



2024 Annual Report



New Jersey Natural Lands Trust
Preserving New Jersey's Natural Diversity

NEW JERSEY NATURAL LANDS TRUST

2024 ANNUAL REPORT

STATEMENT OF PURPOSE

The New Jersey Natural Lands Trust, created by legislation in 1968, has been preserving New Jersey's biodiversity for more than 50 years. The intent of the Trust's enabling legislation was to create an independent agency with the mission of preserving land in its natural state for enjoyment by the public and protecting natural diversity through the acquisition of open space. The Trust preserves land primarily by donations of open space through acquisition of title in fee simple or of conservation easements, and manages its properties to conserve endangered species habitat, rare natural features, and significant ecosystems. The Trust invites passive use by the public for recreational or educational purposes wherever such use will not adversely affect ecological communities and biological diversity.

The Trust also recognizes that ownership and management alone are not enough to achieve its mission. Public education is an integral function of protecting natural diversity. The Trust distributes information designed to convey a conservation ethic for the protection of open space and its natural values.



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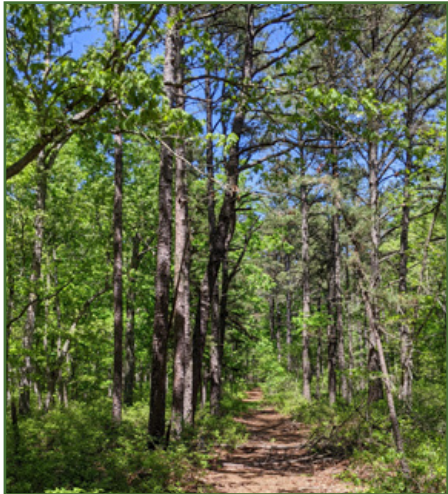
COVER ART: Priscilla Rios

STAFF PHOTOS: Linda Cairnes, Terry Caruso, Jason Hafstad, Megan R. King, Martin Rapp, Terry Schmidt, and Cari Wild

IN 2024...

The New Jersey Natural Lands Trust added more than 500 new acres to its stewardship of more than 120 preserves throughout the state that comprise the Trust's system of nature preserves.

These 2024 acquisitions expanded the Bears Head, Budd Lake Bog, Hardwick Meadows, Pomona Woods, and Wildcat Branch preserves.



Another 500 acres of Trust preserves open to visitors to explore. Clockwise from top left: Budd Lake Bog, Hardwick Meadows, Pomona Woods, Wildcat Branch, Bears Head, and Pomona Woods preserves.

2024 Acquisition Highlights

By: Cari Wild

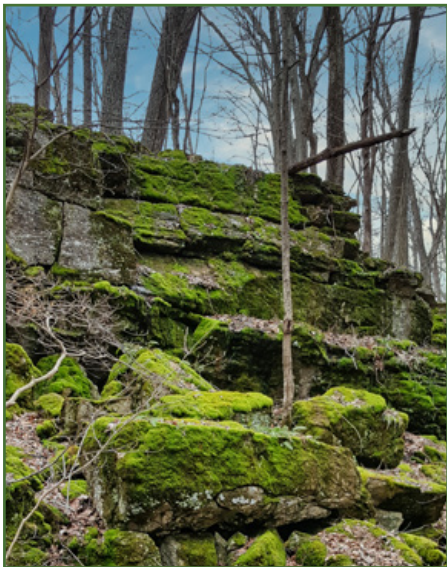
We highlight four 2024 acquisitions: two in North Jersey and two in South Jersey.

North Jersey: Hardwick Meadows and Wildcat Branch

The Trust understands that it takes a village to fulfill its statutory mission of preserving land in its natural state for enjoyment by the public and protection of natural diversity. Indeed, most of our acquisitions involve partnerships. Such is the case with the expansion of the Hardwick Meadows Preserve to over 254 acres.

Hardwick Meadows became a Trust preserve in 2006 with a 164-acre acquisition from The Nature Conservancy. It was expanded over the years with two acquisitions by the New Jersey Green Acres Program (Green Acres). With an 18-acre donation of limestone forest in April 2024 from The Land Conservancy of New Jersey (TLCNJ), it now boasts over 254 acres.

As Sandy Urgo, TLCNJ's Vice President of Land Preservation and Stewardship, noted, "New Jersey's limestone forests are a geographically limited resource with extreme conservation value. At this point in our natural history, protecting ground that supports endangered species is one of the few things we can do to try to stem the tide of extirpation and extinction, which is why [TLCNJ] has always prioritized their preservation. We are grateful for the assistance and support of our terrific partners at The Nature Conservancy and Green Acres. And we are thrilled to have facilitated the preservation of this limestone forest and contributed to the [Trust's] ecologically important Hardwick Meadows Preserve."



LEFT: Limestone outcrops at Hardwick Meadows. **RIGHT:** Hardwick Meadows wetlands.

Hardwick Meadows Preserve is a biodiversity hotspot, and the newest addition includes many unique features as well as limestone escarpments that rise out of the forest. In 2006, the Trust set a goal to protect and preserve the entire Hardwick Meadows Natural Heritage Priority Site (NHPS). NHPSs are designated by the New Jersey Natural Heritage Program as critically important remaining habitat for rare plant species and ecological communities within the State. These areas are considered acquisition priorities to preserve the State's remaining biodiversity. The newest acquisition is almost entirely part of the NHPS, leaving very little of the remaining NHPS in need of future preservation.

With the approximately 176-acre Green Acres acquisition in Franklin Borough and Hardyston Township, Sussex County, in December 2024, the Trust has doubled the expanse of its Wildcat Branch Preserve. This acquisition was the culmination of years of hard work and patience by Green Acres and the Trust. The Trust initiated this acquisition in 2015, but it was complicated by two estates owning the property. Both estates had to be settled prior to the sale with some property owners having died without wills, some property being owned by an LLC, and eight individuals needing to sign off on the sale. Over the years, lawyers changed, Green Acres project managers changed, and federal grants expired. But the Green Acres team and the Trust never gave up on acquiring this critical habitat.

“animals need to be able to move through the landscape to find food, shelter, mates, and other resources. Without [the] ability to move, healthy populations simply will not persist over the long term.”

The Wildcat Branch Preserve lies within the glaciated Ridge and Valley region of northwestern New Jersey and is named for the Wildcat Branch, a tributary of the Wallkill River, which runs through it. The preserve is comprised of beautiful pockets of mature forest, extensive freshwater wetlands, as well as agricultural lands. The preserve is important for protection of New Jersey’s natural diversity in that it includes critical habitat for several state endangered and threatened plants and animals and encompasses part of the Wildcat Bog and Ravine NHPS.



View of mature forests on Bicsak Property.



Wildcat Branch Preserve hosts extensive freshwater wetlands.

The “Bicsak Property” addition is mapped as “core habitat” by New Jersey Fish & Wildlife as part of its Connecting Habitat Across New Jersey (CHANJ) project. [CHANJ](#) is a blueprint for strategic habitat conservation that identifies areas crucial for wildlife habitat connectivity, offering wildlife a fighting chance against New Jersey’s steady urbanization, dense networks of roads, and changing climate. CHANJ recognizes that “animals need to be able to move through the landscape to find food, shelter, mates, and other resources. Without [the] ability to move, healthy populations simply will not persist over the long term.”

To help prevent over browsing by deer, Wildcat Branch Preserve is open to deer hunting with online registration on the Trust’s website.

South Jersey: Pomona Woods

At the very end of the year, on December 31, 2024, Green Acres preserved two spectacular forested properties totaling 265 acres in Hamilton Township, Atlantic County, as additions to the Pomona Woods Preserve. With these additions, the Pomona Woods Preserve has more than doubled in size.

Both preserved properties provide critical habitat for numerous species including the federal- and state-endangered Northern myotis bat and other endangered and threatened plants and animals. The properties are mapped as “core habitat” under the CHANJ project and include extensive forest, helping to advance NJDEP’s carbon sequestration strategy to help mitigate climate change.

Given the ecological significance of these parcels, it’s even more important that these parcels weren’t developed as proposed in 2022 as “Trophy Park,” with a 6,000-square-foot stadium, practice and playing fields, parking facilities, a 300,000-square-foot indoor stadium, amusements and miniature golf, dining hall, and a hotel. Residents protested the plan and took the issue to the NJ Pinelands Commission. The Commission noted that the proposed development ignored the fact that public sewers are not allowed in “rural development areas” of the Pinelands, and a sports complex of the proposed size would far exceed the capacity of any septic system. Even though the sports complex was not permitted, the properties were zoned for low-density residential development, potentially allowing developers to build houses on the properties in conformance with existing rules. Fortunately, residents persuaded the property owners to consider a sale to Green Acres.

