



The Kingfisher

FALL / WINTER 2021

A Publication of North Fork Audubon Society, Inc.

www.northforkaudubon.org

Landscape Committee Invites NFAS Members' Input

By Robin Simmen

Calling all members to lend your interest and expertise to improve habitat at Inlet Pond County Park! The NFAS Landscape Committee hereby invites you to join our one-hour meetings at 6:30 p.m. on the second Tuesday of each month. For more information, to add items to the agenda, and to find out whether we're meeting on Zoom or in person at the Roy Latham Nature Center, email me, the chair, a day or two before our meetings at rsimmen@northforkaudubon.org. Other board members on the committee include Ellen Birenbaum, Theresa Dilworth, Peggy Lauber, Debra O'Kane, and Gwynn Schroeder.

This year our focus has been on removing invasive plant species. In December 2020, Suffolk County cleared a quarter-acre of woods overwhelmed by mile-a-minute weed just west of the Roy Latham Nature Center. With help from Cornell Cooperative Extension of Suffolk County (CCE Suffolk), our goal at NFAS is to restore this field with native-plant habitat for birds, turtles, butterflies, insects and other wildlife living in the park. Like the rain garden planted in front of the Nature Center, we envision this Native Song-scape as a multi-year restoration project.



Weed Workshop June 5, 2021



From L to R:

Mary Ann Zovko, Peggy Lauber, Andy Senesac, Robin Simmen, Carol Edwards, Ellen Birenbaum, Theresa Dilworth and Carol Owens

Our strategy in 2021 was to clear the area of such invasive plants as mile-a-minute weed, mugwort, oriental bittersweet, multiflora rose, locust trees and bitter dock. Thanks to our great volunteers, we've kept it weeded, and in September, rototilled it several times before planting it with winter oats to prevent invasive plants from growing back this fall. We've posted signs along temporary fencing, asking the public not to walk across the newly planted oats so they can grow undisturbed.

Much gratitude is due those who've helped thus far with this project and with weeding the rain garden! Special thanks go out to Mina Vescera, Tamson Yeh, Marie Boulter, and Andy Senesac of CCE Suffolk for their consultations and wonderful advice on planning and implementing this restoration. Andy Senesac led three spring and summer weeding workshops, donated land-

President's Message



As I write this, I have come indoors after a glorious September afternoon, having finally planted the native plants I purchased at our North Fork Audubon fall plant sale. It does not come naturally to me to figure out where they should go and why, but thanks to husband Paul helping with the strategy and digging, we plunked them in. We had to wait to plant the New England Aster because a lone Monarch butterfly kept landing on it, flitting off, and landing on it again in the warm afternoon sunlight.

At North Fork Audubon we made further progress this summer on our Native Songscape garden at our headquarters, the Roy Latham Nature Center at Inlet

Pond County Park. We continued our efforts to eradicate invasive species within the preserve. We monitored nesting Piping Plovers, Terns and Oystercatchers on our local beaches, an uphill battle as these endangered birds were victims of predation, rising sea levels and human interference. We also monitored Bluebird nest box trails and Purple Martin colonies. We advocated for the preservation of local habitats, and led educational programs for families and children, including a nine-week summer Nature Camp for children ages 7 - 12. To celebrate our 50th Anniversary, we commissioned a new logo, making its debut in this newsletter. We could not have accomplished any of this without the help of our members, dedicated volunteers, interested residents and donors to NFAS.

Some of the articles written for this newsletter were inspired by participating in these projects. I hope you will enjoy reading them, and perhaps be inspired to join North Fork Audubon Society as a member and/or volunteer. It can feel discouraging to watch precious wildlife and their habitats carved away by increased population, development and climate change. But we believe that positive change can still be achieved if we are all willing to participate, one Monarch butterfly at a time.

Peggy Lauber
President, NFAS

Friday Morning Bird Walk at Cedar Beach

By Theresa Dilworth

Peggy Lauber, President of the North Fork Audubon Society, organizes a Friday morning bird walk on the first Friday of the month during the summer (In the spring, every Friday morning.) They are held at different locations on the North Fork, and led by an experienced birder.

On Friday morning, September 3, 2021, the walk was led by Tom Damiani, a long-time NFAS member and former member of the NFAS Board. The location was Cedar Beach County Park, Southold, a sixty-eight-acre county park. (No Southold Town parking sticker required!)

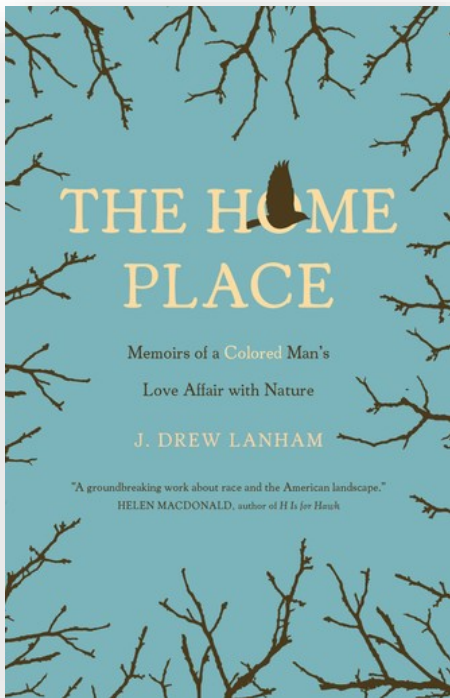


Great Egret. Photo credit: Gary Leavens, Flickr

Walking west, we observed birds along the Shelter Island Sound coastline to the south, and saltwater marsh to the north. I saw three Great Egrets perched in a tree along the marsh. Also known as the Common Egret, Large Egret, Great White Egret, or Great White Heron, large numbers of them were killed in the late nineteenth century for their plumes, also known as "aigrettes," which were used to decorate hats. In 1953, the Great Egret in flight was chosen as the logo of the National Audubon Society, which had been formed in part to prevent the killing of birds for their feathers.

