflower discovered in the interior of the Preserve. Schweinitz's sunflower seedlings from scattered seeds. Photo credit- PCP Staff.

Habitat Restoration

Many of the sites under management by PCP have become dense and overgrown after decades of fire suppression prior to our efforts to reintroduce prescribed fire. This is true for species such as Smooth Coneflower (*Echinacea laevigata*) and associates, Schweinitz's Sunflower (*Helianthus schweinitzii*), and Mountain Sweet Pitcher Plant (*Sarracenia jonesii*), to name a few. Some of these sites cannot be restored with fire alone without excessive heat and dangerous burning conditions which would likely be detrimental to the target forbs. In these cases, mechanical means of brush clearing and removal are used to re-open the habitat, often as a preparatory step for future prescribed burns. We try to remove as much of the biomass as possible either by hauling it away or burning it on site. Some may wonder why we remove the cut biomass rather than leave it on site for the benefit of wildlife or natural decay and nutrient cycling; however, at the volumes we're working with, we feel that we need to remove it to avoid further suppressing the target forbs and to avoid a pile-up of excessive fuels so that future prescribed burns have less heavy fuel to consume.

PCP Staff and volunteers cut and cleared extensive woody biomass, primarily loblolly pines and hardwood saplings, at the **Hebron Road** and **Eno Diabase Sill Preserves**, as well as at important partnership sites, the Blue Indigo Slope Nature Preserve and Stanley Road Nature Preservers (both owned by the Eno River Association), right around the corner. At the **Eno Diabase Sill Preserve**, home to the largest locally occurring subpopulation of Smooth Coneflower, several volunteer workdays were initiated to remove extensive piles of trees felled by PCP staff from the interior of the site to maintain optimal light conditions for the prairie species. PCP also procured the service of two NCDOT dump trucks and removed seven truckloads of cut and downed materials.



Burning brush piles at Hebron Road Preserve. Photo credit: PCP staff.

Tree felling and brush pile burning was initiated at **Redlair's** Adam Hunter Prairie, a Schweinitz's sunflower site, to begin to soften the artificially abrupt boundary between the open grassy/forb-filled area and the wooded edge. This location is useful for demonstrating the mesophication process whereby mafic/xeric woodlands or even more open prairies succeed into mesic forests, where canopy species like oaks and hickories are joined by under and mid-story of maples, beeches, sweetgums, tulip poplars, etc. resulting in essentially zero oak or hickory regeneration. Below are before and after photos from the south side of the Adam Hunter Prairie opening facing the solid woodland edge taken in late 2015. You can see the same bent cedar tree in the middle-right of both photos for reference. In the after photo you can see that by simply targeting the maples, beeches, sweetgums, water oaks, and tulip poplars, but leaving other oaks, hickories, larger cedars, etc. that the hard edge of the woodland is made more diffuse. We can anticipate greater sunlight in this edge habitat as well as along the south side of the sunflower patches to the north and west of the area in these photos which should benefit the sunflowers as well as help prepare this opening for prescribed fire.



Before- dense midstory. Photo credit- PCP Staff



After- midstory reduced. Photo credit- PCP Staff

PCP staff coordinated tree felling at the **Harvest Field Preserve** in August 2014 with the help of NC Forest Service. Five areas approximately 15m in diameter were scouted by PCP staff for the targeted felling of red maples and other fire-intolerant tree species to create light gaps for future Schweinitz's sunflower plantings. The current population at the preserve is largely relegated to the roadside ditch and embankment where it is

vulnerable to aberrant powerline and roadside maintenance as well as resource competition by invasive *Lespedeza*.

At the **Cedar Mountain Bog Preserve**, PCP staff members were joined by Transylvania County Forest Service employees, and the Young Offenders Forest Conservation Program (also known as B.R.I.D.G.E.) to improve habitat for the federally endangered Mountain Sweet Pitcher Plant. Extensive woody debris previously downed by staff was chipped and removed from the site. The service of a rental dump truck and driver were provided by a small grant provided by the North American Sarracenia Conservancy. Before leaving the site, BRIDGE personnel were also able to help install several fire breaks. Additional staff workdays resulted in several more tons of woody material, primarily rhododendron, being cut, piled, and burned on site.

Controlling Invasive Species: a few examples

PCP Staff treated the encroaching *Lespedeza* at the Harrelson and Goldston tracts of the **Eno Diabase Sill Preserve**, where it is intermixed with a host of imperiled and rare species including Tall Larkspur (*Delphinium exaltatum*). Volunteer preserve stewards and workday volunteers have lent quite a few hands to the PCP Staff at the **Hebron Road Preserve** to battle woody invasives. Regular updates provided by stewards at this preserve have helped to gauge the response of these species to our control efforts. PCP staff treated several large infestations of Japanese stilt grass, *Microstegium vimineum*, in parts of the **Eno Diabase Preserve**, significantly reduced populations of privet (*Ligustrum sinense* and *Ligustrum japonicum*), Heavenly Bamboo (*Nandina domestica*) and Queen Anne's Lace (*Daucus carota*) across the preserve. The staff's efforts in controlling a variety of invasive plant species at these and many other preserves are great. In 2015, a comprehensive mapping and treatment history was initiated by PCP staff to better document these efforts and to provide visual/spatial representation of the overall threat of invasive plants at the preserves, in particular with their proximity to imperiled species.

