I am honored to address you as the new Executive Director of Delaware Wild Lands. I’m incredibly optimistic as the organization moves into a new era of growth. Many thanks to our DWL supporters (past and present) for your dedication to shaping our organization’s history, built on the values of innovation, collaboration, and preservation. As we embrace this new chapter, let us continue to build upon our rich legacy with unwavering enthusiasm.

Over the past year, we achieved noteworthy milestones, such as the acquisition of over 20 acres at the Great Cypress Swamp, the establishment of 18 acres of early successional habitat, and the expansion of our wildlife research and survey initiatives. Additionally, we initiated an 84-acre wetland and forest restoration project at Taylor’s Bridge while concurrently safeguarding 100 acres of upland forests and freshwater wetlands. These accomplishments underscore our steadfast commitment to environmental conservation.

Join us as we continue our successes in 2024, especially as we #RestoreMore2024.

In 2024, we’ll increase our efforts by planting over 50,000 trees on DWL properties and restoring 35 acres of hydrology. These projects motivate us as we usher in a new year and a new chapter of our organization’s history. Together, we build upon this solid foundation and continue to impact our environment positively. Thank you for your enduring commitment to our mission. Here is to a future filled with promise and possibility!

Marcia A. Fox
Executive Director

dewildlands.org
Delaware Wild Lands Welcomes
James ‘Jim’ Dowd
New Castle County Conservation Technician

Originally from Long Island, New York, Jim moved to Delaware as a teen and has found a welcoming community to settle into. Married with three daughters and a passion for all things outdoors, Jim stays busy! Having recently retired from the Delaware Forest Service with almost 33 years of service, Jim brings a strong foundation of land management knowledge to DWL. Jim has spent many of those years guiding and assisting with the State’s Wildfire and Prescribed Fire programs, reflecting another passion of his. Jim hopes to help DWL bring prescribed fire back to the landscape to return balance to our native habitats and strengthen our fight against invasive species. He looks forward to working with other DWL staff and advancing the stewardship of our protected lands. Don’t hesitate to greet Jim if you encounter him while he’s out and about!

Research/Education

The Great Cypress Swamp: A Living Classroom and Laboratory

DWL’s mission is to keep some “Wild” in Delaware, so our properties don’t generally have public access. However, that doesn’t mean we never open our gates to visitors. One way we connect with the public is by partnering with colleges and universities to educate the next generation of conservationists. Because of its expanse and diversity, the Great Cypress Swamp (Swamp) has always been of academic interest, and students have visited from throughout the region, including Yale Forestry School, West Virginia University, and the University of Georgia. Some of our most frequent visitors, unsurprisingly, come from nearby Salisbury University. While visitation slowed during COVID, classes and student researchers from Salisbury University have visited us nearly every year since 2013. Classes have ranged from general ecology and conservation to wetland restoration to herpetology, and research studies have been focused on the increasingly rare Spotted turtle (Clemmys guttata) and Eastern screech owl (Megascops asio). Colleges and universities, like Salisbury University, play a vital role in training the scientists and technicians who help us preserve, protect, and enhance our environment. Our own Restoration/Research Manager, Hannah Small, is a graduate of Salisbury University’s Applied Biology master’s program. DWL is proud to host classes and researchers from Salisbury University for a decade now, and we look forward to continuing to do so in the future!
Wood ducks are a highly-valued waterfowl game species that experienced a major population decline in North America in the early 19th century. Hunting regulations and conservation efforts, such as erecting nest boxes, have since helped the species to recover. Today, DWL is working with me, Blake Struthers, a graduate student at the University of Delaware, to study wood duck reproductive success and brood ecology. Research goals include determining locations where hens are leading their broods, their preferred habitats, and establishing a baseline of duckling survival rate. The findings will guide improved management practices to enhance duckling survival, ultimately boosting bird populations for fall hunting seasons and subsequent breeding seasons.