A group of Herring Gulls - typical white seagulls with light

The NFAS Book Club



The Home Place *Memoirs of A Colored Man's Love with Nature*

by J. Drew Lanham

“A groundbreaking work about race and the American landscape, and a deep meditation on nature, selfhood, and the nature of home. It is thoughtful, sincere, wise, and beautiful. I want everyone to read it.”

Helen Macdonald
author of *H is for Hawk*

Winner of the 2017 Southern Book Prize
Winner of the Reed Award from the Southern Environmental Law Center
Finalist for the John Burroughs Medal
Named a “Best Scholarly Book of the Decade”
by The Chronicle of Higher Education

Wednesday, November 10, 2021, 6:30 PM
via ZOOM

To register, please email to info@northforkaudubon.org

ENVIRONMENTAL RIGHTS ON THE BALLOT THIS NOVEMBER VOTE YES on PROPOSITION 2

by Gwynn Schroeder

This November 2nd, [registered voters](#) will have the opportunity to vote for an Environmental Rights Amendment (ERA) to the New York State Constitution. North Fork Audubon Society supports the passage of **Proposition 2**, which simply states:

“The proposed amendment to Article I of the New York Constitution would establish the right of each person to clean air and water and a healthful environment. Shall the proposed amendment be approved?”

Proposition 2 was years in the making. It was first introduced in 2017, and as required by law, passed by both branches of the New York State Legislature in two successive legislative sessions, in 2019 and 2021.

The amendment is supported by a majority of NY voters, and by numerous and diverse [organizations](#), including The Nature Conservancy, Environmental Advocates of New York, New York Public Interest Research Group (NYPIRG), and Save the Sound.

If approved, New York would not be the first state to amend their constitution to include environmental rights; in fact, Hawaii, Illinois, Massachusetts, Montana, Pennsylvania, and Rhode Island have done so.

Detractors argue Proposition 2 will not have any substantive effect on people’s lives. Although it may not be a panacea for all the state’s environmental challenges, it could give state residents and municipalities much stronger footing when dealing with environmental justice, regulatory and land use issues related to climate change, sea level rise, overdevelopment, habitat destruction, and protecting Long Island’s sole-source aquifer.

One of many examples of the successful application of an ERA is in Pennsylvania, the first state to approve an environmental rights amendment back in 1971. The state successfully fought pro-fracking legislation when the

Michigan and Monarchs

By Cassie Kanz and Martin Faint

The prospect of finding Monarchs had drawn us to Peninsular Point Lighthouse, a stubby white building that once guided the ships of Lake Michigan from a crashing death on the shore, and now stands mainly empty but for the tourists who climb its stairs.

It was rumored that the butterflies gather in inordinate beauty on the pines that line the lake here. The image of trees covered in flapping orange drew us: three generations crammed into our minivan, alongside two dogs and a Seinfeld audiobook that brought our ten-year-old son, Oliver, to teary laughter.

We traveled to The Upper Peninsula of Michigan this summer, with our binoculars, Audubon app and Sibley's Guide, expecting to see birds, hoping this gathering of the Monarchs would prove to be the highlight of the trip, displacing in our hearts even the magnificent Trumpeter Swan and Sandhill Cranes that grace the airs and swampy places of the state.



Photo credit: Phoebe Faint

The sun was high when we arrived at the quiet point in the lake, the lighthouse crisp against the clear sky. A handful of Monarchs fed on flowers and we settled in to watch the pines turn to rust. A pelican in the lake — a seasonal visitor — entertained us as the hours passed. We walked from the beach, past petrified wood, and over a thin sandbank in the still, clear water to an islet. As the sun sank to the horizon, Sandhill Cranes settled in for the night and the trees remained stubbornly green.

A handful of other travelers, drawn by the sunset and the same rumor, exchanged thoughts as to the whereabouts of the missing butterflies. They were just on the other side of the woods, in a field covered with poison ivy, believed one. Another claimed they were on the other side of his campsite, yet had mysteriously disappeared when others came to look.



Photo credit: Martin Faint

A small flock of Cedar Waxwings roosted at the top of the trees, after circling the air, and looked down on us as we left the point, to return to the log cabin we had rented well to the north, in the woods outside Marquette. It seemed we would not see the gathering of the Monarchs.

We had spent a day at a beautiful spot, so all was far from wasted, but it was a disappointment. The honking of Trumpeter Swans at sunrise and sunset at the glorious Seney National Wildlife Refuge's scenic drive had lifted our spirits, but as we said goodbye to the cabin to return to the North Fork, we

did wonder if we would ever get the chance to see that legendary mass of butterflies.

A two-day drive is full of many rest stops. We had not even left the Upper Peninsula when we pulled over for the first: at a small car park by the side of Route 2, high over Lake Michigan. We walked the dogs away from the bathroom to the edge of the woods and there, lo and behold, the pines above us were alive--thick with Monarchs. ❁

A TALE OF TWO COLONIES

By Peggy Lauber

Purple Martins are the largest member of the swallow family in North America. East of the Rocky Mountains, Purple Martins have evolved to rely almost exclusively on man-made colonies in the spring and summer, when they fly north from Brazil to breed and raise their young. They are aerial insectivores -- their favorite food is Dragonflies. It is up to humans to provide clean housing in a suitable habitat and check regularly for signs of predation and/or invasive birds. Purple Martins like to nest in groups, 12-18 feet above the ground. There are two preferred types of housing: "traditional" metal houses, each containing up to a dozen or more cavities; or individual gourds, which were first used by Native Americans centuries ago.

