



New Stirrings Of Life

Snow lays heavy on the land, ice hardens the bays. Bare tree branches reach into gray skies. But as the days lengthen into March, the earth warms, life stirs.

Squirrels play the mating game up and down trees and along fences and high wires. Male woodcocks strut and dive and carry on as they court their mates in the moonlight. Green flecks the fields and the voice of the bullfrog is heard in the land.

Soon the sun crosses the equator. It is officially spring — a time for buds and birdsong, and birth and abundance. In the following pages, we show how our natural world reawakens on land, sea and in the sky. — Harvey Aronson



REAWAKENING: LIFE FROM THE AIR

The Return Of The Osprey

A campaign begun on Long Island helps save the great fish hawk



A male osprey returns to its nest near Lloyd Neck with a fish for its young. The female is on the right.

By Irene Virag
STAFF WRITER

The great nest has been empty for months, buffeted by wind and whitened by snow. But now as March hovers between seasons, the days lengthen. The sun warms the dreary landscape, melting the last vestiges of winter on the driftwood and dead branches of the waiting aerie.

And the bird is on the wing.

The male arrives first, soaring in from the south, from Cuba or perhaps as far away as Costa Rica or Venezuela or Brazil. His powerful wings beat the still-chilly air as he circles the nest perched high on a pole

in the marshes of Long Island where land and sea come together. Sometimes, for reasons buried deep in his DNA, he waits a day or two before settling in — fishing in shallow waters, seeking shelter on the ground or in a nearby tree.

Then a few days later, another bird appears. The newcomer has brown markings that resemble a necklace. The female is back — looking for the familiar platform put up by caring humans and the nest that she and her mate have built and tended in seasons past. The nest that they will repair and renovate and add on to with even more sticks and tree limbs and seaweed and with the jetsam of their suburban neighbors — shingles and plastic bags and fishing nets and foam cups



Newsday Photos / Bill Davis

A parent osprey seems to be teaching its young to fly. Osprey couples share family duties: The male gathers the food, the female tends to the young.

and feather dusters and old shoes and even TV antennas and discarded doormats. The nest where they will incubate their eggs and watch their babies learn to fly and devour the menhaden and winter flounder they catch in the warming waters. The nest that will be their home until the shifting seasons beckon them south again.

In the world we share with wild creatures great and small, the brown-and-white raptors are Long Island's most famous warm weather visitors. *Pandion haliaetus*. Fish hawks.

Paumanok's poster birds. Ospreys.

With proud white heads and imperious beaks, they have the look of eagles if not the heft. They are about 25 inches in length and weigh from 2 to 4 pounds but boast wingspans of 5 to 6 feet. There have been a few recorded instances of them carrying off squirrels, snakes and voles, but for the most part, ospreys subsist on fish — a trait that makes them seem less formidable than eagles and other raptors.

They are history's birds as well as Long Island's. Their ancestors flew through the mists of unrecorded time. Fossil remains show that ospreys existed throughout the Northern Hemisphere as many as 10 million to 15 mil-

lion years ago. They were building nests long before our earliest apelike predecessors began to walk upright. They are among the most adaptable of raptors — at home on all of the continents of the Earth except frozen Antarctica and able to live on the shores of clusters of humanity like our own built-up island. Their giant stick nests — some grow to 6 feet tall and weigh more than a ton — have been seen in the cypress swamps of the Carolinas and the mangrove islets of the Caribbean, along the spruce-rimmed coast of Sweden and on desert islands off Mexico, on sea cliffs near Gibraltar and rocky promontories in Yellowstone National Park. And they winter in Afri-

ca and South America and India and Southeast Asia although they do not breed in these places.

As the famous naturalist and ornithologist Roger Tory Peterson — whose guides are bibles to bird-watchers — once observed, “The osprey is a world citizen.”

But the world hasn't always been hospitable to the osprey. Throughout history, these birds of prey have been persecuted by humans — hunted from England to Japan, their creamy-white eggs with buff-colored blotches prized by collectors for museum cases.

See **OSPREY** on N20



Return Of The Osprey

OSPREY from N18

Not long ago in our own place and time, they were on the brink of destruction — caught in a crisis revealed by Rachel Carson in her landmark 1962 book, “Silent Spring,” about the dangers that insecticides such as DDT posed for wildlife. “A grim spectre has crept upon us almost unnoticed . . .,” she wrote.

The spectre cast its shadow on Long Island — and a band of naturalists noticed. The group took the osprey under its wing and insured the bird’s future.

