

NATIVE PLANT NEWS



PAGE 06

Feeding Birds: An Eco-Gardener's Approach



Winter 2019/20 contents



p. 12

02

In Brief

Hunting for rare species on Katahdin, bearberry experiments, the future of yards, and more

06

Feeding the Birds

An Eco-gardener's Approach
—Christopher Leahy



12

Conserving Native Orchids, Fungi and All

—Jane Roy Brown

16

Rare Plant Spotlight

Alpine arctic-cudweed
(*Omalotheca supina*)
—Arthur Haines

05

Happenings

Botany Story Slam, *Ex Situ*
Conservation Symposium

p. 16

NATIVE PLANT NEWS

DESIGN

Moth Design
Rachel Wolff Lander

EDITORIAL

Jane Roy Brown;
jrbrown@NativePlantTrust.org

COVER

Ovenbird. © Deborah Bilfulco

BOARD OF TRUSTEES

Chair

Alan E. Smith

Vice Chair

Ralph G. Brown

Treasurer

Janet Ganson

Clerk

Jackie Stone

Executive Director

Debbi Edelstein

TRUSTEES

- John Barber
- Abby Coffin
- William (Buzz) Constable
- Arabella Dane
- Ruah Donnelly
- Pamela B. Durrant
- Chris Ely
- Mary Griffin
- Suzanne Groet
- Barbara Keller
- Lita Nelsen
- Polly Pierce
- Susan Schadler
- Kathy Shamberger
- Ruth Shelley
- Mary Ann Streeter
- Charles A. Wain

On Stewardship

What do feeding birds and saving orchids have in common? When I read the two feature articles in this issue of *Native Plant News*, I heard a dialogue about stewardship and the actions we take to conserve and preserve nature.



DEBBI EDELSTEIN
Executive Director

A sense of responsibility motivates most of us who care about saving the planet or a subset of its flora and fauna. My own path to advocacy and action—from becoming a vegetarian to changing careers—began when I realized my guiding philosophy is a stewardship ethic. I’m here to speak for the voiceless, care for the vulnerable, and leave at least a small corner of the earth in better shape than I found it.

But, as these two articles suggest, sometimes we don’t know enough to act effectively in either our personal or professional lives. At their core, both pieces highlight the importance of science, in this case what very different organisms need to thrive. They offer a glimpse into a galaxy of interactions and consequences. And they are a subtle invitation to delve deeper into the science of nature and to use that knowledge for measured, even humble, action to steward this beautiful and mysterious world.

We hope you enjoy this issue of *Native Plant News*.

Native Plant News is published by Native Plant Trust, an independent, nonprofit, member-supported organization. Subscriptions are included in membership dues. For information, contact: membership@NativePlantTrust.org.

© 2019 Native Plant Trust. All rights reserved.



IN BRIEF



01

Searching for Rare Species in the Clouds

—Arthur Haines, Senior Research Botanist

With permission from the Park Authority, I returned this summer to Maine’s largest wilderness park to continue inventory and seed collection of rare plant species for Native Plant Trust’s seed bank. Baxter State Park was created primarily as a wildlife sanctuary rather than for human recreation, which makes this 200,000-acre wilderness a very special place. It surrounds Katahdin, Maine’s highest mountain (1,605m/5,267ft), and harbors many rare plant species, some of which occur nowhere else in the eastern United States. This year, along with seed collecting, I sought to locate two species that no one had observed in the park for decades. Inventory work of this kind informs our conservation efforts, for without knowing how many populations we have, we have no ability to prioritize species.

The first species is Oakes’s eyebright (*Euphrasia oakesii*), a tiny, hemiparasitic plant known from a meter-square patch in one of the expansive glacial basins on the slopes of Katahdin. This tiny alpine plant was first located on the mountain in 1900 and last observed there in 1988. Searches of the area in the years since failed to find it again. Thirty-one years later, and after 19 years of concerted personal searching, I finally observed this plant in its historical location, 19 individuals strong.

The second species, also very small, is alpine arctic-cudweed (*Omalotheca supina*), a member of the composite family. For more about this plant, see “Rare Plant Spotlight,” p. 16.

“This year, along with seed collecting, I sought to locate two species that no one had observed in the park for decades.”

