Native Plant NEWS

SPRING/SUMMER 2018 FOR OUR MEMBERS AND SUPPORTERS

How Will Climate Change Affect Invasive Species?

Our Expert Foragers Savor the Wild Flavors of Summer

NEW ENGLAND WILD FLOWER SOCIETY

Native Plant News

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Native Plant News is published by New England Wild Flower Society, an independent, nonprofit, member-supported organization whose mission is to conserve and promote the region's native plants to ensure healthy, biologically diverse landscapes. Subscriptions to *Native Plant News* are included in membership dues, which start at $40/year for individuals.

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NEW ENGLAND WILD FLOWER SOCIETY

Contents

Charles T. Bryson, USDA Agricultural Research Service, Bugwood.org

On the Cover:
Watch out for this plant! Red sesbania (*Sebania punicea*), now growing in southeastern and western states and listed as invasive in several, will likely find suitable climate in New England by 2050. See page 4.

Mass Cultural Council

Institute of Museum and Library Services

From the Executive Director

RAISE YOUR VOICE

In my letter for last spring's magazine, I clanged an alarm bell about an administration "intent on gutting environmental regulations and slashing funding for programs that protect land, water, and the air we all breathe." In January of this year, the New York Times published an update to its list of "67 Environmental Rules on the Way Out," based on research from Harvard Law School, Columbia Law School, and other sources. That's 67 rules in a single year. We owe it to ourselves and the planet to ignore the staged noise and pay attention to the substantive changes behind the curtain.

Consider the impact on all living things of pulling out of internal environmental treaties; rolling back regulations on industrial polluters, power plants, sewage treatment facilities, vehicle emissions, and offshore drilling; and lifting protections for whales, sea turtles, migratory birds, and the habitat for endangered species. And think about the mindset that scraps climate action plans for national parks and scrubs agency handbooks of science-based guidelines for managing 500 million acres of public land facing multiple stressors and climate impacts. Policies that capture years of best practices are disappearing—along with experienced staff.

All of this is happening without any public debate or, in most cases, without input from scientific advisory panels with actual scientists. And that's where you come in. Our elected officials are not hearing much from the environmental community—in large part because we the people are busy contacting them about all the other things we value. But in politics as elsewhere, squeaky wheels get attention. So I urge you to stay informed about agency proposals and budgets, and then raise your voice to call for laws, regulations, and the necessary funding to protect the planet.

For our part, the Society works with agency staff directly or through national partnerships, such as the Plant Conservation Alliance and Native Plant Conservation Campaign, to ensure plants are not overlooked in management and funding decisions and to advocate for stronger protections for endangered plants. Our actions will be more effective if together we insist that every day is Earth Day.

Sincerely,

Debbi Edelstein

Coauthors of the Society's Latest Book Give *NPN* the Backstory

By Jane Roy Brown, Writer-Editor; with Mark Richardson, Director of the Botanic Garden; and Dan Jaffe, Propagator and Stock Bed Grower at Garden in the Woods

Mark Richardson

Dan Jaffe

NPN: Why this book, now?

MR: For years, Dan and I have talked about writing a native gardening book to update earlier titles from the Society, because we have refined our definition of native. Then, last year, someone from Globe Pequot Press asked me if I had any book ideas.

DJ: We knew there was an audience. We teach about gardening with native plants, and people always ask us, when are you going to write a book?

NPN: How has the Society refined the definition of native?

DJ: For horticultural purposes, we now use ecoregions, which are based on climate, geology, and other factors, rather than political boundaries like state lines, to define where species are native. New England has six states but only five ecoregions.

MR: Most of the 100 plants in our book are native to all of our ecoregions. We wanted to focus on geographically wide-ranging species. And we wanted them to be gorgeous, easy to grow even for novices, and suitable in a variety of conditions.

NPN: Are there any surprising plant choices?

MR: For people who love unusual plants, we tucked in some less common species, such as flowering spurge (*Euphorbia corollata*), spotted bee-balm (*Monarda punctata*), and Bowman's-root (*Gillenia trifoliata*). And we suggested less familiar ways to use common plants, like growing wild geranium (*Geranium maculatum*) for its beautiful fruits or wild strawberries (*Fragaria virginiana*) as a lawn substitute.

DJ: With native plants, you don't have to give anything up–they're beautiful, many are edible, they're environmentally beneficial, and, when planted in the right conditions, they require next to no maintenance.

NPN: What are some of the environmental benefits?

DJ: Broadly speaking, native plants provide crucial habitat for pollinators and native insects, which are often the pathway to move plant energy up the food chain. Ordinary plants can hold surprising habitat value. Did you know that hummingbirds collect hairs from the stalks of cinnamon fern (*Osmundastrum cinnamomeum*) for their nests? And that Pennsylvania sedge (*Carex pensylvanica*) supports more pollinators than typical showier species?

MR: In the end, what really resonates with gardeners is beauty. You can grow a beautiful garden with native plants, and we've filled our book with stunning examples.

Pollinator Palooza: Gardens, Workshops, and More

By Courtney Allen, Director of Public Programs

Pollinate New England–the Society's regionwide program to raise awareness of waning pollinator populations–hits the ground this summer, with activities popping up all over. Available right now are two new resources: an online course, "Gardening with Pollinators," and a native-plant database on www.newenglandwild.org to help gardeners choose plants for their home growing conditions.

Starting in June, we will build demonstration pollinator gardens at 12 locations throughout the region provided by partner organizations. (See schedule and locations inside the back cover of this issue.)

Our goal is to showcase native plants that support native pollinators–bees, butterflies, moths, and birds. The garden installations will serve as how-to workshops for homeowners who want to build similar gardens. Those who cannot come to the daytime workshops can attend evening lectures to learn why and how to expand vital pollinator habitat in their own backyard gardens.

Pollinate New England is made possible by a matching grant from the Institute of Museum and Library Services and by the generosity of donors. *All programming is free and open to the public.*

Testing Techniques to Restore Plants on Cadillac Mountain

By Bill Brumback, Director of Conservation

For a third year, the Society is working with the National Park Service to experiment with methods of restoring native plants to the highly disturbed, subalpine summit of Cadillac Mountain in Acadia National Park in Maine. In previous seasons, we have collected seed on the site and either sown it directly into the ground or grown seedlings and transplanted them to test plots. Our goal is to learn which method is cheaper and which more effective. (These outcomes may be mutually exclusive.) Results are yet to come, but we have established that adding organic matter is crucial for growing plants in these depleted soils.

This season, an additional experiment will compare two types of plantings: small plugs and plant "modules"—flats of 12 plants comprising 8 species grown from seed collected on site. A module has two benefits: it can be lifted as a 12 x 16-inch mat and nestled into bare ground, and it can be used on steep slopes with less risk of erosion, because the plants are already

rooted together. Planting single-species plugs, on the other hand, enables us to add plants of the same species as those already growing on the site. Our experiments seek to discern which technique works better in terms of utility, cost, and effectiveness.

Want to support our native plant Conservation work? Please contact the Philanthropy Department: 508-877-7630, x3802; development@newenglandwild.org.

Trials by Fire and Other Torments: Will Bearberry Seed Give Up Its Secret?

By Alexis Doshas, Propagator and Facilities Coordinator, Nasami Farm

Bearberry (*Arctostaphylos uva-ursi*), a low-growing evergreen shrub that thrives in poor, dry soils, is a favorite alternative to turf grass, especially on slopes. Birds and other animals eat its leaves and red fruit. But it is nearly impossible to find genetically diverse, seed-grown specimens in the horticultural trade, because bearberry seed can stay dormant for years. As a result, most nurseries propagate this plant through cuttings from one or two parent plants, producing genetically identical individuals. These contribute to a lack of biodiversity in the designed landscape, putting specimens at risk of being wiped out by diseases or pests for which the parent plants lack resistance.

At Nasami Farm, we are conducting a series of experiments with staff at Greenfield Community College and its laboratory to discover what triggers *Arctostaphylos* seed to germinate. During the winter, we treated the seeds' hard coats with heat, smoke, and chemical baths. We will monitor results over the next 18 months to try and determine the best practices for germination, which could lead to more nurseries growing bearberry from seed–and bolstering the species' genetic diversity.

SEEDS FOR HURRICANE SANDY RESTORATION: BAGGED AND TAGGED

By Michael Piantedosi, New England Plant Conservation Program and Seed Bank Coordinator

If you lined up the 868 bags of seeds Conservation staff and interns collected along coastline damaged by Hurricane Sandy in five New England states, the grapefruit-sized sacks would stretch for a few city blocks, or stuff a school bus, floor to ceiling.

The seeds come from plants native to the coastal habitats that were flooded, washed out, or buried by the 2012 superstorm. Over three years, we visited 127 sites and collected seed from more than 215,000 plants. These represent the Society's contribution to a $2.3 million initiative, in partnership with the North Carolina Botanic Garden and Mid-Atlantic Regional Seed Bank, to ensure that genetically appropriate plants are available for post-hurricane restoration projects from Maine to Virginia.

