

The Turk's Cap

The Newsletter of the Delaware Native Plant Society

Summer 2025 Volume 28 No. 2

DNPS Mission Statement:

Founded in March 1998, we are a volunteer-based, publicly supported 501(c)(3) non-profit organization dedicated to the conservation of native plants and their natural habitats through education, science, advocacy, and land stewardship.

Discover more at <https://delawarenativeplants.org>



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President: Eric Wahl Vice-President: Rick Mickowski Treasurer: Eric Zuelke Secretary: Emma Johnson

Letter From Our President

Eric Wahl

Hello to all our members and welcome any new members to the Delaware Native Plant Society. The summer season appears to be going by just as quickly as the spring. We hope you are staying cool and recommend working in your gardens only in the mornings and late evenings, when it's slightly more amenable to the chores of the garden.

Speaking of chores in the garden, our volunteerism and hard work is paying off in Dover at the Dover Park Wildlife Pond. Thanks to the dedication and passion that Eric Zuelke brings to DNPS, his leadership in this project, and many others, has helped foster ecological stewardship both in urban and rural areas throughout the State of Delaware. You can read more about Dover Park and our other project sites in this newsletter as well as our website. Stay tuned for more volunteer days where we will send out the call for assistance at these places.

Thanks for being a valued member of the Delaware Native Plant Society and keep on being stewards of our native environment.

Stay safe and keep promoting native plants!

Eric Wahl, President

Connect with the DNPS on [Facebook](#)
And explore the DNPS at: <https://delawarenativeplants.org/>

Circle photographs



Fagus grandifolia- American beech
Trillium erectum- red trillium
Corydalis flavula- yellow corydalis
Verbesina alternifolia- wingstem
Mertensia virginica- Virginia bluebells
Veratrum viride- American false hellebore
Lilium superbum - Turk's cap lily

Photographs courtesy of David G. Smith at www.delawarewildflowers.org

Membership Application

Member Benefits:

Quarterly "The Turk's Cap" Newsletter

Tips and tricks on gardening and landscaping with native plants

Annual workshop, symposium, project work days, and field trips!

- Full-time Student \$10*
- Individual \$15*
- Family \$18*
- Contributing \$50*
- Business \$100*
- Lifetime \$500*

Membership is for 12 months, after which we send you a renewal notice.

MEMBER INFORMATION

Name: _____

Organization Name: _____

Full mailing address: _____

Phone number: _____

Email address: _____

Please make checks payable to:

Delaware Native Plant Society

P.O. Box 369

Dover, DE 19903



Our Adventures

Recent escapades of the Native Plant Society

One of the reasons why we do habitat creation\rewilding projects is to boost the lives of Delaware wildlife. The plants we install are the foundation of that, but the wildlife is the end goal. Normally the wildlife enters a new habitat slowly and the transformation takes a keen eye and lots of patience to notice. One encounter we recently had blew that paradigm out of the weeds, literally!

On June 2, 2025, Eric Zuelke went to our Woodland Beach Wildlife Area reforestation site and here's his recounting: "I'm done planting for the year there, but I had left all my 6-foot bamboo stakes, so I went to retrieve them. I was there for only about 10 minutes, and I was just walking around doing a quick welfare check on all the new seedlings and saplings for the year (everyone looks great so far). I was looking down when suddenly I heard a heavy, booming, flapping sound to my right. I stopped dead in my tracks and I had flushed a hen turkey off her nest. She scared the crap out of me because turkeys are like the C-17 Globemasters of the bird world with F-18 speed and when they take off at close range it's impressive! She flew straight away from me across the site and up and over the tree line and landed about 50 yards away on the other side of the trees. I quickly looked where she came from and there it was; her giant nest with eight eggs in it under an autumn olive (why do birds always pick non-natives to nest under?... the Veerys in White Clay Creek State Park often nest under multi-flora rose!!). I was done doing what I was doing, so I high-tailed it outta there so she would come back ASAP; hopefully she did!

Up until this spring, I had never seen hide nor feather of a turkey in that place, but this is my second sighting this year. About 3 weeks ago, just after hunting season was over, I saw a tom walking in the field about 100 yards away from me just as I entered the same field from the gravel road. It only took about 10 steps until he saw me and tore off running into the forest. That was a great sighting, but today was something else!"

Then in an update, here's Eric's recounting from June 16, 2025: "I went to Woodland Beach this morning to check on our turkey nest. There was only one real vantage point that I could use to sneak up on the nest to really be able to see it and it was just fortuitous that I had to use that route because as I got to about 25 feet from the nest, I didn't see the hen on the nest, but I did spot a poult hiding under a big clump of grass. I would not have seen it if it weren't for the fact that it kept moving around just a little bit trying to hide itself. I was only about 10 feet away from it and through my binoculars I could see that it was around the size of a robin, which according to turkey growth charts means that it was about 2 weeks old, give or take a couple days. At that age they will be actively growing flight feathers and will soon be able to fly short distances and roost in the trees at night with the hen. I could hear it very quietly purring and clucking also, and I heard maybe two or three others closer to the nest doing the same, so out of the eight eggs, I'm gonna say at least three survived so far.

There could be more, but they are born being able to run immediately, so the others could be anywhere in the field. And the other thing which is kind of amazing, is that they have a 26-28 day incubation period, which means that the last time I was in that field planting trees, the nest was already there! I was working on the other side of the field from where the nest is, so the hen may have sat on it the entire time just watching me, but eventually she had to have sneaked off it, because I walked right by it multiple times after I finished planting and I never saw it. Very exciting!"