It was 1966 — just a few years after Carson’s warning. Art Cooley of East Patchogue was teaching a marine biology course that looked at the destruction of wetlands. Charlie Wurster of East Setauket, a professor at Stony Brook University, was investigating some of what Rachel Carson had written about DDT. Dennis Puleston, who watched the ebb and flow of the seasons from the edge of the Carmans River near his home in Brookhaven hamlet, was studying ospreys on Gardiners Island. Carol Yannacone of Patchogue was worrying about her Sunday school students swimming in DDT-contaminated Yaphank Lake and her lawyer husband, Victor, was doing something about it.

In one moment in time, they and others who follow the flight of the fish hawk came together and sued the Suffolk County Mosquito Control Commission in State Supreme Court in Riverhead to stop spraying DDT. A temporary injunction was issued, blocking the use of the pesticide until the case was heard. The Yannacones turned to the environmental activists for expert testimony. During a six-day trial, the naturalists presented their measurements of DDT in fish, they described the malformed and broken osprey eggs that Puleston brought back from Gardiners Island and that Wurster analyzed and found loaded with DDT. They explained that the insecticide interfered with the female osprey’s ability to produce enough calcium carbonate for healthy eggshells — that the incubating birds were actually crushing their own eggs and destroying the future of their kind.

It mattered that Dennis Puleston was a transplanted Englishman who traveled the world from the arctic to the South Seas in search of nature but always came back to his adopted Long Island. He would write that as a child in Britain, the osprey “was somewhat of a mythical bird to me. Apart from a few mounted museum specimens, I had never seen one . . . but I longed to see one flying free.” In 1948, he settled on Long Island to work at the new Brookhaven National Laboratory and it seemed as if ospreys were everywhere. “I was enthralled.”

It was not surprising that as a naturalist he would find his way to Gardiners Island, where wild turkeys foraged in the forest, and the oaks and cedars and blackgums stood tall and sturdy. Soon he was hiking through the woods and along the shores of that pristine island, where he found 300 osprey nests in live and dead trees and even in piles of driftwood along the beaches. He climbed to their nests with camera and notebook in hand, peering at “the richly colored eggs and lusty chicks” like a proud uncle to record the ospreys’ comings and goings. Each nest was producing an average of 2.2 fledglings. In 1966, as DDT settled on the natural world, he could find only two chicks in a total of 50 active nests.

Puleston, who died two years ago at the age of 95, is spoken of with reverence by his peers. Paul Spitzer, a nationally known naturalist, ornithologist and osprey researcher now at the Cooperative Oxford Laboratory in Maryland, worked with him in the 1970s studying the fish hawks as they reclaimed their heritage. “We really had a ‘Fellowship of the Osprey’ out on Gardiners,” Spitzer says. “Dennis was our Gandalf.”

It was perhaps in the fight to save the ospreys that Puleston’s magic was most apparent. He created watercolor charts showing how DDT moves through the



Photos by Paul Stoutenburgh

Dennis Puleston tends to osprey nests on Gardiners Island, in 1979, above, and in 1968, below. The late naturalist and other Long Islanders spearheaded an effort to ban DDT and help save the fish hawk.



LIVE ON OSPREYCAM

Imagine being able to watch an osprey tend its nest or feed its young. Beginning in the next few weeks, The Dennis Puleston Osprey Fund plans to train an Ospreycam on a nest to offer live, uninterrupted video of Long Island’s signature birds in their natural habitat. To watch on your computer screen, go to www.linature.com

food chain of the Island’s salt marshes and freshwater streams and deciduous woodlands. One of his charts demonstrated how the blue-claw crab ingested DDT from eating tainted blue mussels. “So that’s why there are no more crabs in Great South Bay,” said Justice Jack Stanislaw, who heard the class-action suit and had grown up on the bay.

The temporary ban continued, until the Suffolk County Legislature made it permanent. By the summer of 1970, a statewide ban was in effect. Meanwhile, Art Cooley, Charlie Wurster and Dennis Puleston met with others in Cooley’s living room and formed the Environmental Defense Fund. The group’s research and testimony played a major role in challenging the use of DDT in other places and in 1972 the pesticide was banned across the nation.

“We were just average people,” says Cooley, who spends much of his retirement leading wildlife cruises

to places like the Falkland Islands and Antarctica. “We pulled together our interests, our research, our observations, our energies.”