Funded chiefly by the U.S. Department of the Interior, the project expanded the federal Bureau of Land Management's largely western-focused Seeds of Success program and represents the first large-scale, coordinated seed-banking effort in the eastern United States. As of the vernal equinox, managers of 14 restoration projects had requested seeds, and 5 of these projects had started. During the next two years, we will distribute the remaining seeds to other projects.

Our Seed Ark project to collect and permanently store the seeds of all the region's imperiled plants by 2020 is ongoing and needs your support. To donate, please contact the Philanthropy Department: 508-877-7630, x3802; development@newenglandwild.org.

Will New England Be an Invasive Species Hotspot as the Climate Changes?

Yes. And no. A leading researcher explains.

By Jenica M. Allen

http://www.floradecanarias.com

At the University of New Hampshire's Department of Natural Resources and the Environment, Assistant Professor Jenica M. Allen, a quantitative plant ecologist, crunches numbers, stacks layers of data, and conducts field experiments to forecast how invasive and native plants could respond to climate change. With colleague Bethany A. Bradley at the University of Massachusetts, Allen led a study on how climate change could alter the geographic distribution of invasive species by 2050. The research points to future invasive species hotspots as well as conservation opportunities.

Climate change and invasive species are two of the major causes of ecological change. To manage potentially disastrous outcomes, biologists naturally want to understand how these two dynamic, complex processes interact to cause or limit ecological change. Investigating this interaction presents many challenges, however, including the lack of a comprehensive set of examples. Though some studies have documented cases in which a warming climate spurred the spread of an invasive species, it is difficult to find examples of the opposite outcome—that of climate change keeping invasives in check. Consequently, many biologists have assumed that a warming climate would accelerate biological invasions rather than slow or contain them. (We use the USDA definition of invasive species: "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health." All of the species we study appear on state and/or federal invasive species lists.)

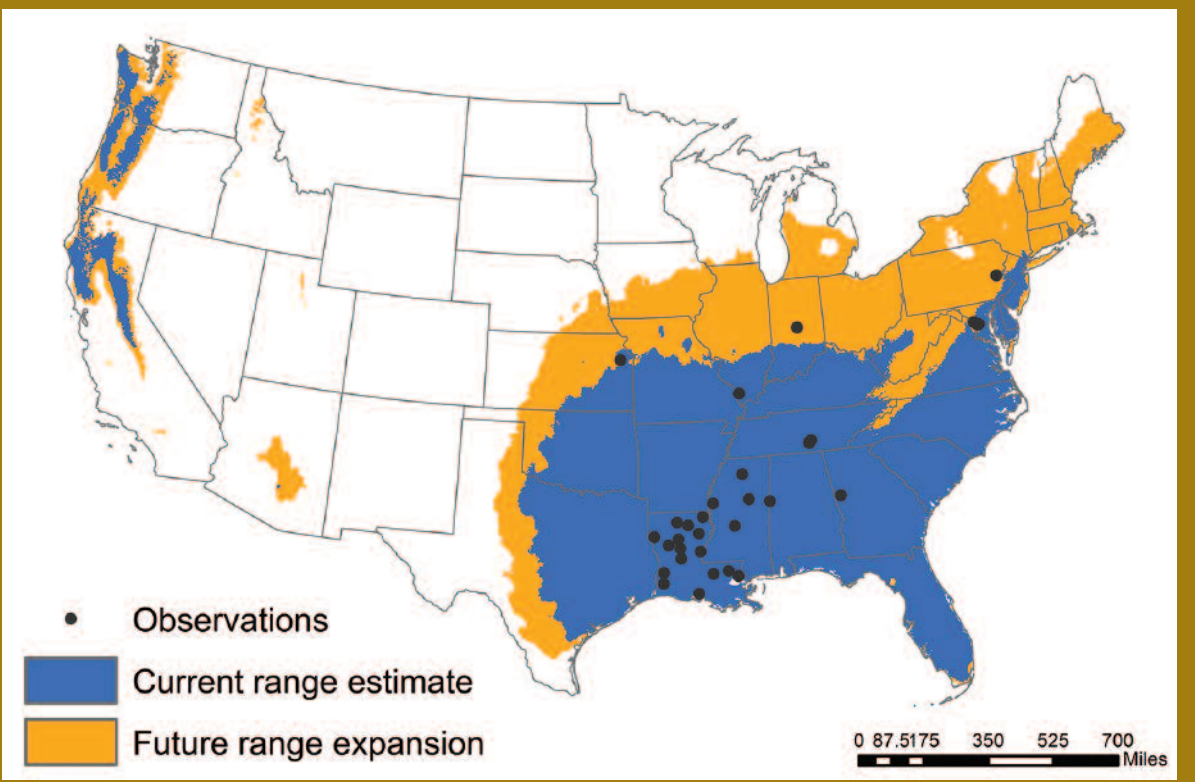
But in our recent research, published in the journal *Biological Conservation*, we found that the predicted spread of invasives as the climate changes is not in fact linear. Our research quantified the shifting invasion risks posed by 900 terrestrial plant species that are already present in the continental United States. We did this by assembling data from public and private databases to create one of the most comprehensive such databases to date. Using this powerful tool, we were able to break out the invasion risk for these species by region. For example, New England could be a hotspot for some invasive species now growing in southern and western states, while some invasives that occur here now will shift to the north. More about our region follows, but first, here is the short version of how we came to this conclusion.

Buffel grass (*Cenchrus ciliaris*), above, and tansy ragwort (*Senecio jacobaea*), left, are two invasive plants likely to migrate into New England.

We began by mapping the species' ranges, because range is one attribute that can be altered by climate change. Although other factors, such as local habitats and soils, also help determine where a species occurs, at large geographic scales, climate is the dominant driver. (Temperature and precipitation are the climate components used in the models.) The geographic areas in which species occur are determined by the species' biology; specifically, in what climatic conditions a particular species can survive. Some species, like buffelgrass (*Cenchrus ciliaris*, formerly *Pennisetum ciliare*), prefer warm, dry climates. Others, like tansy ragwort (*Senecio jacobaea*), favor cool, wet ones. Where the edge of a species' range might contract and expand in the future depends on how its suitable climate moves on a map. So, mapping ranges for an invasive species is the first step in predicting–and ultimately managing–the effects a changing climate will have on native species, agricultural crops, and so on.

Having mapped each species' existing range, we then assembled climate data for that range. We then correlated species occurrences and climate data to create species distribution models. These models enable us to estimate where a species is likely to occur anywhere on a map, given the climate conditions at a given location, and even if a species has suitable climate in places that have not been sampled yet. The distribution models for each of those 900 terrestrial invasive plants enabled us to estimate the geography of invasion risk with climate change and to project future ranges for these species at 2050.

Because no single model holds true for all climate characteristics in all parts of the world, we used projections from several models to bracket the range of possible future changes in climate. If projections from many models agree, we have higher confidence that the projected event will occur. And, because we do not know how the social, economic, and political factors that dictate greenhouse-gas concentrations will unfold, we needed to represent these variables. The International Panel on Climate Change has conducted studies that produced that data, and we incorporated that into our projections.



Heading Our Way: Sawtooth Oak (*Quercus acutissima*)
The current range of *Quercus acutissima* stretches from Florida to New York. With changes in temperature and precipitation by 2050, its range could expand into most of southern and central New England.

WHAT CAN NEW ENGLAND EXPECT?

Our analysis surprised us by predicting that by mid-century, many areas of the continental U.S. may experience fewer impacts from the current pool of invasive species. That sounds like great news, but there are caveats. First, our analysis focused on invasive plants that are already present on the landscape, but new invasive plant species could fill in as the current invasives vacate some areas. Without strong preventive measures in place, this could simply prime the country for a new wave of invasive species. Second, our study predicts that higher-latitude and mountainous areas, which currently have cooler temperatures, are expected to gain invasive plant species.

Range projections under climate change afford those of us who are interested in plant conservation the opportunity to identify and monitor invasive species that may expand into New England. We have identified 140 unique species that have high potential to find suitable climate in one or more New England states by 2050. Though the wide range of environments within the region makes it likely that only a handful of these will find suitable climate in all six states, we need to monitor all 140 species across this large geographic region, as well as to track problem species through state watch lists.

One challenge in identifying the range-shifting species of most concern is that comprehensive analyses of impacts are not yet available. Some species will have multiple types of impacts, such as competition with native plants and changes in soil chemistry. Others may have a single but powerful negative impact. We also recognize that those who monitor for range-expanding plant invaders may focus only on certain types of impacts, which also makes producing unified data more challenging.

To this end, we have begun working on multiple, simultaneous projects to put information in the hands of users, such as botanists who work for state and federal agencies and other members of New England Wild Flower Society's New England Plant Conservation Program. They will be able to prioritize the information according to their needs. Also, impact assessments are underway for all invasive plants predicted to expand their ranges into New England. We are designing these using an adapted version of a method developed in Europe and are including a review of all published literature on impacts for each range-expanding species. We are also building an interactive online tool that provides access to range maps for all the species in our study. Users will also be able to summarize future range maps by state into a watch list and to filter the listed species according to their immediate needs.