My research lab and I aim to answer these questions by using solar-powered GPS units attached to hens that will enable us to track hourly movements and catalog every location a wood duck hen uses while raising her ducklings. We’ll also be marking a sample of ducklings in each brood with very small radio tags, allowing us to track them independently from the hen. We’ll use these trackers to identify major predators and other causes of death. It is important to have separate markers on hens and ducklings because ducklings do not always stay with their mothers. In fact, this past season, we documented an entire brood of ducklings being adopted by an unmarked female. We also tracked a duckling that was somehow separated from the rest of her brood at only 20 days after hatching but was still surviving on her own when our monitoring period ended 30 days after hatching.

This year, 2023, was our first year using these tracking systems. Study sites included DWL’s Augustine Creek and Taylors Bridge complexes. We attached transmitters to 10 hens and 30 ducklings at Augustine Creek and another 5 hens and 15 ducklings at Taylors Bridge. We found that most broods stayed within 0.5 to 1.5 kilometers of the nest box from which they hatched. Those that traveled farther tended to be hatched in areas with isolated water bodies (ponds smaller than 2 acres or shallow pools that either dried up quickly or were overtaken by emergent vegetation), and they moved to areas with more expansive access to water (i.e., larger impoundments or main branches of Augustine Creek). Hens will lead their ducklings as far as necessary to reach areas with quality protective cover and food, but traveling from one area to another exposes ducklings to predators. Typically, shorter travel distances mean better habitat and a higher likelihood of duckling survival.

The full results from this study are not in yet, as we will continue the work in the spring of 2024. The data from this research will be used to improve wood duck conservation practices and result in a master’s thesis publication from the University of Delaware Waterfowl and Upland Gamebird Center. Wood ducks are an important part of DWL’s history and conservation work, and we intend to make sure they continue to thrive in Delaware’s wetlands and waterways.
In 1973, Peter S. Martin returned from his final tour of duty as a shipboard communications officer on an aircraft carrier off the coast of Vietnam. Back at home, he had already initiated his pursuit of a Master of Science in Entomology at the University of Delaware when he happened upon a newspaper article discussing Delaware Wild Lands’ (DWL) acquisition of a substantial parcel of land in the Great Cypress Swamp. What followed is, as they say, history.

Shortly after, Peter visited DWL’s office, then located in Centerville, Delaware (next to Buckley’s Tavern, a place he knew well), and expressed his interest in volunteering. What started as a commitment to planting trees soon evolved into part-time employment with DWL. By 1976, he had transitioned to a full-time role. In the early years, he worked alongside DWL’s founder, Edmund H. “Ted” Harvey, until Ted’s passing in 1978. The organization’s leadership then passed to Ted’s son, Holger H. “Rusty” Harvey. During this formative period, Peter collaborated closely with Rusty’s brother, Bruce Harvey, another Vietnam veteran with a Forestry degree. Together, they mapped the habitat types within the Great Cypress Swamp and formulated a management plan to lay the foundation for DWL’s management of the largest forest block in the state.

When Rusty passed away in 2010, Peter stepped in as DWL’s interim executive director, assisting during a critical transitional phase before Kate Hackett was appointed as director. Over the years, Peter witnessed and played an active role in Delaware Wild Lands’ growth and transformation into the organization it is today. In 1987, he was there when DWL acquired the property at Milford Neck and assumed its management. He oversaw numerous tree planting and wetland restoration projects. Peter contributed to the successful reintroduction of wild-caught wild turkeys in Delaware, a species that had been locally extinct since the 1800s.

During the 1990s, he collaborated with the hunt clubs to revamp DWL’s approach to hunting, introducing Quality Deer Management (QDM) practices to promote a healthier forest and deer population. In the early 2000s, Peter introduced the concept of sustainable forestry to the organization. This initiative facilitated infrastructure expansion and equipment enhancement in the Great Cypress Swamp, laying the groundwork for ambitious and successful restoration projects.