In the fall of 2014, volunteer steward Lisa Tompkins led a volunteer workday at the **Mineral Springs Barren Preserve** to cut back invasive wisteria vines which are impacting federally endangered Schweinitz's sunflower (*Helianthus schweinitzii*). Lisa and her crew will work with PCP Staff during the growing season next year to further control this invasive population.

Botanical Surveys & Imperiled Plant Updates

Occasionally PCP staff and or partners locate previously undocumented or poorly documented populations of imperiled species on Plant Conservation Preserves. It remains a goal of the PCP to completely inventory all of its preserves. Until that happens, these anecdotal observations along with organized surveys through various groups and student research will be the primary source for new and updated knowledge about the imperiled plant populations on the preserves.

Two graduate students from North Carolina State University continued floristic surveys in the **Eno Diabase Sill** and **Pondberry Bay Preserves** in 2014 and 2015. This work will be a great start to meeting our goal of having and maintaining complete botanical inventories of all the North Carolina Plant Conservation Preserves.

Species Monitoring

Understanding the current status and trends of the populations we protect is very important. To that end, we have been collecting annual census data on several species across the state. In 2014 and 2015 census and/or population monitoring work was conducted on the following species:

-Ongoing Projects-

- Rough-leaf Loosestrife - **Boiling Spring Lakes** and **Hog Branch Preserves**, Brunswick Co.
- Venus Flytrap -**Boiling Spring Lakes** and **Hog Branch Preserves** and TNC's Green Swamp Preserve, Brunswick Co.
- Bunched arrowhead - **Bat Fork Bog Preserve**, Henderson Co.
- Schweinitz's Sunflower – **Harvest Field, Denson's Creek, Mineral Springs Barrens, and Redlair Preserves** in Randolph, Montgomery, Union, and Gaston Counties respectively.
- Smooth Coneflower- **Eno Diabase Sill** and **Hebron Road Preserves** and several other sites in Durham and Granville Counties.



Bunched arrowhead at Bat Fork Bog Preserve where we observed a record 194 flowering plants across three patches. Photo credit- PCP Staff.



Lesley Starke with super tall Schweinitz's Sunflower at Harvest Field Preserve. Photo credit- Kathy Schlosser



Lesley Starke counting Smooth Coneflowers at Picture Creek Barrens 2014. We documented over 43,000 flowering stems - the highest ever recorded! Photo credit- PCP Staff.



In 2014 PCP Staff monitored flowering Venus Flytraps for the fifth year at Boiling Spring Lakes and Green Swamp (TNC) Preserves. Photo credit- PCP staff

Ginseng

PCP regulates the sale of American ginseng (*Panax quinquefolius*) in North Carolina by issuing licenses to dealers and tracking all exports out of the state including all international exports which require additional CITES export certification. PCP Staff work directly with our licensed dealers to obtain as much data as possible regarding the locations and weights of all wild harvested ginseng in an attempt to monitor the health of the state's population. Records are also processed for wild-simulated and other cultivated ginseng exports. Before being exported, all ginseng, both wild and cultivated, must be certified by NCDA&CS and reported to PCP. PCP requires that all dealers keep track of the weights and county of origin for every ginseng purchase. With these data we are able to tally the total pounds of wild ginseng roots that are harvested per county and with that, estimate the total number of plants that are harvested per year. This information is helpful for determining the health of the population, in particular, the size of the plants being harvested and number of roots per pound and what that suggests about the availability of larger mature ginseng plants.

In 2014, NCDA&CS issued a total of 40 ginseng dealer licenses from which we received a total of almost 13,000 purchases by dealers from harvesters/diggers, and 394 Export Certification entries (more than 50% increase from 2013), typically representing many ginseng purchases amalgamated for export. PCP has noted that harvest and export rates in the past six years have greatly increased over the previous five years. A five year high in 2002 was approximately equal to the lowest rate of the past six years (2010). In 2015, we issued a total of 51 ginseng dealer licenses; those dealers were issued a total of 527 total export certificates for >17,600 lbs. of ginseng roots.