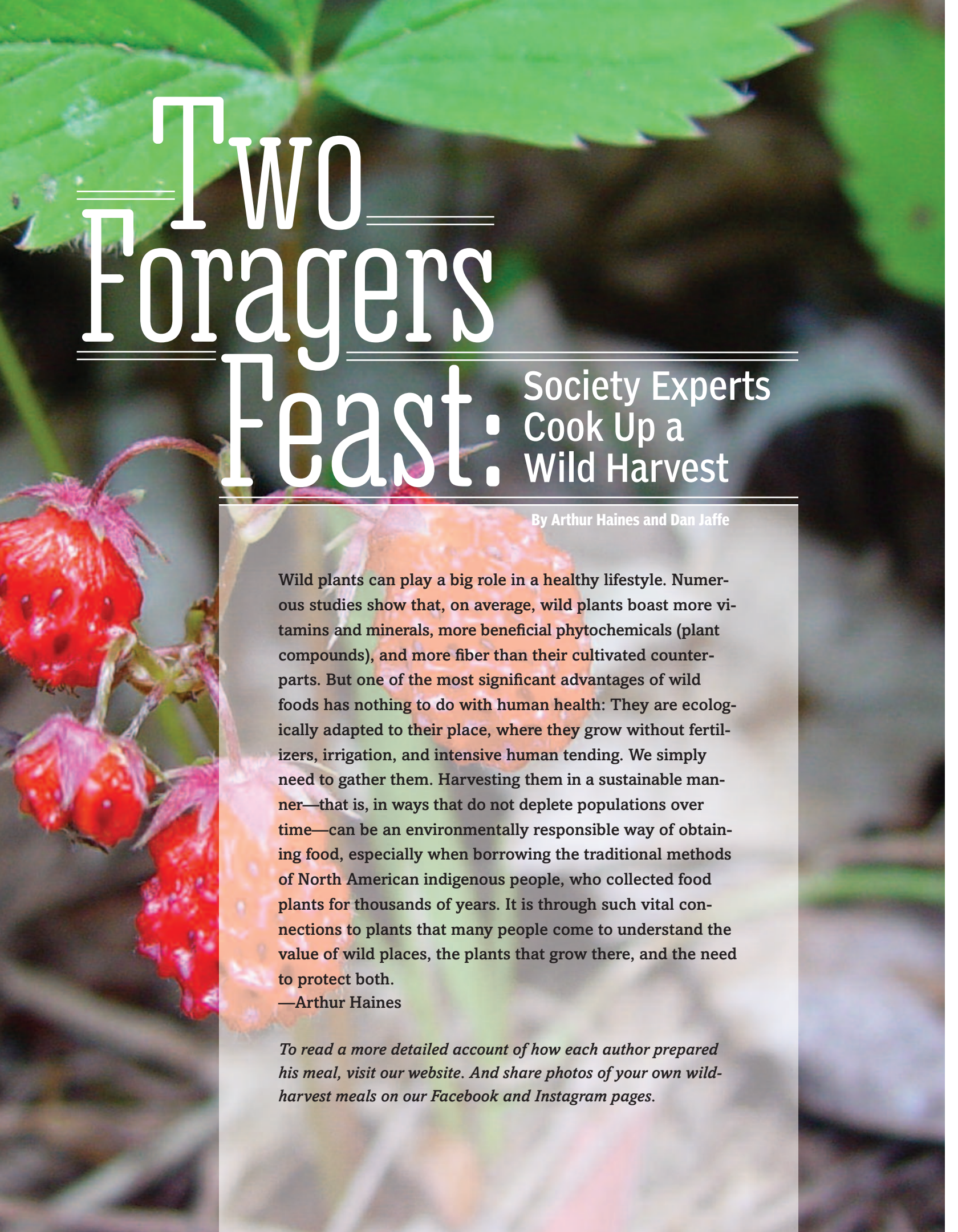
Watch lists may help us prevent range-expanding invasive plants from establishing themselves in our region in the face of climate change. Knowing which species to look for, and where, can help to improve monitoring. Integrating data modeling with ecological knowledge opens many possibilities to get ahead of invasives–and conserve native species–as the climate changes.

Karan A. Rawlins, University of Georgia, Bugwood.org

Turnipweed (*Rapistrum rugosum*), an invasive annual herb, is poised to expand its range into New England and neighboring states.

Chuck Bargeron, University of Georgia, Bugwood.org

Sawtooth oak (*Quercus acutissima*), an invasive tree native to Asia, is now established as close as Pennsylvania and will likely find suitable climate here by 2050.



Two Foragers Feast: Society Experts Cook Up a Wild Harvest

By Arthur Haines and Dan Jaffe

Wild plants can play a big role in a healthy lifestyle. Numerous studies show that, on average, wild plants boast more vitamins and minerals, more beneficial phytochemicals (plant compounds), and more fiber than their cultivated counterparts. But one of the most significant advantages of wild foods has nothing to do with human health: They are ecologically adapted to their place, where they grow without fertilizers, irrigation, and intensive human tending. We simply need to gather them. Harvesting them in a sustainable manner—that is, in ways that do not deplete populations over time—can be an environmentally responsible way of obtaining food, especially when borrowing the traditional methods of North American indigenous people, who collected food plants for thousands of years. It is through such vital connections to plants that many people come to understand the value of wild places, the plants that grow there, and the need to protect both.
—Arthur Haines

To read a more detailed account of how each author prepared his meal, visit our website. And share photos of your own wild-harvest meals on our Facebook and Instagram pages.

Sara Moore

Eating Wild during the Ripening Moon

By Arthur Haines, the Society's Research Botanist and author of *Flora Novae Angliae*

Wild foods are a regular part of my life in western Maine, so the chance to share such a meal with readers is a special occasion. Aside from some herbs and accompaniments, I harvested all ingredients from the forests, marshes, and waters of Maine. I also wanted to include some species that most people today never have tasted. So, passing over the first flush of spring, which produces more familiar wild edible plants, I gathered the food during the time the Maine native people called Accihtewsiket Kisuhs (*aht-chee-tew-SEE-ged GEE-zoos*)*, the Ripening Moon (early June through July).*

MENU

(Courses served simultaneously on a single plate)

Beverage
Wild grape mead

Plant side dishes
Boiled glaucous cattail flowers
(*Typha × glauca*)

Garlic mashed ground-nuts
(*Apios americana*)

Main course
Fried brown bullheads (catfish)
in fresh-ground cornmeal

Dessert
Fresh wild strawberries
(*Fragaria virginiana*)

I started by collecting glaucous cattail in a large wetland, where this hybrid between broad- and narrow-leaved species has colonized several hectares of shallow water. The plant's vertical growth over such a large expanse is visually striking, and the constant calls of red-winged blackbirds filled the air during the time I spent in the marsh. The native word for cattail, *pkuwahqiyasq* (pkoo-wah-KWEE-yaskw), means "bog root" or "swamp root." While native people typically ate its rhizomes, I was after the pollen-bearing flowers. Cattail pollen is tedious to harvest, so I follow the practice of some South American indigenous groups by gathering the entire inflorescence (flower head) and consuming both pollen and flower parts. This wild food contains significantly more vitamin C than citrus fruits, as well as calcium, iron, fiber, and protein.

Facing page: Fruits of wild strawberry at peak ripeness and maximum flavor.

This page:
Left: The author in a large cattail marsh gathering the pollen-bearing portion of the inflorescence for use in the featured wild meal.

Right: The gathered pollen-bearing spikes, which will be unsheathed from any bracts, briefly rinsed, and then cooked.

Arthur Haines

Several of the gathered ground-nuts with the wooden tool used to loosen the ground around them.

Sara Moore

Brown bullheads, a species of catfish, caught by hook and line from a section of fresh tidal river in mid-coast Maine.

Arthur Haines

Prepared meal with garlic-mashed ground-nut tubers (lower), cattail pollen-bearing flowers (center), brown bullhead filets (upper), and wild strawberries (sides).

The inflorescence of cattail consists of a pollen-bearing spike rising above an ovule-bearing portion. To gather the pollen-bearing flowers, I detach only the top parts, leaving intact the ovule-bearing flowers to be wind pollinated. I peel off any remaining sheathing bracts, then rinse and boil the spikes for five to six minutes. Like corn on the cob, they taste wonderful with melted butter, and, like corn cobs, you eat the flowers by rotating the central spike. The flavor is refreshing, like a blend of corn and greens.

Next, I gather common ground-nuts, or *ktahkitom* (ktah-KEE-dum). The "nuts" are actually starchy tubers, ranging in size between acorns and walnuts, that grow along a thin underground rhizome. They taste a bit like potatoes, but nuttier. (*Caution: Do not eat raw ground-nuts, because they contain compounds that interfere with protein metabolism. Cooking renders these inert.*) They contain almost three times more protein and significantly more calcium and iron than cultivated potatoes, and are rich in genistein, an isoflavone. (Isoflavones function as antioxidants.) I peel and boil the tubers for about 30 minutes, then mash them with a fork with sautéed garlic and a dash of raw Jersey cream. (Jersey cow milk is notably rich in protein, calcium, butterfat, and other nutrients.)