In early summer 2020 an email was forwarded to me from a concerned resident of Orient, that Purple Martins were seen flying around a nest box colony that had been long established – but no one seemed to be maintaining the houses and the Purple Martins seemed to be distressed. Upon further investigation, we learned that a local resident and bird enthusiast had monitored this colony for years – but now lives elsewhere.

I immediately called my neighbor and friend, Jim Greenfield, who had been managing a successful Purple Martin colony on his waterfront backyard property in Greenport, coincidentally facing directly across from the colony in Orient, less than five miles away, separated by Greenport and Orient Harbors. The new owner of the Orient property granted us permission to investigate the colony. We found four traditional houses on posts, some not fully raised, in disrepair, and a few dozen Purple Martins were flying around the houses and perched in the nearby trees. Since adult male Purple Martins fly north by mid-April to claim their territory and find a suitable nest to attract their mates, it was already very late – the adult females and sub-adult birds had already arrived and were anxiously awaiting the chance to nest, lay eggs and raise their young. All we could do was raise the houses, make some basic repairs to the doors, clean out the old nesting material from the previous year, line the boxes with pine needles and hope for the best.



This is a very unusual number of eggs! Purple Martin clutches are normally 4 - 6 eggs — perhaps two Moms laid eggs in the same gourd?

We continued to monitor the houses in Orient that summer and vowed to make repairs to the colony after the birds departed in August. That summer I also helped Jim monitor his colony in Greenport, which was almost entirely hung with gourds, along with two traditional houses. In August Jim announced that he had decided to move with his family to Pennsylvania. The new owners had graciously agreed to keep the Purple Martin colony on the property but did not know how to monitor it. Jim asked whether I would be willing to take charge, which I enthusiastically agreed to do. Now I would be taking over responsibility for two PUMA colonies!

Fast-forward to 2021. With the help of the property owner in Orient, as well as with grant money provided by New York State Audubon Society, we were able to purchase new poles and fittings to make further repairs to that colony. One of the houses had blown over in a late summer storm in 2020, so we used parts from that house to repair the others, instead of buying new houses. Now we were down to 3 houses and were not able to mount one of these high on a pole. It was nearly time for the birds to arrive from their long journey north.



Purple Martin male in gourd nest. Both parents participate in caring and feeding for their young .

Pennsylvania Supreme Court ruled that the proposal violated the state constitutional provision, which states, “The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania’s public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.”¹

Another example is a lawsuit brought against the state of Montana. The ERA, coupled with the state’s [public trust doctrine](#), brought about a ruling by a District Court which gave standing to a group of young plaintiffs in their claims the “Montana State Energy Policy and the Climate Change Exception to the Montana Environmental Policy Act (MEPA) violate the Montana Constitution – which includes provisions declaring that Montana citizens possess an inalienable right to clean and healthful environment.”²

New York has established robust goals, through the Climate Leadership and Community Protection Act ([CLCPA](#)), to address the consequences of climate change and to regulate greenhouse gases (GHG). The state is in the process of planning and rule-making for the implementation of those goals, with input from community members from across New York (click [here](#) to sign up for email updates). This, coupled with the passage of Prop 2, and existing environmental laws, could help NY protect its residents, human and otherwise, against polluters and other environmental bad actors, and perhaps help the state obtain compensation for damage already done.³

Climate Leadership and Community Protection Act (CLCPA) – Overview

Carbon neutral economy, mandating at least an 85% reduction in emissions below 1990 levels

- 40% reduction in emissions by 2030
- 100% zero-carbon electricity by 2040
- 70% renewable electricity by 2030
- 9,000 MW of offshore wind by 2035
- 6,000 MW of distributed solar by 2025
- 3,000 MW of energy storage by 2030
- 185 TBtu on-site energy savings by 2025

Commitments to climate justice and just transition

A healthier New York State for people also means a healthier place for plants, animals and birds to thrive, in the face of a changing climate and ever-dwindling habitat. So, on November 2nd, after you cast your vote

for elected offices, please make sure to flip over your ballot, and vote “yes” for Proposition 2. ✨

¹ <https://www.natlawreview.com/article/green-amendments-fundamental-right-to-healthy-environment>

² <http://climatecasechart.com/climate-change-litigation/case/11091/>

³ <https://circa.uconn.edu/wp-content/uploads/sites/1618/2020/12/Barry-E.-Hill-journal-article-regarding-climate-liability-litigation.pdf>

My Unexpected Encounter with Forensic Ornithology, or Feathers of Flight 375

By Ellen Birenbaum

I was nine years old when my 36-year-old father, Martin Birenbaum, was killed in a plane crash. I was told that the October 4, 1960 crash was caused by starlings that were sucked into the engines of the Eastern Airlines Electra jet. The disabled plane crashed into the Boston harbor soon after takeoff from Logan Airport. The pain of his death deeply enveloped my two sisters and my mother, slowly dissipating over time but never resolving.