As part of the Green Acres acquisition process, it was discovered that the properties had been used for decades as a dumping ground. With the cooperation of the former owners and guidance from Green Acres, 70 tons of debris was removed. The challenge now is for the Trust to forestall future dumping. Plans are in place for the installation of a gate to block the access point used in the past. The Trust will do its best with its limited resources to keep the property clean so that visitors can enjoy hiking the woods roads and viewing the shrubs and wildflowers in bloom throughout the year.



ABOVE: Heal-all in bloom, one of many beautiful plants that may be found along the trails within Pomona Woods Preserve.

BELOW: Mountain Laurel in bloom at Pomona Woods Preserve.
POMONA WOODS PHOTOS: Larry Fink.



Petty's Island Preserve: Community Engagement Through Co-Design

By: Linda Cairnes

The Trust, which holds a conservation easement over Petty's Island with the right to conduct limited public programming, has made a concerted effort over the years to improve the local community's awareness about and access to the island through partnerships and alliances with Camden organizations. In 2024, the Trust focused on deepening and expanding current partnerships and exploring new opportunities for engagement through community co-design. Through this new initiative, the Trust and its programming contractor, the Center for Aquatic Sciences (CAS), doubled the prior year's program participation to almost 700 visitors, most of whom live or work in Camden. The Trust independently facilitated 39 community programs that included walks, shoreline cleanups, trail building, animal conservation/monitoring, career exploration, water quality testing, animal/plant exploration, and an art installation tour. These programs were developed through a community co-design model that has deepened engagement with Camden residents and communities.

So, what is community co-design? It is designing and implementing programs **WITH**, not **FOR**, targeted communities. In 2023, the Trust developed and implemented a co-design model that involves:

- **Identifying partner community groups or individuals;**
- **Assessing mutual goals and objectives;**
- **Building engagement based on the partner's agenda;**
- **Introducing the partner to Petty's Island;**
- **Soliciting input for program engagement; and**
- **Developing and implementing the program.**



Teens with Trust co-design partner Urban Trekkers enjoying the Petty's Island shoreline.

At first, trying to implement co-design was challenging due to residents' historically negative experiences of misused urban green spaces, language and transportation barriers, non-centralized communication systems, and distrust towards those perceived as outsiders. With a consistent, and sometimes persistent community presence, the Trust has become a reliable, trusted, and sustainable ally within Camden through collaboration with community leaders, service-providers, businesses, and residents.

The Trust has become a reliable, trusted, and sustainable ally within Camden.

Over the past two years, the Trust has developed relationships with community stakeholders through collaboration on mutually aligned goals and objectives. Most partner engagement begins with Trust participation in stakeholder meetings or through assisting at events and activities in Camden communities. Such events are ideal for one-on-one conversations with Camden residents to promote opportunities for visiting Petty's Island. In 2024, the Trust attended events that reached over 2,000 residents, including Camden Night Gardens, Camden High School College and Career Fair, Byron Gardens Harvest Festival, and North Camden's food and holiday gift giveaways. Trust staff helped with East and North Camden neighborhood cleanups, some hosted by First Lady Tammy Murphy and Councilwoman Jeannette Ramos. The Trust attended and supported important events highlighting Camden residents and celebrating art murals, community gardens, and other neighborhood projects. Since attending these meetings and events, the Trust has seen an increase in Camden residents' awareness and interest in Petty's Island, with many organizations, particularly those serving teens and young adults, interested in bringing their groups to Petty's for hikes, cleanups, island explorations, and other programs.



Teens with VietLead braving soggy paths at Petty's Island.

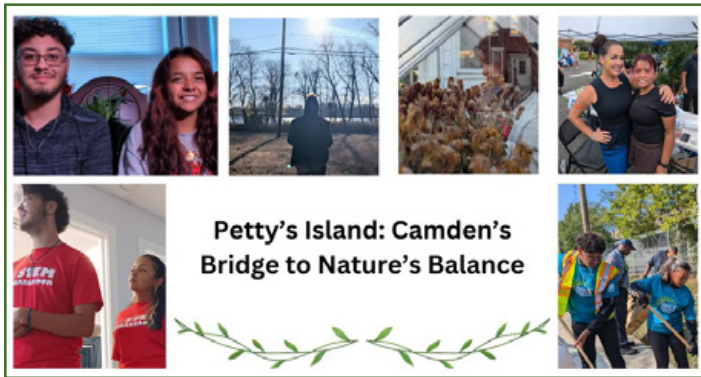


Teens from Romero Center proudly display their cleanup haul.

Using the community co-design model, the Trust, in collaboration with Camden stakeholders, successfully developed and implemented 10 co-designed programs in 2024 with partners, including Camden Lutheran Housing Inc., St Joseph's Carpenter Society, the Kroc Center/Salvation Army, Center for Family Services, PowerCorps Camden, Neighborhood Collaborative Community Gardens, Mastery Charter School, Camden Promise Charter School, The We Live Here Artist Collective, Camden Fireworks, The Work Group/Climate Corps, Romero Center Ministries, Urban Promise Charter School/Urban Trekkers, VietLead Camden, The Neighborhood Center/Bridges Youth Program/ Authentic Minds, and Upward Bound.

As an example of a co-designed program, the Trust began communicating with Camden resident champion Jackie Santiago who formed Neighborhood Collaborative Community Gardens (NCCG), which is dedicated to transforming urban brownfields into gardens for pollinators and people. After a visit to Petty's Island, NCCG interns, mostly Mastery Charter High School students and North Camden residents, developed and designed

a coloring book called [Wormington and Friends: A Riverside Quest to Petty's Island](#) (part of their Wormington and Friends coloring book series). This delightful coloring book will be available at 2025 Camden events and on the Trust's website. They also created a mini [documentary](#) about what Petty's Island means to their community.



NCCG interns produced a Petty's Island video (**Above**), and a coloring book (**Right**).

One of the greatest values of these group programs was the opportunity to listen and hear directly from those that live in Camden about the value of a space like Petty's. Students and young adults from several of these programs were asked to reflect on their experiences on the island and how it compares to their neighborhood. Through our Petty's Island Ponderings work sheet, they shared their favorite (peace and quiet) and least favorite (BUGS!) things about Petty's Island.

Another co-design program involved Petty's Island reimagined as an outdoor art gallery. Camden artist Priscilla Rios, a member of the We Live Here Artist Collective responsible for a variety of murals throughout Camden, created and installed an art exhibition along the trails at Petty's Island called "Nature's Embrace." Priscilla lives down the street from Petty's and got to know this amazing space as the Trust's 2020 [Alliance for Watershed Education Fellow](#). Nature's Embrace is Priscilla's first solo project. She created over 20 art pieces comprised of her paintings with found natural objects and cultural elements. She offered a series of tours of her exhibit, which resulted in discussions about art opportunities for more residents, including other art installations, sketching programs, and poetry slams. The experience was so successful that Priscilla plans to reinstall the exhibit in 2025.



Above: Invitation to the Camden community about hikes.

Below: A group memorializing their Petty's visit with a selfie.



The Trust has also been engaging with local businesses and youth groups to deal with the never-ending flow of plastic that the river deposits onto the island shoreline. Most youth groups that visit Petty's are also invited to participate in a small shore cleanup to showcase the problem with plastics, particularly plastic bottles. As a result, we are seeing more teens and young adults bringing reusable bottles to their Petty's Island hikes.

For Earth Day 2024, the Trust partnered with the CAS and Adventure Aquarium to coordinate a large cleanup called the Earth Week RiverSweep. With the help of Camden County Municipal Authority, NJ DEP Community Collaborative Initiative (CCI), PowerCorps Camden, The Work Group's Climate Corps, and American Water, more than 100 bags of plastic and other trash, including over 2,500 plastic bottles, were pulled from the shoreline. In 2024, over 1.5 tons of (mostly plastic) trash was removed from Petty's Island!

The Trust has built momentum with the community co-design model and hopes to expand its use beyond the success of the past two years to build more awareness of Petty's Island within adjacent communities, provide access to those willing to explore the island, and deepen its relationships, trust, and understanding of community goals and interests. Numerous new opportunities are taking form for 2025. There are still barriers and challenges that need to be navigated along the way including, time, funding, and partner capacity, which all slow the process down significantly. But through the Trust's authentic engagement with the community, Camden residents are becoming aware of Petty's Island as a community asset over which they have voice into future programming and recreational uses.