For the animal portion of the meal, I chose brown bullhead (*Ameiurus nebulosus*), a species of catfish native to Maine, which Maine's indigenous people called *motepèhs* (muh-deh-BASS): an unseen animal that sloshes around in the water. Abundant in the tidal waters of Merrymeeting Bay in the state's mid-coast region, they have a mild flavor that pairs well with many foods. At this time of the year, brown bullheads are spawning, so it was relatively easy to catch several with hook and line. (I immediately and humanely dispatch any fish I catch.) Also, spawning females provide roe for those who enjoy this prized traditional food. Brown bullheads are generally filleted to remove their many fine bones. I soak the fillets in cold water overnight to eliminate the sometimes muddy flavor bullheads can acquire. I coat the soaked fillets with fresh-ground corn flour and herbs and fry them in a generous dollop of rendered black bear fat, which is similar to lard.

For the final plant course, I was seeking color and a little sweetness. At this time of year, wild strawberries grow abundantly around my home, where I often pick them with my daughter, Samara. I gather a heaping palmful for the meal. Maine's native people call strawberries *pskihqiminsok* (pkee-kwee-MEEN-sug), or "grass berries," similar to the English word—although technically, strawberries are not a berry but an aggregate of achenes, or dry, usually single-seeded fruits. Wild specimens, though smaller than cultivated ones, are tastier and higher in the phenolic compounds that support health.

With this menu, I pair a homemade grape mead, a kind of wine in which honey is used as the sugar for fermentation. This mead incorporates three different species of wild grape native to Maine: fox grape (*Vitis labrusca*), river grape (*V. riparia*), and their hybrid, New England grape (*Vitis* × *novae-angliae*). The combination yields a fruity, mildly alcoholic drink with a small amount of carbonation, delicious to sip during and after the meal.

Sara Moore

Backyard Foraging in the 'Burbs

By Dan Jaffe, Propagator and Stock Bed Grower at Garden in the Woods

Creating a wild-food menu at the height of our growing season means working with an optimal variety of ingredients, so the bigger challenge was to construct the framework guiding my choices: Should I use only wild ingredients? Include nonnative species or preserved wild ingredients harvested previously? Because I live in metropolitan Worcester, MA, I decided to take a flexible approach focused on flavor, combining unique flavors found only in foraged foods (several of which I grow at home) with ingredients sold in stores. This allowed me to create dishes anyone can make.

MENU

Cocktails
Cucumber Hyssop Hiccup
(*Anise hyssop, Agastache foeniculum*)

Starter
Ground-nut chips
(*American ground-nut, Apios americana*)

Plant side dishes
Scalloped sunchokes (*Helianthus tuberosus*)

Wild rice (*Zizania palustris*) with
ramps (*Allium tricoccum*)

Main course
Sautéed salmon topped with ramps
(*Allium tricoccum*)

Dessert
Vanilla ice cream with wild strawberry (*Fragaria virginiana*) and bee-balm (*Monarda didyma*) sauce

In my opinion, a great meal starts with cocktails and finger food. One of my favorite combinations is Cucumber Hyssop Hiccup cocktails served with ground-nut chips, shallow-fried with salt and cracked pepper. I craft the cocktail with anise hyssop, a species native to the Acadian Plains and Hills ecoregion, one of the five New England ecoregions. I grow this sun-loving plant at home in a semi-wild meadow. Its anise-tinged sweetness is wonderful in cocktails. Even if you think you don't like anise, give this a try—this drink has converted nonbelievers. Anise, lime, and vodka make for a powerful flavor trio, and the cucumber mellows it into a smooth libation. If you're willing to lose the cocktail's whimsical name, substitute scarlet bee-balm (*Monarda didyma*) or wild bergamot (*Monarda fistulosa*) for anise hyssop. (The hiccups come later, after you've forgotten how many of them you've had.)

Finger food doesn't get much better than freshly fried potato chips, but ground-nut chips are just as crisp and add a dimension of sweet, rich nuttiness. The combination of their sweetness and some added salt and freshly ground black pepper makes these tubers pair well with just about any drink. Next time, try replacing black pepper with cumin or red pepper flakes.

As the vegetable side dish, I chose sunchokes, a.k.a. Jerusalem artichokes. They're tubers like ground-nuts, and both

This page:
Left: Ground-nuts and sunchokes are tastier than they look before cooking.
Right: Ramps are rare in the wild, so these were grown in garden containers.

Dan Jaffe

Dan preps anise hyssop leaves for cocktails.

Dan Jaffe

Ramps, rolled and sliced, top the salmon for the main course.

Dan Jaffe

Salmon topped with ramps nestles on a bed of wild rice and ramps.

are ready to harvest at the same time in the fall. I grow these common plants together in a barrel-sized container, because these vigorous perennials would soon overrun my small backyard. Sunchoke flower stalks can reach heights of 14 feet, so I cut them back at least once before summer. Ground-nut is a vine, which will twine up the sunchoke stems. Watch for their dusky-pink flower clusters emerging in midsummer, ahead of the yellow sunchoke flowers that bloom in fall. Sunchokes are tasty prepared in a lot of different ways, but in my kitchen, good things get better with onions, cream, and lots of cheese. Like potatoes, these tubers hold their firmness when sliced and baked with these ingredients.

Though it would be hard to choose, ramps could take the prize for the region's tastiest wild native plant. Whether raw or cooked, this wild onion has a mild, sweet flavor reminiscent of Vidalia onion, and it can be used in a variety of ways. (*NOTE: Because ramps are a rare plant in New England, I harvest only home-grown specimens and leave wild populations alone. Ramps are easy to cultivate in a raised bed filled with rich soil and compost, with regular additions of leaves or leaf mold. The first harvest, in early spring, yields the most tender shoots, while later harvests provide leaves with more texture.)* This meal uses ramps in two ways: cooked into the wild rice, adding a rich background flavor; and as a soft, yet complex topping for the salmon.

For the rice, I sauté the ramps in butter with sliced garlic. I add water and uncooked rice to this mixture, so that the flavors infuse the rice as it absorbed the liquid. For the salmon, I sauté the ramps with brown butter and lemon and set them aside. I cook the salmon in a heavy frying pan and serve it on a bed of wild rice, place the cooked ramps atop the salmon, and squeeze fresh lemon over both before serving.

Many cooks prefer cooking dessert after dinner, which requires a simple recipe that can be whipped up fast. Strawberry–bee-balm sauce, good over ice cream or cake, is simple to make and tastes anything but. The leaves of scarlet bee-balm (*Monarda didyma*) can be harvested as soon as they emerge in spring and through the summer. In a saucepan, I cook minced bee-balm leaves with sugar and the wild berries until the mixture is a little runny. Wild strawberries (*Fragaria virginiana*) deliver a burst of intense sweetness that is perfectly grounded by the earthy notes of the bee-balm leaves.

Dan Jaffe

Bee-balm leaves add eathy notes to wild strawberries for a dessert sauce.

MESSAGE FROM THE TREASURER

In 2017 the Society continued its record of success in core programs and ended the year in a strong financial position. In addition, the Society made progress on its goal to substantially increase the endowment.

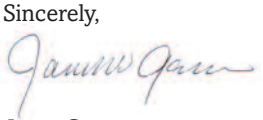
The Society continued to attract support for key initiatives and ended the year with an operating surplus of $130,280 and with $782,331 in purpose-restricted funds on hand. The Board of Trustees also voted to reserve an unrestricted bequest of $265,989 for capital improvements.

The performance of the endowment, managed since 2002 by the Investment Committee, reflected general market trends and earned 16.1% in 2017. The endowment portfolio—corpus plus appreciation—was $6,335,736 as of December 31, 2017.

Net assets increased this past year from $10,615,806 to $14,240,255, largely due to a $3 million pledge to the endowment, in the form of a Charitable Remainder Unit Trust.

Thanks to the hard work of our Board, dedicated staff, committed volunteers, and the generous gifts of our many members and supporters, the Society had a successful year in 2017.