KEEP AN EYE OUT

If you see this plant, the American chaff-seed (*Schwalbea americana*), please email: mpiantedosi@nativeplanttrust.org
Photo: © Uli Lorimer



The Future of Yards

—Debbi Edelstein, Executive Director

Starting this winter, our website will feature a new collaboration with scientists from the Woods Hole Research Center (WHRC) and several universities—a regular update reporting on their research into the broad ecological functioning of the suburban landscapes in which 51 percent of Americans now live. With funding from the National Science Foundation, the research team is examining yards in the metropolitan areas of Boston, Baltimore, Los Angeles, Miami, Minneapolis–St. Paul, and Phoenix to study how their management influences the structure, biodiversity, and function of residential ecosystems. The project, nicknamed Yard Futures, also compares the structure of yards with the structure of large natural areas in the region and the smaller remnants of natural areas that residential neighborhoods abut. It grew out of previous work by the research team that tested how suburban residential environments push the landscape toward more homogenous microclimates, plant communities, and nutrient-cycling patterns.

The articles, under the heading Yard Futures Project, will draw on the project team’s body of published, peer-reviewed research and will present the key findings and their implications for the management of our yards. To date, the team has published 52 papers on topics including tree diversity, plant species richness, soil nitrogen, bee abundance, and birds. Under the editorial direction of Chris Neill at WHRC, who is an Overseer of Native Plant Trust, we aim to publish at least one new article each month.

Update on *Schwalbea*

—Michael Piantedosi, Director of Conservation

This season the Conservation Department conducted 15 surveys, or methodical field searches, in Massachusetts for the federally endangered American chaff-seed (*Schwalbea americana*). Before being rediscovered by a Native Plant Trust Plant Conservation Volunteer in 2018, this plant had not been observed in our region since 1963. We searched in locations deemed likely to support American chaffseed by a computer-generated model designed by the U.S.

Fish & Wildlife Service, based on the habitats of other known populations of this species in the mid- and south-Atlantic coastal states. We also helped improve the model by ground-truthing the predicted locations for the plant in the field. Our search took us to the plant’s preferred wetland habitats all over Massachusetts, from sandy, coastal grasslands to wetland edges that are regularly disturbed. We have also attempted to relocate *Schwalbea americana* from historical occurrences in the state, but we have not yet found additional populations.

02



Bearberry seedlings.
Photo: Alexis Doshas ©
Native Plant Trust

Pilot Programs, New Partners

—Courtney Allen, Director of Public Programs

Native Plant Trust’s public programs engaged thousands of people through a variety of innovative new programs promoting native plants and landscapes. This past spring, in partnership with Maine Audubon, we hosted a symposium focused on next steps for *in situ* (on site) conservation, following up on our “State of the Plants” report and highlighting new research in the field. The summer brought dozens of field studies in both conservation and horticulture, with two notable new series. Our Sanctuary Series raised awareness about our six public properties in northern New England and the conservation methods we employ for these extraordinary habitats and species. Our Landscape Series, in partnership with Boston Society of Landscape Architects and Historic New England, offered unique opportunities to discover contemporary relevance in historic landscape design and the role of native plants in new designs by acclaimed professionals. Fall featured the launch of two initiatives: a series of

conservation talks on plant communities of Massachusetts, in community libraries throughout the state, funded by local Cultural Council grants; and a collaboration with the Garden Club Federation of Massachusetts to bring native plant access and online resources to the federation’s 12,000 members. We hope to replicate these successful programs in other states in the region. Next up in 2020: Expanded offerings in certificate programs and online learning.

Acid + Heat Spurs Bearberry to Germinate

—Alexis Doshas, Propagator

We are continuing to experiment with techniques for propagating bearberry (*Arctostaphylos uva-ursi*), a hardy evergreen groundcover whose seed is difficult to germinate in normal greenhouse conditions. Collaborating with colleagues at Greenfield Community College in their laboratory, we subjected seeds to various treatments, including soaking them in sulfuric acid, inundating them with liquid smoke, and exposing them to high heat.



03

This summer, the first seedlings emerged from the treated seeds. Seeds soaked in a high (98%) concentrate of sulfuric acid, followed by exposure to heat at 125°C (257°F) yielded the highest germination rate, with 100% of seeds germinating. Armed with these results, we started a second round of experiments in early August to replicate these findings and refine our understanding of this resilient species’ germination requirements.