Those average people helped take a species off the endangered list. Even though DDT is a peril of the past, ospreys — now classified as birds of special concern — struggle with new problems in some parts of Long Island. The numbers of fish hawks summering in our precincts rebounded, although as Dennis Puleston prophesied, they have never returned to their pre-DDT levels. In 2001, the last time a complete census was taken, there were 279 active nests — fewer than existed a half century ago on Gardiners Island alone. According to New York State Department of Environmental Conservation figures, 352 young were fledged from those nests.

In the wake of the DDT ban, other measures were taken to make Long Island’s waterfront choice real es-



Newsday Photo / Bill Davis

Bill Starke, engineering equipment operator from the U.S. Fish and Wildlife Service, erects an osprey nesting platform on the banks of the Carmans River in Brookhaven. The platform is made of an old wagon wheel and twigs.

tate for ospreys as well as humans. Naturalists erected more of the tall platform poles that over the years have become part of our shorescape. The high-rise homes make nesting easier for a peaceful bird that devotes itself to domestic duties and even lets house finches move in beneath its aerie. In the wild, the fish hawks — whose life expectancy is as much as 25 years — will build their massive nests on the tops of tall dead trees. Or in areas where there are no raccoons and other land predators that go after osprey eggs, they'll nest on the ground. But except for privately owned preserves such as Gardiners Island and Robins Island, few places in suburbia offer those conditions.

And so the ospreys have become accustomed to our platforms. They seek them out from Shelter Island to Sunken Meadow, from Napeague Harbor to Jamaica Bay. They come on the cusp of the vernal equinox and lose no time getting on with their lives.

Mike Scheibel has made a career out of watching them — first for the New York State Department of Environmental Conservation, now as manager of The Nature Conservancy's Mashomack Preserve on Shelter Island, a refuge of sea and forest where ospreys have summered for years. It is not so much that ospreys mate for life, he says, as it is that they possess what is known as site-fidelity, a scientific name for a call of the wild that makes a bird fly thousands of miles to reach a precise nest. Usually, couples take separate winter vacations but return year after year to the same summer place. In 1996, a female osprey fitted with a satellite transmitter took off from Mashomack Preserve on Aug. 16 and arrived in Brazil on Oct. 1 with stops in Georgia, the Florida Keys, Haiti and Venezuela. A male thought to be her mate was

See OSPREY on N22



Newsday File Photo

Ware, manager of Caleb Smith State Park in Smithtown, stocks the Nissequogue River with trout.

PEOPLE OF THE NATURAL WORLD

Clarence Ware

WHO: Clarence Ware, 49, park manager at Caleb Smith State Park Preserve in Smithtown.

LIFE STORY: Steward of the 543 acres of streams, woods and wetlands at Caleb Smith for the past 12 years. He caught the outdoor bug early, fishing the Hudson and camping with the Harlem YMCA. "I was born in the city, but I was not a city kid." At 17 became a lifeguard at the Bronx's Roberto Clemente State Park; park manager at Valley Stream State Park from 1989 to 1991.

HABITAT: Nissequogue River and stream system.

FAVORITE PLACE: A bench at a bend in the Nissequogue from which, in the spring, he can spy ospreys overhead or see trout spawning and feeding in the crystalline waters.

CLAIM TO FAME: Founded a fly-fishing school at Caleb Smith to pass on his love of fishing and the outdoors. Ware and co-founder and head instructor Dave Sekeres have taught nearly 300 students ages 12 to 72 how to bait, cast and "read the river" in an ecologically sound fashion.

TOP OF HIS WISH LIST: Stop degradation of the water supply by placing "more of a moratorium" on construction in open spaces that sit over freshwater aquifers.

PET PEEVE: "Budgetary problems, manpower problems, lack of proper equipment" that hamper responses to urgent environmental issues such as storm-water runoff.

FAVORITE FIELD GEAR: Two pairs of Bushnell binoculars — one mini, the other longer and high-powered. "Whether I'm looking for birds or poachers . . . you never know what you're going to run into."

HERO: Gary Lawton, regional environmental education coordinator for New York State parks who helped transform Ware from an outdoorsman into an environmentalist. "He really opened up my eyes . . . and helped me see how much I had to learn."

— Jennifer Smith



Newsday Photo / Bill Davis

A domestic moment last July on a radio-station tower in Bellport.

Return Of The Osprey

OSPREY from N20

tracked to Cuba.

Scheibel's onetime science teacher Art Cooley explains the winter separation as a matter of biology rather than a need for personal space. "Birds have one sex organ and it shrinks after the breeding season. In the winter, they don't really know or care whether they're male or female."