Sincerely,

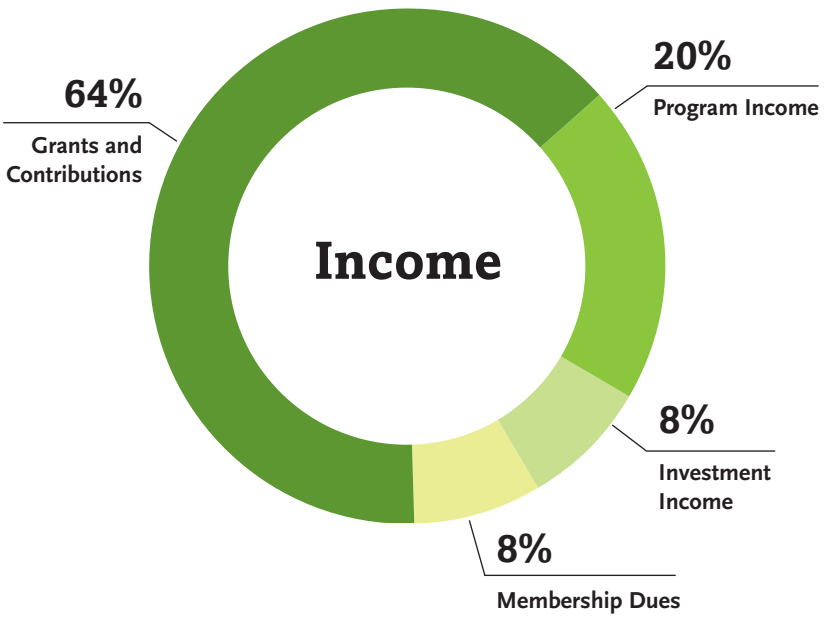


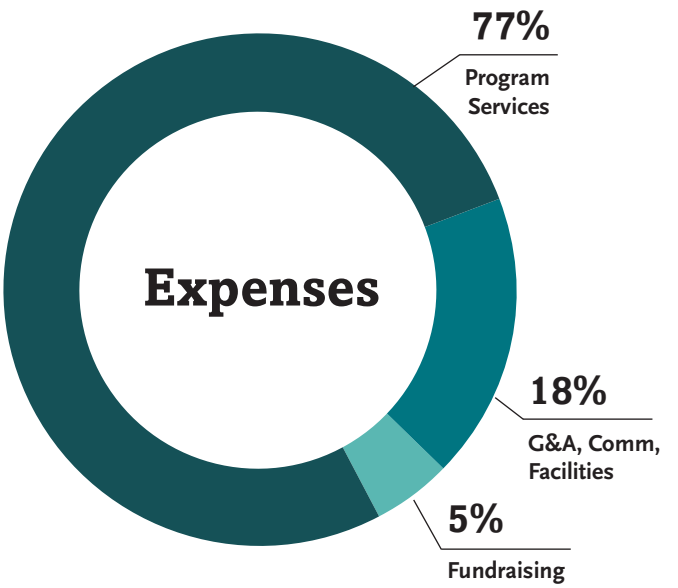
Janet Ganson

Fiscal Year 2017 Operating Results

Income		
Grants and Contributions	$	1,918,159
Program Income	$	598,738
Membership Dues	$	250,730
Investment Income	$	231,815
Total Income	$	2,999,442
Expenses		
Program Services		
Conservation & Sanctuaries	$	768,660
Horticulture	$	620,128
Education	$	344,277
Member Services	$	220,527
Retail Shops	$	255,307
Total Program Services	*$*	*2,208,899*
Support Services		
G&A, Comm, Facilities	$	524,051
Fundraising	$	136,212
Total Support Services	*$*	*660,263*
Total Expenses	$	2,869,162
Operating Surplus	$	130,280

Note: A complete copy of the audited financial statements is available on our website or upon request by emailing twillmott@newenglandwild.org.





Celebrating Your Support

Our ambitious vision is for landscapes where New England's native plants exist in vigorous populations within healthy, evolving ecosystems. In this section, we are delighted to thank everyone whose financial support has helped conserve, promote, and protect native flora. We celebrate friends like you who understand that plants are the cornerstones of life on our planet!

CONSERVATION CIRCLE AND LEADERSHIP GIFTS

The total giving noted below for fiscal year 2017, ending December 31, reflects restricted and unrestricted gifts, membership dues, and pledges. Our Conservation Circle honors individuals whose generous personal philanthropic support reached $1,000 or more. Leadership gifts and grants from companies and foundations also had an extraordinary impact on the Society.

† *denotes deceased donors*

$100,000+

Anonymous (2)
Bromley Charitable Trust
Estate of Dr. Allen E. Everett†
Estate of Dr. M. Priscilla Hele†
Hope Goddard Iselin Foundation

$50,000 - $99,999

Fidelity Charitable Gift Funds
Litowitz Foundation, Inc.
Amelia Peabody Charitable Fund
Barbara and Edward Scolnick
Jackie and Thomas E. Stone
Vanguard Charitable Gift Funds
Martha Wallace and Ed Kane

$20,000 - $49,999

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BNY Mellon Charitable Trust
Institute of Museum and Library Services
Michele H. Mittelman
May H. Pierce
Johanna Ross
Sandplain Fund at Schwab Charitable
U.S. Charitable Gift Trust

$10,000 - $19,999

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John C. Barber
Lalor and Patricia N. Burdick
Center for Plant Conservation
Dana Foundation
Marjorie D. and Nicholas P. Greville
Johnson-Stillman Family Foundation
Network for Good
Jessie B. and Jon Panek
Geri and Douglas D. Payne
Dr. Alan E. Smith and Leigh A. Dunworth

$5,000 - $9,999

Anonymous (2)
Frances H. Clark and Bernard J. McHugh
Abby and Peter B. Coffin
Christopher R. and Carole M. Ely
Christina T. Hobbs
Massachusetts Cultural Council
New Hampshire Charitable Foundation
New Hampshire Charitable Trust
Ruettgers Family Charitable Foundation
J. F. Swope Fund
Caroline Blanton Thayer 1990 Charitable Trust

$1,000 - $4,999

1772 Foundation, Inc.
Louise F. Ahearn
Annemarie Altman and David Cook
Anonymous (7)
Beacon Hill Garden Club
Molly and John E. Beard
Michele L. and Alan Bembenek
Nancy A. Benchoff
Benevity
Bose Corporation
Ralph Brown and Sue Murray
Kimberly and Dennis Burns
Donna L. Burrell and Dr. Jane Eggerstedt

Lita Nelsen identifying native fungi and flora on a nature walk in New Hampshire last summer.

Dr. Rebecca Cannon and Dr. Scott Miller

Susan B. and David D. Clark

Charlton Clay

Dr. Rebecca E. and Dr. David L. Conant

William G. Constable

Judith H. Cook

Dr. William W. and Martha P. Cooper

Stuart L. Cummings

Martha R. Davis

Ruah Donnelly and Steven E. Dinkelaker

Pamela B. and David Durrant

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Echo Charitable Foundation

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Framingham Garden Club, Inc.

Janet W. and John P. Ganson

Betty D. Gardescu

Sarah O. Garland-Hoch and Roland E. Hoch

Goldman, Sachs & Co.

Harold Grinspoon Charitable Foundation

Mary Griffin and Andy O'Neill

Jane C. Hallowell

Susan S. and Douglas B. Harding

Christine Psathas and Robert Shabot savoring the plantings around the Lily Pond during our 2017 Intern Walk.

Susan Harding and Barbara Scolnick admiring colorful displays during our 2017 Art and Nature event in Connecticut.

Rebecca M. Harvey

Timothy Helbig and Adam Beerman

Thelma K. and John H. Hewitt

Daniel Hildreth

Timothy T. Hilton and Sara Miller

John and Ingrid Hotchkiss

Barbara Katzenberg and Peter Piela

Dr. Barbara M. and Robert A. Keller

Marilyn K. Kucharski

Peggy Lahs

Lucinda H. and David S. Lee

David L. Lindsay

Brian K. and Anne S. Mazar

Stephen McCarthy

Virginia McIntyre and John Stevens

Deirdre Menoyo

Thomas J. and Jo-Ann Michalak

Wyatt J. and Gwyn A. Mills

Anthony Mirenda and Tracey Cornogg

Ralph Brown, Jackie Stone, and Casey Sklar enjoying our 2017 Leadership Summit, preceding the American Public Gardens Association's "Partnerships for Protecting Plants and Habitats" symposium.

Dr. Sandra O. Moose and Eric Birch

Eliott Morra and Kimberly E. Gurlitz

John W. Murphy

William L. Murphy and Claire M. Corcoran

Lita and Donald Nelsen

Ken Nimblett

Geoffrey† and Clare H. Nunes

Carolyn M. and Robert T. Osteen

Overhills Foundation

Robert Treat Paine Association

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Edward P. Petcavage

Karen D. and Matthew V. Pierce

Gloria J. and Roger P. Plourde

Barbara F. and Frederick M. Pryor

Katherine E. Putnam and Timothy G. Delaney

Barbara Keller making new friends with attendees of the American Public Gardens Association's Partnerships for "Protecting Plants and Habitats" symposium.

Rich Dube making selections at our 2017 Members' Plant Exchange.

SusanA Litowitz learning about Smith College students' hybridizing experiments as part of our 2017 Behind-the-Scenes Tour.