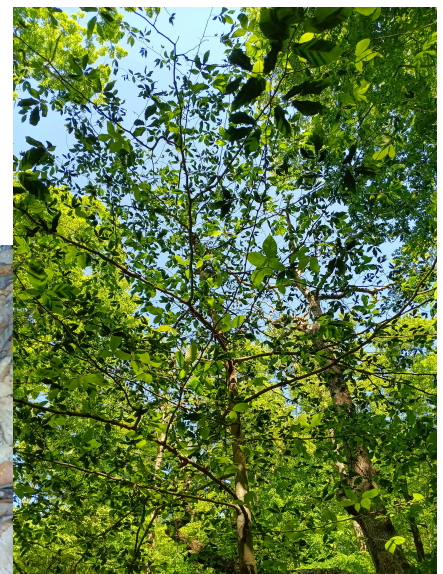
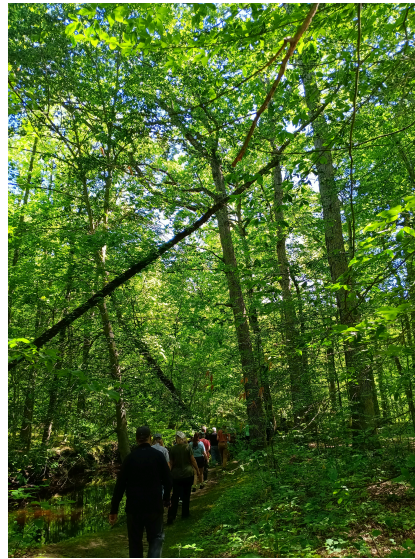
I've seen turkeys in the wild many times, but have never found a nest nor have I seen poults, so it was a great wildlife sighting, and was very encouraging to see a bird of this stature using our created habitat for a very important life function. It's a great beginning to what will be a grand forest full of life someday. Eric Zuelke



Eastern Wild Turkey (*Meleagris gallopavo silvestris*) nest, and poult
Images from Youtube and Pinterest



A hike through the Woodlands in the Ardens with 24 people all interested in nature, native plants, and conservation was an unforgettable adventure. Sharing a walk with friendly new faces, discussing dogwood species (remembering that silky dogwood, *Swida amomum* (formerly *Cornus amomum*) is native and present in Delaware woodlands was a treat, and finding American strawberrybush (*Euonymus americanus*) in flower was also a nice addition to the trip. Unfortunately, we also witnessed first-hand the rapid, rampant damage that beech leaf disease is visibly causing in our woodlands. Even last year, the symptoms were not noticeable, but now it visually seems as though 99% of beeches are symptomatic. A personal trip further north to French Creek State Park in Pennsylvania shortly thereafter showed me that the beech leaf disease is an unfortunately ubiquitous detriment. Emma Johnson



Picturing Plants

An Interview with David G. Smith

Every issue of "The Turk's Cap" includes beautiful photos of native plants. The majority of these photos come from delawarewildflowers.org, a resource founded and curated by David G. Smith. David was kind enough to meet and talk about how it all began.

Like many "plant people," David's day job was in Information Technology. Working for the state of Delaware, David said it was easy to translate his work skills to create a website for a hobby that turned into something spectacular.

David used to use film cameras to take pictures of a variety of things, but when his wife gave him a digital camera- he began taking high-quality pictures of plants. He says "That 1997 camera was awful by today's standards, but seemed OK at the time." Then he began to compile his photographs. I was surprised to learn that although David has a Nikon Z8 he also takes high-quality pictures using an iPhone. "That's the one I always have with me," he explains. When asked how to improve photography skills, to achieve pictures as clear and vibrant as David's, he turned to a popular adage: "practice, practice, practice!"

David takes so many photos that he has a backlog of four years-worth of pictures to sort through, so at this time most photos on the website were taken within the past three decades.

When asked why the focus is on plants rather than other subjects in nature, David replied "you can get right up close to plants and they hold still." David's website is not limited to native plants. Any plant found in Delaware is fair game, including nonvascular ones. "Some of the photos I've worked hardest on are of [mosses](#)." Some photos were snapped in other states while visiting family or on other adventures, so some of the web pages also represent nuanced differences between regional ecotypes.

The catalogue of plants is an achievement that many people reference. He has made it user-friendly for use on the computer and now by smartphone. His photographs have also been featured in many places, our newsletter included! David prefers to be asked when his photos are used.

David also contributes to iNaturalist, particularly in cases where good photos were previously lacking in the iNaturalist database. David says he's surprised at just how accurate iNaturalist is. The website "learns" as people make contributions and edit identifications, so the contributions of high-quality photographs are essential to building reliability in the identification features of the database. (Follow at [dgsmith](#) on [iNaturalist.org](#)). At times he consults iNaturalist for identification suggestions as well. David also has an [Instagram](#) handle. Just before we spoke, he had posted a picture of *Mertensia virginica*!

David's favorite time of year to photograph plants is the spring. "There's a lot blooming in spring, and it's not too hot." Bright red trilliums ([Trillium erectum](#)), green American false hellebore ([Veratrum viride](#)) and orchids are among his favorites-

"finding the rare [plants] is the most fun- if I have one I haven't seen before."