Teens with Romero Center spending some time along the Petty's shoreline.

“Nature’s Embrace” with Artist Priscilla Rios

By: Cari Wild



Priscilla Rios is a Camden-based environmental artist who aligns herself with nature, both great and small. Growing up in Camden, she had little access to green spaces, and no access to Petty’s Island just a few blocks from her house. Now, as she explores places like Petty’s Island, she finds and incorporates “things animals leave behind” (feathers, shells, antlers, etc.) into art to express gratitude and honor for living things. She takes outdoor experiences and turns them into visual messages through unique artforms. Through her art, she shares her passion for the environment and its beauty and spirituality.

This year at the Petty’s Island Preserve, Priscilla embarked on her first solo art project, “Nature’s Embrace,” which uses art to tell stories about the birds, mammals, reptiles, amphibians, insects, and plants found on the island. Nature’s Embrace involves a series of stations along existing trails that incorporate cultural elements such as colorful yarn and flowers, and “found” objects, with the intent of inspiring visitors to focus on their surroundings to find magic as they explore the outdoors. Nature’s Embrace participants experienced the fluttering of newly hatched butterflies, hearing the chirping of osprey chicks, and finding the feathers of wild turkeys. Through her art, Priscilla shares with Petty’s Island visitors her personal journey discovering and being spellbound by the plants and critters that call Petty’s Island home. Her goal with “Nature’s Embrace” was to develop a program that attracts Camden residents to visit and explore the island, which is part of their community, and have it become as important to them as it’s become to her.

From May through October 2024, Priscilla led groups totaling about 200 people through her exhibit. To connect participants with “Nature’s Embrace” and each other, she would hand everyone a flower at the beginning of her walks and request that they place it at the station that speaks most to them. Participants were asked to share, if they felt comfortable doing so, what connected them to their selected station. They related to the red shouldered hawk because they were “calculating and goal oriented,” or to the osprey because they always “catch their fish.” In this way, each walk was a unique experience dependent on what the participants were feeling and sharing with Priscilla and each other.

Priscilla’s art is not just found on Petty’s Island but can be seen all over the City of Camden. She was one of five local artists chosen to update Camden’s “City Invincible” mural originally created by William Butler after being inspired by Walt Whitman’s poem “I Dream’d in a Dream:”

I DREAM’D in a dream I saw a city invincible to the attacks of the whole of the rest of the earth;

I dream’d that was the new City of Friends;

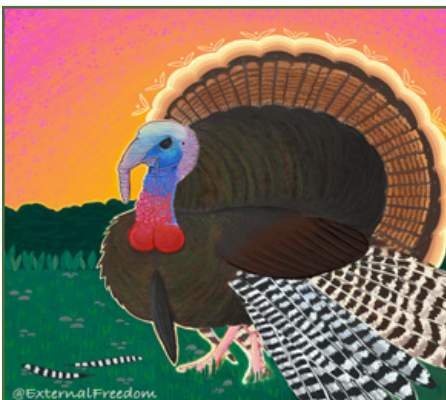
Nothing was greater there than the quality of robust love--it led the rest;

It was seen every hour in the actions of the men of that city;

And in all their looks and words.

**By Walt Whitman
(from his book, Leaves of Grass (1881-82))**

Whitman is one of Camden’s most famous residents, having lived there from 1873 until his death in 1892 at age 72. With Priscilla and her work throughout Camden rising in prominence, maybe she’ll be next.



A few of Priscilla Rios’s paintings from “Nature’s Embrace.”



Visitors enjoying Nature's Embrace including the artist's grandmother, bottom right.



While studying Biology at Rutgers Camden, Priscilla started painting animals and insects for an Instagram account, [ExternalFreedom](#). This led her to become part of Camden's environmental justice and art scene and participate in many public art exhibitions, including the Alliance for Watershed Education's [Lenapehoking Watershed: Water Spirit](#). She is a member of the [We Live Here Artist Collective](#), which collaborates with organizations on murals and public art to raise awareness of environmental and social issues while also beautifying the City and uplifting residents' spirits. They have made a tremendous impact with their murals throughout Camden's North Camden, [East Camden](#), and Waterfront South neighborhoods. Priscilla has also worked with the New Jersey Department of Environmental Protection on decal art throughout Camden to bring attention to storm drain and rain garden projects, and on private commission.*

"Nature's Embrace" was uninstalled in November 2024 to protect it from the elements, but Priscilla has expressed an interest in reinstalling it in 2025 for more Camden residents to discover, enjoy, and connect with nature right in their neighborhood. The Trust values art programming to build connections between communities and their open spaces and inspire residents to find magic in the outdoor world.

*Connect with Priscilla Rios: Instagram [@ExternalFreedom](#).



Checkered rattlesnake-plantain. PHOTO: [Nathan Dewar](#)

*Because the Trust's mission is to preserve land in its natural state and protect New Jersey's natural diversity, our annual report profiles a selected rare plant each year. This year we profile **Goodyera tessellata**,*

Rattlesnake-Plantain and Roosevelt

By Elena Williams

During his presidency, Franklin Delano Roosevelt had a huge impact on many aspects of American life. Although often overshadowed by Theodore Roosevelt's environmental legacy, FDR was himself one of the most influential presidents in terms of environmental policy and conservation. He is remembered today for creating the Civilian Conservation Corps (CCC) and for expanding the mission of the National Park Service. Among other projects, the CCC was responsible for restoring environmentally damaged lands, planting millions of trees, and building trails and other structures on park lands throughout the nation. And in the process FDR may have helped save one of New Jersey's rarest orchids.

It's a long story that begins shortly after the last ice age. That's when the checkered rattlesnake-plantain orchid (*Goodyera tessellata*) is believed to have first appeared as a hybrid of two other North American species – giant rattlesnake-plantain (*Goodyera oblongifolia*) and dwarf rattlesnake-plantain (*Goodyera repens*). Both parent species are still present in North America, although neither is found in New Jersey. There is also a fourth species of rattlesnake-plantain, the downy rattlesnake-plantain (*Goodyera pubescens*), that is common in New Jersey.

This group of perennial, evergreen orchids is characterized by vegetation that is just as attractive, if not more so, as the flowers. The common name is thought to derive from the superficial resemblance of the *Goodyera* leaves to the broad, flat leaves of plantain species such as the weedy broadleaf plantain (*Plantago major*). The white, net-like markings may have reminded observers of the skin of some rattlesnakes.

The common name for these orchids provides no clue as to just how attractive these plants are. As evergreen species, their striking leaf patterns stand out against the surrounding duff and dead leaves. This is especially true for the downy rattlesnake-plantain, with its bright white midrib and dark green leaves that make it easy to spot on the forest floor.

The checkered rattlesnake-plantain is smaller and has a more subtle leaf pattern. The basal leaves may be less than 2 cm long and lack the prominent white midrib of the downy rattlesnake-plantain. The lighter green leaves display less contrast between the white and green colors of its leaf pattern. The flowering stem ranges from 10-35 cm in height with 5-72 small white flowers.

Checkered rattlesnake-plantain is a predominantly northern species that currently ranges from New Jersey into New England and Canada, and west to Minnesota and Manitoba. It is now historic in Maryland and Ohio but is ranked by [NatureServe](#) as globally secure. The orchid is usually found in coniferous or mixed coniferous/deciduous woodlands, including spruce, hemlock and pine forests. In New Jersey, it appears to be closely associated with red pine (*Pinus resinosa*).

Checkered rattlesnake-plantain can reproduce in a variety of ways. Clonal plants can arise from the rhizomes. Flowers can be pollinated through self-pollination as well as visits from insect pollinators (mostly bumblebee species). After pollination occurs, plants produce numerous minuscule, wind-dispersed seeds, often called “dust seeds.”

Dust seeds are characteristic of many orchid species. These tiny seeds lack an endosperm that provides nutrients for germination in other plant species. Instead, orchid seeds must obtain nutrients from another source before the plant can successfully germinate and grow. In most cases these nutrients are obtained from soil fungi. Some orchid species require these mycorrhizal associates only when the plant is starting out, while others need these fungal associates during their entire life cycle.