In early July of this year, my older sister sent out a family email with the subject heading, “Sad Audubon Article.” I knew that she and her husband had recently gotten interested in birding and wasn’t surprised that my brother-in-law was reading past issues of the national *Audubon* magazine. What could be sad about “The Remarkable Life of Roxie Laybourne” in the Science section of the October 5, 2020, *Audubon* Magazine (<https://www.audubon.org/news/the-remarkable-life-roxie-laybourne>)? Part of the answer is that Roxie Laybourne (1910-2003), a scientist at Smithsonian National Museum of Natural History, investigated my father’s plane crash. It was through her work that the definitive cause of the crash was determined. The other part is in the detail the article’s author, Chris Sweeney, provides about the crash of Eastern Airlines Flight 375, wherein 62 of the 72 people aboard died. The contemporaneous descriptions of the sounds and the bystanders’ memories of the crash gave my father’s death a new reality that felt quite overwhelming. A first-person description

Piping Plover Monitoring Season Comes To An End

By Theresa Dilworth

In July, I helped North Fork Audubon Society (NFAS)'s Jennifer Murray remove fencing protecting Piping Plover nesting areas at a Peconic Bay beach. A pair of Piping Plovers (*Caradrius melodus*) had successfully nested, hatched eggs, and raised the fledglings to maturity, so it was time to return that small section of beach to human beachgoers and dog-walkers.

Walking to the nesting area, I saw a small crab without its shell—vulnerable and pale. I remembered that Indians of the North Fork harvested soft-shelled crabs from these waters. The Indians learned from observing birds, which attacked the crabs when they molted their shells.

Several Ospreys glided overhead. We could see an Osprey nest at the top of a tree in the distance. Jennifer said she occasionally saw Bald Eagles here. A Blue Heron flew by. I saw a bird with a distinctive black and white wing pattern, which Jennifer told me was a Willet (*Tringa semipalmata*), a type of large sandpiper.

We were assisted by a NFAS volunteer, Jack. We loaded the metal fence stakes onto a toboggan gifted to Jennifer by Lucy, another NFAS volunteer. We had to make three trips. It was easier to drag the toboggan on the wet, firmer sand. Thinking of the American Indians dragging heavy loads across hundreds of miles of prairie using their *travois*, I joked that next time we should get a canoe to float the metal posts to the parking lot.



Willet, Photo Credit Tom Bunker Flickr

Piping Plovers are an “endangered” species in New York. According to the Department of Environmental Conservation (DEC) website, recent surveys estimate the Atlantic Coast population at about 800 breeding pairs, of which 200 nest in New York. Piping Plovers are also listed as endangered in Maine, New Hampshire, New Jersey, Maryland, Indiana, Michigan, Minnesota, Wisconsin, Iowa, Ohio, and Pennsylvania. Where not endangered, they are listed as “threatened” and are federally protected.



Piping Plover Eggs. Photo Credit: Erin Eve Flickr

For the 2021 season, NFAS received a contract from Southold Town to monitor and protect shoreline birds including the Piping Plover and the Least Tern. NFAS had done this for many years in the past.

Jennifer told me that the Piping Plovers stuck to their nest even in the big Memorial Day storm. Both females and males share in nesting duties. The sea level rose, submerging the nest, but the plovers continued sitting on their eggs even though surrounded by water. Two of the four eggs were damaged, though. The other two hatched.

Looking up information on the internet afterward, I read that Piping Plovers forage for food in “wrack.” (NFAS hosted a program called Wrack Line Rambles.) According to Wikipedia, “**Wrack** is part of the common names of several species of seaweed in the family Fucaceae. It may also refer more generally to any seaweeds or seagrasses

scape cloth for underpinning paths and our new education terrace area before we covered them with wood chips, and lent time and equipment to help us plant the field with winter oats. And all spring and summer the following NFAS members showed up with rakes, shovels, trowels, and elbow grease to clear the land of invasives—THANK YOU!

Kathleen Kmet Becker
Christopher Cole
Carol Edwards
Judy Lyons
Carol Owens
Shannon Simon
Nancy Walker
Mary Ann Zovko


Savannah Calderale
David Dilworth
Veronica Kaliski
Lucas Natali
Kate Rummel
Christina Sun
Patrizia Zanaboni

In November we plan to hold one last volunteer weeding and mulching event in the new rain garden extension taking shape along the west side of the house; an invitation to that will be emailed to members.

We hope in May, 2022 to rototill the Native Songscape again and plant it with native grasses and perennials, which will be sustained by rain-fall, occasional mowing, and selective weeding to keep woody succession at bay. Little bluestem and pink muhly grasses, goldenrods and beebalms are among the many native species we'll plant to support hummingbirds, orioles, thrushes, cardinals, woodpeckers, nuthatches, waxwings, Wood Warblers and more species of birds. It will take about three years for this area to mature into a Native Songscape where the public can walk along mowed paths, past drifts of native grasses and blooming wildflowers.



Robin and mountains of Mile-a-minute
(*Persicaria perfoliata*)



All programs held at the Roy Latham Nature Center and Inlet Pond County Park are co-sponsored by Suffolk County Executive Steve Bellone and Suffolk County Parks.

Meanwhile, please consider joining us as we continue planning this and many other NFAS landscape projects and concerns. Our next Landscape Committee meeting will be on **Tuesday, November 9 at 6:30 pm**, and we hope to see you there. ✨

Join North Fork Audubon Society for a Virtual Screening of



Thursday, November 4, 2021, 7pm—Via Zoom

We're excited to host this important and timely film - "Uninvited," a new hour-long documentary produced by the New York State Department of Environmental Conservation about their work on invasive species.