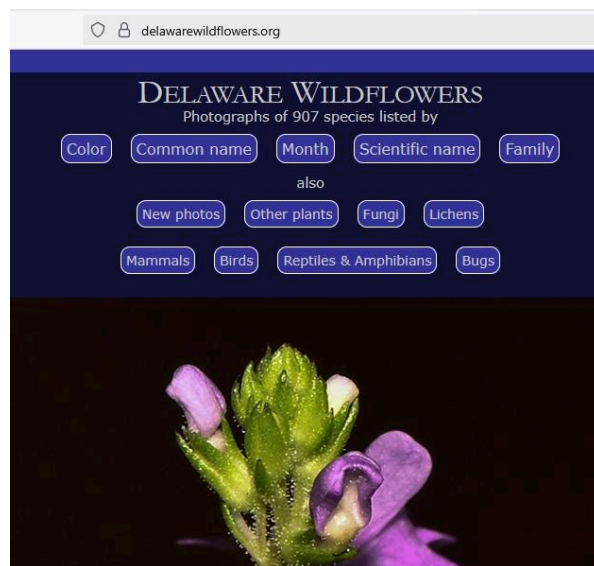
One plant he tracked down that technically hadn't been seen in DE for a long time was [Corydalis flavula](#), a small yellow flower in the poppy family with frondlike leaves that blossoms in spring. Two weeks prior, he was visiting his son in Maryland and came across the plant. He had an inkling it could be found in Delaware as well. He had been talking with Bill McAvoy about the plant and its historical location. He heard from two different people that it might be spotted at two different locations in White Clay Creek State Park. Following the leads, David went searching, and was successful!

He also spoke of a story in which the wingstem flowers ([Verbesina alternifolia](#)) reappeared at White Clay Creek State Park. Bill determined they were used in a restoration project on Pike Creek, where David had found it. A historical Native in Delaware, it was now starting to make a resurgence. David pondered how a plant that appears to spread so readily now ever became uncommon in Delaware in the first place.

David enjoys the ecosystem at Middle Run Valley Natural Area Park. David has found two kinds of trilliums there, *T. erectum* and *T. cernuum* as well as ginseng, which is also not common to find.

Most of the places David goes to take photographs are open to the public, and don't need special permits. "Mostly it's just parkland or roadsides or places where somebody told me it would be okay to go...we've got so many parks." David has gone to Hoopes Reservoir with special permission. Once, someone led him on a trip to a cedar swamp downstate which he found out later was a little too close to a private shooting range. Luckily, they made it out of that trip safely!

I greatly respect the way in which David experiences nature. Instead of uprooting physical plant material for herbarium collections as was done in the past, or cutting and picking plant pieces as is done today, David's photography follows principles I grew up with in Scouting- "leave no trace," and leaving the space cleaner than one found it. Continuing thanks to David, whose photos have illustrated this publication for many years, and a special shout-out to his wife for that initial catalyst so many years ago; David's first digital camera!



Social Responsibility

Book recommendations and societal acknowledgment

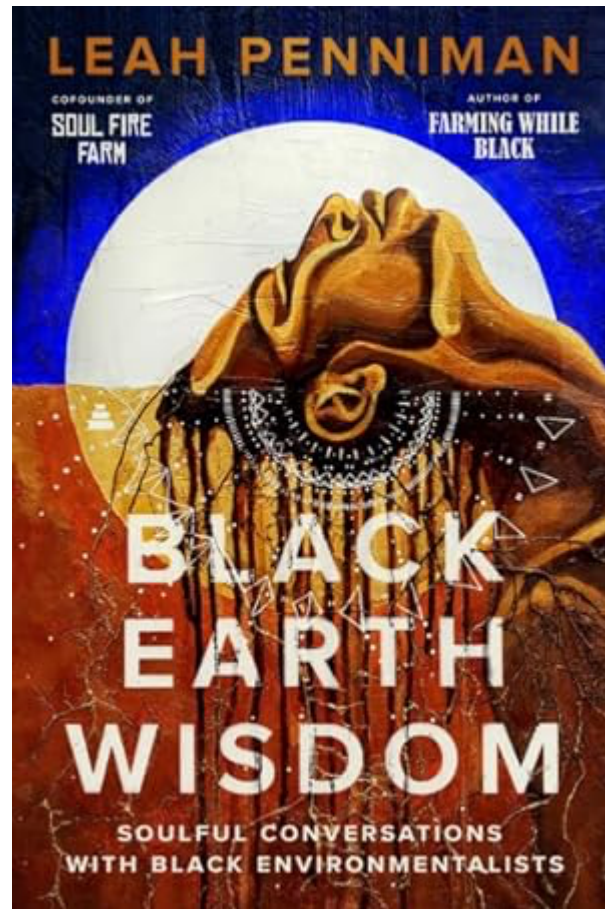
A book called "Kutiikiitowaakanun: Once it has been spoken... it cannot be unspoken" by Keith Cunningham, Karelle Hall, and RagghiRain. Delaware Today Magazine published an article on the revival of the Nanticoke language, referencing the book. This book is of significance because it comprises the revival of Delaware's piece of Algonquian language history- the language in which the original names of the plants we love would have first been spoken. This piece of culture is more than just about plant names. It is about connecting people to their roots and honoring knowledge so that it is not lost again.

A book called "Black Earth Wisdom" edited by Leah Penniman compiles conversations into one compendium of knowledge from over 30 Black environmentalists. It deserves far more space and attention than I know how to give. Read the book to learn more!