Research is still needed to determine exactly what checkered rattlesnake-plantain needs to establish and thrive. Some orchids require a specific fungal associate while other orchids can utilize multiple species. The characteristics of the conifer species and the duff layer produced by these trees may also play a role in creating the requisite habitat for checkered rattlesnake-plantain to establish itself and flourish at new locations.



Diminutive [checkered rattlesnake-plantain](#) shown with leaves and sticks.



[Checkered rattlesnake-plantain flowering stem.](#)



[Civilian Conservation Corps planting crew, ca. 1930-40.](#)

In New Jersey, checkered rattlesnake-plantain is almost always associated with red pine. That's a big problem, because natural occurrences of red pine are exceedingly rare in the state. In fact, there's only one population of this tree located in northern New Jersey that is thought to be native. This may begin to explain why checkered rattlesnake-plantain is extremely rare in New Jersey.

Checkered rattlesnake-plantain was unknown in the state until its [discovery in 1981](#) by Sharon and Wade Wander in a grove of planted red pine in Warren County. Only three plants were observed, but this was the first addition of a new orchid species to New Jersey's flora in many years. Unfortunately, the location where the orchids were found was apparently destroyed not long afterward during construction of the Merrill Creek Reservoir. That seemed to be it for the checkered rattlesnake-plantain in New Jersey.

But all was not lost. We now return to the role of FDR and the CCC in creating the conditions for this orchid to persist in New Jersey and remain part of its flora. Red pine is native to the northeastern United States and Canada where it was highly valued as a source of lumber, pulpwood, and fuel. As a result, it was heavily logged, especially during the nineteenth century. Because of its commercial value, red pine has also been planted extensively to meet the needs of the timber industry.

FDR was first elected in 1932 when America was in the depths of the Great Depression. He immediately

proposed federal legislation and developed numerous programs designed to combat the high rates of poverty and unemployment. Among these initiatives was the [CCC](#). Building on his longstanding interest in conservation, he proposed a new national program to Congress in March of 1933 to address both unemployment and the country's degraded natural resources:

I propose to create [the CCC] to be used in complex work, not interfering with normal employment and confining itself to forestry, the prevention of soil erosion, flood control, and similar projects. I call your attention to the fact that this type of work is of definite, practical value, not only through the prevention of great present financial loss but also as a means of creating future national wealth.

Camps were then set up to house and feed the men working in the CCC and each enrollee was paid 30 dollars per month. Participants worked to establish and improve many of New Jersey's parks and forests including High Point State Park and Stokes State Forest in north Jersey, Cheesequake and Voorhees State Parks in central Jersey, and Bass River and Belleplain State Forests in south Jersey.



[President Franklin Roosevelt signing legislation, 1941.](#)

Among other projects, during the 1930s and 1940s the CCC planted stands of red pine throughout northern New Jersey. These plantations were intended to both stabilize worn and damaged soils while providing a valuable tree crop for later harvesting. It may also have created the perfect habitat conditions for the checkered rattlesnake-plantain. Research indicates that this orchid is most likely to be found in well-established tree stands. A [study of post-fire understory regeneration](#) in a Quebec boreal forest found that *Goodyera tessellata* and *Goodyera repens* did not appear until 74 years or more following the last fire.

That seems to be exactly what occurred here in New Jersey after the CCC planted red pine and other trees throughout the state. A new population of checkered rattlesnake-plantain was first observed in 2019 by a botanist hiking in Sussex County. Since then, two other populations have been documented, also in Sussex County. And this time, more than 100 plants have been observed, indicating that the orchids are responding positively to the local habitat conditions. Thanks in part to Roosevelt and the CCC, the checkered rattlesnake-plantain and the red pine remain part of our state's natural heritage. As John Muir [wrote](#), "Between every two pine trees there is a door leading to a new way of life." And a wonderful opportunity for this rare orchid to put down roots in New Jersey.*



[*Goodyera tessellata*.](#)

[Checkered Rattlesnake Plantain, #22 from "Orchids of the North Eastern United States" \(1931\), Edwin Hale Lincoln.](#)

* Author's Note: This article is based in large part on information in the [rare plant profiles](#) written by Jill Dodds for [checkered rattlesnake-plantain](#) and [red pine](#). The Office of Natural Lands Management has produced and posted these and over 200 more rare plant profiles.

Surveys and Inventories: Getting a Handle on What's Out There

By Jason Hafstad

Each year, the Trust's Board of Trustees appropriates funds for biodiversity inventories. Surveys inform staff about what biota our preserves support so the Trust can properly manage these elements of biodiversity and protect their essential habitats. Surveys also contribute to the understanding of species' rarity, distribution, and life histories, and provide baseline data that allows staff to measure how these resources are faring over time, with or without management.

Several of our 2024 surveys were likely adversely affected by New Jersey's record drought during the late summer and fall, and which was especially pronounced in southern New Jersey. The Philadelphia area saw 2.44 inches of precipitation in July (4.38 is the normal), and 5.07 inches in August (4.29 is the normal). But in the month of September, just 0.77 inches of precipitation (4.40 is the normal) was recorded. Much of southern New Jersey broke a record, with 42 consecutive days of no measurable rain, from September 29th through November 9th. The previous record for this area was 29 days, a record set in 1874. How this dry period influenced inventory results is uncertain.

During 2024, the Trust contracted 12 surveys for nine taxa groups at 12 separate preserves. Counties in which these preserves are located rather than naming the preserves is provided to protect taxa from unscrupulous collectors:

* **Lichenized fungi (fungal species partnered with an algae and/or cyanobacteria)** (Atlantic County):

This inventory by Dennis Waters yielded 91 taxa, a remarkably high number for a preserve on the coastal plain with almost no rock substrates. Several species were observed for the first time in New Jersey, including *Agonimia borysthenica* and *Lecanora farinaria*. The former was described as new to science in 2011 from Ukraine and has since been found in Ohio and Ontario. *L. farinaria* is a species with a northern distribution (Connecticut, Maine, Ontario) plus the Great Smoky Mountains. Other notable species include *Phyllopsora corallina* (a single other NJ record from 1865), *Caloplaca camptidia* (last seen in NJ in 1982), and *Opegrapha atra* (not seen in southern New Jersey since 1904).

Surveys provide baseline data allowing staff to measure how resources are faring.

* **Mammals** (Sussex County): This survey by Piedmont Ecological Services, Inc. used trail cameras mounted to trees and inside constructed "Mostela boxes," a wooden box with a camera trap and windowed-tunnel, to survey large and small mammals, with a particular focus on documenting short-tailed weasels (*Mustela richardsonii*). While none were found, the survey recorded 10 mammal species, including the white-footed mouse, short-tailed shrew, Virginia opossum, coyote, and bobcat.



Bobcat captured with trail camera.



TOP: Acadian flycatcher; BOTTOM: Red-shouldered hawk.
PHOTOS: William Culp



* **Avian diversity** (Warren County): This survey by Wild Bird Research Group, Inc. yielded 59 species, including evidence of breeding for 44 of those species. A total of 11 rare or uncommon species were observed, including the brown thrasher, Acadian flycatcher, northern parula, osprey, red-shouldered hawk, and willow flycatcher.

* **Moths** (Warren County): This survey by Ann Marie Woods yielded 131 moth species, two of which are not native to New Jersey. Several species observed are thought to be uncommon but none are considered rare or Species of Greatest Conservation Need (SGCN) in the [NJ State Wildlife Action Plan](#) (2018). These include the brown scoopwing (*Calledapteryx dryopterata*), the spotted grass moth (*Rivula propinqualis*), the pickerelweed borer (*Bellura densa*), and the smeared dagger (*Acronicta oblinita*).

* **Moths** (Ocean County): This survey by Ann Marie Woods yielded 101 moth species, two of which are not native to New Jersey. One notable find isn't a moth but is exciting nonetheless, the pleasing lacewing (*Nallachius americanus*). This species is closely related to mantidflies and antlions, and is rare to uncommon in New Jersey, usually only showing up during nighttime moth surveys. The pleasing lacewing is thought to feed primarily on the larvae and eggs of bark-infesting beetles and ants.



LEFT: Pleasing lacewing; RIGHT: Brown scoopwing.



Photuris luciscrepens.