Discussion to follow. Click [here](#) to view the trailer. To register, please email gschroeder@northforkaudubon.org

The unofficial count for the day:

- 12 Ruddy Turnstone
- 6 Semipalmated Sandpiper
- 4 Greater Yellowlegs
- 1 Willet
- 3 Lesser Yellowlegs
- 13 Laughing Gull
- 8 Herring Gull
- 1 Great Black-backed Gull
- 3 Great Egret
- 3 Osprey
- 4 Double-crested Cormorant
- Number of Taxa: 11



Juvenile Great Black-Backed Gull. Photo credit: gull-research.org

Left Credit for Plate 257, Double-Crested Cormorant: "Courtesy of the John James Audubon Center at Mill Grove, Montgomery County Audubon Collection, and Zebra Publishing"

gray wings--were "loafing" on the shoreline; basically just hanging out, resting, or "chilling." Among them was a large, taupe, speckled gull with a black tail, likely a juvenile Great Black-backed Gull. Tom explained that gulls go through color changes, from the brown juvenile through their first and second winters, gradually transforming to mostly white.

Several Double-crested Cormorants could be seen out on a wooden float, sunning themselves, drying out their plumage after fishing. I could clearly see the feather tufts on the heads of a few of them. Someone commented that cormorants are "ugly," even when they are chicks. However, beauty is in the eye of the beholder.

Walking back, we saw Semipalmated Sandpipers along the shore. Tom explained that "semipalmated" refers to the short webbing between its toes which helps them walk on the sand. ❁

On April 17th, I spotted our first Purple Martin of the season in Greenport – an adult male “scout.” Soon after, they began to arrive in Orient as well. By mid-May, we counted more than forty Purple Martins in Greenport, and I recorded the first nest lined with leaves. In Orient, still no nests but about two dozen Purple Martins were flying around the colony. We were off to a great start!

Then the trouble began in Orient.

By the end of May, we had our first eggs in Greenport. Forty-five eggs already in fourteen nests! Still no nests begun in Orient. By mid-June, ninety-seven eggs in Greenport, in twenty-five different nests. Nearly every gourd was occupied, while only four nests had been built in the traditional houses there. Nothing in Orient, yet the adults were still flying around. By early July there were 106 hatchlings hatched in Greenport, and thirty-six eggs yet to hatch. In Orient two nests had finally been built, with a total of six eggs. The Greenport colony was bursting with new life and felt joyous, with very vocal birds flying in and out of the gourds and high up in the air, male and female adults, sub-adults and newly-fledged babies. By contrast, the Orient colony felt gloomy, eerily quiet, with only a handful of adults and sub-adults roosting in the trees nearby. Clearly, the Purple Martins in Orient had rejected the housing we had offered. Houses too old? Not high enough? In Greenport, they had showed a clear preference for the gourds over the traditional houses. Lesson learned. Next year, we will need to replace those houses with gourds! I only hope it is not too late, that the Purple Martins will return to the site and give it another chance.

August 5, 2021. In Orient, there were no Purple Martins to be found. Six hatchlings had successfully fledged from two nests, and all had moved on. In Greenport, 136 hatchlings had fledged, most of the adults and sub-adults had departed with their new offspring -- but there were still five babies including newborn hatchlings – very late in the season for these! Normally by mid-August, the Purple Martins would have all departed for their long journey to South America. These hatchlings would need at least a month to grow strong enough to fledge.

Hurricane Henri arrived on August 22nd. The evening before the storm, after much deliberation we decided to lower the colonies closer to the ground, fearing that the gourds and houses might be blown down by the force of the wind. By lowering them, we knew there was the risk of the parents abandoning their young, since the nests so close to the ground meant a greatly increased chance of predation. 3 hatchlings remained, still being tended by their families. Would the parents depart so as not to risk their own lives? They did not – miraculously, all survived the storm, and when I checked boxes before raising them, the mother Purple Martin was in the gourd protecting her two babies. Another week went by, one of the hatchlings died in the nest. Now there was only one gourd, #41, with two babies – and 4 adults & sub-adults still feeding them! I realized that not only had the parents stayed behind to care for them, but so did two additional family members. At this point, the family members were risking a perilous and perhaps deadly journey south, yet they were not giving up.

On September 8th, one of the two hatchlings died in the gourd. The next day, I saw the last remaining hatchling sticking his head out, begging for food, with the four family members gathered around him outside the



Two kinds of housing. On left, “traditional” houses with gourds hung underneath. Note the elevation and proximity to water.



Hungry fledglings. Approximately 2 weeks old.

of the crash and rescue operations of the handful of survivors leads the article, followed by descriptions of the plane debris and retrieval of bodies and body parts by first responders. Newspaper headlines from across the country were included. The AP photo of the tail of the Lockheed Electra L-188 being lifted from Boston Harbor was particularly painful.

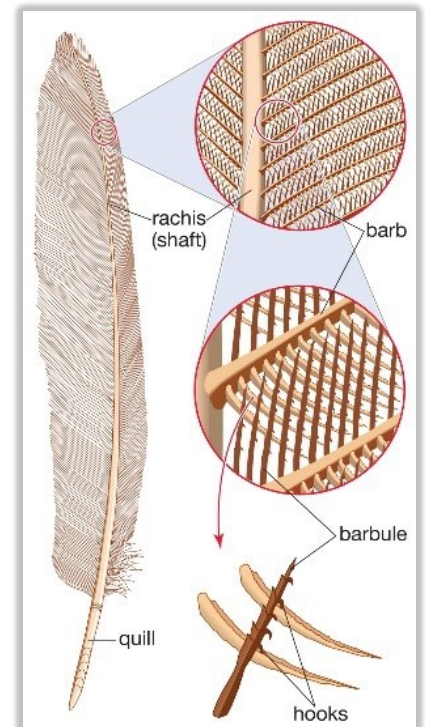
Hundreds of bird carcasses were found at the end of the runway and, when the plane engines were disassembled, feathers were found enmeshed in the machinery. As part of the nine-month investigation, officials from the newly established Federal Aviation Administration (FAA) sent the bird remains to the Smithsonian for examination. Roxie Laybourne was given the assignment of identifying the feathers.