Plugging Holes in the Ecosystem

—By Uli Lorimer, Director of Horticulture

Every year, the staff at Nasami Farm grows plants for ecological restoration projects under contracts from public agencies and private organizations. It is yet another way in which Native Plant Trust supplies regionally appropriate, seed-grown plants for the New England landscape. This year, Nasami grew more than 5,000 plugs comprising 22 species of native wildflowers and grasses specifically for ecological restoration. (Plugs, grown in cells four to five inches deep, are larger and more established than younger seedlings and can be planted directly into the ground.) These plants have found homes in several Massachusetts conservation areas:



04

Assabet River National Wildlife Refuge, in Sudbury; the National Park Service’s Boston Harbor Islands; and land-trust properties in Leverett and Bolton.

The plants for Bolton Conservation Trust included 144 plugs of greater fringed gentian (*Gentianopsis crinita*), an increasingly rare native plant that is difficult to propagate. Some of the plants for the Boston Harbor Islands started

with seeds we collected there during the Hurricane Sandy restoration project, which was funded through the Seeds of Success (SOS) program, a Bureau of Land Management initiative to collect and bank the seeds of native plants for restoration. Native Plant Trust is one of six nonprofit organizations that formed a partnership with SOS in 2008.

Volunteer Service Award

—Frederick C. Sechler, Jr., Ecological Programs Coordinator

All of our sanctuary stewards work quietly behind the scenes to tend to the landscape and maintain trails and infrastructure. One steward has a special assignment: to care for a sanctuary that is not open to the public because it is home to a long-term research project on a rare orchid. Since 2002, Jane Davis has kept a watchful eye on a bog in Maine and helped the Conservation staff and University of Maine researcher Andrea Nurse with management of the orchid, which has included maintaining a deer-excluding fence, pulling invasives, and opening the canopy so light can reach the seed bank in the forest floor. Jane is retiring as a steward, and we are delighted to honor her long dedication to the bog with the Volunteer Service Award, which comes with a lifetime membership in Native Plant Trust.

At Leadership Summit, Distinguished Scientist Champions Seed Banking

The urgent need to prepare for a global decline in all species by banking seeds of rare plants was the focus of Native Plant Trust’s annual Leadership Summit



05

this spring. Guest speaker Sir Peter Crane, FRS, president of the Oak Spring Garden Foundation and senior research scientist in the School of Forestry and Environmental Studies at Yale University, shared insights from his work in complex aspects of seed banking. A conversation with the audience about how to protect and preserve native plants in New England followed, led by Alan E. Smith, CBE, FRS, chair of Native Plant Trust’s Board of Trustees.

*Please support our work to conserve native plants:
Contact Director of Philanthropy Tracey Willmott,
508-877-7630 x3502 or twillmott@nativeplanttrust.org.*



Feeding Birds


An Eco-Gardener's Approach

—Christopher Leahy

Humans have been feeding birds, at least inadvertently, well, forever. The same kinds of birds that now visit our conscientiously tended feeders—especially titmice, seed eaters and corvids (the family containing the crows and jays)—figured out, probably in the early stages of their evolution, that they had a dependable food source in the leavings of other animals, including, eventually, humans. Village scenes by Pieter Bruegel the Elder (1525–69) show the usual suspects scouring the neighborhood

for crusts and crumbs. In one skating scene an actual bird feeder has been set up in a nearby yard, though on close inspection this proves to be a trap in which a heavy door is rigged to fall upon the birds

gobbling tidbits beneath. (This may be the place to point out that birds have doubtless provided more food for humans than the reverse, even to the point of extinction. But that's the subject of another essay).



Envision your yard as potentially diverse bird habitat composed of diverse native plants. Hummingbirds, for instance, love scarlet bee-balm (*Monarda didyma*).

Photo: © Lauraag


(Top) Native plants support more insects, a staple for American robins. (Bottom) A cedar waxwing sips maple sap. Photos: © George McLean

But while bird feeding *sensu lato* has deep roots in human history, it is only since the 1930s that feeding our feathered brethren has become a highly organized pastime and industry, currently involving 55 million Americans who purchase 3 billion of pounds of seed, suet, meal worms, and other edibles, and spend \$800 million on paraphernalia such as specialized seed dispensers and squirrel baffles each year. Certainly there is no doubt that watching birds gobbling our offerings gives great pleasure to people of all ages. And despite assertions of some negative effects of the pastime—e.g., providing unintended feeding stations for predators or venues for the spread of avian diseases—most have been shown to be fairly negligible or correctable.