A book called "Not Too Late: Changing the Climate Story from Despair to Possibility" edited by Climate Activists Rebecca Solnit & Thelma Young Lutunatabua

A Fall 2023 article in the "Nature Conservancy" magazine by Suzanne Goldsmith brought up poignant points about names of animal [and plant] species and how they are changing for the better. In the past few hundred years, a lot of English common names for North American species have been named after people of European descent who had a hand in America's history of "oppression, slavery, and genocide." Bird names such as "Scott's oriole," "Abert's Towhee, Clark's Nutcracker...Couch's Kingbird...Townsend's Warbler" are offensive reminders of the suffering that indigenous American, black American, and American communities of color have experienced. Credit is now being given in more productive ways. For instance, the new name for the "gypsy moth" is the "spongy moth" - changing the name based on a derogatory term into a name that refers to an aspect of the moth's life cycle. Many of the new common names are more descriptive, better identifiers, such as describing colorful plumage or the type of habitat or ecosystem where the species can be found. A subconscious feature of the connotations people use in conversation is that negative connotations are often incidentally assigned to species and these connotations may indirectly take part in building prejudices. In example, knowing that a species is "invasive" and thus perceiving it in a negative way, in conjunction with knowing the part of the world that species is originally from, may lead to the brain storing the information with "invasive - that country - negative." The invasive species is not inherently bad. Neither is its provenance (location of origin). However, the subconscious contextualization can alter the rhetoric of conversation, sensitizing into unwarranted readiness to make judgments and assumptions of blame. By actively changing the names of the wildlife around us, such as the "Atlantic goliath grouper, long-tailed duck, blue-billed teal, silver inch plant" and more, we as a community of nature lovers take responsibility for the past and improve kindness and accessibility of nature loving in a way that includes all people, improves nature communication, and asks the public for citizen

science contributions. "The Entomological Society's Better Common Names Project" takes public submissions.



Not Too Late

Changing the Climate Story from Despair to Possibility

Edited by
REBECCA SOLNIT & THELMA YOUNG
LUTUNATABUA

Native Myrmecochorous Plants in Delaware

William A. McAvoy

Myrmecochorous plants produce seeds that contain elaiosomes, which are external appendages attached to the seed that are rich in lipids, amino acids, or other nutrients and are attractive to ants. The seed from myrmecochorous plants are dispersed by ants (known as myrmecochory). Seed dispersal by ants is typically accomplished when foraging workers carry seeds back to the ant colony, after which the elaiosome is removed and eaten, or fed directly to ant larvae. Once the elaiosome is consumed, the seed is usually discarded in underground middens or removed from the nest above ground to the forest floor. Thus, dispersing native plant seed throughout the forest.

Current research shows that there are 53 native species of myrmecochorous plants in Delaware. Represented by 14 families and 17 genera. The largest genus is *Viola*. All of Delaware's myrmecochorous plants are perennials and grow in forests and woodland habitats. Additionally, 26 of the 53 known myrmecochorous plants are rare in Delaware.

Below is a list of all the known native myrmecochorous plants in Delaware.

Scientific Name	Common Name
<i>Anemone quinquefolia</i>	wood anemone
<i>Asarum canadense</i>	wild ginger
<i>Asarum reflexum</i>	reflexed wild ginger
<i>Carex communis</i>	fibrous-rooted sedge
<i>Carex jamesii</i>	James's sedge
<i>Carex laxiculmis</i>	spreading sedge
<i>Carex laxiflora</i>	broad loose-flowered sedge
<i>Carex nigromarginata</i>	black-edged sedge
<i>Carex pedunculata</i>	longstalk sedge
<i>Carex striatula</i>	lined sedge
<i>Carex umbellata</i>	hidden sedge
<i>Claytonia virginica</i>	Eastern springbeauty
<i>Corydalis flavula</i>	short-spurred corydalis
<i>Dicentra cucullaria</i>	Dutchman's-breeches

<i>Dichanthelium aciculare</i>	needle-leaf dichanthelium grass
<i>Dichanthelium boscii</i>	Bosc's dichanthelium grass
<i>Dichanthelium dichotomum</i>	forked dichanthelium grass
<i>Epigaea repens</i>	trailing arbutus
<i>Erythronium americanum</i>	yellow trout-lily
<i>Galium circaezans</i>	forest bedstraw
<i>Hepatica americana</i>	roundlobed hepatica
<i>Luzula acuminata</i>	Northern hairy woodrush
<i>Luzula echinata</i>	hedgehog woodrush
<i>Sanguinaria canadensis</i>	bloodroot
<i>Scleria triglomerata</i>	tall nutrush
<i>Trillium cernuum</i>	nodding trillium
<i>Trillium erectum</i>	ill-scented trillium
<i>Trillium grandiflorum</i>	great white trillium
<i>Uvularia perfoliata</i>	perfoliate bellwort
<i>Uvularia sessilifolia</i>	sessile-leaf bellwort
<i>Viola affinis</i>	akin-to violet
<i>Viola blanda</i>	sweet white violet
<i>Viola brittoniana</i>	northern coastal violet
<i>Viola cucullata</i>	marsh blue violet
<i>Viola emarginata</i>	triangle-leaved violet
<i>Viola eriocarpa</i>	smooth yellow forest violet
<i>Viola fimbriatula</i>	northern downy violet
<i>Viola hirsutula</i>	wood violet
<i>Viola labradorica</i>	alpine violet
<i>Viola lanceolata</i>	lanceleaf violet
<i>Viola minuscula</i>	smooth white violet
<i>Viola palmata</i>	blue palmate-leaved violet
<i>Viola pedata</i>	blue bird's-foot violet