Prior to the crash, Roxie Laybourne's work at the Smithsonian National Museum of Natural History primarily involved preparing bird specimens from around the world for research purposes. She was experienced in feather identification and had developed a specialty in distinguishing structural differences in feathers among closely-related birds. However, the specimens she received from the Electra crash were pulverized remains of feather remnants covered in oil and gasoline. She developed a novel technique to clean these bits of feathers while keeping them suitable for microscopic analysis. She confirmed that the birds involved in the Boston crash were European Starlings.

The final FAA report was issued in July 1962. It concluded that, at liftoff, Flight 375 had struck a flock of European Starlings numbering approximately 20,000 birds. This caused three of the four engines to malfunction. The report clearly acknowledged that bird strikes are a deadly aviation threat. A major recommendation from the report was that the FAA should start a comprehensive program of research on bird hazards and turbine engine bird ingestion and should develop methods of protecting aircraft from the effects of bird strikes. The FAA distributed bird strike report forms to airlines and airports, and asked mechanics to collect a feather or other bird remains and mail them to Roxie Laybourne at the Smithsonian's National Museum for identification. The data collected on these forms was the beginning of the Wildlife Strike Database (<https://wildlife.faa.gov/home>).

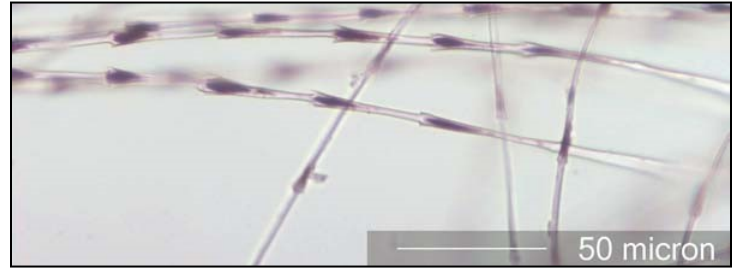
Laybourne's work in this project was groundbreaking. In addition to the difficulties in preparing the specimens for microscopic evaluation, she had no comparison microscope, now a mainstay of forensic investigations. This equipment would have allowed her to simultaneously examine unknown feather fragments with known reference feathers. Without it, she had to hand-sketch her microscopic images on index cards and then search for a match in the reference library. One of her most important references was Asa C. Chandler's article in the April 17, 1916, *University of California Publication in Zoology* "A Study of the Structure of Feathers, with Reference to their Taxonomic Significance" (<https://www.biodiversitylibrary.org/item/51770#page/5/mode/1up>). Chandler examined the microscopic structure of feathers of seventeen orders of birds, comparing the number, size, and shape of feather elements within birds of the same order and birds of different orders. Graphic illustrations of the microscopic features of the orders are included.

By way of background, bird feathers are either pennaceous or plumulaceous. Pennaceous feathers, or flight feathers, are the typical bird feather, flexible with a solid, hollow shafted structure called the rachis that extends down the middle of the feather. Plumulaceous feathers, or down feathers, are less stiff and have a delicate rounded form described as soft and fluffy. The rachis may be vestigial or short. Branching outward from the rachis are the barbs, and branching off the barbs are the slender barbules, which have small hooks that link together with other barbules and hold neighboring barbs together (see Figure; Source: Britannica.com). The barbules on down feathers are usually reduced or thinner. Contour feathers give birds their characteristic exterior shape. The top section of these feathers is pennaceous, the bottom plumulaceous.



Chandler was the first scientist to conclude that differences in the microscopic features of feathers existed in different groups of birds and that these differences in morphology were of diagnostic value. His research showed that many anatomic aspects of bird feathers are of little value in identifying bird orders. However, he determined that the distal barbules have the highest value in bird identification. As Chandler states "...in fact it is frequently possible by means of the down [barbules] alone to identify the group to which a bird belongs..." (p. 387). Using her own experience and Chandler's work, Laybourne likewise concluded that plumaceous barbules at the base of feathers best indicate a feather's identity. This concept was a central element in her feather identification methodology (see Figure: microscopic image of barbule; Source: micro-labgallery.com).

European starlings, *Passeriformes Sturidae*, the birds involved in the crash, are native to Eurasia and northern Africa. 100 starlings were released in 1890-91 in Central Park, New York City, by Eugene Schiefflin as part of a plan to introduce to the United States all birds mentioned in Shakespeare. They are now the most numerous songbirds in the US. The *Passeriforme* order, or perching birds, includes nearly 120 species of starlings and mynas. They have 3 unwebbed toes in the front and a strong flexible toe on the back that allow them to perch on tree branches.