* **Fireflies** (Burlington, Ocean, Salem counties): This survey by Dr. Chris Heckscher included three separate preserves that collectively yielded four species of fireflies. Lack of precipitation likely affected the survey results, but a healthy population of an under-reported (if not uncommon) species was observed at one preserve, ignited firefly (*Photinus ignitus*). Only one of the four species was found at all three preserves, *Photuris luciscrepens*. At one of the preserves, it was seen emerging from the leaf litter of the older-growth swamp and immediately ascended to the canopy and exited the forest. Later, adults were found to be abundant in the nearby young, regenerating forest. All specimens examined in the regenerating forest were female. This observation of females leaving the older-growth forest at dusk, moving to the younger forest, and then returning to the older-growth swamp before dawn the next day, is significant and contributes to the understanding of this species' life history.

* **Odonates** (Camden, Ocean counties): Mark Manning conducted two separate surveys for dragonflies and damselflies; one was a continuation of his 2023 inventory at the Trust's Petty's Island Preserve, the other at a preserve in Ocean County. The Petty's Island survey yielded 11 species, and the Ocean County survey yielded 21 species. None of the species were rare or SGCN.

* **Native Bees** (Ocean County): This survey by Max McCarthy recorded 28 species, which adds to his work at this preserve from 2023 and brings the total number of bee species documented at this preserve to 51. The results included one non-native species, *Osmia cornifrons*, a species from east Asia that has been established in the mid-Atlantic for decades. It also included a globally restricted species, *Lasioglossum arantium*, known only from Maryland and New Jersey. This is only the 8th record of this species from New Jersey and is a species listed as data deficient in the NJ State Wildlife Action Plan. It's known to inhabit inland paleodune habitats, and was observed visiting a State Endangered plant species, Pickering's morning glory (*Stylisma pickeringii*).

* **Spiders** (Salem County): The Trust contracted Joseph Salmieri Jr. to conduct a spider inventory for one of the Trust's preserves in Salem County. New Jersey has very little information on spider taxa, with no checklist of what's present or any idea about which species might be rare or declining. Available records suggest New Jersey has at least 353 species of spiders, of which 38 species were recorded during this inventory. These include *Micrathena sagittata*, *Zygoballus sexpunctatus*, and *Phrurotimpus alarius*, all of which appear to be county records. An additional 17 taxa were identified to the genus level.



Along came a spider, from left: *Micrathena sagittata*, *Zygoballus sexpunctatus*, and *Phrurotimpus alarius*.



Non-lichenized fungi (*Cortinarius sanguineus*).

* **Non-lichenized fungi** (Fungi that is not a lichen) (Burlington County): Brandon Roddy found 136 taxa total, a remarkably high number for a group of species so dependent on rainfall. Many fungi in New Jersey are under-documented and have questionable taxonomies, making it difficult to infer rarity or conservation significance. That said, Brandon located several rare to under-documented species, including some previously not reported from New Jersey. These include *Amanita pakimpondensis*, *Boletus purpureorubellus*, *Geoglossum glabrum*, *Gyroporus roseialbus*, *Inocybe digitula*, *Russula michiganensis*, and *Xylaria corniformis*. Several collections will be submitted for DNA sequencing.

* **Non-lichenized fungi** (Sussex County): Dave Wasilewski found 152 taxa total, also remarkable for a group of species so dependent on rainfall. Dave located a few rare to under-documented species, including some previously not reported from New Jersey. These include *Phaeoclavulina* cf. *myceliosa*, *Phaeonematoloma myosotis*, and *Psathyrella pseudogracilis*. Several collections will be submitted for DNA sequencing.

The Trust intends to continue these smaller-scale targeted surveys in 2025, particularly for under-appreciated taxa groups. Although the NJDEP promulgates lists of State Threatened and Endangered animal species and State Endangered plant species, these lists only include taxa groups that have been assessed for rarity (vascular plants, birds, snakes, turtles, bats, freshwater mussels, etc.). There are many other species deserving of such status, but the Department simply lacks statutory authority, expertise and/or data to focus on them. These non-assessed taxa include liverworts, spiders, syrphid flies, beetles, snails, slime molds, mushrooms, and others. Collecting data to better understand these species' statuses, trends, ecologies, and distributions in New Jersey is a primary goal for the Trust.

In addition to the contracted biodiversity surveys, Trust staff also conducted ecological inventory work. This included updating information on 36 known populations of rare plant species and documenting three previously unknown populations on Trust preserves, bringing the total number of rare plant occurrences on Trust preserves to 379 (not including easements). The Trust also collected vegetation plot data at five preserves, and the part-time bryologist with the NJDEP's Office of Natural Lands Management, Blair Young, conducted moss inventories at several preserves.

Preserve Manager Jason Hafstad documented several rare to under-documented species of fungi from Trust preserves, including the lichenized *Cladonia pocillum* and *Leptogium hirsutum*, and the non-lichenized *Gyroporus purpurinus* and *Boletus albisulphureus*.

Two Rutgers PhD students conducted ecological research on Trust preserves in 2024. Morgan Mark continued her research on scavengers using deer carcasses at over a dozen preserves, and Max McCarthy continued his study of the rare native bee *Andrena parnassiae* at several Trust preserves.

Lastly, an ongoing study of rare snakes is underway on one of our Preserves, and we are working with the Endangered and Nongame Species Program to manage habitat for rare turtles at several sites. New Jersey Fish & Wildlife, NJDEP, is also conducting research to document fisher (*Pekania pennanti*) on several Trust preserves.

Turning Back Time at Milford Bluffs

By: Terry Schmidt

Every property within each Trust preserve has a story. The Trust views the Annual Report as a place to share some of those stories with current visitors as well as with future generations. This year, the Trust learned a little bit more about the history of the Thomas F. Breden Preserve at Milford Bluffs.

During 2024, the Trust was contacted by the Cardella family, relatives of former residents Francesco (Frank) and Lena Magnante, who moved from New York City to a farmhouse on the preserve in 1934 after their five children were grown. Having many fond memories of visits to Milford Bluffs, the Cardellas expressed their desire to visit and share stories about the preserve with us.

So, 90 years after their elder relatives first took residence at Milford on the bluffs, on a lovely sunny April day, four members of the Cardella family (accompanied by their spouses) visited the bluffs. Their grandfather, Joseph Cardella, was Lena Magnante's brother, making our guests Lena and Frank's grandnieces/nephews. Following introductions, the stories began in earnest.

They shared a written recollection by their Uncle Sonny Cardella fondly recalling his visits to Uncle Frank and Aunt Lena's farm during summers of the 1930s-50s, especially on the 4th of July holidays. Time at the farm was a welcome change from the hectic and hot life in New York City. Festivities for the city visitors included early wakeups with music, huge farm breakfasts, hiking, ball playing, swimming, and fireworks. There was also a fair amount of lounging under the trees and around the gardens. In the evenings, the family would travel into Milford to visit a carnival or shop, greeting locals as they meandered along the streets.



FROM LEFT: Bill Curao, Betsy Farkas, Art Cardella, Joe Cardella, Anne Cardella, Margherita Curao, Maria Walton, and Rick Walton.

Great Uncle Frank Magnante had been an iceman, as well as an amateur musician, who performed at wedding receptions and other dance venues. Frank and Lena's five children, Joseph, Charles, Angelo, John and Theresa (Tess) were also gifted musically, with Charles being a child prodigy on accordion and eventually performing at Carnegie Hall. His musical ventures began at the age of five as he sang along with his father's band. By the age of seven, he had secretly taught himself to play his father's accordion by ear. In addition to playing, he wrote numerous popular arrangements for the accordion, many of which can still be found in the standard repertoire of accordionists throughout the world. His artistry helped raise the image of the accordion from an instrument primarily used for folk music to one used across many musical genres, from easy listening and light classical to jazz and boogie-woogie. Charles Magnante remains famous for his contributions to the instrument to this day. His sister Tess, who played the violin, along with brother Angelo, eventually moved to Milford Bluffs, living with their parents Frank and Lena until their passing. Lena would eventually become blind but continued living at the farmhouse, somehow safely navigating the property along the bluffs.

Our visitors reminisced about the farmhouse lacking running water and, although small, always being filled with cousins and company while they vacationed there. We photographed them sitting around the water pump on that sunny day, which they fondly recall doing in their youth. They generously shared that they enjoyed the times of their lives running along the bluffs and driving around the property in an old jeep. Although more than 60 years have passed since they last visited, they scampered up and down the steep slopes of the bluffs like mountain goats laughing with joy. They left us that day promising another visit to share more family lore in the future.

One of the most scenic preserves in the Trust's system, Milford Bluffs encompasses 296 acres of land overlooking the Delaware River. In 2004, it was renamed the Thomas F. Breden Preserve at Milford Bluffs in memory of Tom Breden, the Administrator of the Office of Natural Lands Management and Trust Executive Director from 2001 to 2003.