However, many, if not most people who feed birds also do so under the impression that they are providing necessary sustenance, without which many birds would perish, especially during our harsh northern winters. This is simply untrue. Birds are extraordinarily well-adapted for finding the kind of food they require and are vastly better equipped than our species for living outdoors in abominable weather, due to the highly effective insulation system called plumage and an exquisitely sensitive metabolism. To summarize: Feeding birds as usually practiced is for the enjoyment of people, not the welfare of birdlife.

The origin of the hungry bird myth is probably located in the early bird conservation movement in the mid-to-late 19th century. It was a time when birds were indeed under threat from human ignorance, greed, and depredation. Passenger pigeons, Eskimo curlews, egrets, and other species “harvested” for the commercial value of their meat or feathers were on or over the brink of extinction. Many species, especially crows and raptors, were condemned as pests to be destroyed. Gun laws were even more lax than now, and men frequently carried shotguns as they went about their daily business, from time to time potting a passing duck or loon just for the sport of it. And boys with slingshots were ubiquitous and proud of their prowess in hitting small songbird targets.





One solution that early conservationists hit upon in the early 20th century was the establishment of bird sanctuaries, which would provide safe havens for the birds sheltering within their bounds. This proved to be a spectacularly good idea, not so much because large populations of birds were protected, but because the sanctuaries became centers of education about the beauty and value of birds and of advocacy, where legislative strategies were formulated, that soon brought “market gunning” to an end and prohibited the indiscriminate slaughter of most non-game birds.


Alas, in their well-intentioned zeal to protect birds, but driven by the misapprehension that birds were not getting enough to eat, early bird conservationists came up with the idea of planting shrubs that produced abundant fruit and in many cases thick cover for native birds. These included European buckthorn (*Rhamnus cathartica*) and glossy-buckthorn (a.k.a. glossy false buckthorn (*Frangula alnus*), Russian-and autumn-olive (*Elaeagnus angustifolia*, *E. umbellata*), multiflora rose (*Rosa multiflora*), Asian honeysuckles (*Lonicera maackii*, *L. japonica*, *L. tatarica*, *L. morrowii*, to name some common ones), Japanese barberry (*Berberis thunbergii*), oriental bittersweet (*Celastrus orbiculatus*), black and pale swallowwort (*Cynanchum louiseae*, *C. rossicum*), and other fast-growing non-native species. In the early years the project seemed a spectacular success: birds of many

species loved the fruits and built their nests in the thick shrubbery; they also spread the digested seeds far and wide, creating even more bird food. I need not explain to members of Native Plant Trust the down side of this experiment.

Another possible criticism of conventional bird feeding is that it is very limiting. At least in New England, it is typically practiced mainly during the colder months and provides a fairly restricted menu, which results in attracting a select clientele of seed and suet eaters. Rather than regarding your yard as a locus for a feeding station, why not see it as potentially diverse bird habitat to be managed on the basis of native plant diversity? Call it a gardener’s approach to bird feeding. This will increase species diversity manyfold—though admittedly, you will have to pay closer attention to your new, enlarged “feeder”—possibly with binoculars—and not just glance out the window to see what the nuthatch is up to.

A promising starting point might be to bone up on the 50 common birds likely to visit your yard regularly at one season or another. This will, of course, depend upon where you live: the boreal spruce forests of northern New England harbor very different species than the mixed deciduous woodlands further south, and the rich mesic forests of the Berkshire Hills and Green Mountains are home to many birds that would be disoriented on the acidic heathlands of Cape Cod.