<i>Viola primulifolia</i>	primrose-leaf violet
<i>Viola pubescens</i>	downy yellow violet
<i>Viola rotundifolia</i>	round-leaf yellow violet
<i>Viola sagittata</i>	arrowhead violet
<i>Viola sororia</i>	common blue violet
<i>Viola stoneana</i>	Stone's violet
<i>Viola striata</i>	striped violet
<i>Viola subsinuata</i>	lobed blue violet
<i>Viola vittata</i>	strap-leaved violet



Ant carrying a bloodroot seed. The elaiosome is the white fleshy part of the seed. Photo from Oceana Conservation District, 2018.



Pollen Ponderings

*Courtesy of Flavia Rutkosky, Biologist, Fish and Wildlife Service at Bombay Hook
National Wildlife Refuge*

At last fall's symposium, we talked about Pollen. Flavia Rutkosky provided an excellent article expanding upon questions that many of you asked. Here are the answers.

The pollenkitt - the outside of a pollen granule- contains lipids that mediate interactions with pollinators, help to prevent desiccation and potentially manage microbial activity, and this study in question suggests the lipid content may be affected by temperature and other environmental conditions from ecosystem to ecosystem even within the same genus or species of plants. This particular study looked at different plant species within the same ecological region and the native pollinators that visited them to see if pollen protein and fat content varied between species and if it was affected by climatic variables.

The study is titled "Do past and present abiotic conditions explain variation in the nutritional quality of wildflower pollens for bees?" by Anthony D. Voudo, Eva Lin, Jillian A. Luthy, Anne S. Leonard, and Eliza M. Grames, published August 26 2024 in Springer: *Evolutionary Ecology* <https://doi.org>

To conduct the study, fresh pollen was collected from 35 different species and all bees that visited the flowers were identified. Pollen nutrient concentrations were analyzed, and periods of weather were calculated within subsets of the year corresponding to when plants fall asleep (go dormant) for winter, when they are actively growing, and when pollinators are actively visiting. The combination of factors resulted in 44 measurable variables. Statistical models were used to calculate the most likely or most certain outcomes, because while it would be nice to say that a scientific experiment or observational study can "prove" or "disprove" something, even repeating parts of a study many times can only yield outcomes in terms of likelihood and not absolute certainty.

A diagram in the study showed the relationship between the protein and lipid content for plants within 11 orders [Apiales (3 species), Asterales, Boraginales, Fabales, Lamiales, Liliales, Malpighiales, Malvales, Myrtales, Ranunculales, Rosales). At a glance, plants tended to either have high lipid or high protein concentration, or an intermediate concentration of both, with instances of plants within the same botanical order generally exhibiting similar concentrations of each lipids and proteins, with the exception of members of the Rosales, which all shared a similar lipid concentration range but varied greatly in protein concentration.

The study noted it was likely that drought stress decreased lipid content while increasing protein content, however oddly enough heat stress can result in higher

lipid concentration, as plants deal with drought and heat stress using different physiological methods, though they often do so in tandem. “The most valuable insight...may simply be evidence that the previous season contributes to floral resource traits.”

“Previous research...demonstrated...interspecific variation in pollen nutritional quality can determine bee foraging preferences: plant species that share similar pollen nutritional qualities share similar bee visitors, while plants with different pollen nutritional values are visited by different communities of bees.” The study showed climate variables don’t have a large effect on pollen quality except that species “may shift in nutritional space *enough* to cross into possible other nutritional niches.” The study theorizes that some plants may not significantly shift and thus could be steady sources of nutrients for their typical pollinators- fitting within the concept of keystone species in an ecosystem that provide a stable and reliable food source.

The study determined that pollen chemistry is affected by above and below-ground environments and does have an effect as a food source on the choices of the pollinators that tend to visit them, having the ability to shift ecosystem services in terms of pollinator visitation, which in turn, affect everything else.



Bee covered in pollen. Photo from Reddit.



Hidden Treasures: Learn about Rare Plants in Delaware

Reprinted with permission of author- Outdoor Delaware Magazine's Writer/Editor:

Matt Bittle

Upward of 1,600 plant species are native to Delaware, according to state botanist Bill McAvoy. Surprisingly, a full 40% of those are considered rare in the state.

Of the 657 rare plants, more than a third have not been seen here in at least 20 years, including 47 species believed to be completely extinct in Delaware.

In fact, the First State tops most others when it comes to rare flora, with a higher percentage of plants classified as scarce than almost any state in the country, McAvoy said. That's largely attributable to Delaware's small size.

To McAvoy, few things are more thrilling than discovering a new species or a species not previously believed to exist in the state — something he's done on a number of occasions in his 33 years as the Delaware Department of Natural Resources and Environmental Control's foremost plant expert.

Delaware's rare plants include flowers, grasses and trees and can be found in various locations throughout the state, especially in wetlands and forests. It's entirely possible that not all the species in Delaware have been discovered and catalogued, which means our state could be home to an even higher share of uncommon plants.

McAvoy is a firm advocate for protecting these species, each of which plays a unique role in the ecosystem.