TOP LEFT: Lena and Frank Magnante at their Milford Bluffs home; **BOTTOM LEFT AND RIGHT:** Magnante Family over the years.

The Continuing Saga of Easement Monitoring

By: Terry Caruso

In its 2023 Annual Report, the Trust reported on the 24 conservation easements in its real estate portfolio which protect a total of almost 2,800 acres of land throughout the state. Some easements were acquired as donations from landowners interested in conservation, others through regulatory permit conditions.

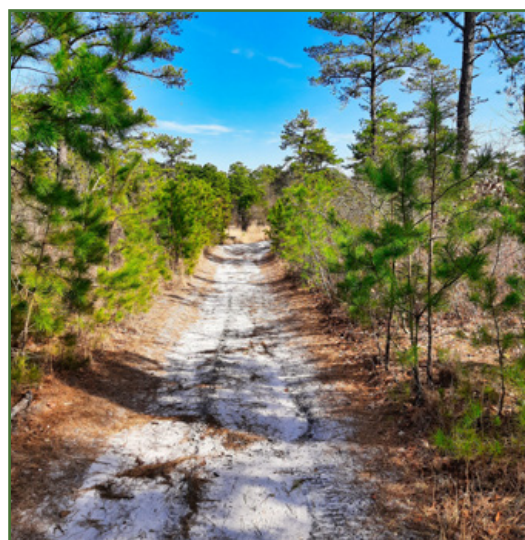
In the 1980s and 90s, conservation easements were viewed as an attractive method of land preservation without the cost, responsibilities, and obligations of full land ownership. As property changes hands, however, there is an obligation to educate the new owner(s) about the easement on their land. Even with consistent ownership, regular easement monitoring and communications with the property owners are essential to ensure easement compliance.

Reviewing easement terms, contacting property owners, and inspecting easements is time consuming and hard work. As reported in the 2023 Annual Report, the Trust monitored 13 easements that year. In 2024, easement monitoring continued with seven additional easements. These seven easements, which protect Pinelands habitat in Atlantic and Ocean counties and forested deciduous woodlands in Hunterdon, Mercer and Morris counties include: two Hamilton Preserve easements in Hamilton Township, Atlantic County; the NJ Audubon Society's (Audubon) Hovnanian Sanctuary easement in Berkeley Township, Ocean County; the Hagedorn Preserve Herson easement in Lebanon Township, Hunterdon County; the Highfield Easement in Hopewell Township, Mercer County; the NJ Conservation Foundation's (NJCF) Craighmont Farm Easement in Boonton Township, Morris County; and the Black Meadows Preserve Easement in Hanover Township, Morris County.

Three easements had new owners and, notwithstanding that all the easements are recorded and should be reflected in a title report as part of the property purchase documentation, the current landowners were unaware of the conservation easement until contacted by the Trust (two Hamilton Easements and the Black Meadows Easement). New owners were provided with copies of the easement, maps of the area, and given the opportunity to walk the easement area with Trust staff to understand easement boundaries and restrictions affecting their property. In all cases, after being educated about the easement and the reasons for it, the owners were appreciative of the easement and its history. Fortunately, none of these easements had violations. One landowner needed to clarify whether there was an encroachment into the easement area, but with help from the adjacent property owner this issue was quickly resolved.



ABOVE: Hagedorn Preserve Easement.
RIGHT: Audubon Easement.



Audubon's Hovnanian Sanctuary is 465 acres of Pinelands habitat which connects to the Trust's Crossley Preserve as well as Double Trouble State Park and Ocean County parkland. At the time of Audubon's acquisition, a Trust easement was placed over the land as an additional layer of long-term conservation protection for important endangered and threatened plant and animal species habitat. Audubon has restored habitat and constructed trails on the preserve. In addition, Audubon has taken steps to reduce wildfire risk in the proximity of the adjacent 55 and older community. While illegal use of motorized vehicles and dumping pose challenges for Audubon, they have posted "No Motorized Vehicles" and "No Dumping" signage to help combat these illegal uses. The inspection found that Audubon is providing excellent stewardship and adhering to the conditions of the easement.

The original owners of the Hagedorn-Herson easement property were present for the inspection and walked the land with Trust staff for several hours. Having held the land for two generations, they shared many stories about the property. Their love of the land was evident in discussions about the trees, the pond, the stream, birds, and butterflies seen that day. The family sold not only this easement to the state Green Acres Program several years ago, but also adjacent land in fee, which is managed as part of the Hagedorn Preserve.

The owners of the Highfields easement property, NJ Juvenile Justice Commission, were present for the Trust's inspection, which revealed compliance with the easement.

The Trust and NJCF jointly inspected the Craighmont Farm easement, where NJCF holds the easement, and the Trust has a secondary right of enforcement. This property has been owned by the family for three generations and is being managed by the family for woodland management. It was refreshing to see how the youngest generation loved walking around the property while reminiscing about spending many happy days in their childhood enjoying the property and swimming in the pond with their parents and grandparents. It was also a pleasure working together with NJCF to ensure good stewardship of the land while making sure the easement terms were complied with.

In sum, easements are important tools in the conservation toolbox for protecting critical animal and plant habitat. Some of the easements inspected this year contain large areas of habitat, while other easements serve as important buffers to existing preserves. It is critical that long-term monitoring of these easements continue to ensure compliance and good stewardship.



ABOVE: Craighmont Farm Easement.

BELOW: Black Meadows Preserve Easement.



Unlocking the Cabinets of Chrysler Herbarium

By: Megan R. King^{*}

What is a herbarium?

Think of a herbarium (plural: herbaria) as a library of preserved plant specimens. Just like a library, items are preserved, curated and cataloged, but rather than books, they contain pressed and dried plant and fungal specimens. Depending on the herbarium, the number of specimens, and where those specimens have been collected from, can be vastly different. Most herbaria will contain specimens from the region in which they are housed and/or from areas where affiliated researchers have studied. They may also have been sent specimens from researchers, collectors and institutions that are from other parts of the world, referred to as gift specimens. Together all these unique specimens form a collection, which primarily is used for research, but also for education and conservation.

Herbarium collections started as personal collections made by those studying and documenting the diversity as well as medicinal uses of plants. The oldest known herbarium collection was created during the Renaissance period (16th century) by Luca Ghini and was called *hortus siccus* (dry garden) (Thiers, 2020). Today there are 3,567 active herbaria worldwide that are active and likely more that are currently unaccounted for. Within these herbaria there is an estimated four million specimens, making up just a portion of the natural history collections documented worldwide (Thiers, 2024).



Specimens are stored in steel cabinets or drawers.



Chrysler Herbarium lightbox for photographing specimens.

Specimens are typically stored in large steel cabinets or filed in drawers. Storage methods are important for protecting specimens from environmental conditions such as light, dust, and pests as well as keeping them neat and organized. Different methods of curation are used to store different types of collections. For example, a standard U.S. herbarium sheet measures 11.5" by 16.5" inches and is used when mounting specimens of flowering plants, cone bearing plants, ferns, and algae. Packets are typically used for storing moss, liverworts, lichens and fungi. All materials used in collections should be designed for archival storage to ensure preservation of these specimens in perpetuity.

*

Assistant Curator Education and Outreach | Collections Manager, Chrysler Herbarium (CHRB).

Celebrating a hundred-year-old herbarium

Chrysler Herbarium (CHRB) established in 1925, is the largest internationally recognized herbarium in the state of New Jersey. It contains nearly 200,000 botanical specimens of plants, algae, and fungi covering a vast range of botanical biodiversity. Dr. Mintin A. Chrysler and Dr. Arthur P. Kelley formed the herbarium from multiple collections that had been stashed away in spaces across the Rutgers University campus, such as Nathaniel Lord Britton's Collection, Byron Halstead's American Weeds and the A.C. Cuthbert Collection. The collection grew to 15,000 specimens in 1930 with continued contributions from Chrysler and Kelley. It was officially named "The Chrysler Herbarium of Rutgers University" in 1942 in (Johnson, 1964), and by 1946 the herbarium contained 40,000 specimens.