Ospreys are monogamous, but if one of them doesn't show up at the nest, the surviving spouse will look for a new mate. And there are always a few young single birds on the fly looking for love. Usually, ospreys spend their first few winters in the South. When they're around 3 years old, the need to procreate takes over and they return to the geographic area where they first spread their wings.

Even for those who've been there before, a little courtship is called for. It's like renewing wedding vows. As with humans, the festivities involve danc-

ing and eating. The male does a so-called "sky dance" — a slow undulating flight performed with a fish dangling from his talons — and cries seductively "eeeet-eeeet-eeeet."

This isn't just pillow talk; the male is proving he's a provider. Eventually, the female settles into the nest and cries out for food. Called "courtship feeding," this is a prelude to mating. Ten days to a month after her arrival, the female is laying two to four brown blotched eggs about the size of chicken eggs. The eggs are laid a day or two apart and hatch in sequence — later eggs are smaller and so are the chicks they produce. Males and females each have a "brood patch," a bare spot on the breast that they take turns snuggling against the eggs to keep them warm. In five or six weeks the eggs hatch and the flutter of little wings signals a new generation of ospreys.

Howard Boltson of East Northport is among the many birders who watch over the generations. In the spring of 1987, he was one of a small band that put up the first of three nesting platforms in the lagoon at Sunken Meadow State Park — that anchored the pole into the muck with quick-drying cement, then watched the ospreys appear in the spring sky. "That platform's been there through thick and thin. The nest was blown off by storms at least twice, so the couple had to start from scratch each time. Ospreys know how to persevere. Over the years, I'd say about 50 youngsters were fledged here."



On a spring afternoon, very much the birder in camouflage jacket and matching hat, Boltson focused his high-powered binoculars on the lagoon.

"There he is. Isn't he magnificent? He's fishing." If Boltson had wings, he would have been soaring. "See how he's hovering. If he finds a target he'll strike the water feet first to grab it. Oops, he hasn't found what he wants — he's heading home. Watch him come in high and swoop down as he approaches the nest. Then he'll lift up again and in the next instant, he'll drop down and he's home." The fish hawk was right on cue.

Another day at a pond about a mile from the park, an osprey circled in the cloudless sky, hovering, scanning the shallow waters below. Suddenly, it tucked back its wings and plummeted with feet stretched out in front of it. All the while, its keen yellow eyes remained riveted on an unsuspecting target. Splash. The osprey disappeared in the spray.

In this unseen moment, the fish hawk's powerful talons did their job. An osprey's curved claws can grasp a fish in the blink of a human eye. The bottoms of its long toes are equipped with small rough spines that allow the bird to grip a slippery struggling fish weighing close to a pound and a half.

The osprey broke free of the water. Oily feathers prevented it from getting waterlogged but still the bird shook off in midair. The osprey rearranged its prey with the fish's head pointing forward to reduce wind resistance and the body tucked in close. It flew to a

nearby tree and tore into lunch with its sharp hooked beak.

A male spends about one third of his day flying, diving and hauling fish back to the nest. It's a high-energy pursuit, which is why he gets to chow down first — away from the cries of his hungry babies. Then he fishes for the family. For the first few days, the mother bird feeds regurgitated "fish chowder" to the youngsters. But soon they're eating solid sushi, with mom doling out the portions. The firstborn chick, usually larger and more assertive than its siblings, gets the most. "It's a survival strategy," Scheibel explains. "Instead of having three sickly young, they'll have at least one good strong one. From the very beginning, the first bird has the best shot at surviving."

Life on the nest settles into a routine. Dad goes fishing. Mom watches over the little ones. In a month's time, they have all their feathers and they're flapping their wings to strengthen the muscles that will enable them to fly. "Sometimes, as they do their wing exercises, they surprise themselves by lifting off the nest," says Boltson. "But if they're not strong enough to fly yet, they fall back into the nest."

By the time they're 8 weeks old, the young ospreys have fledged — they're able to fly. And before long, they're fishing.

Larry Penny, director of the Town of East Hampton Natural Resources Department, and his assistant, Lisa D'Andrea, tell the story of a widowed male

left to raise three youngsters by himself in the summer of 2001. The female was found dead on the side of a road not far from the birds' home — the oldest nest in East Hampton — near Napeague Harbor. Experts theorized that the cause of death was West Nile virus or, possibly, old age. Now a single parent, the male carried on — fishing, guarding the nest, watching all three chicks spread their wings.