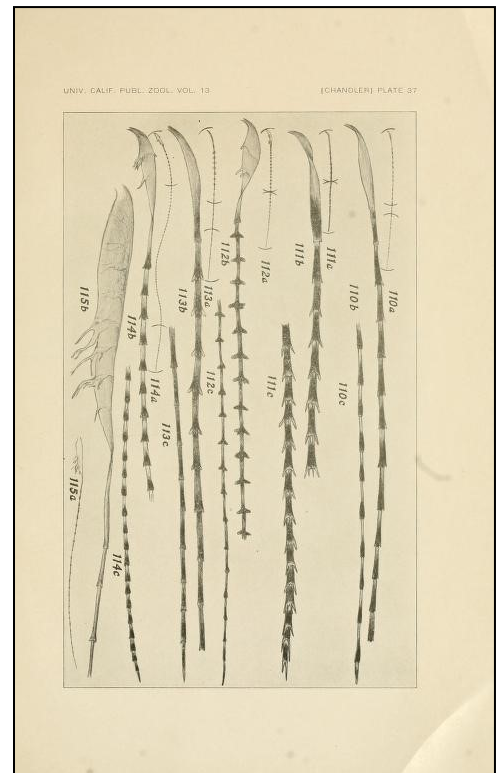
Chandler's description of the barbules of the *Passeriforme* order is of particular interest, and I can well imagine Laybourne confirming her identification of the starling feathers using Chandler's description of the down barbules and the barbule illustration: "The down barbules of passerine birds have a constant and peculiar character in the presence of lobate or fingerlike villi on the ventral edge or on the side of the base" (p. 382; see Figure illustrating plate 37, p. 446, depicting distinct passerine barbules on far left).

In addition to microscopic analysis, Laybourne used other clues to help determine the identity of birds involved in bird strikes: the time of year, the airplane route, and grasses and other plants near the airport. She assisted with poaching and environmental crime investigations and helped solve homicides using forensic ornithology. She worked to help redesign engines to be able to continue to fly after bird strikes and helped set new standards for cockpit windshield strength.

The collection of accurate data on bird strikes allowed the FAA to understand better the scope of the problem of wildlife strikes and provided the scientific foundation for management programs to mitigate risk. The FAA now has a comprehensive program to address wildlife hazards at airports. (https://www.faa.gov/airports/airport_safety/wildlife/resources/media/2005_FAA_Manual_complete.pdf).

Ninety-seven percent of all strikes with civil aircraft involve birds. There were approximately 27,005 wildlife strikes with civil aircraft in the US between 1990 and 2019. Fifty-three percent of bird strikes occur from July to October when young birds have fledged from nests and fall migration occurs. Mourning doves are the most common species of bird struck by civil aircraft, accounting for 11%. Waterfowl such as ducks and geese account for only 5% of bird strikes but are responsible for 28% of strikes that damage the aircraft. The remaining very small minority of non-bird strikes are due to mammals such as white-tailed deer. Alligator strikes have also occurred.

Airports use integrated wildlife management programs to reduce the risk of wildlife strikes. Habitat modification to reduce food, cover and water for birds is recommended. Food is widely available to birds from human



handouts at taxi stands and parks. Improperly stored food waste is a major source of food, as are landfills, feed lots, agricultural crops, and spilled grain along transportation lines. The FAA recommends bird-proof storage of food wastes and recommends against the use of airport property for agricultural production. It is recommended that landscaping plants and trees for airports not be chosen if they produce fruits or seeds that are attractive to birds. Because large areas of grasses and forbs provide an ideal habitat for rodents and insects that attract raptors and gulls, and because grasses that produce seedbeds attract doves, blackbirds and other flocking species, the FAA recommends adjusting mowing schedules to the nighttime and changes in the vegetation cover to minimize bird feeding on insects exposed by the mowing. The FAA also recommends that dense tree covers, typically used for roosting by European Starlings and blackbirds, be avoided. The elimination of standing water is another recommendation. Exclusion techniques that create physical barriers for perching and nesting is important. This involves minimizing exposed areas of buildings, hangers, and other structures. Repellent techniques are less effective due to bird habituation and acclimation to most repellent devices.

Roxie Laybourne's work is at the heart of the Smithsonian Institution Feather Identification Laboratory (https://www.faa.gov/airports/airport_safety/wildlife/smithsonian/). Funded through interagency agreements between the Smithsonian Institute, US Air Force, US Navy, and the FAA, this highly specialized laboratory continues to process several thousand specimens a year from whole or fragmentary feather material. If a whole or partial bird carcass is available, the laboratory uses the same physical characteristics in identification as used when viewing birds in the wild. If only feather fragments are available, the same technique pioneered by Laybourne of microscopic examination of the downy barbules is used to narrow down the species identification. The latest tool for identification is DNA analysis of blood, bone, and tissue samples. DNA is extracted from the samples, amplified using polymerase chain reaction and then sequenced. The DNA sequence is then compared with the online reference database known as the Barcode of Life Data System.

The Eastern Airlines Flight 375 crash on October 4th, 1960 resulted in the largest loss of life due to a bird strike to date. Roxie Laybourne's methodology of bird feather identification for the crash began the field of forensic ornithology. The crash prompted the FAA to create the Wildlife Strike Database. The crash investigation was the basis for the FAA's mandate to mitigate against bird strikes and to promote airline safety by reengineering jet engines and cockpits. Strategies to reduce the risk of strikes are now commonplace. These sequelae of my father's death are now a comfort to me, and they help mitigate its sadness. Before I read the "The Remarkable Life of Roxie Laybourne" in *Audubon*, I was unaware of how profoundly the manner of his death influenced the science of forensic ornithology and the safety of air travel. ✿

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that wash up on beaches and may accumulate in the wrack zone. The wrack zone or wrack line is a coastal feature where organic material (e.g. kelp, seagrass, shells) and other debris is deposited at high tide. This zone acts as a natural input of marine resources into a terrestrial system, providing food and habitat for a variety of coastal organisms.