In 2009, he assembled a team of experts from Ducks Unlimited, the US Fish and Wildlife Service, the Delaware Center for the Inland Bays, and the State of Delaware to create a plan for restoring hydrology to the northern section of the Great Cypress Swamp, which had been significantly degraded by ditching dating back to the 1930s. His idea resulted in installing water control structures and ditch plugs, effectively restoring hydrology to thousands of acres, and enabling the Field 7 and Long Field restorations. This, coupled with the Sustainable Forestry Plan, paved the way for DWL to plant over 200,000 Atlantic white-cedar and Baldcypress trees in an ongoing effort to rehabilitate the Great Cypress Swamp’s ecosystem, which had been altered by a century of land conversion and drainage.

Several years ago, Peter transitioned into retirement from full-time work at Delaware Wild Lands. However, he continued to work part-time, providing insight on restoration projects, and supporting DWL’s daily operations. In 2023, Peter officially retired, allowing him more time to spend with his family, including his grandson Whitaker and another grandson expected to arrive in early 2024.
The Crawford Family’s Enduring Commitment to Delaware Wild Lands

In the heart of Delaware, one family’s legacy, intertwined with a passion for conservation, stands as a testament to dedication and a love for preserving nature’s wonders. Scott Crawford, President and Lead Financial Advisor at Crawford Financial Services might be recognized for his remarkable contributions to the financial world, but his roots extend deeper into a legacy of conservation that began long before his career took flight.

Born in Wilmington and a 1988 graduate of Smyrna High School, Scott’s journey into the realm of conservation was strongly influenced by the connection between his family, especially his mother, Susan Crawford and Delaware Wild Lands (DWL). Susan served as Rusty Harvey’s executive assistant at DWL for an impressive 24 years. Young Scott found himself entrenched in the world of conservation at an early age, often accompanying his mother during her workdays, where he vividly recalls folding newsletters and sealing envelopes with a wet sponge – a humble start to a lifelong connection with the cause.

Scott’s direct involvement with conservation deepened through his passion for hunting, especially alongside Rusty, a key figure in his life. Recollections of duck and deer hunting, notably in the tidal marshes of Taylor’s Bridge, solidified his appreciation for the importance of habitat protection. Scott’s father, Clayton Crawford, also played a pivotal role in imparting the philosophy of giving back to nature, which has been a guiding principle for the Crawford family’s commitment to conservation.

Scott’s involvement with conservation reached new heights as he took the helm as the state chair of Ducks Unlimited (DU) in 2009. His leadership at DU strengthened the partnership between DWL and DU, leading to joint projects focused on wildlife habitat preservation.

What’s your legacy?
One spot that holds deep sentimental value is the Ray's Ditch duck blind on DWL property, where generations of the Crawford family, including Scott, his father, and now his children, cherished moments spent hunting. This blind has become a focal point for the Crawford family as they share their love of hunting, deepen their commitment to conservation and support DWL.

The passion for conservation isn’t just a personal journey but a legacy that Scott has worked diligently to pass down to his children – Nick and Mason. Both have taken an active role in conservation by volunteering and participating in DWL’s restoration projects.

Scott and his sons, Nick and Mason.

Scott’s involvement in DU and DWL extends beyond personal endeavors. He joined DWL’s Board of Directors in 2019, and his involvement with DU has spanned local, state, and national levels. Scott continues to serve in various leadership roles, contributing both time and financial resources toward conservation and land protection efforts.

Today, as Scott reflects on his family’s journey and the impact they’ve made in the realm of conservation, there’s a deep-seated sense of satisfaction. The legacy of preserving natural habitats and instilling the spirit of conservation in the younger generations stands as a cornerstone of the Crawford family's contributions. Their commitment to conservation isn’t just a passion but a way of life, an intricate part of their identity. Through Scott and his family’s unwavering dedication, Delaware’s Wild Lands continues to flourish, ensuring the preservation of nature’s beauty for years to come.

As the Crawford family exemplifies, the legacy of conservation isn’t merely about preserving lands; it’s about fostering a connection between people and nature, ensuring a thriving landscape that future generations can cherish.