CHRB is regional, focusing on the flora of New Jersey and the surrounding states within the Mid-Atlantic region. Specimens range from the 1800s to the current day, with the oldest specimen collected on a walking journey from northern Georgia to North Carolina between 1787-1788. The collection continues to grow through student collections and deposits from local collectors. Thanks to its dedicated "Herbarium Army," a student and volunteer internship program that began in 2016, the collection continues to thrive, with new specimens mounted, nomenclature updated, and specimens databased and made digitally accessible. Digitization, a term used to describe the imaging and databasing of natural history collections, is an effort that began in collections around the world nearly 20 years ago. This is an integral part of collections management in the modern-day herbarium, as digitization allows specimens to be accessed by anyone anywhere in the world. CHRB was fortunate enough to be part of numerous grant-funded digitization projects and is nearly 100 percent digitized. Specimens can be viewed online through large data aggregators such as Integrated Digitized Biocollections (iDigBio) and Global Biodiversity Information Facility (GBIF), but also through the [Mid-Atlantic Herbaria Consortium](#) (MAHC).



Examples of herbarium specimens of varying ages with the one at the far right being the herbariums oldest, collected between 1787-88.



Each individual specimen is a representation of a species' existence in a place and time and allows users to immerse themselves in nature without having to go into nature itself. This becomes crucial when it comes to studying highly remote areas or areas that have been altered due to natural disasters or through anthropogenic changes. Since each specimen's place and point in time of collection is unique, they are irreplaceable (at least until we figure out time travel). Specimens can contain varied amounts of information in addition to just their identification, such as associated species and habitat. It is important to have multiple collections of the same species, whether they are from different localities, different populations or just different points in time. This allows for studies related to ecology, evolution, restoration, species interactions, habitat preferences, plant trait adaptation, and landscape changes over time. The CHRB collection has been used in various research projects, including sampling for DNA or chemical defenses, rediscovering rare and endangered species, and even determining species introduction through ship ballast. Rutgers undergraduate researchers have also looked at species range shifts, herbivory trends, and to assist in rediscovering species over 100 years since their last known collection in the state.

Keeping a good thing going!

It is important that herbaria, including the CHRB, be recognized for their value, and that they do not become forgotten or unused. This is especially true in 2025, which will mark the 100th anniversary of the CHRB. We must continue to preserve and grow the collection so that future generations can take advantage of the knowledge and potential within them. CHRB strives to promote the next generation of collections staff, botanists, ecologists, bryologists, and others through its internship programs and tours.

Click on the links below if you:

- * Have specimens you'd like to [contribute](#)?
- * Are interested in visiting [CHRB](#)?
- * Are interested in [donating](#) to CHRB?

Story of a Blue Mushroom By: Dorothy Smullen

Entoloma indigoferum, one of the rarest mushrooms in the United States was collected by J.B. Ellis, a prominent mycologist. Ellis published the finding in the Bulletin of the Torrey Botanical Club in 1879... a specimen to later be found deposited in the Chrysler Herbarium in the Mycological Collection.

Fast forward over 135 years to a Wells Mills foray hosted by the New Jersey Mycological Association (NJMA) in 2013. Two women from New York City collected a beautiful blue mushroom with "pink" gills. Nina Burghardt (NJMA member) recognizing that this was an unusual mushroom, dried it and sent it to Dr. Tim Baroni of SUNY Cortland, an expert on pink-spored species. Dr. Baroni identified it as *Calliderma indigofera* (*Entoloma indigoferum*). No one had documented this mushroom in the Mid-Atlantic states in all that time.

In 2018, Nina and John Burghardt revisited Wells Mills to collect another specimen which is now deposited in the NJMA, Raymond Fatto and Dr. Eugene Varney Herbarium, housed within Chrysler Herbarium.

BELOW: *Calliderma indigofera* on a Trust preserve in 2020.



Writing the Land

By: Cari Wild

Throughout 2024, the Trust worked with two poets, Javier Mendez and Michaeline Picaro, to explore their connections to Trust preserves for inclusion in a poetry anthology entitled, *Writing the Land: Wanderings II*. This anthology, available for [purchase](#), covers a collection of conserved lands across the North American continent. Each of the 11 chapters contains poems, photos, and information about actual conserved properties from a land conservation organization. They celebrate the beauty and value of lands of all kinds including forests, islands, farms, caves, and rivers.” The poems invite the reader to “explore lands ... not yet seen or re-explore familiar territory through art.” The Trust is one of over 150 land conservation organizations and 400 poets participating in the [Writing the Land project](#), and *Wanderings II* is part of the series of more than 15 Writing the Land anthologies.

Within the *Wanderings II* anthology are poems, photos, and other information about the Trust’s Petty’s Island and Mackenzie’s preserves. Javier Mendez and Michaeline Picaro are passionate individuals in all they do, including in their connections to these preserves.

Javier Mendez, who wrote about Petty’s Island Preserve, is a first-generation college graduate born and raised in Camden, New Jersey. He has described himself as using “poetry and skateboarding to express himself as a young man navigating through life. As a [h]usband ... and a [f]ather ..., he continues to build a legacy for his family day by day. By day he is an IT professional and by night he can be found developing websites for small business owners in the area.”

Original People by Javier Mendez

A space in time, place your perspective in mine
If my roots could speak, it would be deafening
Riddled in grief beneath the stream
Filled pockets, locomotive steam.

Hidden beneath the gentle flow,
Carrying sorrows and dreams, we continue to grow.
We journey through history, as a resilient team.
Through sorrows and trauma, we find our way,
Believing in tomorrow, a brighter day.

In this village, once whole and strong,
We now stand divided, but still, we belong.
Seasons change, and so does our view,
Familiar with hardships, we’ll see it through.

Original people, a legacy to bear,
In the face of adversity, a story to share.
Through strength and unity, we stand with care.
In a dream, I saw a city invincible, our pride.

Michaeline Picaro, who wrote two poems, one about her deep connections to Mackenzie's Preserve, the other about the Paulins Kill wetland system, is a member of the Ramapough Lenape Nation Turtle Clan and a co-founder of the Munsee Three Sisters Medicinal Farm and of Ramapough Culture and Land Foundation. She advocates for the preservation and restoration of the economic, social, cultural, sacred, and environmental assets of the Ramapough Munsee ancestral lands. She is the Tribal Historic Preservation Officer for Turtle Clan, Ramapough Lenape Nation, and a preservationist for sacred ceremonial landscapes. The Paulins Kill wetland system, within which Mackenzie's Preserve is located, has a tortured past that resulted in environmental damage and long, complicated litigation. As a result of litigation, a federal court ordered the Trust to hold a perpetual conservation easement on property, which was later purchased by the state and became the Paulinskill River Wildlife Management Area. History about peat mining of the land and ensuing litigation can be found in the Trust's [2012 Annual Report](#). Ms. Picaro speaks to the Paulins Kill Meadows' journey of renewal:

Full Circle by Michaeline Picaro

Lenape Munsee Ramapough, honored our lands from thence bestowed.

**All sacred spirit that is our world, now thought of as less and stands
imperiled.**

**Pristine Meadows awaiting its fate, born of glacier meltwater,
surrounding hills acting as gate.**

**Micro habitats forged in calcareous soils, miraculous creation of our
creator's toil.**

**Paulins Kill Meadows pale-laurel, bog rosemary, William Penn's sons did
sell the land tract in 1760.**

**Cranberry and cotton grass soon expire. In 1915, Samuel's bog dredging
was his only desire.**

**Court of New Jersey In 2003, enacted a conservation decree, to save the
bog with easement of the property.**

**Nine plus one of Mackenzie's lost sedges, have disappeared forever
because of the bog dredging's.**

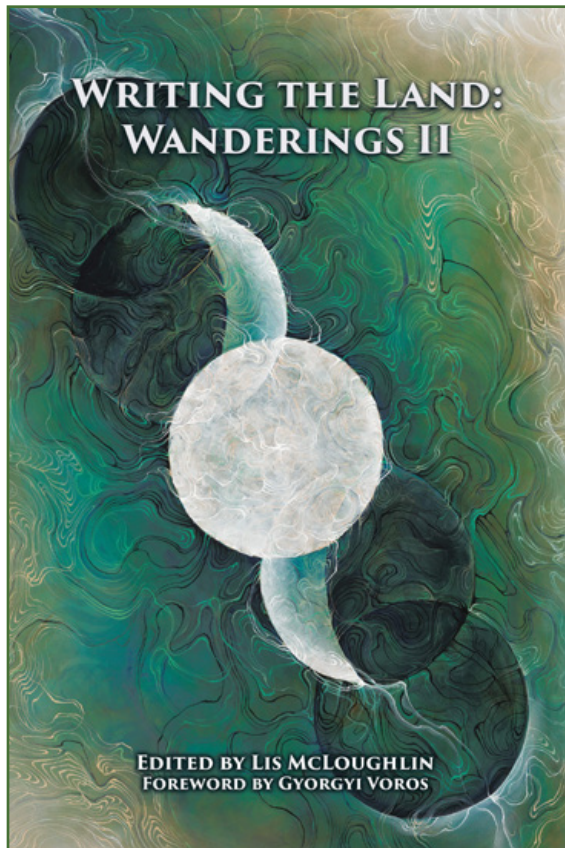
**Relentless destruction rare species did succumb, Full circle the peat bog
did manage to come.**