Piping Plover and chicks. Photo Credit: Brian Batley, Flickr

for Bald Eagles.

In August, I helped Jennifer remove the piper plover fencing from beaches in Mattituck, Cutchogue, and Orient Point. It was Saturday August 21, the day before Hurricane Henri, which made the task more urgent. In Mattituck and Cutchogue we used the toboggan to drag the fence posts. We saw a Great Blue Heron, Great White Egrets, and lots of Ospreys. I saw a small fiddler crab coming out of a hole in the sand. Jennifer pointed out a group of Ruddy Turnstones—a sandpiper-type bird, so named because they turn over stones. We saw Semipalmated Sandpipers, and many gray-winged seagulls. With her binoculars, Jennifer searched, in vain,

Jennifer showed me a Piping Plover nest—little more than an indentation in the sand—and a Willet's nest.

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At Orient State Park, there were several Piping Plover nesting areas. The fencing was far away, and we had the use of a four-wheel drive vehicle. The tide was higher than optimal, and the drivable area along the beach narrow. Coming back, we got stuck in shallow water along the shore, but after unloading all the metal fence posts, using shovels, and waiting a bit for the tide to recede, we were able to get out.

Among the many flocks of seagulls along the shoreline, Jennifer pointed Great Black-back Gull, a large gull that is a predator of Piping Plovers. With a total wingspan of sixty inches, it is as large as an Osprey. We saw an Osprey sitting in the dunes with a Great Black-backed Gull sitting about six feet away. Though we passed within ten feet in the vehicle, neither budged. Jennifer surmised that the Osprey had caught a fish and was sitting on it, and the gull was patiently waiting for the Osprey to make a wrong move.



Piping Plover Symbolic Fencing. Photo Credit: Jennifer Murray

As we were leaving the park, a Belted Kingfisher flew by. It was the first time in my life I'd seen one! I am happy to report it looks just like the North Fork Audubon logo!

- ◆ For more information about Piping Plovers, and to hear their songs and calls, go to: <https://www.audubon.org/field-guide/bird/piping-plover>
- ◆ For more information about Willets, and to hear the Willet's songs and calls, go to: <https://www.audubon.org/field-guide/bird/willet>
- ◆ For ten things you can do to help shoreline birds, from New York Audubon, see: [Ten Ways to Help Beach-Nesting Birds | Audubon New York](#)
- ◆ For a May 30, 2021 Suffolk Times article about Piping Plovers and NFAS's Jennifer Murray, see <https://suffolktimes.timesreview.com/2021/05/audubon-society-avoid-piping-plover-areas/> 🌸



Piping Plover and chicks. Photo Credit, Tom Bunker/Flickr

Thanks to the Shorebird Monitoring Volunteers!

Lucy Cutler
Theresa Dilworth
Cassie Kanz
Margaret Rose de Cruz
Kara Jackson
Sara Phillip
Scott Rosen

Special thanks to Jennifer Murray, who in addition to organizing and running our Nature Camp last summer, was instrumental in writing and obtaining the Southold Town grant.

Jennifer served as our shorebird monitoring steward. She organized and trained the volunteers, and diligently monitored all the sites throughout the summer, trouble-shooting along the way, dealing with the many immediate threats to nesting shoreline birds. Finally, she wrote and submitted the necessary reports to Southold and the NYS DEC. 🌸

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entrance to the gourd, clearly coaxing him to PLEASE fly out. Then the afternoon of September 10th, there he was outside – but on the ground under the colony. His family was flying over him, and when I approached the little guy, the agitated family members aggressively dive-bombed me. This was not looking good, why wasn't he able to fly?

The morning of September 11th, that last fledgling lay dead on the ground. Two of the adults were perched directly over him on top of the colony. Waiting? Mourning? I walked up to the fledgling and the adults flew away. I never saw them again, and hope they are safely on their way to South America as I write this, a journey that takes 4-6 weeks.

For more information about Purple Martins, including recordings of their many vocalizations:
<https://www.purplemartin.org> 🌟

Help Ban Neonics in NY!

From the Neonic [fact sheet](#):

“Neonicotinoids or “neonics” are neurotoxic pesticides linked to massive bee and insect losses around the globe and, increasingly, to vast water and soil contamination, ecosystem-wide harms, and human health concerns in New York. [Cornell University research](#) reveals that the neonic uses that pose the greatest threats to New York’s bees are also those that provide little-to-no benefits to users or are easily replaceable with safer alternatives.

The Birds and Bees Protection Act (A7429-Englebright/S6998 –Hoylman) prohibits these wasteful uses – specifically, neonic-treated corn, soybean, and wheat seeds, and non-agricultural, turf and ornamental uses – to provide a targeted, science-based approach to address the heart of New York’s neonic contamination crisis, benefiting New York’s environment, agricultural economy, and health.” Read more [here](#).

TAKE ACTION TODAY!
CLICK [HERE!](#)



Reduce, Re-Use, Recycle, Yard Sale
to benefit North Fork Audubon Society

Saturday, November 13th, 9 am-2 pm
Poquatuck Hall, Village Lane, Orient

NFAS members are invited to reserve a space for the day.
We have a limited number of spots for \$50. Contact us at nfasregister@gmail.com to register for a table.

Members: please give us your feedback!

Write to gschroeder@northforkaudubon.org with feedback on our newsletter, to submit a “letter to the editor”, or if you would like contribute to our news letter. If you would like to submit recommendations for programs, we would appreciate hearing from you!

We hope you love our new logo as much as we do!