Continuing the Legacy: Scott’s Mom, Susan Crawford, and son, Nick upholding the tradition of conservation.
At only nine years of age, Penny is already a veteran volunteer for Delaware Wild Lands (DWL). She bestowed her time and energy to help DWL at the Liston Beach Clean-up in 2019 when she was only four years old. Since then, she has helped us plant trees, put stamps on letters, made cages to protect new trees, and cleaned up the beach - again. Penny has also dedicated time to other organizations helping with tree plantings and invasive insect removal. Her favorite volunteer activity is cleaning up the beach because she "gets to see the animals."

Penny says volunteering is important because she is “making the world better.” Plus, it makes her happy, and her Dad (Fred Geist, another committed DWL volunteer) happy, too. Dad has influenced Penny’s love of volunteering, taking her with him as he shares his love of pitching in and helping wherever needed.

This animal-loving fourth grader, who sings in chorus, loves sushi, and wants to grow up to be a ballerina, says volunteering will always be a part of her life. Volunteers are essential to DWL, providing us with the help and support we need to fulfill our mission of protecting and restoring Delaware’s natural areas.

**3 Easy Ways to contribute to land protection and habitat restoration in Delaware:**

**Monetary Donation:** In addition to accepting cash donations and Donor Advised Funds, DWL accepts the transfer of marketable securities [Mutual Funds, Stocks, Bonds, and Exchange Traded Funds (ETFs)]. These types of donations may qualify for a tax deduction.

**Planned Giving:** Did you know you can name DWL as a beneficiary of your life insurance policy or include us in your will? It can be as easy as a phone call to your insurance carrier or attorney.

**Real Estate:** DWL loves landscapes...so we are always pleased to accept donations of land! With permission from donors, we also accept donations of boats, buildings, and other assets, that can be sold and then use the proceeds to further DWL’s conservation mission.

We encourage you to contact your financial advisor, estate attorney, or tax consultant to discuss how these transactions can benefit you. DWL also has staff and advisors available to help you and answer questions.

For more information, contact Marcia Fox, DWL Executive Director, at 302-378-2736 or mfox@dewildlands.org.

**Thank you, Penny Geist and family, for all you do to, in Penny’s words, “make the planet better.”**
Out and About on DWL’s properties

- Wild bergamot in bloom
- Large tulip poplar tree
- Fungi on a log
- Black and yellow garden spider
- Ruddy turnstone at Milford Neck Preserve
- Pileated woodpecker
- Muskrat den in the marsh
- Bald eagle
Boosting Protection at Bennett’s Pier Beach

Founded in 1961, Delaware Wild Lands (DWL) is the oldest and largest land trust in the State. Just ten years later, in 1971 DWL played a vital role in establishing Delaware’s Coastal Zone Act to defend coastal habitats from industrial development. One area that benefited from this legislation is now known as DWL’s Milford Neck Preserve (Preserve), located along the Bayshore in Kent County, spanning approximately 3,500 acres, and hosting 3.5 miles of undeveloped shoreline. The Preserve is home to spawning horseshoe crabs, migratory shorebirds, and numerous other threatened species and habitats.

Since the property was purchased in the late 1980s, vehicle trespass on the beach, dunes, and marsh has become a perennial problem. With the additional pressures from rising sea levels and increased development, this area faces more threats than ever. This past summer, DWL partnered with the U.S. Fish and Wildlife Service to reduce degradation and pollution from vehicle trespass at Bennett’s Pier Beach, the most northern beach in the Preserve.

Marine-grade pylons were installed along the beach, perpendicular to Bennett’s Pier Road, to inhibit vehicle trespass. DWL has also changed the access policy to preserve and protect the exceptional resources at Milford Neck. Access is no longer permitted at Bennett’s Pier Beach; however, foot traffic for non-destructive recreational activities is permitted at Big Stone Beach only between dawn and dusk, strictly on a carry-in, carry-out basis. DWL staff are actively performing outreach on-site and in the local community to convey the new policy changes.