Stage Two could be researching the food and nesting preferences of your Top 50. Frugivores such as waxwings and thrushes suggest the inclusion of native shrubs and trees, such as winterberry (*Ilex verticillata*), mountain ash (*Sorbus americana*), and shadbush (*Amelanchier* spp.), whose fruits are known to attract birds. Nectivores such as hummingbirds need flowers with readily accessible



A promising starting point might be to bone up on the 50 common birds likely to visit your yard regularly at one season or another.



nectaries, preferably at the red end of the spectrum, such as cardinal-flower (*Lobelia cardinalis*). And a number of seed eaters that are shy of bird feeders will come eagerly to a riotous patch of wild grasses (including *Elymus*, *Sorghastrum*, *Andropogon*, *Panicum*, and *Eragrostis* spp.) and flowering forbs such as native thistles, asters, goldenrods (*Solidago* spp.) and blazing stars (*Liatris* spp.).

While insectophobic gardeners may raise an eyebrow, bird-oriented ones need to get comfortable with the fact that many of our songbirds, such as the spectacular wood warblers, are exclusively insectivorous, and even birds that generally prefer a vegetarian diet feed their young exclusively on invertebrates.

Coupled with the fact, now well-established scientifically, that we are in the midst of an “insect apocalypse,” as many science journalists are calling it, the conservation-minded gardener should embrace counterintuitive strategies of encouraging the presence of insects and their kin—think spiders, mites, centipedes, sawbugs, and other denizens of soil and leaf litter—rather than trying to banish them. Introducing plants whose flowers are popular with pollinating insects and setting out “bee hotels” for native species are two readily accomplished action items.

In addition to being sensitive to birds’ feeding preferences, some knowledge of the varieties of nesting habitats should also inform gardening choices. Common types and representative species that inhabit most New England ecoregions include: (1) tree nesters (e.g., American robin, Baltimore oriole), which are probably best accommodated by not over-pruning mature trees; (2) species that require thick cover (e.g., gray catbird, Carolina wren), such as a good-sized, impenetrable shrub patch

of viburnum (*Viburnum* spp.) or spicebush (*Lindera benzoin*); (3) ground nesters (e.g., ovenbird, Eastern towhee), which prefer an area of undisturbed ground with thick leaf litter; and (4) cavity nesters (e.g., titmice, nuthatches), whose pre-occupied domiciles in the wild are constructed almost exclusively by woodpeckers, though properly designed and sited bird boxes can also work.

In addition to being sensitive to birds’ feeding preferences, some knowledge of the varieties of nesting habitats should also inform gardening choices.

One insidious threat to a biologically diverse yard (and an affliction to which some gardeners are prone) is the tidiness pandemic sweeping through our communities, especially those suffering from what I call Rapid Gentrification Syndrome. The effect of this neatness plague is to eliminate all naturally

occurring vegetation on residential and municipal property and replace it with specimen trees and greenhouse ornamentals smothered in bark mulch. Birdwatchers are particularly sensitive to the new scourge because they witness the utility to migrant birds of scrubby thickets that may seem unsightly to some gardeners. In short, embrace a wilder aesthetic and the ecological value of messiness.

Finally, even if you want to provide more natural feeding opportunities for your local birds, this doesn’t mean you have to take down all your feeders. There is no question that watching a red-bellied woodpecker on the suet or reappreciating the spectacular plumage of a blue jay works best when you put out some easy eats not far from your windows. But it’s important to acknowledge that you’re doing this for your own (legitimate) pleasure, not to support starving birds.

Christopher Leahy is Gerard A. Bertrand Chair of Natural History and Field Ornithology (Emeritus) at Mass Audubon and an Overseer of Native Plant Trust

Making your yard bird-friendly

Kill your lawn (let it go to seed).

—
Leave (or create) an area of rank grasses and wildflowers (tidy the edges if you must). This can actually be quite attractive with proper species selection.

—
Don't over-prune trees (or prune them at all).

—
Leave standing dead trees. Woodpeckers "sing" by hammering on hollow trunks and create nesting cavities in them for themselves and other species. When the dead trees fall, leave them on the ground to rot—they are excellent invertebrate habitats and therefore bird buffets.

—
Retain areas of heavy brush such as catbrier (*Smilax* spp.) as nesting habitat, shelter from raptors, and winter cover.

—
Encourage insects with appropriate plantings.

—
Plant native fruit-bearing shrubs and eliminate invasive species; note that not all non-native plants are invasive, and many Eurasian steppe forbs (such as clovers, vetches, and composites) common in highway medians and the like are attractive to insects, hence to birds.

—
Avoid all garden chemicals.