Elisabeth A. Raleigh

Bob and Amy Rands

Pamela P. and Griffith L. Resor

Peter M. Richards

Estate of Sandra S. Rogers†

Sacajawea Charitable Foundation

Johanna Schmitt and James C. Dunn

Bruce M. and Sarah T. Schwaegler

Kathleen E. and Robert C. Shamberger

Wendy Shattuck and Samuel Plimpton

Nicholas A. Skinner

Edwin E. and Katharine T. Smith

Mark Smith and John O'Keefe

Rachael Solem and Barry Herring

Anita E. Springer and James P. Lerner

John Springfield

Galen† and Anne Stone

Dr. Thomas S. and Karen Thornhill

Upper Valley Native Plant Conservation Fund

Emily Wade

Tony and Lorraine A. Wain

Carolyn and Sturtevant Waterman

Hartley D. and Benson Webster

Gray H. and Paul M. Wexelblat

Jim and Betty Wickis

Robin E. Wilkerson and Steve Atlas

Tracey Willmott

Richard S. Wood

Dr. Deborah Woodcock

Kathy H. Wrean and Hugh W. Chandler, Jr.

Candace J. Young

$500 - $999

Walter L. and Beverlee A. Adamski

John A. Alic

William S. Andreas

Anonymous (5)

Lisa M. Bendixen

Janet S. and Dr. Robert A. Bissell

Doris E. Bouwensch

David A. Bristol

Aviva and Douglas Brooks

Frederick and Judy Buechner

Kim and Lawrence Buell

Ronald R. Campbell

Mary Ann Carey

Diana Chaplin

John A. Clark and Elizabeth P. Barringer

Robert A. Clark

Community Foundation of Western Massachusetts

Scott Cousland

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Dr. Karen P. Doppke and Dr. Philip Judy

Walter J. and Anne Gamble

Virginia Gauss

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Beverly J. Greer

Dena and G. F. Hardymon

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Richard K. Johnson

Dr. Kristina N. Jones and Dr. Peter Hecht

K Foundation

Susan M. and Christopher A. Klem

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Marta Jo Lawrence

Emily L. and George Lewis

Faye H. and David P. Lieb

Deborah and Bob Lievens

Peter and Joy Madnick

Curtis W. Marble

Elizabeth A. and Bernard Meyer

Enid R. Mingolelli

Martha S. and Todd S. Moore

Karen Nathan

Deborah Nowers

Lise M. Olney and Timothy Fulham

Elizabeth S. Paynter

Garry R. and Virginia L. Plunkett

Bonnie B. Potter

George and Nancy Putnam

Richard and Carol Rader

Rare Plant Group, G.C.A.

Charles A. Rheault, Jr.

Carrie Waterman appreciating and photographing pollinators during our 2017 Intern Walk.

The Society's hard-working Sanctuary Committee and Stewards taking a well-deserved rest during the 2017 trail maintenance day at our Annie Sturgis Sanctuary in Maine.

Lucas Rogers and Mathieu Gagne
Wickie Rowland
Amy and John Saar
Ellen Schoenfeld-Beeks and David Schoenfeld
Russell P. Selvitella
Dr. Dick Snellgrove
Carolyn Summers and David Brittenham
Anne Symchych
Polly Townsend
Cornelia Trubey
Linda D. Walker
Wilma K. Wilensky
Elizabeth and Hugh M. Wilkinson III
Ellen S. Withrow and Robert Noah
Sara L. Wragge
Susan and Paul Young
Margaret W. and Charles A. Ziering

$250 - $499

Ellen Abdow
Michael Ahearn
Michael Alterman
Anonymous (3)
Rosemary Van Antwerp

Joseph Rothleutner and Jim Salyards at our 2017 Leadership Summit and American Public Gardens Association reception.

James R. Baker
Brad Barber
Ingrid J. Barrett
Dotty and Nicholas Beckwith
Rob and Katherine Beede
Reinier and Nancy Beeuwkes
Lisa A. Bielefeld
Dr. Sarah L. Booth and Dr. Edward Saltzman
Roland H. Boutwell III
Peter M. and Elaine Brem
Eleanor F. Briggs
Patricia A. Brooks
David† and Marti Budding

Diana P. and Stephen A. Cebra
Dr. Maureen H. Conte and Robert W. Busby
Peter T. and Leslie E. Cope
Todd N. Creamer
Edward N. and Arabella S. Dane
Barbara David
Elizabeth Davidson
Lucy W. and Neil J. Dean
James Doris and Lucille Cameron
Elaine Eadler and Daniel Robbins
Robin B. and Samuel Fan
Eileen R. Farrell

Charles and Carol Fayerweather
Louisa Ferree
Elaine W. Fiske and Philip L. Ladd
Patricia Freysinger
Garden Club of America
Garden Club of Amherst
Keith E. and Jennifer H. Garrant
Michele A. and Donald Girard
Jane C. and Bernard Gottschalk
Joan P. Gulovsen
Benjamin W. Guy III
Barbara F. Hall
Helen C. Hamman and Peter C. Isakson
Robert and Michele Hanss
Dr. Tammy C. Harris
Syed Hashmi and Asma Rashid
Deborah and Richard D. Hellmold
J. Duncan and Dorene J. Higgons
Patricia H. Highberg
Stanley Howe
Fern and David Jaffe

Murphy Westwood, Amy Highlands, and Anne Frances at our 2017 Leadership Summit and American Public Gardens Association reception.

Our Members' Open House at Nasami got last year's season off to a great start with Alexis Doshas, right, helping customers find the perfect native plants for their gardens.

Nancy E. Jaysane and James J. Darr

Diab Jerius and Sherry Winkelman

Dr. Alvin Kho and Myles Green

Warren King

Lynne Klemmer and Erik Husby

Ted Lapres and Connie Keeran

Anne and Robert Larner

Dr. Catherine C. Lastavica

Madeline Leone and John Mastrobattista

Leslie and Walter J. Leslie

Wanda and Richard N. MacNair

Lee Mason and Peter Hamlin

Judith P. and Michael H. McKay

Mary E. Memmott and George A. Burton

Donald B. Miller and Anne Gibbs

Gloria A. Mooney

Linea K. and Robert A. Murray

Cindy K. Neels and David Beck

Dr. Christopher Neill and Dr. Linda A. Deegan

Greta and Allen Newman

Noanett Garden Club

Peggy and Rick Novak

Melinda S. and Robert E. Oleksiak

C. W. Eliot and Linda Paine

Susan W. Peck

Sandra Peters and Alan L. Frohman

Robert A. and Veronica S. Petersen

Dennis Picker

Wallace Pinfold

Karl L. and Pamela W. Reichelt

Virginia Remeika and E. James Burke

Margaret E. Richardson

Jacqueline Rigolio

Catherine Ritch

Charles W. and Patricia K. Robertson

Susan Schadler

Loring L. and Andrew M. Schwarz

Martha W. and Peter V.D. Schroeder

Catherine and George G. Schwenk

Karen I. Sebastian

Jo Seibel and Stuart Levitz

Dr. Ellen Senghas and Dr. Mark Kassis

Susan and Adam Shipman

Thomas A. Smarr, Jr.

Frank W. Smith

Mundi and Syd Smithers

Nancy Sommers and Joshua Alper

David B. Soule and Patricia J. O'Reilly

Peggy Spaeth

Claire B. and Meir J. Stampfer

M. K. Swain

Jane M. and Hooker Talcott, Jr.

Heather and Jared F. Tausig

David V. N. Taylor

J. David Tholl and Carol Thomas

Charity and Thomas Tremblay

L. Jeanne VanPatten

Paul and Jennifer Walsh

Charles H. and Louise E. Weed

Catherine M. and Craig L. Weston

Mercy H. and Bancroft R. Wheeler

Valerie A. Wilcox

Deborah Wiley

Alan and Charlotte B. Wilson

Tobias Wolf and John Skurchak

LIFE MEMBERS

These dedicated individuals have chosen to play a long-term role in the preservation of our region's native flora by becoming life members.

Anonymous

Judy A. Artley and Charles T. Moses

Nancy H. August

John C. Barber

Julia A. Barber

Patricia Callan and Chuck Crafts

Martha F. and Robert W. Carlson

John S. and Jane Chatfield

Terry A. Chvisuk

Edward H. and Sandy Coburn
Frederick and Jeanine Coburn
Robert S. Coburn
Virginia and Jay Coburn
Judith H. Cook
David L. DeKing
Ann Dinsmore and Richard Nemrow
Elizabeth Dudley
Elizabeth S. and Frederic A. Eustis
Janet Fillion and Richard Laine
Mary F. and Joseph Fiore
Joanne C. and Lionel L. Fray
Anne and Walter J. Gamble
Nancy Goodman and Mike Kotarba
Christine M. Gradijan
Marjorie D. and Nicholas P. Greville
T. C. Haffenreffer
Jane C. Hallowell
Ervina Hamilton
Dena and G.F. Hardymon
Allyson Hayward
Thelma K. and John H. Hewitt
Robert C. Hooper
Dr. Kristina N. Jones and Dr. Peter Hecht
Larry L. Jones
Kathleen A. Klein
Catherine Z. Land
David R. Longland
Ellen West and George M. Lovejoy, Jr.
Jane Lyman
Eugene I. Majerowicz
Ellen B. and Duncan McFarland

The thrill of getting great new plants from fellow members is the highlight of our annual Plant Exchange.