"This is a living organism that deserves to exist, but also it's part of Delaware's natural heritage that we're destroying," he said. "We need to preserve that natural heritage in the state of Delaware."

Many animals depend on one particular species of plant, making them especially vulnerable to factors like climate change. Unfortunately, sea level rise is causing saltwater to break from its traditional limits and move inland, which is damaging to plants, McAvoy said. Many marshes in the state have a greater degree of salinity than just a few decades ago, he noted, while development and agricultural uses have also been harmful to Delaware's flora.

"Remove one of those links from the chain and everything becomes dysfunctional," McAvoy said, pointing to rare butterflies that completely rely on a number of plant species here. If those plants are wiped out, the insects that use them for food could die off as well, which would potentially have repercussions further along the food chain.

Here is a look at some of the most uncommon plant species in the First State.

Hirst Brothers' panic grass

Hirst Brothers' panic grass is named after two New Jersey botanist siblings who discovered the species in the 20th century. It is formally known as *Dichantherium hirstii* from the Greek "dicha" (twice) and "antherion" (flower), referring to the two phases of flowering the grass goes through, first in the spring and then in the fall.

One of the world's rarest grass species, Hirst Brothers' panic grass is found in only eight locations in North America, including one population in Sussex County.

It's a perennial species, meaning it lasts more than two years. In bloom from May to September, Hirst Brothers' panic grass is found in seasonally flooded wetland depressions sometimes known as whale wallows or Delmarva bays. Its seeds are eaten by birds like quail, and the plant can grow to be several feet tall.

The grass is one of McAvoy's favorite species, as he was friends with the discoverers. [In 2014, he led an expedition to the state of Georgia that ultimately found around 500 members of Hirst Brothers' panic grass growing in the wild.](#)

And in case you were wondering — no, the name has nothing to do with becoming alarmed. Rather, it stems from the Latin "panus," which refers to the millet grass.

Purple pitcher plant

The purple pitcher plant, also known as the northern pitcher plant, is far more common than the panic grass, being found in about two dozen states and much of Canada. It's considerably less prevalent in Delaware, though.



The purple pitcher plant is a carnivorous plant species that consumes insects and even small amphibians and mammals. (Delaware DNREC/Bill McAvoy)

The perennial plant is known by the scientific name *Sarracenia purpurea* after its discoverer, Canadian doctor and scientist Michel Sarrazin, and "purpurea," Latin for purple.

This carnivorous plant is part of the pitcher plant family, one of the most unique types of flora. The species has hollow leaves that look like pitchers and contain glands that release nectar, attracting insects and even small amphibians and mammals. These creatures often become stuck in the pitcher after entering and drown in rainwater that has collected at the bottom. The plant then uses enzymes to digest the organisms.

This colorful species can be about a foot tall. It blooms from May to August and is found in both New Castle and Sussex counties, though it is more commonly spotted in Atlantic white cedar swamps in southern Delaware. The plant's roots typically grow in water, with the crown sitting above water.

Little curlygrass fern

The little curlygrass fern was only discovered in Delaware in 1990 in an Atlantic white cedar swamp in Sussex. It is found in just a few locations along the eastern coast of the United States and Canada, though a disjunctive population exists in Peru.

Its scientific name is *Schizaea pusilla*, which comes from the Greek "schizein" (split) and Latin "pusilla" (small).

As with many of Delaware's most unique plants, the little curlygrass fern is a perennial. It blooms in July and August and grows to be a few inches in height.

Unlike most ferns, its leaves are curly and grass-like, hence the name.

Blue lobelia



The blue lobelia herb prefers fresh water but can live in brackish environments. (Delaware DNREC/Bill McAvoy)

The blue lobelia, or longleaf lobelia, is an herb found in wetland habitats. It prefers fresh water but can live in brackish environments.

It is officially known as *Lobelia elongata*, after Flemish botanist Mathias de l'Obel and the Latin "elongate," or elongated.

The blue lobelia is native to the southeastern United States, with Sussex being at the northern tip of its range. The plant can grow to be several feet tall, with leaves that are thicker, stiffer and wider than those produced by many other lobelia plants.

It blooms in August and September, and hummingbirds use its nectar as food. As a perennial, it dies down over the winter before growing again come warm weather.

The species is one of McAvoy's favorites due to its rarity and pretty color, although he noted it is on the path to extinction here due to climate change, chiefly in the form of sea-level rise.

Mid-Atlantic beaksedge

The mid-Atlantic beaksedge is one of the newest rare plants in Delaware, only being identified as a distinct species in 2023. Just six populations across Maryland, New Jersey and Delaware are known, including one in Sussex.

The plant's scientific name is *Rhynchospora mesoatlantica*. The former comes from the Greek words "rhynchus" (beak) and "spora" (seed), and the latter refers to its location in the mid-Atlantic.

This perennial, which grows to a height of about 2 feet, is found in seasonal ponds and blooms from June to August.

Though just noted as a new species last year, the first example of the mid-Atlantic beaksedge was collected in 1899 in Sussex by a Wilmington botanist, according to McAvoy. Because of its small population and land-use changes, this plant is considered by scientists to be threatened.

Delaware hawthorn

The Delaware hawthorn is a tree-like shrub found in New Castle, though it has not been seen in more than a century.