**For Seventy Years the mining has ceased, with continued protection the
bog life increased.**

**Bog meadows now filled with song and bliss delight, because of Natural
Lands Trust, there is no longer a plight.**

**We are still here speak Ramapough Munsee, land is spirit uphold and
entrust, we unite with New Jersey Natural Lands Trust.**

A poet herself, Lis McLaughlin, founded the Writing the Land project in 2020. As she describes in the Land Trust Alliance’s [Saving the Land, Fall 2022](#), she had been a poet and an activist for a long time, but when a proposed pipeline threatened her community, she realized that poetry could be used to connect poets with land trusts and support land protection. McLaughlin actively seeks out poets of all racial and ethnic backgrounds because she wants Writing the Land to be as inclusive as possible, understanding that the project “gains strength, depth, beauty and energy from a multitude of voices.” She hopes “that when people read these poems, they get a sense that the outside is for everybody. And even if we all interact with it differently, it’s still needed, it’s essential.” We agree.



BOOK COVER ART: [Martin Bridges](#)



PHOTO: William Culp
Petty’s poem accompanied by this photo.

Writing the Land is a vital project that asks through the language of poetry the most important question that faces us in these cataclysmic times: who are we without the land and the more-than-human kin it nourishes, who nourish us in return? Each anthology contains poems that expose the lie of separation between human and nature, and returns us to the reality that even when trapped amongst pavement and concrete, we are but seedlings and genetic cousins to trees, plants, stones, and mycelia. To know ourselves, we must know the land. Wanderings II is yet another vivid and moving glimpse into these natural landscapes across the country, splaying a treasure-trove of nature preserves somehow both contained and expansive beyond imagining. As the poets immerse themselves in preserves spanning from Washington to New York, you can feel the earth breathe and grow through each poem and photograph, evoking a profound respect for each stream, such as Deer Creek in the Sierras holding the hope for the survival of the sacred salmon, to the plethora of native wildlife in a slice of Ohio to each unique rare plant allowed to thrive in New Jersey’s Mackenzie’s Preserve. With this anthology, you hold in your hands a portal to remember your truest self, an invitation to come back to the land.

—Angela María Spring, poet and journalist, owner of Duende District, a pop-up bookstore project for and by people of color, where all are welcome.



Hunting News

During the 2024-2025 hunting season, there were 2,193 hunting registrations through its [website](#). In many cases, the same hunters registered at multiple Trust preserves with 1,539 individual hunters registering to hunt. The Trust allows hunting for deer only at 40 preserves totaling over 19,800 acres to maintain biodiversity. The deer population in New Jersey is far greater than the ecosystem can sustain. Over-browsing by deer depletes native vegetation resulting in impacts to animal and plant habitat, such as decreased food sources and increased invasive plants.

To hunt deer at selected Trust preserves, hunters access the Trust's website, electronically submit information to the Trust, and print their own hunter registration letter with the required accompanying preserve map. The Trust can use this information to sort hunter registrations by preserve. Trust staff may reach out to hunters registered at a specific preserve to determine their interest in volunteering for cleanups and maintenance projects.

It is important to note that the Trust does not allow hunting for waterfowl, small game, turkey, or bear, as it maintains that only over browsing by deer poses a threat to biodiversity. In addition, Sunday bow hunting is not authorized on Trust preserves as it is on state wildlife management areas and private property during deer season.

While hunting on Trust preserves, all rules and regulations in the New Jersey Fish & Wildlife game code must be followed. Hunting deer by bow and arrow, shotgun or muzzleloader are acceptable, depending on the preserve and season. No target shooting or discharge of weapons other than for deer hunting purposes is permitted. Permanent deer stands are not allowed, and portable deer stands, while permitted, must be labeled with the hunter's contact information and be removed after the hunting season is completed or are subject to confiscation by the Trust. Additionally, hunters are not permitted to damage or clear vegetation, and deer baiting/feeding is prohibited on all Trust preserves.

“Impacts of deer abundance are not limited to plant species, but cascade throughout the food web.” *



PHOTO: William Culp

* Kelly, JF. 2018. Results of white-tailed deer (*Odocoileus virginiana*) surveys in Watchung Borough in April 2018. Raritan Valley Community College.



Thanks to Our Volunteers

The Trust would like to acknowledge and thank its many volunteers for their invaluable contributions to the maintenance of Trust preserves.



Always something to do at Petty's Island. Fortunately, there are always lots of volunteers on hand to help with sign hanging, interpretive sign cleaning, and general cleanups.

Contribute to the Delaware Bay Shorebird Fund

Each spring in Delaware Bay, from about the first week in May to the second week in June, the largest concentration of horseshoe crabs in the world comes onshore to spawn. At the same time, tens of thousands of shorebirds arrive at the Bay en route from southern wintering grounds to Arctic breeding territory, and Delaware Bay is their most critical stopover. The shorebirds need to quickly double their weight to complete their migration north and breed successfully. To refuel at such capacities and in only a 10-day window, high-energy horseshoe crab eggs provide essential nourishment. But since the early 1990s, there have been major declines in both the number of adult horseshoe crabs and their eggs. With the decline of their critical food source, shorebird numbers also plummeted. For the past 35 years, the Trust has funded scientific research and conservation efforts through the Delaware Bay Shorebird Fund with the goal that someday Delaware Bay's skies will be once again filled with shorebirds.

The Delaware Bay Shorebird Fund was initially created in 1985 through an agreement between the Department of Environmental Protection and Public Service Electric and Gas Company (PSEG). The agreement provided that \$600,000 would be transferred to the Trust, as a fiduciary, to invest and administer solely for protection and management of shorebird habitat. After funding critical shorebird research for the past 35 years, the Delaware Bay Shorebird Fund is now nearing depletion. With contributions, the Delaware Bay Shorebird Fund could continue critical long-term shorebird and horseshoe crab research.

In order to protect these shorebirds, please consider making a donation to the Trust's Delaware Bay Shorebird Fund. Donations can be made online through PayPal:

Donate with PayPal button:



Please indicate that the donation is being made to the Delaware Bay Shorebird Fund.



Delaware Bay Shorebirds.
PHOTOS: William Culp

Donations



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William Penn Foundation
New Jersey Conservation Foundation
The Nature Conservancy
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Urban Promise
New Jersey Audubon Society
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For more information about how you can donate to further the Trust's mission to acquire, preserve and manage lands for the protection of natural diversity, please visit the [Trust's website](#).



Board of Trustees

The Trust is governed by an eleven-member Board of Trustees. The Board is comprised of six representatives from the private sector and five representatives from State government. The State government members include the Commissioner of DEP and two DEP staff members designated by the Commissioner; the State Treasurer; and a member of the State House Commission. Employees of the Office of Natural Lands Management, State Parks, Forests & Historic Sites, serve as staff to the Trust and implement the policy set by the Board.

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In the spirit of healing, the Trust acknowledges the Lenni Lenape, Munsee Lenape, Ramapough Lenape, and Nanticoke tribes, the original people of the lands that we manage as Trust preserves. These people have been here for many thousands of years and the Trust acknowledges, honors, and respects their past, present, and future deep ties to these lands. The Trust takes responsibility to:

- * Better honor and respect the original people of this land in the stories we tell;*
- * Provide platforms for Native voices;*
- * Seek Native representation in managing these lands; and*
- * Remain humble and curious.*

The Trust strives to take all actions in the spirit of repair and justice without further harm or injustice to the Lenni-Lenape, Munsee Lenape, Ramapough Lenape, and Nanticoke tribes or these lands.



Looking over the vast freshwater intertidal marsh surrounding much of Petty's Island. Lenni-Lenape seasonally gathered the edible arrow-plant, also known as tuckahoe, from the marsh surrounding Petty's Island.