Many community members and regular visitors to the beach have already commented on the success they have seen from the pylons. There has been less trash and pollution on the beach, and the dunes are beginning to recover. This gives DWL hope that these efforts will be successful and that the many species that call the area home will continue to benefit from the protected resource. DWL partners with the Delaware Division of Fish and Wildlife to conduct annual horseshoe crab spawning and shorebird surveys at Milford Neck. As we monitor these vulnerable species, we will determine the effectiveness of the pylons and adapt our conservation strategy if needed. Be sure to look for updates on these populations in future newsletters and visit our website to learn more about how you can help protect this beautiful natural ecosystem!
Leveraging the Power of Protected Lands

Delaware Wild Lands (DWL) recently acquired two new properties in southern New Castle County: The Fortner and Gitaitis Farms. These properties expand DWL’s Augustine Creek land complex and add to a growing area of contiguous protected land in Delaware. When DWL lands are combined with State protected lands, they create 23,000 acres of connected, protected land along Delaware’s Bayshore between the C&D Canal in the north and the Woodland Beach Wildlife Area in the south. The Gitaitis Farm acquisition was pivotal in this effort because large, protected areas offer more conservation value than the same land area spread over smaller, disconnected properties.

Protected areas are typically designed to safeguard special, rare, or sensitive habitat types and species, but the interior portions are normally better protected than the outer edge. “Edge” habitat is subject to greater disturbance from extreme weather events (hurricane storm surges, heat, drought, wildfires, etc.) and humans, such as housing and commercial developments, noise and artificial lighting, roadways, and agriculture. Edges are also where invasive species are more likely to gain a foothold and become established. Larger contiguous protected areas tend to be more resilient to extreme weather and “Edge effects” when compared to smaller, more fragmented areas.

Contiguous tracts of land also offer greater benefits for wildlife species than isolated areas. Wildlife species require different habitat types to survive, e.g. meadow areas for feeding, bunchgrasses for nesting, and scrub/shrub for cover. Larger areas can offer more varied habitats and allow wildlife to move between habitat types without having to cross open areas where they may be vulnerable to predation. Contiguous lands also serve as corridors that connect different populations, facilitating gene flow and supporting natural immigration and emigration. For example, if a box turtle population is extirpated then individuals from a nearby wetland can recolonize an area more readily if they don’t have to travel across roads or backyards to get there.

-Continued on page 12
Continued: Leveraging the Power of Protected Lands

23,000 acres of contiguous protected land stretch along Delaware’s Bayshore in New Castle County, comprised of properties owned by Delaware Wild Lands, the DNREC Division of Fish and Wildlife, and the Delaware National Estuarine Research Reserve.

These areas provide a host of benefits for humans and wildlife, but they can become even more valuable when they are linked together. With increasing connectivity, ecosystems become more durable, and wildlife thrives. Ecosystem services such as air and water purification, flood risk abatement, shoreline erosion, and fisheries improve when protected areas can function as part of a larger network of interconnected natural areas. Every time a property is added to the contiguous protected area along Delaware’s Bayshore, the habitat value of the other properties is enhanced, creating a more stable and more resilient future for Delaware.

DWL’s acquisition of the Fortner and Gitaitis Farms in Augustine Creek was only possible with the invaluable support of our partners. A hearty thanks to New Castle County, Mt. Cuba Center, Delaware Ornithological Society, USFWS, WSFR, NCWCG Program, State of Delaware, Ducks Unlimited, Welfare Foundation, Delmarva Power, Delaware Nature Society, and DWL’s committed donors and supporters.

Over the summer, DWL broke ground on their Coastal Plain Seasonal Pond (CPSP) restoration in Taylors Bridge. This project was first reported in DWL’s Fall 2022 newsletter, which described how CPSPs, AKA Delmarva Bays, are seasonal freshwater wetlands that provide unique habitat for the area’s fauna and flora. Many of Delaware’s CPSPs have been lost to land development, and those that remain are often degraded, so DWL embarked on this project to restore a natural CPSP ecosystem in southern New Castle County.

The CPSP restoration project is already years in the making, but the heavy lifting came over the summer when DWL hired Tappahanna Services to move earth and bring the project design to life. The concept for digging each pond is relatively straightforward: Identify the historic footprint of the pond, remove the topsoil and set it aside, remove the earth while reading the subsurface soil layers to guide you where the bottom and slopes of the original pond used to be, then put the topsoil back in the depression to add organic material to support the newly forming ecosystem. Finally, logs and tree stumps are placed around the edge of the pond to provide basking, cover, and foraging habitat for wildlife.