Botanist and author Ted Elliman signing copies of *Wildflowers of New England* for Karen Pierce following his talk at our Trillium Society's 2017 special event.

Michele H. Mittelman
Monadnock Garden Club
Sally McGuire Muspratt
Beverly Myers
Bruce Patterson
May H. Pierce
Peggy and Hollis Plimpton
E. M. Poss
Patricia Pratt
Christine A. Psathas and Robert E. Shabot
Harriet D. Purcell
Dr. Paul John Rich
Chandler S. Robbins
Johanna Ross
Barbara V. and George R. Rowland
Maureen L. and Michael C. Ruettgers
David B. Rundle and Catherine M. Huntley
Aire-Maija Schwann
Catherine and George G. Schwenk
Robin R. Shield and John Tariot
William and Hatsy Shields
Mary M. Smithline
Peggy Spaeth
Gwen L. Stauffer
Galen† and Anne Stone
Edward S. Valentine
Emily Wade
Nancy L. Weiss
Louise Westcott
Weston Garden Club
Cheryl K. Wilfong
Robin E. Wilkerson and Steve Atlas
Patty Wylde
Margaret F. and T. C. Price Zimmermann

TRILLIUM SOCIETY

The following generous friends have included the Society in their estate plans, to help ensure our future ability to conserve native plants and their habitats.

Elizabeth L. Aghajanian
Annemarie Altman and David Cook
Anonymous
Joyce H. Bisson
Lalor Burdick
Frances H. Clark
Stuart L. Cummings
Ruah Donnelly
Peter V. Doyle and Ellen Clancy
Christopher R. Ely
Nancy Goodman
George C. and Diantha C. Harrington
Patti Laier
Ann R. Lemmon
Deirdre Menoyo
Carole M. Merrifield
Bettina L. Messana
Carolyn M. Osteen
Jessie B. Panek

Nathan Evans and Toby Wolf at our 2017 Leadership Summit, preceding the American Public Gardens Association's "Partnerships for Protecting Plants and Habitats" symposium.

Students from Framingham State University getting hands-on experience last fall cleaning rare and endangered specimens for our seed bank.

Musician Ben Cosgrove entertaining the Society's members at our 2017 Night of Illumination event.

Sunshine and smiles...the late Elizabeth Farnsworth demonstrating her trademark humor with Mollie Babize at our opening of the 2017 season at Nasami Farm.

Geri and Douglas D. Payne
Karen D. and Matthew V. Pierce
Barbara F. Pryor
Dori Smith
Anita E. Springer
Natalie C. Starr
Jackie and Thomas E. Stone
Mary Ann Streeter
Leslie Turek
Dr. Edward S. Valentine
Martha Wallace
Cheryl K. Wilfong
Elizabeth H. Wright
Patty Wylde

TRIBUTES

In 2017 we received honoraria or memorial donations in tribute to the following friends, colleagues, mentors, and loved ones.

IN HONOR OF

Dorothy C. Ahearn
Janet Bissell
Deborah Conant
Arabella Dane
Rosetta Dymond
Liza Green
Marjorie D. Greville
Logan Hughes
Dan Jaffe
Dr. Barbara Keller
Virginia McIntyre
Dr. Richard Melchreit
Mary H. Norton
Mark Richardson
Dr. Michael J. Robinson
Kathleen Shamberger
Carolyn Waterman
Gray H. Wexelblat
Christina D. Wood

IN MEMORY OF

Bob August
Walter Berezanksy
Leah Blumenfeld
Catherine A. Cannon
Dr. Shirley Cross
Carolyn Drury
Col. Leonard Edelstein
Robert Evans
Dr. Elizabeth Farnsworth
Paul G. Gardescu
Bertha K. Kelner
Ellen Leszczak
Glen T. Macon
Phoebe D. A. McCarthy
Susan Mehigan
Deborah L. Mister
Caitlin O'Hara
Daphne B. Prout
Beverly H. Ryburn
Anne T. Sears
Douglas H. Sears
Dorothy D. Thorndike

GIFTS-IN-KIND

Gifts-in-kind uniquely allowed us to expand our outreach in 2017 without impacting our outgoing expenses. It is our pleasure to thank the following gift-in-kind donors.

Bee Good Apiary Wildflower Meadow Pollinator Sanctuary
Big Y Foods, Inc.
Boston Gourmet Chefs
Ruah Donnelly
Janet Ganson
Hannaford Brothers Company
Insomnia Cookies
Kathleen Rao
Julie Richburg
Roche Brothers Supermarkets

Dr. Alan E. Smith
Stop & Shop
Trader Joe's
Turkey Hill Dairy
Elizabeth Haight
Carolyn Waterman
Wegmans Food Markets, Inc.
Robin Wilkerson
Whole Foods Market, Inc.
Tobias Wolf

MATCHING GIFT COMPANIES

We extend special thanks to the following businesses for their generous support in 2017.

Aetna Foundation, Inc.
Apple Inc. Matching Gifts Program
Autodesk Foundation
Eaton Vance Management
FM Global Foundation
GE Foundation
IBM Corporation Matching Gifts Program
Intel Corporation Matching Gifts Program
Liberty Mutual
Mass Mutual
Medtronic Foundation

Barbara Weinstein eagerly awaiting her next plant selection at our 2017 Members' Plant Exchange.

2018 Book Launch
Native Plants for New England Gardens

Dan Jaffe and Mark Richardson

Ron and Karen Riggert

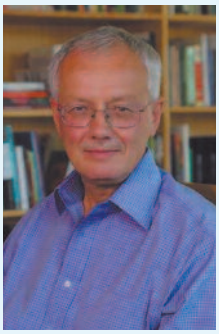
Deirdre Menoyo

William Gil, Lucy and Neil Dean, and Sid Koul

Kathy and Robert Shamberger with Noni Macon (center)

OAK SPRING GARDEN FOUNDATION CREATES NEW FELLOWSHIP

By Tracey Wilmott, Director of Philanthropy



SIR PETER CRANE

We are pleased to announce that the Oak Spring Garden Foundation (OSGF) has chosen New England Wild Flower Society as one of the first partners in a new fellowship program for early career professionals.

The year-long Native Plant Fellowship extends the recently established foundation's mission to support and inspire scholarship, public dialogue, and bold action on the history and future of plants, including the art and culture of plants, gardens, and landscapes, and the importance of plants for human well-being. In announcing the fellowship, OSGF President Sir Peter Crane, who previously headed the Field Museum in Chicago; Royal Botanic Gardens, Kew; and Yale School of Forestry & Environmental Studies, said: "We are excited about this new opportunity to collaborate with the Society. Its professional training program is much admired and has a long and successful history."

The OSGF fellow will train with the Society's staff in New England and at the Foundation's 700-acre property in Virginia, which is part of the estate of the late Rachel (Bunny) Lambert Mellon. The fellow will conduct botanical research and integrate his or her studies with practical native plant conservation, restoration, and horticultural strategies. Work with Society staff at Garden in the Woods, Nasami Farm, and in the field will complement ecological management projects at the Oak Spring estate, which contains historic gardens, former pastures, and woodlands. The fellow's training and projects may encompass seed collection and propagation of native species from wild-collected sources, rare plant monitoring, floristic survey work, invasive species management, garden inventory and curatorial work, and native plant display horticulture. "This new fellowship will help create strong leaders in plant conservation and native plant horticulture," said Debbi Edelstein, the Society's executive director. "We are honored to be partnering with the Oak Spring Garden Foundation and its distinguished leadership."

CUSTOM HORTICULTURE SERVICES

The following organizations either contracted with us for custom growing or purchased quantities of plugs for their projects, or engaged us for design services.

* indicates a partner nursery

Contract Grow Customers and Partners

Allandale Farm (MA)
Russell Cohen (MA)
William Danforth (VT)
Greenfield Community College (MA)
J. Patrick McIntyre (CT)
New England Wild Flower Society, Garden in the Woods (MA)
Summer Hill Nursery (CT)*
Sustainable Wellesley (MA)
Van Berkum Nursery (NH)*
Lisa C. Van Dusen (MA)

Additional Plug Customers

Kate Brittenham (NY)
Broadfork Permaculture (MA)
Ruah Donnelly (MA)
Elizabeth Dowey (MA)
David Falk Gardening/Wild City Gardens (MA)
Friends of Mashpee National Wildlife Refuge, Inc. (MA)
Manitoga, Inc. (NY)
Montshire Museum of Science (VT)
Moosewood Ecological Services (NH)
Muddy River Herbals (MA)
State of New Hampshire (NH)
Bruce Patterson (MA)
Rhode Island Wild Plant Society (RI)
RSE Landscape (MA)
Ruth Shelley (MA)
Smithfield Conservation Commission (RI)
Speaking of Landscapes, LLC (CT)
Carolyn Summers (NY)
The Trustees of Reservations (MA)

Design Services

Michael Kerstein

CONSERVATION SERVICES

In 2017, the following organizations contracted for our services or utilized our expertise in rare plant surveys, seed collection, invasive species management, botanical inventories, and restoration.