Its official name, *Crataegus delawarensis*, stems from "kratos," a Greek word meaning strength that refers to the hardness of its wood, and from the Greek term "akis" (sharp) in reference to the thorns some members of the hawthorn family have. (You can probably guess where the second half of the name originates.)

This perennial lives in thickets and tree lines and blooms in May. Its fruit is eaten by many animals, including wild turkeys, while the nectar and pollen benefit a number of insect species. The Delaware hawthorn is deciduous, meaning it sheds its leaves in the fall and regrows them the following year.

It extends to a height of up to 30 feet and, like the mid-Atlantic beaksedge, was first collected by a botanist from Wilmington in 1899.

Buckthorn bumelia

The buckthorn bumelia, or buckthorn bully, is a deciduous tree primarily located in the South in the United States. In Delaware, the only known population was found in Sussex at a shell midden, which contains waste from shellfish once eaten by Native Americans.



The buckthorn bumelia is found in only one location in Delaware. (Delaware DNREC/Bill McAvoy)

The plant's formal name, *Sideroxylon lycioides*, is a reference to the Greek words "sideros" (iron) and "xylon" (wood) and its resemblance to the lycium, a type of nightshade.

The buckthorn bumelia typically makes its home in sandy woodlands and forested sandspits. It's a perennial that blooms in July and can grow to be approximately 30 feet tall.

Its leaves are typically a shiny dark green and can be around 5 inches long. The fruit is ovoid and, when ripe, is a blackish-red color and about half an inch in size.

Its flowers attract pollinators, and its fruit is eaten by critters like birds and squirrels. Indigenous Americans, who may have brought the species to Delaware centuries ago, also likely dined on the fruit.

Discover more from "Outdoor Delaware" from original publication [HERE](#)

The State of Delaware's Biodiversity

Due to its geological features and its location in the Mid-Atlantic, Delaware is home to a wide variety of habitats, plants, and animals. This rich variety, or biodiversity, is key to ecological resilience over the course of time in the face of environmental changes. Unfortunately, many of Delaware's plants and animals are in decline, and some are in danger of disappearing from the state. The primary reason for this decline in species is the loss of critical habitat, a result of human activity and changes in land use. Pollution, invasive species, and climate change also contribute to the degradation of habitat. Current state and county regulations are not adequate to prevent further decline of our biodiversity. This summary highlights the state of Delaware's biodiversity and illustrates the need for increased efforts to conserve our unique habitats and the plants and animals that depend on them.

Disappearing Flora: The State of Delaware's Native Plants

Delaware's native flora currently consists of over 1,600 species and varieties.

- 37% of Delaware's native flora is rare and known from just a few populations, which includes over 200 species that may have disappeared, perhaps never to be seen again.
- 50 of Delaware's native plant species are globally rare and over 100 are rare within the North Atlantic Region, meaning our populations are important to the long-term survival of these species throughout their range.
- 32% of Delaware's overall flora is non-native, which includes over 150 that are invasive and potentially invasive.

Delaware's plants are at risk!

- 78% of Delaware's rare plant populations are within unprotected habitats (non-tidal wetlands and forests)
- 69 species are known from a single population in the state.

Declining Fauna: The State of Delaware's Animals

Vertebrates: Birds, Mammals, Reptiles, Amphibians, Fish

- Of Delaware's over 400 species of birds, 24 are considered State Endangered
- More than half of Delaware's amphibian and reptile species are considered of conservation concern.
- 2 of Delaware's 9 species of bat are Endangered, and the remaining 7 are considered species of greatest conservation need.
- 9 of the 10 diadromous fish (species that migrate between the ocean and streams to spawn) are of conservation concern, with species of sturgeon, herring, and shad having declined to historically low populations.



Grass Pink -
Atlantic White
Cedar Swamp

Baltimore
Checkerspot -
Wet Meadow



Invertebrates: Moths, Butterflies, Dragonflies, Fireflies, Mollusks

Many of Delaware’s most at risk invertebrate species have not had their populations assessed in decades.

- Moths are one of the most ecologically important groups of insects. Of Delaware’s approximately 1,000 known moth species, less than 20% have been assessed for conservation status.
- 1 in 4 species of butterflies and skippers known from Delaware is rare or gone from the state.
- Of the 128 dragonfly species reported in Delaware, 18 are listed as Tier 1, Species of Greatest Conservation Need. For example, the Elfin Skimmer dragonfly is listed as State Endangered.
- The globally rare Bethany Beach Firefly is known in only a few small and potentially at risk wetland areas in Delaware. The species is a candidate for federal protection by the U.S. Fish & Wildlife Service.
- 6 of the 13 species of freshwater mussels are Endangered and 4 of these are likely gone from the state.

Barking Treefrogs - Delmarva Bay



Wood Thrush - Mature Deciduous Woodland

Development Danger: The State of Delaware’s Critical Wildlife Habitats

While many habitats within the state are important to wildlife, the most critical habitats at risk of human destruction are non-tidal freshwater wetlands and intact forests.

Neither of these habitats is protected under state law.

Freshwater Wetlands

- 1 in 4 species of rare plants occur in non-tidal freshwater wetlands.
- Many of Delaware’s globally rare insects, like Bethany Beach Firefly and Mysterious Lantern Firefly, live exclusively in non-tidal wetlands.
- Endangered species like the Tiger Salamander and Spotted Turtle breed only in small, isolated seasonal wetland habitats.
- Many rare and declining freshwater fish are associated with slow-moving freshwater wetlands like beaver ponds.