Heavy machinery excavated the CPSPs to their original size and depth.
Josh Thompson from Tappahanna Services was on-site performing the pond excavations. He explained that the key part of a CPSP restoration is to recreate the original shape and size of the pond, and to restore the natural movement and behavior of the underground water table, known as hydrology. “If you can achieve hydrology that’s seasonal, and you add in natural vegetation while controlling invasive plants, you can recover that historical habitat value.” If you do that, Josh says, the wildlife will follow. Some of the changes to the landscape are immediate: As ponds are dug, and agricultural drainages are plugged, the land will quickly start to hold more water. Other changes, however, take more time. “Wetlands need years to mature. As the natural forest returns, it will stabilize the soil, regulate the temperature and humidity in the ponds, and add organic material to the system. Over time, this makes the wetlands more resilient and less susceptible to drying out.”

Today, the ponds are already adding habitat value to Taylors Bridge. They are holding water from recent rainstorms, and the native grasses and wildflowers are growing. The logs and stumps are partly submerged in the water, waiting for the first turtles to hoist themselves up to bask in the sun. You can already find frogs that burrow themselves down into the tree holes in these logs to survive the heat of the day. Flocks of killdeer forage around the pond edges, dragonflies and songbirds perch above the water, and deer and fox tracks show that they’ve been traveling to and from the pond sites. The ponds are back, the stage is set, and it’s up to DWL to manage these new wetlands as they mature and restore a natural element of Delaware’s coastal plain ecosystem.
Prescribed Fire: Where Training and Experience Matter Most

Prescribed fire is a habitat management tool with ecological benefits that can’t be matched. It is a management tool dependent on many variables (weather, resources, etc.), and ensuring that those variables align can be a lot of work. The outcome is worth it, however, because prescribed burns provide significant ecological benefits. Prescribed fire is a natural disturbance that enhances herbaceous growth, reduces woody encroachment, replenishes soil nutrients, and is more efficient and cost-effective than chemical and mechanical methods. In the hands of trained and experienced personnel, prescribed fire is a win-win for both land managers and wildlife.

Delaware Wild Lands uses prescribed fire to manage early successional habitats for northern bobwhite quail and other grassland-dependent species in southern New Castle County. DWL staff must work closely with many regional partners to perform prescribed burns effectively and attend annual trainings. With support from the Delaware Forest Service and the Mid-Atlantic Interstate Forest Fire Protection compact, this past spring DWL staff member Hannah Small attended the Mid-Atlantic Wildfire Training Academy in McHenry, MD to take a course called “S-212: Wildland Fire Chainsaws.” This course covered chainsaw safety, operation, maintenance, and various techniques for felling trees in a wildland fire scenario. While there, staff also learned about using specialty drones that can be used to ignite prescribed fires and had opportunities to network and connect with other regional fire practitioners.

With the knowledge and experience gained at the Academy, DWL is better prepared to use prescribed fire to achieve the benefits of a well-planned, well-managed wild land burn program.
Spotlight: DWL Staff member Hannah Small

This past summer, DWL Staff member Hannah Small, traveled with the Delaware Forest Service’s Wildland Fire Type 6 Engine (E612) to Yosemite National Park in central California. The crew assisted National Park staff with wildfire suppression for 14 days.
Wish List

AA batteries
AAA batteries
32GB + SD Cards
Binoculars
Rubber latex gloves (various sizes)
Plastic totes

Treated lumber – 2 x4’s, 4x4’s
Treated plywood – ½”
Assorted bolts and nuts ¼” and ½”
Assorted screwdrivers
Aluminum skiff boat
Kayak

No time to read now?
Take the DWL newsletter with you!

Joan Gitaitis, an avid donor and supporter of DWL, read hers while relaxing on a balcony during her cruise near the Bay of Fundy.

Donate Today!