National Park Service

Acadia National Park (ME)
Boston Harbor Islands National Recreation Area (MA)

U.S. Army Corps of Engineers

U.S. Department of Agriculture - Natural Resources Conservation Service

Cape May Plant Materials Center (NJ)
Agricultural Research Service (WA)
National Plant Germplasm System - Western Regional Plant Introduction Station (WA)

U.S. Department of the Interior – Bureau of Land Management

Seeds of Success (East) with partners:
New York City Department of Parks and Recreation – Mid-Atlantic Regional Seed Bank
North Carolina Botanic Garden
Chicago Botanic Garden

U.S. Fish and Wildlife Service

Petit Manan National Wildlife Refuge (ME)
Rhode Island NWR Complex (RI)
Hyde Pond, Mystic River (CT)
Great Bay NWR (NH)
Parker River NWR (MA)
Rachel Carson NWR (ME)

U.S. Forest Service

Northern Research Station (NH)
White Mountain National Forest (NH)
Green Mountain & Finger Lakes National Forests (VT)

Center for Plant Conservation

North American Orchid Conservation Center (Smithsonian Experimental Research Center)

State Natural Heritage Programs (or their equivalent)

CT Natural Diversity Data Base
MA Natural Heritage and Endangered Species Program
ME Natural Areas Program
NH Natural Heritage Bureau
RI Natural History Survey
VT Natural Heritage Inventory

State Offices

CT Department of Energy and Environmental Protection – Bluff Point Coastal Reserve
CT Department of Energy and Environmental Protection – Nathan Hale State Forest
CT Department of Energy and Environmental Protection - Wildlife Division
CT Department of Environmental Protection – Gillette Castle State Park
CT Department of Environmental Protection – Osbornedale State Park
CT Department of Environmental Protection – Wildlife Division
Connecticut Department of Transportation
MA Department of Conservation & Recreation – Division of Reservations & Historic Sites
MA Department of Conservation & Recreation – Harold Parker State Forest
MA Department of Conservation & Recreation – Kingston State Forest
MA Department of Conservation & Recreation – Mt. Greylock State Reservation
MA Department of Conservation & Recreation – Mt. Tom State Reservation
MA Department of Conservation & Recreation – Myles Standish State Forest
MA Department of Conservation & Recreation – Savoy Mountain State Forest
MA Division of Fisheries & Wildlife
MA Department of Ecological Restoration
Maine Department of Inland Fisheries & Wildlife
Maine Department of Inland Fisheries & Wildlife – ME Dept. of Marine Resources
NH Department of Environmental Services
NH Division of Parks & Recreation – Crawford Notch State Park, White Mountains Region
NH Division of Parks & Recreation – Franconia Notch State Park
NH Fish & Game Department
RI Coastal Resources Management Council
RI Department of Environmental Management – Department of Fish and Wildlife

RI Department of Environmental Management – Division of Fish and Wildlife

RI Department of Environmental Management – Water Resources Board

Rockingham County Conservation District (NH)

Vermont Department of Forests, Parks and Recreation

Vermont Department of Forests, Parks and Recreation – Niquette Bay State Park

OTHER PARTNERS

Includes towns, land trusts, utility companies, and other private and public landowners who allowed staff and volunteers access to their properties for conservation of our native flora. The names of individual landowners granting access are not included.

A. D. Makepeace Company (MA)

Amherst Country Club (NH)

Androscoggin Land Trust (ME)

Aquarion Water Company (CT)

Aquidneck Land Trust (RI)

Audubon Society of MA

Audubon Society of RI

Avalonia Land Conservancy Inc. (CT)

Bear Hill Conservancy Trust (NH)

Benedictine Monastery of the Immaculate Heart of Mary (VT)

Berkshire Natural Resource Council (MA)

Book Brothers Incorporated (VT)

Botanical Club of Cape Cod and the Islands (MA)

Brown Ledge Foundation Inc. (VT)

Cambridge Plant and Garden Club (MA)

Camp Isabella Freedman (CT)

Central Maine Power Company (ME)

Champlain Valley Exposition (VT)

Charles River Conservancy (MA)

Chatham Conservation Foundation, Inc. (MA)

City of Burlington (VT)

City of Gloucester (MA)

City of Holyoke (MA)

City of Lebanon (NH)

City of Lynn (MA)

City of Meriden Parks and Recreation Department (CT)

City of Newport (RI)

City of Salem (MA)

Concord Land Conservation Trust (MA)

Connecticut Forest and Park Association

Cumberland Land Trust (RI)

Episcopal Diocese of Vermont

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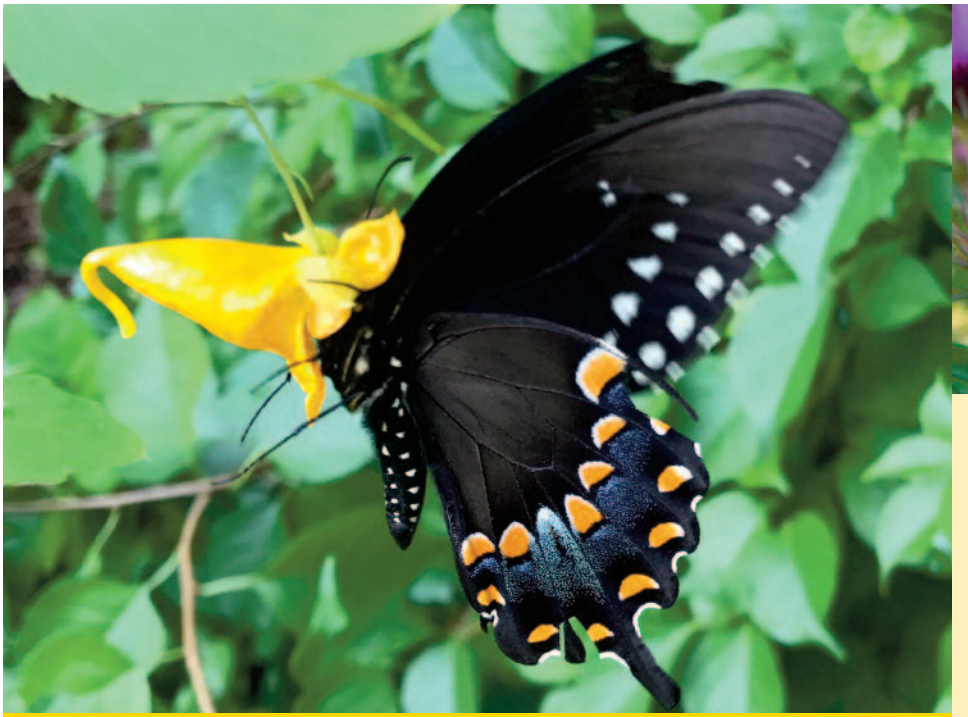

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East Haddam Land Trust, East Haddam - **Wednesday, July 25**

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MAINE

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Smaller capitula (flower heads) and less hairy stems distinguish a globally rare variety, Provancher's Philadelphia fleabane (left in each photo pair), from the common Philadelphia fleabane.

RARE PLANT SPOTLIGHT

The rare *Erigeron philadelphicus* var. *provancheri*

Provancher's Philadelphia fleabane
(Erigeron philadelphicus var. *provancheri)*

Philadelphia fleabane (*Erigeron philadelphicus*) is a relatively common, native member of the aster family that grows primarily in open areas, such as fields, clearings, shorelines, and human-disturbed sites. Flowering chiefly in June and July, this plant has flower heads composed of a yellow disk ringed by narrow, white to pink rays (florets) that resemble single petals. Its clasping leaves and hairy stems further characterize this species.

So why feature this common species in a column about rare species? Because though the species may be common, two varieties of Philadelphia fleabane occur in New England, one of which is globally rare and a conservation priority in our region: Variety *provancheri*, or Provancher's Philadelphia fleabane, grows on calcium-rich outcrops on river shorelines and has been documented in only three New England sites, two in Vermont and a third in Connecticut. This specialized habitat is itself rare in this region, except in western and northern New England.

Provancher's Philadelphia fleabane looks much like the more widespread form, variety *philadelphicus*, except that it is smaller overall, with less hair on the stems, smaller flower heads, and basal leaves that persist during flowering. Such subtle differentiators between varieties often escape the notice of plant enthusiasts focused on higher taxonomic ranks, such as family, genus, and species. Provancher's Philadelphia fleabane is an example of a classification only one rank below species, where subdivisions are subtler to differentiate. The genetic and physically observable differences are not considered sufficient to treat the plant as a separate species, yet the variety that escapes notice is so rare that it merits conservation efforts.

Fortunately, the *Flora Novae Angliae* manual includes this distinction between varieties, as does the Society's Go Botany website. This documentation will bring some awareness to this rare element of our flora, hopefully resulting in the discovery of more populations.

—Arthur Haines, Research Botanist, Author, *Flora Novae Angliae*

Read more about the distinctions between rare and common varieties of Philadelphia fleabane on www.newenglandwild.org.
We rely on your generous support for ongoing botanical research.