Forests

- Nearly half of Delaware’s rare plant species occur in forests.
- Large contiguous forest tracts are especially important for birds and other wildlife.
- Delaware has lost 2/3s of our forests since European colonization.
- Since 1984 on average nearly 1,000 acres of forest have been lost each year.
- Many of Delaware’s remaining forests have been highly fragmented and lack connectivity and wildlife corridors.
- Between 2008 and 2017, Delaware has lost over 6,000 acres of large block forests, and 33% of all forest blocks over 250 acres have declined in size.
- Two thirds of all Delaware’s forest acres are not protected.



Delmarva Bay



Need a new license plate?



Consider this award-winning design to help support pollinators!

The design received the 2021 [“Best Plate Award”](#) from the Automobile License Plate Collectors Association and is still available on the DMV website under [“Special Plate Sales.”](#) Choose the Background Type called “Pollinator” from the dropdown menu to get yours today!

“Max and the Milkweed” by Auggie Grand




The DNPS has been in direct contact with this author. A great new kid’s book to guide young gardeners in the adventure of planting and growing milkweed to attract monarchs! A good gift for family, or an addition to classroom or camp teaching curricula!

Learn more [HERE](#)

Events & Programs

Annual Conference REGISTER NOW



Maryland Native Plant Society

Extraordinary Ecosystems of Maryland's Eastern Shore

About the Event

Discover the unique plants and natural areas of Maryland's Eastern Shore and learn about the herculean efforts to conserve them. Featuring a keynote presentation by Jim Brighton.

What You'll Experience

- Interesting talks
- Field trips (both days)
- Dinner with speakers
- Poster session
- Native plant sale

September 6 & 7, 2025

WASHINGTON COLLEGE
300 WASHINGTON AVE.
CHESTERTOWN, MD



Washington College, Natural Lands Project



For more information, go to MDflora.com/events or scan QR Code

Planned presentations and speakers:

-*Rare, Threatened and Endangered Plants of the Eastern Shore* - Jim Brighton (Keynote Speaker)

-*Threats to Unique Plants and Animals within Tidal Salt Marshes and Collaborative Conservation Efforts* - Henrietta Bellman and Sophia Seufert

-*Managing Early Successional Habitats to Support Declining Grassland Wildlife Species* - Kathy Thornton

-Evening social with Bill McAvoy's talk on *Eastern Shore Plant Communities and Habitats: From Marsh to Mounds*. Please select the Social option during registration.

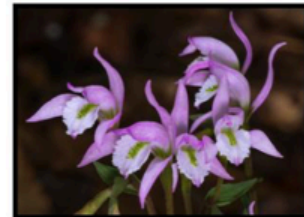
Field trips are planned to Delaware Bays, ES Serpentine Barrens and Shell Middens.



Introducing the Native Orchid Conference

WHO WE ARE

- a twenty plus year old organization with an active membership that spans North America from coast to coast
- diverse membership with backgrounds in architecture to zoology and everything in between



WHAT WE DO

- maintain a dynamic network of native orchid enthusiasts
- support, promote and actively participate in conservation efforts
- collaborate with universities, Smithsonian Environmental Research Center & conservation groups to restore and preserve orchid habitat
- participate in ongoing scientific research
- maintain an internet forum
- publish a peer reviewed journal
- award grants to students engaged in native orchid research
- sponsor online presentations
- conduct an annual symposium at various venues across the continent



[2025 SYMPOSIUM](#)

NEWFOUNDLAND, CANADA
July 3 - 7

- [American Horticultural Society](#)- use the nationwide Garden Network and check out their programming!
- “This Earthen Door” at the [Brandywine Conservancy](#) & Museum of Art
- [Delaware Botanic Gardens](#) Programs and Events, visit Thu-Sun 9AM-4PM
- [Delaware Nature Society](#) Programs and Events including the Dupont Environmental Education Center’s programming at the Wilmington Riverfront
- Third Mondays Monthly 6:15-7:45PM [Green Drinks Online](#) Virtual Meeting
- [Delaware Cooperative Extension & Master Gardener Workshops](#) -Live & Zoom
- [Mt. Cuba Center](#)’s upcoming classes
- [Northeast Rising](#) in Wilmington is looking out for people and plants, mitigating the negative effects of climate change through community involvement and outreach programming and connecting organizations to help the communities that need it the most.
- [University of Delaware Botanic Gardens](#)
- [Wilmington City Council](#) and Northeast Rising [Wilmington Initiatives](#) at Conscious Connections Urban Farm
- White Clay Creek State Park- [Ethnobotany Walk](#) on August 23rd! Check for updates!

Volunteers Needed!

- Volunteer at the Delaware State University’s Claude E. Phillips [Herbarium](#)
- Zooniverse Herbarium Volunteering- [Virtual opportunities](#)
- Discover the new [Delaware Habitat Guardians](#)
- Become a Delaware [Master Gardener](#)
- Become a Delaware [Master Naturalist](#)
- Know anyone in nearby Chester County? The Chester County Conservation District (PACD) has a [lawn conservation program](#) rewarding homeowners who convert lawn to garden space!

Native Plant Nurseries to Support:

[Blooming Meadow Nursery in Dagsboro](#)

[Heritage: A Native Plant Nursery](#) - coming soon to Sussex County!

[Josie’s Native Plants](#)

[The Naked Oak Tree Farm](#)