—
We love our house cats, but it is critical for bird conservation to keep them indoors. Free-ranging cats are responsible for the extinction of 33 bird species worldwide and kill an estimated 480 million birds a year in the U.S. alone (Hildreth, et al., University of Nebraska Extension, 2010).





Conserving Native Orchids

Fungi and All

—Jane Roy Brown, Writer-Editor

North America is home to 210 known native species of orchids, 57 percent of which are threatened or endangered. New England has 56 native orchid species, of which 22 are threatened or endangered. But just how many fungi it takes to help all of these species reproduce is a mystery science is still trying to crack.

“Orchids need mycorrhizae, or associations with fungi, to pull essential nutrients—including carbon—from the soil,” explains Native Plant Trust Director of Conservation Michael Piantedosi. “Unlike the seeds of most terrestrial plants, orchid seeds, which are as fine as dust particles, lack nutrient packs. They require an outside supply of nutrients from mycorrhizae to sustain a developing plant.”

At the practical level, this means that orchids are hard to conserve solely by seed banking. Seeds of rare orchids are included in Native Plant Trust’s seed bank (also known as the Seed Ark), and they can remain viable in storage for thousands of years, Piantedosi says. “But to ensure that the seeds produce new plants, we also need to bank the fungi that provide life support to the seed once it’s in the soil.”

Banking fungi samples for each orchid species is complicated. Scientists have not identified most of the fungi involved, because most of them do not produce fruit—mushrooms—above ground. Plus the orchid digests the fungi after the fungi does its job. So, the fungi must be isolated from the orchid’s roots at just the right times, cultured, and frozen.



Freezing is also tricky, because the required temperature varies according to the fungus species. And each part of this process requires special equipment.

A few years ago, as Piantedosi and other members of the Conservation staff were wrestling with this issue, Native Plant Trust was invited to be a founding collaborator in the nascent North American Orchid Conservation Center (NAOCC), an organization formed to conserve the native orchids of the U.S. and Canada. NAOCC had an alternative approach: grow the fungi outside the roots. What it needed were trained people to collect specimens across North America.

NAOCC Program Director Julianne McGuiness explains that collectors need to know when to collect root tissue. “Sometimes, the plants require different fungi at different points in the life cycle, and that varies by species,” she says. “We are conducting germination and propagation studies, as well as experiments to discover how orchids and fungi interact during the entire life

cycle of each orchid species, as well as which fungi are part of the orchid’s habitat.”

Based at the Smithsonian Environmental Research Center (SERC), in Edgewater, Maryland, NAOCC was initially formed in partnership with the U.S. Botanic Garden,

National Zoological Park, National Museum of Natural History, and Smithsonian Gardens; now more than 55 collaborators are involved in the alliance. The coalition is the brainchild of Dennis Whigham, principal investigator and senior scientist at SERC, who sought to create a network of colleagues

to collaborate in advancing orchid conservation. (These included Native Plant Trust Conservation Director Emeritus Bill Brumback, who has been studying a rare New England orchid called small whorled pogonia, *Isotria medeoloides*, for decades.) In addition to creating national collections of seeds and orchid mycorrhizal fungi, the coalition’s goals include preserving habitats and supporting research on orchid ecology,

“We’re reaching a point where collections overall are gaining momentum. We’re about to develop reporting tools for Go Orchid, so anyone can go on our website and see our progress.”





conservation, and restoration. NAOCC also has developed an online identification system, Go Orchids, built on Native Plant Trust's Go Botany platform. NAOCC's resources include the laboratory and equipment to freeze orchid root tissue at the required temperatures and to conduct research, which enabled the collaborators to begin an ambitious project to collect orchid seeds and root tissues in every ecoregion of every state and province across North America.

To date, Native Plant Trust has made 75 collections representing 18 of New England's 56 orchid species, with most of the collecting done by colleagues in Native Plant Trust's two long-standing networks, the New England Plant Conservation Program and Plant Conservation Volunteers. Native Plant Trust continues to store orchid seed in its seed bank, while delivering live root tissue samples to the lab at SERC, where technicians extract the fungi.

At this point, McGuinness says, "collections overall are gaining momentum. Each collection brings us closer to the goal of unlocking the secrets of orchid ecology to preserve these valuable species for future generations."