PCP Staff also participated in the 2014 and 2015 annual Ginseng Marking Blitz in the Great Smoky Mountains National Park, a collaborative effort between NCDA&CS and the National Park. Removal of plants is illegal in US National Parks without a permit; permits are only issued to research professionals who may be using the plants for educational purposes. Each year thousands of wild American ginseng plants in National Parks and other lands are marked with a permanent dye so that if the plants are poached and attempted to be sold for export, they might be identified as illegally poached from the park.

In December of 2015, the Friends of Plant Conservation Program collaborated with PCP Staff and the Georgia Ginseng Management Program Staff to hold an auction of more than 430 pounds of seized and confiscated wild ginseng roots from multiple incidents of illegal harvests. The ability to auction these roots to NC certified ginseng dealers brought in valuable dollars to the Friends of Plant Conservation Program and Georgia Ginseng Management Program to be applied to future ginseng conservation projects.



Ginseng from 2015 auction. These wild ginseng roots were confiscated due to illegal harvesting. Photo credit- PCP Staff.



Wild ginseng root. Photo credit- PCP Staff.

Imperiled Plant Species Currently Documented on North Carolina Plant Conservation Preserves

Federally listed species are in bold. PCP staff is working toward verifying/updating each of these records.

<p>1. <i>Acmispon helleri</i> 2. <i>Agalinis virgata</i> 3. <i>Amorpha georgiana</i> var. <i>confusa</i> 4. <i>Anemone berlandieri</i> 5. <i>Arethusa bulbosa</i> 6. <i>Asclepias pedicellata</i> 7. <i>Astragalus michauxii</i> 8. <i>Baptisia alba</i> 9. <i>Baptisia australis</i> var. <i>aberrans</i> 10. <i>Berberis canadensis</i> 11. <i>Boechera missouriensis</i> 12. <i>Carex trisperma</i> 13. <i>Celastrus scandens</i> 14. <i>Chelone cuthbertii</i> 15. <i>Cirsium lecontei</i> 16. <i>Coeloglossum viride</i> var. <i>virescens</i> 17. <i>Cyperus granitophilus</i> 18. <i>Dalibarda repens</i> (last observed in 2008) 19. <i>Delphinium exaltatum</i> 20. <i>Dichanthelium aciculare</i> ssp. <i>neuranthum</i> 21. <i>Dionaea muscipula</i> 22. <i>Echinacea laevigata</i> 23. <i>Eleocharis elongata</i> 24. <i>Geum geniculatum</i> 25. <i>Helianthus schweinitzii</i> 26. <i>Helonias bullata</i> 27. <i>Houstonia montana</i> 28. <i>Ilex collina</i> 29. <i>Isoetes piedmontana</i> 30. <i>Liatris helleri</i> 31. <i>Lilium canadense</i> spp. <i>Editorum</i> 32. <i>Lilium grayi</i> 33. <i>Lilium philadelphicum</i> var. <i>philadelphicum</i> 34. <i>Lilium pyrophilum</i> 35. <i>Lindera melissifolia</i> 36. <i>Lithospermum canescens</i> 37. <i>Litsea aestivalis</i></p>	<p>38. <i>Ludwigia suffruticosa</i> 39. <i>Lysimachia asperulifolia</i> 40. <i>Lysimachia fraseri</i> 41. <i>Magnolia macrophylla</i> 42. <i>Micranthes pensylvanica</i> 43. <i>Oxypolis canbii</i>-PENDING (last observed in 2004) 44. <i>Packera schweinitziana</i> 45. <i>Panicum flexile</i> 46. <i>Pellaea wrightiana</i> 47. <i>Platanthera grandiflora</i> 48. <i>Polygala hookeri</i> 49. <i>Portulaca smallii</i> 50. <i>Rhexia aristosa</i> 51. <i>Rhus michauxii</i> 52. <i>Rhynchospora harperi</i> 53. <i>Rhynchospora pleiantha</i> 54. <i>Ruellia humilis</i> 55. <i>Ruellia purshiana</i> 56. <i>Sagittaria fasciculata</i> 57. <i>Sarracenia jonesii</i> 58. <i>Scutellaria leonardii</i> 59. <i>Shortia galacifolia</i> var. <i>galacifolia</i> 60. <i>Silene ovata</i> 61. <i>Sisyrinchium dichotomum</i> 62. <i>Symphyotrichum depauperatum</i> 63. <i>Symphyotrichum georgianum</i> 64. <i>Symphyotrichum laeve</i> var. <i>concinnum</i> 65. <i>Trichostema brachiatum</i> 66. <i>Trifolium reflexum</i> (extirpated on site)</p> <p>Other species of special note: <i>Phemeranthus piedmontanus</i> -This species is not a North Carolina Protected Plant Species;</p>	<p>however, it was not included in the most recent threat assessment because it was not named at the time. PCP Staff believe it will be included in future updates of the protected plant list.</p> <p><i>Stachys eplingii</i> -Although globally secure (G5), PCP protects the only known population of this species in North Carolina.</p>
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