"Not many couples fledge three young," Penny explains, "but he pulled it off. In fact, that nest was the only one in town to fledge three young in 2001. He came back the following year and found a new mate, but they didn't succeed in breeding. The female was probably young and inexperienced. It was the first time that nest flopped in 20 years. We'll see what happens this spring."

Penny and other osprey watchers are scanning the skies across the Island — checking new patterns and new problems. The numbers that Mike Scheibel compiles every year for the state DEC show that ospreys are thriving in western Suffolk, as well as Nassau and Queens. But their reproduction rate seems to be slipping on the East End, especially in traditional strongholds such as Shelter Island and Gardiners Island, where each active nest has averaged fewer than one fledgling per season over the past five years. In 2001, Gardiners Island's 36 active nests produced 21 fledglings. That's a disappointing average of 0.58 per nest — below the 0.8 figure experts say is necessary to keep the

fish hawk population stable.

But go west to towns like Huntington, Smithtown, Islip, Oyster Bay, Hempstead and to Jamaica Bay and the future seems rosier. In Hempstead, for instance, 20 active nests fledged 36 young in 2001 for a per nest rate of 1.80.

Gardiners Island is a case study for experts trying to make sense of osprey productivity. A cold wet spring is hard on chicks, which are born without feathers and can't regulate their body temperature. And fishing is difficult in stormy conditions. But what may be more important is overfishing of 15-inch-long herring called menhaden or bunker — the osprey's staple — by humans, and competition for winter flounder from cormorants. It's not just that cormorants can dive deeper, but they now number in the thousands on Gardiners Island.

Still, the osprey has come back — sometimes in unlikely places. Last summer, Art Cooley focused his binoculars on a nest atop a 252-foot-high WALK radio tower not far from his home. A male and a female and a fledged youngster sat on the nest tearing apart a weakfish. "They're doing OK," he said.

Later that day, Cooley watched a new platform being put up on the edge of the Carmans River, across a field from the home where Dennis Puleston kept track of the comings and goings of the fish hawk that he once thought of as a mythical bird.

The survival of the osprey continues to depend on the kindness of strangers.

THE LIFE OF A HUMMINGBIRD

The Tiny Gem Takes Flight

They're called nature's little jewels — the tiny iridescent hummingbirds with gossamer wings that beat so fast they actually hum. The ruby-throated hummingbird is the only species that breeds east of the Mississippi River and the only one that visits Long Island. It shows up in our gardens, parks, roadside thickets and backyard feeders in May and astounds us with its aerodynamics until it heads back to the tropics in late summer.

It is the smallest of birds, measuring 3½ inches in length and weighing 3 grams, or **one-tenth the weight of a first-class letter**. Its nest is the size of an English walnut and its two white eggs are each no bigger than a black-eyed pea. But a hummingbird is a powerful flying machine. It doesn't actually flap its wings — instead the wings are attached to shoulder joints that can move in all directions and rotate 180 degrees. It can fly backward and forward and sideways — always with its body upright. It can fly up and down, and even upside-down. And it can hover almost indefinitely, **beating its wings more than 60 times a second** while it sucks nectar from a flower.

A hummingbird burns up so much energy that it needs a sugar fix every 15 minutes. In fact, it needs to consume half its

weight in carbohydrates — with a little protein in the form of spiders, flies and other insects — and drink eight times its weight in water every day. Its resting heart rate of 480 beats per minute shoots up to 1,260 when it's feeding. By the way, the hummingbird has the largest heart, relative to size, of any living animal — as much as 2.5 percent of its body weight. At night it lapses into a state of torpor, lowering its body temperature from 108 degrees to about 68 to conserve energy.

Perhaps its most amazing feat is the incredible journey it makes just to get here. Ruby-throated hummingbirds winter in Central America, and in January and February, they head north — each little bird all by itself. Within a month, the tiny traveler has nearly doubled its weight, storing fat for its journey and is ready to face the Gulf of Mexico. At dusk, it takes off, **flying nonstop for 18 to 22 hours** over 500 miles of open water. Then the hummingbird travels some 20 miles a day, following the blooming flowers northward until it reaches its summer digs in places like Long Island. To attract one of nature's little jewels to your yard, plant tubular red flowers or put out a hummingbird feeder filled with sugar water.

— Irene Virag



Newsday Photo / Bill Davis

The female ruby-throated hummingbird lacks the male's bright red plumage. It beats its wings more than 60 times a second while sucking nectar from a flower.