New Seed Ark Challenge

SEED ARK GETS ENDOWMENT DONATION—AND YOU GET A CHALLENGE

—Tracey Willmott, Director of Philanthropy

The Seed Ark, our initiative to bank the seeds of New England's rare and endangered plants by 2020, has received a pledge from an anonymous donor to match gifts to its endowment fund through the end of 2019. The donor has already pledged half the \$1,000,000 needed to protect the seed in perpetuity, and we need to raise the remaining \$500,000. Please donate by December 31 to double your impact on the future of native plants! You may use the envelope in this magazine, visit www.NativePlantTrust.org/seedark, or call the Philanthropy Department: 508-877-7630 x3802.

Rare Plant Spotlight



Alpine arctic-cudweed (*Omalotheca supina*)

— Arthur Haines, Senior Research Botanist

During a return trip to Maine's Baxter State Park this summer, I set out to find an alpine plant that has not been seen for 25 years. Alpine arctic-cudweed (*Omalotheca supina*), a native member of the composite family, is a small species, typically shorter than 8 cm. It can be difficult to spot for that reason, as well as the fact that it grows only on the rugged slopes of Katahdin within the state of Maine. First discovered there in 1892, by F. P. Briggs, a botanist and entomologist, this plant was last seen on Katahdin in 1994 by a small group from the Josselyn Botanical Society, of Maine, in which I was included. Searches of this area and other locations documented by herbarium collections failed to find this species again.

Alpine arctic-cudweed is known only from northeastern North America and Europe. It reaches its southern limit on Katahdin, in Maine, and Mount Washington, in New Hampshire, where it needs a specific habitat. Given its small size, it does not compete well with other plants. It is normally found on open gravels, especially those that are solidified by low-growing mosses.

Following the suggestion of Don Hudson, a botanist who has done years of field research on the flora of Katahdin, I was able to find two small patches of *Omalotheca supina*—six reproductive plants and small number of vegetative ones—in a steep gully where snow is deposited by winter winds and remains long into the growing season. After a quarter-century's absence from the botanical record, this alpine species is now known again, and we have the opportunity to collect seed to preserve for the future in Native Plant Trust's Seed Ark.

*This conservation work was made possible
by a collaboration between Native Plant
Trust and Baxter State Park,
with assistance from the Maine Natural
Areas Program.*

HAPPENINGS



SATURDAY, FEBRUARY 29, 2020, 6-8 P.M.

Tales From the Field: a Botany Story Slam

Join Native Plant Trust for an evening of plant adventure storytelling at Garden in the Woods in Framingham, MA. Listen to some of the region's top botanists, horticulturists, and fellow plant geeks share their most riveting and hilarious tales from the field, then cast your vote for the night's best storyteller! This one-of-a-kind event will be moderated by Michael Piantedosi, Director of Conservation, with audience participation.

\$30 (Members) | \$36 (Nonmembers)

THE GARDEN SHOP

Winter snows bring spring flowers. Snuggle up with the 2020 native plants list and plan your preorder.

Online now at

[www.NativePlantTrust.org/
for-your-garden/buy-native-plants/](http://www.NativePlantTrust.org/for-your-garden/buy-native-plants/)

Gift cards available

EVERY PURCHASE SUPPORTS OUR MISSION

Native Plant Trust
**GARDEN IN
THE WOODS**

JUNE 2020

Plant Diversity Symposium

Join us for the unveiling of a new analysis of and framework for preserving plant diversity in New England. This symposium delves into land protection goals and conservation strategies for ensuring plant diversity in the face of development and climate change. The symposium sheds new light on the intersection between plant conservation, land management, and land protection. Register at www.NativePlantTrust.org/education/classes/ and keep checking our website for up-to-date details.

SIGN-UP

Sign up for our free eNews to get updates about our public programs, events, and other activities.

Visit www.NativePlantTrust.org and click on eNews in the footer on any page.

Native Plant Trust

Conserving and promoting
New England's native plants

HEADQUARTERS & GARDEN IN THE WOODS

180 Hemenway Road
Framingham, Massachusetts 01701-2699

Spicebush Swallowtail (*Papilio troilus*).
Dan Jaffe © Native Plant Trust

DULY NOTED

Scientists are concerned that the climate-related changes underway in the spring flowering times of plants, dates of bird migration, and emergence of insects could decouple critical species-species interactions.

